ORDINANCE NO. 716


WHEREAS, the City of Woodinville is fully planning under Washington’s Growth Management Act pursuant to Chapter 36.70A RCW; and

WHEREAS, the state-designated shoreline areas for the City of Woodinville include the Sammamish River and Little Bear Creek within the city limits; and

WHEREAS, the Shoreline Management Act (Act), codified at Chapter 90.58 RCW, requires the City of Woodinville to develop and administer a Shoreline Master Program; and

WHEREAS, the City of Woodinville adopted amendments to the Shoreline Master Program as required by RCW 90.58.080(2) by Ordinance No. 487, which was effective December 16, 2009, consistent with the required elements of the master guidelines adopted by the Washington State Department of Ecology set forth in Chapter 173-26 WAC; and

WHEREAS, RCW 90.58.080(4) requires the City of Woodinville to periodically review and, if necessary, revise the Shoreline Master Program on or before June 30, 2019; and

WHEREAS, the review process is intended to bring the Shoreline Master Program into compliance with requirements of the Act or state rules that have been added or changed since the last Shoreline Master Program amendments, ensure the Shoreline Master Program remains consistent with amended comprehensive plans and regulations, and incorporate amendments deemed necessary to reflect changed circumstances, new information, or improved data; and

WHEREAS, the City of Woodinville opted for a more comprehensive update of its Shoreline Master Program to codify and integrate the shoreline regulations into the city’s Unified Development Code, Title 21 WMC, and to integrate the shoreline goals and policies into the Woodinville Comprehensive Plan; and

WHEREAS, the goals of integrating the shoreline regulations into the city’s development code include:

- Improve the codes organization and user-friendliness, so that it is more easily understood by people who are not land use professionals;
- Consolidate and simplify standards, including using more tables, figures and diagrams, so that the regulations are easier for readers to understand and apply;
- Clarify confusing and ambiguous language, and correct conflicting regulations;
- Update definitions to support the development regulations and move out any development standards found in the definitions; and
• Eliminate redundancy to the extent feasible; and

WHEREAS, the City of Woodinville developed a public participation program for this periodic review in accordance with WAC 173-26-090(3)(a), which was received by the City Council at their December 4, 2018 regular meeting to inform, involve and encourage participation of interested persons and private entities, tribes, and applicable agencies having interests and responsibilities relating to shorelines; and

WHEREAS, the City of Woodinville has followed its public participation program including:

• Establishing a website where the public could access information, draft documents and other project information on the Shoreline Master Program updates;

• Providing postcard notices sent to all property owner addresses within the City limits notifying property owners of Shoreline Master Program open houses that were held on February 6 and November 6, 2019 to provide opportunities to answer questions from the public about the updates to the Shoreline Master Program; and

WHEREAS, the Planning Commission discussed changes to the Shoreline Master Program at their September 19, 2018 regular meeting, and at their January 16, February 20, April 17, July 17, September 18 and October 16, 2019 regular meetings; and

WHEREAS, the City of Woodinville used Ecology’s checklist of legislative and rule amendments to review amendments to Chapter 90.58 RCW and department guidelines that have occurred since the Shoreline Master Program was last amended, and determine if local amendments are needed to maintain compliance in accordance with WAC 173-26-090(3)(b)(i); and

WHEREAS, the City of Woodinville reviewed changes to the comprehensive plan and development regulations to determine if the shoreline master program policies and regulations remain consistent with them in accordance with WAC 173-26-090(3)(b)(ii); and

WHEREAS, the City of Woodinville considered whether to incorporate amendments needed to reflect changed circumstances, new information or improved data in accordance with WAC 173-26-090(3)(b)(iii); and

WHEREAS, the Planning Commission completed a review of staff recommendations and prepared initial amendments; and

WHEREAS, the City of Woodinville consulted with the Department of Ecology early and often during the drafting of the amendments as the City worked collaboratively with Ecology to address local interests while ensuring proposed amendments are consistent with the policy of RCW 90.58.020 and applicable guidelines in accordance with WAC 173-26-104; and

WHEREAS, after providing notice, the City of Woodinville conducted a public comment period between November 1 and December 2, 2019 in compliance with requirements of WAC 173-26-104; and

WHEREAS, the City of Woodinville published a legal notice in the Woodinville Weekly on October 31, 2019 and posted notices at the City’s official notice boards and on the City’s website for a public hearing on November 20, 2019 on the proposed Planning Commission recommendation, including a statement that the hearing was intended to address the periodic review in accordance with WAC 173-26-090(3)(c)(ii); and
WHEREAS, the Planning Commission received public testimony on the proposed Planning Commission recommendation at a public hearing on November 20, 2019; and

WHEREAS, pursuant to RCW 36.70A.106(3)(a), a notice of intent to adopt was transmitted to the Washington State Department of Commerce on November 27, 2019 (Submittal ID# 2019-S-960); and

WHEREAS, the proposed amendment has been reviewed as required under the State Environmental Policy Act, Chapter 43.21C RCW, and a Determination of Nonsignificance (DNS) was issued on November 21, 2019 pursuant to WAC 197-11-340(2).

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF WOODINVILLE, WASHINGTON, DO ORDAIN AS FOLLOWS:

Section 1. Review and Evaluation. The City Council hereby finds that the review and evaluation required by RCW 90.58.080(4) have occurred, as described in the recitals above.


Section 3. Repeal Ordinance No. 375. Ordinance No. 375 is hereby repealed in its entirety.

Section 4. Adoption and Codification of Revised Shoreline Master Program. A revised Shoreline Master Program is adopted and codified in Chapters 21.70 through 21.77 of the Woodinville Municipal Code as set forth in Attachment “A”.

Section 5. Amendment of the Comprehensive Plan. Chapter 9.0 “Environmental” of the Woodinville Comprehensive Plan as adopted by Ordinance No. 591 § 2 and amended by Ordinances Nos. 641, 646, 650, 651, 669, 689, 701 and 704 is hereby amended to add Section 9.1 entitled “Shoreline Master Program” to read as set forth in Attachment “B”.

Section 6. Re-adoption of Restoration Plan. The Shoreline Restoration Plan set forth in Ordinance No. 487 § 1, Appendix B, is hereby re-adopted as set forth in Attachment “C”.

Section 7. Severability. Should any section, paragraph, sentence, clause, or phase of this Ordinance be held invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other sections, sentence, or phrase of this ordinance.

Section 8. Adoption. The City Council hereby adopts the above referenced Shoreline Master Program amendments and finds the amended Shoreline Master Program consistent with the requirements of RCW 90.58 and WAC 173-26, as they apply to these amendments.

Section 9. Submission to Department of Ecology. The Director of Development Services is directed to submit the Shoreline Master Program and associated documents to the Department of Ecology for their review and approval for formal adoption. Once approved by the Department of Ecology no further action is necessary for compliance with RCW 90.58.080(4) for the periodic review.

Section 10. Effective Date. The adoption of this Ordinance, which is a power specifically delegated to the City legislative body, is not subject to referendum. This Ordinance or a summary thereof as set forth in the ordinance title shall be published in the official newspaper of the City.
and shall take effect and be in full force five (5) days after the date of publication; provided, that the amendments to the Shoreline Master Program adopted through Ordinance No. 716 shall not take effect prior to 14 days after Department of Ecology final action as provided by RCW 90.58.090(7).

ADOPTED BY THE CITY COUNCIL AND SIGNED IN AUTHENTICATION OF ITS PASSAGE THIS 18th DAY OF MAY 2021.

______________________________
Gary Harris, Mayor

ATTEST/AUTHENTICATED:

______________________________
Katie Hanke
Katie Hanke, City Clerk

APPROVED AS TO FORM:
OFFICE OF THE CITY ATTORNEY

______________________________
Jeffrey Ganson, City Attorney

PASSED BY THE CITY COUNCIL: 05-18-2021
PUBLISHED: 05-24-2021
EFFECTIVE DATE: 05-29-2021
ORDINANCE NO. 716
Division 7    Shoreline Master Program

Chapter 21.70    Shoreline Master Program.
Chapter 21.71    Shoreline Environment Designation.
Chapter 21.72    Shoreline Use Table.
Chapter 21.73    General Shoreline Regulations.
Chapter 21.74    Shoreline Development Standards.
Chapter 21.75    Use-specific Shoreline Development Standards
Chapter 21.76    Shoreline Modifications.
Chapter 21.77    Shoreline Critical Areas.
Chapter 21.70
Shoreline Master Program

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21.70.010 Title.

Chapters 21.70 through 21.77 WMC, in combination with Sub-Element 9.1 of the Woodinville comprehensive plan, shall be known as, and may be cited as, the “Woodinville shoreline master program.”

21.70.020 Introduction.

The Shoreline Management Act of 1971 (Act) was adopted by the public in a 1972 referendum “to prevent the inherent harm in an uncoordinated and piecemeal development of the state’s shorelines.”

(1) The Act advances the following broad policies:
   (a) Encourage water-dependent uses along the shoreline;
   (b) Protect the resources and ecology of the shoreline; and
(c) Promote public access of the shoreline environment.

(2) The Act, and the City, recognizes the protection of private property rights while aiming to preserve the quality of unique shoreline resources.

(3) The primary purpose of the Act is to provide for the management and protection of shoreline resources by planning for reasonable and appropriate uses through a coordinated planning program between the state and local jurisdictions.

21.70.030 Purpose.

The purpose of the shoreline master program is to:
(1) Carry out the responsibilities imposed by the Act;
(2) Promote the public health, safety and general welfare by guiding future development of shoreline resources within the City; and
(3) Comply with the shoreline master program guidelines set forth in Chapter 173-26 WAC.

21.70.040 Authority.

The Woodinville shoreline master program is adopted under the authority of Chapter 90.58 RCW and Chapter 173-26 WAC.

21.70.050 Applicability.

Unless specifically exempted by statute, all proposed uses and development occurring within shoreline jurisdiction must conform to chapter 90.58 RCW, the Shoreline Management Act, and this master program whether or not a permit is required. The City’s shoreline jurisdiction includes the following:
(1) The Sammamish River;
(2) Little Bear Creek;
(3) All areas extending landward for 200 feet from the ordinary high-water mark of the Sammamish River and Little Bear Creek;
(4) Floodways and contiguous flood plain areas landward 200 feet from such floodways associated with the Sammamish River and Little Bear Creek; and
(5) All areas of wetlands associated with the Sammamish River and Little Bear Creek, except those areas of wetland buffers extending outside of shoreline areas listed in WMC 21.70.050(3) and (4).

21.70.060 Administration.

(1) All uses and development proposals within the shoreline jurisdiction should be evaluated in terms of the shoreline master program. All uses and development proposals, including those that do not require a permit, must comply with the policies and regulations established by the Act and shoreline master program, except as provided for in WAC 173-27-044 and WAC 173-27-045.

(2) The Director is vested with responsibility for administering the shoreline master program consistent with this shoreline master program and applicable provisions of the Act.

(3) No development may be undertaken or is authorized unless it is consistent with the policies and provisions of the shoreline master program and the Act.

(4) Shoreline permits, and shoreline exemptions, shall be processed in accordance with the requirements set forth in WMC 21.82.090, WMC 21.83.030, WMC 21.84.040 and WMC 21.84.050.
21.70.070  Relationship to other plans and regulations.

(1) The Woodinville comprehensive plan provides the underlying planning framework within which the shoreline master program fits. The goals and policies found in the shoreline management Sub-element 9.1 of the comprehensive plan are incorporated as an element of the shoreline master program.

(2) The shoreline master program shall apply as an overlay and in addition to zoning, land use regulations, development regulations, and other regulations established by the City.

(3) In the event of a conflict between the regulations in this shoreline master program and any other applicable regulations of the City, the regulation that provides the greater protection of shoreline ecological functions and aquatic habitat shall prevail.

21.70.080  Interpretation.

(1) The Director is authorized to make written interpretations of the shoreline master program whenever necessary for clarification or to resolve a conflict within these regulations. Interpretations are a Type 1 decision processed pursuant to WMC 21.80.050.

(2) Any person may submit a written request for an interpretation to the director, or the Director may issue an interpretation on their own initiative.

(3) A request for an interpretation shall address the following decision criteria:
   (a) The defined or common meaning of the word or words in the provision;
   (b) The general purpose of the provision as expressed in the section or chapter where the provision is found;
   (c) The logical or likely meaning of the provision viewed in relation to the Act and the shoreline master program;
   (d) Consistency with the policies and provisions set forth in Chapter 90.58 RCW, and Chapters 173-26 and 173-27 WAC;
   (e) Consistency with the goals and policies set forth in the shoreline sub-element of the Woodinville comprehensive plan; and
   (f) Consistency with other elements of the shoreline master program.

(4) The Director shall consult with the Washington State Department of Ecology for consistency of the interpretation with the Act and the shoreline master program before issuing a written interpretation.

(5) A written interpretation shall have the effect and be enforced as if it is part of the shoreline master program.

(6) A record of all written interpretations shall be maintained by the City and be available for public inspection and copying during regular business hours.

21.70.090  Liberal construction.

As provided in RCW 90.58.900, the Shoreline Management Act is exempted from the rule of strict construction; the Act and the shoreline master program shall therefore be liberally construed to give full effect to the purposes, goals, objectives, and policies for which the Act and the shoreline master program were enacted and adopted, respectively.
21.70.100  Violations and Penalties.

Violation of any provision of the shoreline master program shall be subject to the enforcement provisions and penalties set forth in Chapter 1.06 WMC and WAC 173-27-240 through 173-27-310.

21.70.200  Definitions – General provisions.

(1) Words in this shoreline master program used in the singular shall include the plural, and the plural shall include the singular, unless the context clearly indicates otherwise.

(2) The definitions in this chapter apply to the shoreline master program and they should be used in conjunction with other definitions found in this title. However, these definitions are not intended to replace or alter similar definitions found elsewhere within the Woodinville Municipal Code except where specifically applied to the shoreline master program.

21.70.210  “A” definitions.

“Accessory structure, use, or activity” means a structure or part of a structure, use, or activity, which is incidental and subordinate to a permitted principal use or building.

“Act” means Chapter 90.58 RCW, the Shoreline Management Act of 1971, as hereafter amended.

“Agricultural activities” means agricultural uses and practices including, but not limited to: Producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie fallow in which it is plowed and tilled but left unseeded; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing agricultural equipment; maintaining, repairing, and replacing agricultural facilities, provided that the replacement facility is no closer to the shoreline than the original facility; and maintaining agricultural lands under production or cultivation.

“Alteration” means any development or human-induced action which changes and/or impacts the existing conditions of a critical area or buffer. Alterations do not include walking, fishing, other types of passive recreation, or other similar activities.

“Anadromous fish” means fish that spawn and rear in fresh water and mature in the marine environment.

“Applicant” means a person who files an application for permits who is either the owner of the land on which that proposed activity would be located, or the primary proponent of a project. Applications may be filed by an applicant representative, which can include a contract purchaser, or the authorized agent of such a person.

“Appurtenance, normal” means an incidental structure that is necessarily connected to the use and enjoyment of a primary use. This definition does not apply when used under WAC 173-27-040(2)(g).

“Aquaculture” means the culture or farming of food fish, shellfish, or other aquatic plants and animals.

“Associated wetlands” are those wetlands which are in proximity to and either influence or are influenced by the shorelines of the state, such as the Sammamish River or Little Bear Creek.

“Average grade level” means the average of the natural or existing topography of the portion of the lot, parcel, or tract of real property which will be directly under the proposed building or structure. In the case of structures to be built over water, average grade level shall be the elevation of the ordinary high-water mark. Calculation of the average grade level shall be made by
averaging the ground elevations at the midpoint of all exterior walls of the proposed building or structure.

21.70.211  “B” definitions.

“Berm” means a linear mound or series of mounds of sand and/or gravel generally paralleling the water at/ or landward of the line of ordinary high tide; or a linear mound used to screen an adjacent activity.

“Best management practices” means conservation practices or systems of practices and management measures that:

1. Control soil loss and reduce water quality degradation caused by high concentrations of nutrients, animal waste, toxics, and sediment;
2. Minimize adverse impacts to surface water and ground water flow, circulation patterns, and to the chemical, physical, and biological characteristics of streams and wetlands;
3. Protect trees and vegetation designated to be retained during and following site construction; and
4. Provide standards for proper use of chemical herbicides within critical areas.

“Bioengineering” means project designs or construction methods that use live woody vegetation or a combination of live woody vegetation and specially developed natural or synthetic materials to establish a complex root grid within the existing bank that is resistant to erosion, provides bank stability, and maintains a healthy riparian environment with habitat features important to fish life.

“Biofiltration System” means a storm water or other drainage treatment system that utilizes as a primary feature the ability of plant life to screen out and metabolize sediment and pollutants.

“Biota” means the animals and plants that live in a particular location or region (also sometimes referred to as flora and fauna).

“Boat lift” means any lift for motorized boats, kayaks, canoes and jet skis; including floating lifts that are designed to not contact the substrate of the water body; ground-based lifts that are designed to be in contact with or supported by the substrate of the water body; and suspended lifts that are designed to be affixed to the existing overwater structure with no parts contacting the substrate.

“Boathouse” means an overwater structure with walls and a roof designed for the storage of boats.

“Breakwater” means a protective structure that is normally built offshore to provide protection from wave action.

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

“Building” means any structure having a roof supported by columns or walls used or intended for supporting or sheltering any use or occupancy.

“Building Coverage” means the area of a lot that is covered by building, which includes the total horizontal surface area of the roof of a building when viewed in plan.

“Bulkhead” means a vertical or nearly vertical erosion protection structure placed parallel to and near the ordinary high-water mark consisting of concrete, timber, steel, rock, or other permanent material for protecting adjacent wetlands and uplands from waves and currents.

“Buoys” means a floating object anchored in water used to mark a location, warn of danger, or indicate a navigational channel.

21.70.212  “C” definitions.

“Channel” means an open conduit for water either naturally or artificially created, but does not include artificially created irrigation, return flow, or stock-watering channels. See also "stream."
“Circulation network” means the interconnected system of public and private streets and roadways which provide pathways for vehicles, pedestrians, bicycles, and/or other transportation means to travel between two or more destinations.

“City” means City of Woodinville.

“Clean Water Act” means the primary federal law providing water pollution prevention and control; previously known as the Federal Water Pollution Control Act. See 33 USC 1251 et seq.

“Clearing” means cutting, grubbing or removing vegetation or other organic plant material by physical, mechanical, chemical or any other similar means. For the purpose of this definition, “cutting” means the severing of the main trunk or stem of woody vegetation at any point.

“Commercial” means engaging in commerce; the buying and selling of goods.

"Conditional use" means a use, development, or substantial development which is classified as a conditional use or is not classified within the shoreline master program.

“Compensatory mitigation” means replacing project-induced critical area losses or impacts, and includes, but is not limited to, the categories listed below.

1. Re-establishment. Actions that manipulate the physical, chemical, or biological characteristics of former or degraded critical area with the goal of returning natural or historic functions.

2. Rehabilitation. Actions that manipulate the physical, chemical, or biological characteristics of former or degraded critical area with the goal of repairing natural or historic functions [and processes] of a degraded critical area.

3. Creation. Actions that manipulate the physical, chemical, or biological characteristics present to develop a critical area where a critical area previously did not exist.

4. Enhancement. Actions that manipulate the physical, chemical, or biological characteristics to heighten, intensify or improve specific function(s) 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.

5. Protection/Maintenance. Actions that remove a threat to, or preventing the decline of, critical area conditions by an action in or near a critical area. This term includes the purchase of land or easements, repairing water control structures or fences, or structural protection.

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

“Critical areas” means critical areas as defined in RCW 36.70A.030 and includes the following areas and ecosystems:

1. Wetlands;
2. Areas with a critical recharging effect on aquifers used for potable waters;
3. Fish and wildlife habitat conservation areas;
4. Frequently flooded areas; and
5. Geologically hazardous areas.

21.70.213  “D” definitions.

“Degrade” means to scale down in desirability or salability, to impair in respect to some physical property, or to reduce in structure, function, or value.


“Development” means a use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to the
act at any stage of water level. "Development" does not include dismantling or removing structures if there is no other associated development or redevelopment.

"Diameter breast height or DBH" means the diameter measurement in inches of the outside bark of a tree trunk, measured at four and one-half feet above the surrounding existing ground surface. The DBH for multi-trunk trees forking below the four-and-one-half foot mark is determined by measuring the diameter of the tree trunk at the narrowest part of the main stem below the tree fork. The DBH for multi-trunk trees splitting at ground level is determined by taking the square root of the sum of all squared stem DBHs.

"Director" means the person appointed by the city manager as the Director of Development Services for the City of Woodinville, or the designee appointed to act on behalf of the Director of Development Services.

"Dock" means a structure that floats on the surface of the water, without piling supports, and which may be attached to the shore or may be anchored to submerged land. Dock facilities may include wharves, boat moorage, swimming, public access, and other activities that require access to deep water.

"Drainage facility" means the system of collecting, conveying and storing surface and storm runoff. Drainage facilities shall include but not be limited to all surface and stormwater runoff conveyance and containment facilities including streams, pipelines, channels, ditches, infiltration facilities, retention/detention facilities, and other drainage structures and appurtenances.

"Dredging" means the removal, displacement, or disposal of unconsolidated earth material such as sand, silt, gravel, or other submerged materials, from the bottom of water bodies, ditches, or natural wetlands; maintenance dredging and/or support activities are included in this definition.

"Dwelling" means a living space or combination of rooms designed to provide independent year-round living facilities for one family or household, including household staff and guest, constructed to the minimum standards of the building or HUD code, and with provisions for sleeping, eating and sanitation.

"Dwelling, multifamily" means a residential structure containing two or more dwellings.

"Dwelling, single-family" means a residential structure containing one dwelling.

21.70.214 "E" definitions.

"Ecological functions, shoreline ecological functions" means the work performed or role played by the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments constituting the shoreline’s natural ecosystem.

"Ecosystem-wide processes" means the suite of naturally occurring physical and geologic processes of erosion, transport, and deposition; and specific chemical processes that shape landforms within a specific shoreline ecosystem and determine both the types of habitat and the associated ecological functions.

"Emergent wetland" means a regulated wetland with at least 30 percent of the surface area covered by erect, rooted, herbaceous vegetation extending above the water surface as the uppermost vegetative strata.

"Erosion" means the process whereby wind, rain, water, and other natural agents mobilize and transport particles.

"Erosion hazard areas" means at least those areas identified by the U.S. Department of Agriculture’s Natural Resources Conservation Service as having a “moderate to severe,” “severe,” or “very severe” rill and inter-rill erosion hazard.

"Exotic" means any species of plants or animals which are foreign to the planning area.
21.70.215 “F” definitions.

“Fair market value” of a development is the open market bid price for conducting the work, using the equipment and facilities, and purchase of the goods, services and materials necessary to accomplish the development. This would normally equate to the cost of hiring a contractor to undertake the development from start to finish, including the cost of labor, materials, equipment and facility usage, transportation and contractor overhead and profit. The fair market value of the development shall include the fair market value of any donated, contributed or found labor, equipment or materials.

“Feasible” means an action, such as a development project, mitigation, or preservation requirement that meets all of the following conditions:

1. Can be accomplished with technologies and methods that have been used in the past in similar circumstances, or studies or tests that have demonstrated in similar circumstances that such approaches are currently available and likely to achieve the intended results;
2. Provides a reasonable likelihood of achieving its intended purpose; and
3. Does not physically preclude achieving the project’s primary intended legal use.

The burden of proving infeasibility is on the applicant in cases where these guidelines require certain actions. In determining an action’s infeasibility, the City or the Department of Ecology may weigh the action’s relative public costs and public benefits, considered in the short- and long-term time frames.

“Fill” means the placement of soil, sand, rock, gravel, sediment, earth retaining structure or other material to an area waterward of the ordinary high-water mark, in wetlands, or on shorelands in a manner that raises the elevation or creates dry land.

“Fish and wildlife habitat conservation” means land management for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. This does not mean maintaining all individuals of all species at all times, but it does mean not degrading or reducing populations or habitats so that they are no longer viable over the long term.

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

1. Areas with which state or federally designated endangered, threatened, and sensitive species have a primary association;
2. Habitats of local importance, including, but not limited to, areas designated as priority habitat by the Department of Fish and Wildlife;
3. Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas to mitigate impacts to ponds;
4. Waters of the state, including lakes, ponds, streams, inland waters, underground waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington;
5. State natural area preserves and natural resource conservation areas; and
6. Land essential for preserving connections between habitat blocks and open spaces.

“Flood or flooding” means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters and/or the unusual and rapid accumulation of runoff of surface waters from any source.
“Floodway” means those areas that have been established in federal emergency management agency flood insurance rate maps or floodway maps. (See Chapter 21.53 WMC for maps.)

“Forest practices” means any activity conducted on or directly pertaining to forest land and relating to growing, harvesting, or processing timber.

“Forested wetland” means a regulated wetland with at least 30 percent of the surface area covered by woody vegetation greater than 21 feet in height that is at least partially rooted within the wetland.

"Frequently flooded areas" are lands in the flood plain subject to at least a one percent or greater chance of flooding in any given year, or within areas subject to flooding due to high groundwater. These areas include, but are not limited to, streams, rivers, lakes, coastal areas, wetlands, and areas where high groundwater forms ponds on the ground surface.

“Functions and values” mean the beneficial roles served by critical areas including, but not limited to, water quality protection and enhancement; fish and wildlife habitat; food chain support; flood storage, conveyance and attenuation; ground water recharge and discharge; erosion control; wave attenuation; protection from hazards; historical, archaeological and aesthetic value protection; and recreation. These beneficial roles are not listed in order of priority.

21.70.216 “G” definitions.

“Gabion” means a structure composed of masses of rocks or rubble held tightly together by wire mesh (typically) to form upright blocks or walls.

“Geohydrological processes” means the flow characteristics or cycle of subsurface waters. Commonly used interchangeably with "hydrology" to reference all water characteristics on earth without regard to geologic aspects or locations. "Processes" refers to the hydrologic cycle, that is, the planet's water system and how water moves from the oceans to the atmosphere to the continents and back to the sea. Sometimes geohydrologic is used interchangeably with geohydraulic.

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

“Geotechnical report” or “geotechnical analysis” means a scientific study or evaluation conducted by a qualified expert that includes a description of the ground and surface hydrology and geology, the affected land form and its susceptibility to mass wasting, erosion, and other geologic hazards or processes, conclusions and recommendations regarding the effect of the proposed development on geologic conditions, the adequacy of the site to be developed, the impacts of the proposed development, alternative approaches to the proposed development, and measures to mitigate potential site-specific and cumulative geological and hydrological impacts of the proposed development, including the potential adverse impacts to adjacent and down-current properties. Geotechnical reports shall conform to accepted technical standards and must be prepared by qualified professional engineers or geologists who have professional expertise about the regional and local shoreline geology and processes.

“Grading” means the movement or redistribution of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land.

“Grassy swale” means a vegetated drainage channel designed to remove various pollutants from stormwater runoff through biofiltration before the water enters an aquatic feature such as a stream or wetland.

“Groin,” also referred to as a spur dike or rock weir, means a barrier-type structure extending from the backshore or stream bank into a water body for the protection of a shoreline and adjacent upland by influencing the movement of water and/or deposition of materials.

“Ground water” means water in a saturated zone or stratum beneath the surface of land or a surface water body.
“Growth Management Act” means all of the regulations contained within Chapter 36.70A RCW. “Grubbing” means to clear by digging up roots and/or stumps.

**21.70.217 “H” definitions.**

“Habitat” means the environment with which an organism interacts and from which it gains its resources with which it lives and grows; habitat is often variable in size, content, and location, changing with the phases in an organism’s life. “Height” is the vertical distance measured from the average grade level to the highest point of a structure. “Historical flows” (of drainage) means the volume of stormwater that typically would runoff from a given area of land draining into the Sammamish River or Little Bear Creek, based on the level of land development prevailing during the years prior to and including the date of enactment of the Shoreline Management Act, June 1, 1971. “Hydraulic project approval (HPA)” means a permit issued by the State Department of Fish and Wildlife for modifications to waters of the state in accordance with Chapter 75.21 RCW. “Hydric soil” means a soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part. The presence of hydric soil shall be determined following the methods described in the approved federal wetland delineation manual and applicable regional supplements. “Hydrophytic vegetation” means macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen because of excessive water content. The presence of hydrophytic vegetation shall be determined following the methods described in the approved federal wetland delineation manual and applicable regional supplements.

**21.70.218 “I” definitions.**

“Impervious surface” means any hard surface area which either prevents or retards the entry of water into the soil mantle as it would otherwise enter under natural conditions preexisting to development, or any hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow as it would otherwise under natural conditions preexisting to development. Examples include impenetrable materials such as asphalt, concrete, brick, stone, wood, and rooftops. “Industry” means industrial activities and uses involving the processing, handling, and creating of products, including research and technological processes, and major fabrication. “Instream structure” means a structure placed by humans within a stream or river waterward of the ordinary highwater mark that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. Instream structures may include those for hydroelectric generation, irrigation, water supply, flood control, transportation, utility service transmission, fish habitat enhancement, or other purpose. “Isolated wetland” means those wetlands that are outside of and not contiguous to any 100-year floodplain of a lake, river, or stream, and have no contiguous hydric soil or hydrophytic vegetation between the wetland and any surface water.

**21.70.219 “J” definitions.**

“Jetty” means structures projecting out into the sea at the mouth of a river for protecting a navigation channel, a harbor, or to influence water currents. “Joint aquatic resource permit application (JARPA)” means a single application form that may be used to apply for shoreline management permits, approvals of exceedance of water quality
standards, water quality certifications, Coast Guard bridge permits, Department of Natural Resources use authorization, and Army Corps of Engineers permits.

“Joint-use or shared” means structures that are constructed for private use by more than one property owner.

21.70.221  “L” definitions.

“Land division” means the division or re-division of land into lots, tracts, parcels, sites or divisions of land for sale, lease, or transfer of ownership.

“Landfill” means the placement of soil, sand, rock, gravel, existing sediment, or other material (excluding solid waste) to create new land, tideland, or bottom land area along the shoreline below the ordinary-high-water mark, or on wetland or upland areas to raise the elevation.

“Land surface modification” means any movement or modification of earth material on any site.

“Landslide hazard areas” means areas at risk of mass movement due to a combination of geologic, topographic, and hydrologic factors. These areas are typically susceptible to landslides because of a combination of factors including bedrock, soil, slope (gradient), slope aspect, geologic structure, ground water, hydrology, or other factors.

“Lot” means a measured piece of land having fixed boundaries and designated on a plot or survey.

“Lot area” means the dry land area landward of the ordinary-high-water mark.

“Low impact development” means a set of techniques that mimic natural watershed hydrology by slowing, evaporating/transpiring, and filtering water that allows water to soak into the ground closer to its source.

21.70.222  “M” definitions.

“Marshes” (includes bogs and swamps) means lands transitional between terrestrial and aquatic systems where saturation with water is the dominant factor determining plant and animal communities and soil development. Such lands must have one or both of the following attributes:

1. At least periodically, the land supports predominately hydrophytes; and/or
2. The substrate is predominately undrained hydric soil. See also "hydrophytes," "hydric soil."

“Marina” means a private or public facility providing the purchase and/or lease of a slip for storing, berthing and securing motorized boats or watercraft, including both long-term and transient moorage.

“Mining” means the removal of sand, gravel, soil, minerals, and other earth materials for commercial and other uses.

“Mine hazard areas” are those areas directly underlain by, adjacent to, or affected by mine workings such as adits, tunnels, drifts, or air shafts.

“Mitigation” means to reduce the severity of an action or situation.

“Moorage buoy” means a floating object anchored in water used to secure a vessel.

“Moorage structure” means those installations or facilities including piers, platforms, ramps, buoys, quays, or bulkheads, or any place or structure connected with the shore or upon shorelands provided for the securing of a boat or waterborne craft.

“Multiple use corridors” means utility or transportation corridors where more than one utility and/or type of transportation is in the same linear corridor of land.

21.70.223  “N” definitions.

“Native growth protection area (NGPA)” means an area where native vegetation is preserved for preventing harm to property and the environment, including, but not limited to, controlling surface water runoff and erosion, maintaining slope stability, buffering and protecting plants and animal habitat.
“Native plants” means plant species which are native to the Puget Sound lowlands.
“Native vegetation” means plant species that are indigenous to the area in question.
“Natural or existing topography” means the topography of the lot, parcel, or tract of real property immediately prior to any site preparation or grading, including excavation or filling.
“Non-water-oriented uses” means uses that are not water-dependent, water-related, or water-enjoyment.
“Nonconforming structure” means an existing structure which was lawful at the time it was built and was continuously maintained consistent with WMC 21.73.080, but subsequently fails by reason of adoption, revision or amendment to the shoreline master program to fully comply with present dimensional regulations such as, but not limited to critical areas and buffers, height, impervious surface or density. This term applies whether or not the nonconformance was permitted by variance.
“Nonconforming use” means any existing use, occupancy, or activity which was lawful at the time it was established and was continuously maintained consistent with WMC 21.73.080, but subsequently fails by reason of adoption, revision or amendment to the shoreline master program to fully comply with the shoreline master program. A change in the required permit review process is not a cause for nonconformance. A nonconforming use may or may not involve buildings or structures and may involve part or all of a building or property.
“Nonconforming site” means a lot which does not conform to shoreline regulations pertaining to the development of a site, including but not limited to landscaping, parking and loading, public access, vegetation management, and lighting.
“Nonindigenous” means: See “Exotic.”

21.70.224  “O” definitions.

“Open space” means land preserved in its undisturbed and natural state. Usually intended to be comprised of heavily treed steep slopes, wetlands, waterway corridors, or other critical areas.
“Ordinary-high water mark” means on all lakes, streams, and tidal water is that mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by the City or Department of Ecology; provided, that in any area where the ordinary-high water mark cannot be found, the ordinary high-water mark adjoining fresh water shall be the line of mean high water.
“Outfall” means a structure used for the discharge of stormwater or sewer system into a receiving water.

21.70.225  “P” definitions.

“Pervious” means, as opposed to impervious surfaces, these are surfaces that allow water to pass through at rates similar to pre-developed conditions or better. Pervious surfaces include, but are not limited to pervious asphalt, pervious concrete, pervious gravel, grass or pervious pavers.
“Pier” means a platform built on pilings or similar structures that projects over, and is raised above, the water and is attached to land, and that is used for boat moorage, swimming, fishing, public access, or similar activities requiring access to deep water.
“Piling” means the structural supports for piers, usually below the pier decking and anchored in the water.
“Pile, moorage” means a standalone piling to which a boat is tied up to prevent it from swinging with changes of wind, waves or other similar functions.
“Ponds” means areas of open water fed by springs, or fed by natural and enhanced drainage ways, which are so intrinsically associated with a wetland, stream or natural watercourse as to merit protection under the provisions of this title.

“Practical alternative” means an alternative that is available and capable of being carried out after taking into consideration cost, existing technology, and logistics in considering overall project purposes, and having fewer impacts to critical areas.

“Priority habitat” means habitat type or elements with unique or significant value to one or more species as classified by the Department of Fish and Wildlife. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element (see WAC 173-26-020(30)).

“Priority species” means species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels. Priority species are those that meet any of the criteria set forth in WAC 173-26-020(31).

“Professional office” means those establishments engaged in processes where human capital is the major input and where equipment and materials are not of major importance. These establishments make available the knowledge and skills of their employees, often on an assignment basis, where an individual or team is responsible for the delivery of services to a client.

“Public access” means the ability of the general public to reach, touch, and enjoy the water's edge, to travel on the waters of the state, and to view the water and the shoreline.

“Public interest” means the interest shared by the citizens of the state or community at large in the affairs of government, or some interest by which their rights or liabilities are affected including, but not limited to, an effect on public property or on health, safety, or general welfare resulting from a use or development.

21.70.226  “Q” definitions.

“Qualified professional” means a person with experience and training in the pertinent scientific discipline, and who is a qualified scientific expert with expertise and/or certification appropriate for the relevant subject. A qualified professional must have obtained a degree in biology, engineering, environmental studies, fisheries, geomorphology, or related field and, unless otherwise specified in this master program, must have at least two years of related work experience.

21.70.227  “R” definitions.

“Recharge” means rainwater and snowmelt that has percolated through the unsaturated zone, increasing the amount of groundwater in storage and raising the water table.

“Reconstruction” as used in WMC 21.73.080 means to undertake construction within and/or on an existing structure with fair-market construction costs greater than 50 percent of the replacement cost of the existing structure being rebuilt. The construction cost shall be valid for a period beginning on the date of permit issuance and ending 18 months after the date the permit is finalized by the City.

“Recreational uses” means facilities designed consistent with WMC 21.75.080 and used to provide recreational opportunities to the public.

“Repair” means to restore something broken or damaged to good condition.

“Replacement cost” means the square footage of the structure multiplied by local building costs per square foot, or a similar method of calculation.

“Reservation of easement” means preservation of land through legal agreement with the property owner. The land is usually prevented from being built upon to preserve open space, habitat, or steep slopes, or to allow access to adjacent parcels or utility lines.
“Residential use” means development in which people sleep and prepare food, other than developments used for transient occupancy. As used in the shoreline master program residential development includes single-family development (known as detached dwelling unit), multifamily development (attached dwellings/ stacked), townhome development (attached dwellings/ not stacked, and the creation of new residential lots through land division.

“Restoration” when used with Chapter 21.77 WMC means measures taken to restore an altered or damaged natural feature including:

1. Active steps taken to restore damaged wetlands, streams, protected habitat, or associated buffers to the functioning condition that existed prior to an unauthorized alteration; and
2. Actions performed to reestablish structural and functional characteristics of the critical area that have been lost by alteration, past management activities, or catastrophic events.

“Restore,” “restoration” or “ecological restoration” means the reestablishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including, but not limited to, re-vegetation, removal of intrusive shoreline structures and removal or treatment of toxic materials. Restoration does not imply a requirement for returning the shoreline area to aboriginal or pre-European settlement conditions.

“Riparian” means of, on, or pertaining to the banks of a river.

“Riprap” means a layer, facing, or protective mound of large stones, boulders, or artificial material placed to prevent erosion, scour, or sloughing of a structure or stream embankment by absorbing wave action and retaining earth landward of its placement.

21.70.228     “S” definitions.

“Scrub-shrub wetland” means a regulated wetland with at least 30 percent of its surface area covered by woody vegetation less than 21 feet in height as the uppermost strata.

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

"Sensitive Areas" means: See “Critical areas.”

“SEPA” means the Washington State Environmental Policy Act, Chapter 43.21C RCW.

“Shorelands” means those lands extending landward for two hundred feet in all directions as measured on a horizontal plane from the ordinary high-water mark; floodways and contiguous floodplain areas landward two hundred feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of this chapter; the same to be designated as to location by the department of ecology.

“Shoreline jurisdiction” means all “shorelines of the state” and “shorelands” as defined in RCW 90.58.030.

“Shoreline master program” means the Woodinville shoreline master program adopted pursuant to Chapter 90.58 RCW and Chapter 173-26 WAC.

“Shoreline modifications” means those actions that modify the physical configuration or qualities of the shoreline area, usually through the construction of a physical element such as a dike, breakwater, pier, weir, dredged basin, fill, bulkhead, or other shoreline structure. They can include other actions, such as clearing, grading, or application of chemicals.

“Shoreline stabilization” means protecting shoreline upland areas and shoreline uses from the effects of shoreline wave action, flooding or erosion. Shoreline stabilization can be separated into the following categories:

1. “Nonstructural” includes the planting or re-planting of native vegetation, beach enhancement and similar nonstructural measures;
2. “Structural” includes the use of structures such as bulkheads, revetments, cribs, and gabions made of hard materials such as stone, concrete or timber;
3. “Bioengineering” includes the use of vegetation, both through planting and for structural purposes such as live staking, brush layering, and brush matting; or

4. “Biotechnical measures” includes the combination of bioengineering approaches with some degree of structural design such as matting or vegetated gabion walls or mattresses, vegetated cribbing, vegetated rip rap, or keyed native toe-boulders.

“Shoreline stabilization, hard structural” means shoreline erosion control practices using hardened structures that armor and stabilize the shoreline from further erosion. Hardening materials typically include concrete, boulders, dimensional lumber or similar materials.

“Shoreline stabilization, soft structural” means shoreline erosion control practices that contribute to restoration, protection or enhancement of shoreline ecological functions such as the use of bioengineering and biotechnical measures.

“Shorelines” means all of the water areas of the state, including reservoirs, and their associated shorelands together with the lands underlying them, except (1) shorelines of statewide significance; (2) shorelines on segments of streams upstream of a point where the mean annual flow is 20 cubic feet per second or less and the wetlands associated with such upstream segments; and (3) shorelines on lakes less than 20 acres in size and wetlands associated with such small lakes.

“Sign” means any structure, device, or natural object containing words and/or symbols used to attract attention to, identify, or advertise the premises on which located, or the occupant of said premises, or relating to goods or services manufactured, produced, or available on said premises, or conveying other information. Such signs must relate directly, and not incidentally, to such business, use or service.

“Significant vegetation removal” means the removal or alteration of trees, shrubs, and/or groundcover by clearing, grading, cutting, burning, chemical means, or other activity that causes significant ecological impacts to functions provided by such vegetation. The removal of invasive or noxious weeds does not constitute significant vegetation removal. Tree pruning, not including tree topping, where it does not affect shoreline ecological functions, does not constitute significant vegetation removal.

“Soil survey” means the most recent soil survey for the local area or county by the National Resources Conservation Service, U.S. Department of Agriculture.

“Species” means any group of animals classified as a species or subspecies as commonly accepted by the scientific community.

“Species, endangered” means any fish or wildlife species or subspecies that is threatened with extinction throughout all or a significant portion of its range and is listed by the state or federal government as an endangered species.

“Steep slope” means any area with a slope of 40 percent or steeper and with a vertical relief of 10 or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least 10 feet of vertical relief.

“Stream” means a course or route, formed by nature or modified by humans and generally consisting of a channel with a bed, banks, or sides throughout substantially all its length, along which surface waters, with some regularity (annually in the rainy season), naturally and normally flow in draining from higher to lower lands. This definition does not include specially designed irrigation and drainage ditches, grass-lined swales, canals, stormwater runoff devices, or other courses unless they are used by salmonids or to convey watercourses that were naturally occurring prior to construction.

“Streambank” means the edge of the river or creek, parallel to and upland of the ordinary high-water mark.

“Structure” means a permanent or temporary edifice or building, or any piece of work artificially built or composed of parts joined together in some definite manner, whether installed on, above, or below the surface of the ground or water, except for vessels.
“Substantial destruction” means to remove more than 60 percent of the existing exterior walls of a building or structure, as measured by the horizontal linear length of all exterior walls. Any partial removal of existing wall shall count towards the measurement of horizontal linear length the same as if the entire wall within that horizontal linear length was removed, except partial removal shall not include replacement of windows or doors when no beams or struts are removed. Walls shall include all structural components such as framing and foundations but shall not include the floor or roof and such wall components as insulation, or finish elements or surfaces (e.g., drywall or exterior paneling and siding).
“Substantial improvement” means to undertake construction within and/or on an existing structure which has a valid construction permit with fair-market construction costs equal to or exceeding 50 percent of the replacement cost of the existing structure being enlarged, extended, repaired, remodeled, or structurally altered. All project phases necessary to result in a habitable building must be included. The calculation for fair market construction costs shall include all costs of construction associated with the structure for a period beginning on the date of permit issuance and ending 24 months after the date the permit is finalized by the City. Costs do not include taxes or any permit fees.
“Substantially degraded” means to cause significant ecological impact.
“Swale” means: See “grassy swale.”

21.70.229  “T” definitions.

“Townhome” means a building containing one dwelling unit that occupies space from the ground to the roof and is attached to one or more other townhomes.
“Tree” means a self-supporting woody perennial plant, excluding a bush or shrub.
“Tree, drip line” means the area directly located under the outer circumference of the tree branches.
“Tree, hazard” means a tree designated by a qualified arborist and accepted by the City as having a high to extreme risk using the International Society of Arborists Tree Risk Assessment Qualification (TRAQ) system. A hazard tree must have a likely or very likely potential to fail and a target that might sustain injury or damage. Hazard trees are created through a variety of circumstances including human influences, disease, and weather.
“Tree, nuisance” means a tree whose branches, stem and/or roots cause one or more of the following conditions to exist:
1. Substantial physical damage to public or private structures;
2. Substantially impairs, interferes or restricts streets, sidewalks, sewers, power lines, utilities or other public improvements;
3. Substantially impairs, interferes, or obstructs any street, private lane, or driveway;
4. The tree is diseased and restoration of the tree to a sound condition is not practical.
“Tree removal” means uprooting, severing the main trunk of the tree or any act which causes, or may reasonably be expected to cause, the tree to die, including but not limited to damage inflicted upon the root system by machinery, storage of materials, or soil compaction; substantially changing the natural grade above the root system or around the trunk; excessive pruning; or paving with concrete, asphalt, or other impervious materials in a manner which may reasonably be expected to kill the tree.

21.70.230  “U” definitions.

“Utilities” means services, facilities and infrastructure that produce, transmit, carry, store, process or dispose of electrical power, gas, water, sewage, communications, oil, storm water and the like. This includes:
1. Primary: facilities and infrastructure that are provided by a public agency, utility, or franchise which produce, transmit, convey, store, process, or dispose of essential utility services throughout an area. These include, but are not limited to, water storage tanks and lines, reservoirs and booster stations, wastewater interceptors, sewage pump stations and lines, electrical transmission substations and high-tension and distribution power lines, natural gas pipelines, and associated equipment; and including telecommunication facilities provided by a public or private entity.

2. Accessory: On-site utilities that connect directly to uses and are considered part of the primary use.

21.70.231 “V” definitions.

“Vessel” includes ships, boats, barges or any other floating craft which are designed and used for navigation and do not interfere with the normal public use of the water.

“Visual corridor” (used interchangeably with “view corridor”) means unobstructed visual access to and from waterways and their adjacent shoreland features. View or visual protection can include, but is not limited to, preventing blockage or barriers through height limitations on structures or requiring aesthetic enhancement through the undergrounding of utility lines or added landscaping.

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

21.70.232 “W” definitions.

“Water-dependent use” means a use or portion of a use which cannot exist in a location that is not adjacent to the water and which is dependent on the water by reason of the intrinsic nature of its operations.

“Water-enjoyment use” means a recreational use or other use that facilitates public access to the shoreline as a primary characteristic of the use; or a use that provides for recreational use or aesthetic enjoyment of the shoreline for a substantial number of people as a general characteristic of the use and which through location, design, and operation ensures the public’s ability to enjoy the physical and aesthetic qualities of the shoreline. To qualify as a water-enjoyment use, the use must be open to the general public and the shoreline-oriented space within the project must be devoted to the specific aspects of the use that foster shoreline enjoyment.

“Water frontage” means the extent of land abutting water.

“Water-oriented use” means a use that is water-dependent, water-related, or water-enjoyment, or a combination of such uses.

“Water quality” means the physical characteristics of water within shoreline jurisdiction, including water quantity, hydrological, physical, chemical, aesthetic, recreation-related, and biological characteristics. Where used in this chapter, the term “water quantity” refers only to development and uses regulated under this chapter and affecting water quantity, such as impermeable surfaces and stormwater handling practices. Water quantity, for purposes of this chapter, does not mean the withdrawal of ground water or diversion of surface water pursuant to RCW 90.03.250 through 90.03.340.

“Water-related use” means a use or portion of a use which is not intrinsically dependent on a waterfront location but whose economic viability is dependent upon a waterfront location because:

1. The use has a functional requirement for a waterfront location such as the arrival or shipment of materials by water or the need for large quantities of water; or

2. The use provides a necessary service supportive of the water-dependent uses and the proximity of the use to its customers makes its services less expensive and/or more convenient.

“Waterward” means the direction from a point towards a body of water, stream, or river.
“Waterways” means the path followed by flowing water normally indicated by stream banks, boulders, and/or alluvial soil which are arranged to define the pathway. “Wetland” or “wetlands” means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from 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. “WMC” means Woodinville Municipal Code.
CHAPTER 21.71
SHORELINE ENVIRONMENT DESIGNATIONS

21.71.010 Findings.

The City’s shorelines comprise a riverine system centered on the Sammamish River, which flows north and west through the City, and Little Bear Creek, a major tributary, which flows southwest through the western portion of downtown. Existing uses along the shorelines are comprised of residential, public, private recreation and dedicated open space, commercial and industrial uses.


Woodinville’s shoreline is divided into the following shoreline environment designations based upon the designation criteria prescribed by this chapter:

(1) Aquatic;
(2) Conservancy;
(3) Shoreline Residential;
(4) Urban Conservancy; and
(5) Urban General.

21.71.030 Shoreline jurisdiction and shoreline map.

The shoreline environment designation map set forth in Figure 21.71.030(1) and the Shoreline Environmental Zone Diagram in Figure 21.71.030(2) are graphic representations of the City’s shoreline jurisdiction regulated by the shoreline master program. Figure 21.71.030(1) serves as the official map for assigning shoreline environment designations to properties subject to the following interpretations:

(1) The boundaries depicted on the map are approximate and are for planning purposes only;
(2) The precise extent of shoreline jurisdiction is determined at the time of a development proposal using additional site-specific evaluation to confirm and/or verify actual boundaries of the shoreline jurisdiction;
(3) Property lines and the designation criteria in this chapter shall be used for interpreting the boundaries of shoreline environment designation, except:
   a. For the aquatic environment, the ordinary high-water mark is used for interpreting the boundary; and
   b. Where more than one shoreline environment is shown within a public right-of-way, excluding the state right-of-way, the centerline of the right-of-way is used for interpreting the boundary; and
   c. All areas not mapped or designated are automatically assigned an Urban Conservancy Environment designation until the shoreline can be re-designated through a master program amendment.
Figure 21.71.030(1)
Shoreline Environment Designation Map

The Sammamish River Shoreline Corridor

Shoreline Environment Designation
- Aquatic (water)
- Conservancy
- Residential
- Urban Conservancy
- General Urban

*Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed. Additional site-specific evaluation may be needed to confirm or modify the information shown on this map.*
Little Bear Creek Shoreline Corridor

Shoreline Environment Designation

- Aquatic (water)
- Conservancy
- Residential
- Urban Conservancy
- General Urban

*Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed. Additional site-specific evaluation may be needed to confirm or modify the information shown on this map.*
21.71.040 Aquatic Environment.

(1) Purpose. The purpose of the Aquatic Environment is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high-water mark.

(2) Designation Criteria. Assign an Aquatic Environment designation to lands waterward of the ordinary high-water mark.

(3) Management Policies. The following policies apply to all Aquatic Environment areas:
   (a) Allow new over-water structures only for water-dependent uses, public access, scientific research, or ecological restoration;
   (b) The size of new over-water structures should be limited to the minimum necessary to support the intended use;
   (c) Encourage multiple use of over-water facilities to reduce impacts from shoreline development and increase effective use of water resources;
   (d) All developments and uses on navigable waters or their beds should be located and designed to minimize interference with surface navigation, to consider impacts to public views, and to allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration;
   (e) Uses that adversely impact the ecological functions of critical freshwater habitats should not be allowed except where necessary to achieve the objectives of RCW 90.58.020, and then only when their impacts are mitigated according to the sequence described in WAC 173-26-201(2)(e) as necessary to assure no net loss of ecological functions; and
   (f) Shoreline uses and modifications should be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.
21.71.050 Conservancy Environment.

(1) Purpose. The purpose of the Conservancy Environment is to protect and restore ecological functions while making areas available for limited human use, when appropriate and nondestructive of critical areas. The Conservancy Environment is intended to balance the existing development within the shoreline jurisdiction to be consistent with the shoreline critical area regulations.

(2) Designation Criteria. Assign a Conservancy Environment designation to all shorelands extending 100 feet landward from the ordinary high-water mark.

(3) Management Policies. The following policies apply to all Conservancy Environment areas:
   (a) Critical areas can be altered only as a last resort and only when overriding State-wide interests or protection or enhancement of the natural resources require the alteration;
   (b) Uses should be compatible with uses and activities in adjacent environments and should meet the Shoreline Management Act guideline (WAC 173-26-211(2)(a)) of being non-consumptive of the physical and biological resources of the area;
   (c) Preservation of resources must have priority over public access recreation and development objectives whenever a conflict exists; and
   (d) Construction of structural shoreline stabilization and flood control works should be minimized.


(1) Purpose. The purpose of the Shoreline Residential Environment is to accommodate residential development and appurtenant structures that are consistent with the Shoreline Management Act. An additional purpose is to provide appropriate public access and recreational uses.

(2) Designation Criteria. Assign a Shoreline Residential Environment designation to all shorelands extending beyond the first 100 feet landward from the ordinary high-water mark that are predominantly characterized by single-family or multifamily residential development or are planned for residential development.

(3) Management Policies. The following policies apply to all Shoreline Residential Environment areas:
   (a) Development standards shall be set to maintain no net loss of shoreline ecological functions;
   (b) Proposed projects should be reviewed for consistency with the no net loss policy, considering 1) the environmental limitations and sensitivity of the shoreline area, 2) proposed mitigation for anticipated impacts, 3) the level of infrastructure and services available, and 4) other comprehensive planning considerations;
   (c) Multifamily and multi-lot residential and recreational developments should provide public access and joint-use recreational facilities where appropriate; and
   (d) Access, utilities, and public services should be available and adequate to serve existing needs and/or planned future development.

21.71.070 Urban Conservancy.

(1) Purpose. The purpose of the Urban Conservancy Environment is to protect and restore ecological functions of open space, floodplain and other sensitive lands where they exist in urban and developed settings, while allowing a variety of compatible uses.

(2) Designation Criteria. Assign an Urban Conservancy Environment designation to all shorelands extending beyond the first 100 feet landward from the ordinary high-water mark that are planned for development compatible with maintaining or restoring ecological functions.
functions of the area, and that are not generally suitable for water-dependent uses, or lie in areas where any of the following characteristics apply:

(a) They are open space, floodplain or other sensitive areas that should not be more intensively developed;
(b) They have potential for ecological restoration;
(c) They retain important ecological functions, even though partially developed; or
(d) They have the potential for development that is compatible with ecological restoration.

(3) Management Policies. The following policies apply to all Urban Conservancy Environment areas:

(a) Uses that preserve the natural character of the area or promote preservation of open space, floodplain or sensitive lands either directly or over the long term should be the primary allowed uses. Uses that result in restoration of ecological functions should be allowed if the use is otherwise compatible with the purpose of the environment and the setting;
(b) Standards should be established for shoreline stabilization measures, vegetation conservation, water quality, and shoreline modifications within the Urban Conservancy designation; and these standards, in combination with proposed mitigation for any anticipated impacts, should ensure that new development does not result in a net loss of shoreline ecological functions or further degrade other shoreline values;
(c) Public access and public recreation objectives should be implemented whenever feasible and significant ecological impacts can be mitigated; and
(d) Water-oriented uses should be given priority over non-water-oriented uses. For shoreline areas with commercial development or adjacent to commercially navigable waters, water-dependent uses should be given highest priority.


(1) Purpose. The purpose of the Urban General Environment is to provide for economically viable use of commercial and industrial areas that contain existing non-water-dependent use or are not suitable for water-dependent uses due to limited or no water access, and to protect existing ecological functions.

(2) Designation Criteria. Assign an Urban General Environment designation to all shorelands extending beyond the first 100 feet landward from the ordinary high-water mark that are zoned industrial, commercial, or mixed-use and contain existing non-water dependent industrial and commercial uses.

(3) Management Policies. The following policies apply to all Urban General Environment:

(a) Non-water-dependent uses should not replace existing water-dependent uses;
(b) Development standards shall be set to maintain no net loss of shoreline ecological functions;
(c) Proposed projects should be reviewed for consistency with the no net loss policy, considering 1) the environmental limitations and sensitivity of the shoreline area, 2) proposed mitigation for anticipated impacts, 3) the level of infrastructure and services available, and 4) other comprehensive planning considerations; and
(d) Industrial and commercial development should provide public access to the shoreline where appropriate.
CHAPTER 21.72
SHORELINE USE TABLE

21.72.010  Applicability.

This chapter applies to specific uses and types of development that typically occur in shoreline areas. This chapter is applied in combination with regulations found elsewhere in the shoreline master program.

21.72.020  Permitted uses, prohibited uses.

Uses within the shoreline jurisdiction are subject to the following:

(1) Uses listed with a “P” in Table 21.72.030 are permitted, subject to a substantial development permit or shoreline exemption;

(2) Uses listed with a “C” in Table 21.72.030 are conditionally permitted, subject to approval of a shoreline conditional use permit;

(3) Uses listed with an “X” in Table 21.72.030 are prohibited;

(4) Uses not listed in the table may be authorized as conditional uses provided the review criteria in WAC 173-27-160 are satisfied; and

(5) Review procedures for deciding project permits are found in Chapters 21.80 WMC.

21.72.030  Use table.

Table 21.72.030 establishes those uses which are permitted, those uses requiring special approval, and those uses that are prohibited within each shoreline environment designation.

Table 21.72.030: Shoreline Use Table

<table>
<thead>
<tr>
<th>Shoreline Use</th>
<th>Aquatic</th>
<th>Conservancy</th>
<th>Residential</th>
<th>Urban Conservancy</th>
<th>Urban General</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Uses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detached single-family dwelling</td>
<td>X</td>
<td>X</td>
<td>P</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Townhome (attached dwellings/ not stacked)</td>
<td>X</td>
<td>X</td>
<td>P</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Multifamily dwellings (attached dwellings/ stacked)</td>
<td>X</td>
<td>X</td>
<td>P</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Overwater dwellings (all)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Boarding/Rooming houses and dormitories (long-term lodging)</td>
<td>X</td>
<td>X</td>
<td>C</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Normal appurtenance accessory to residential use not listed</td>
<td>X</td>
<td>X</td>
<td>P</td>
<td>X</td>
<td>P</td>
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<tr>
<td>Commercial Uses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial, wholesale, retail development</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Professional office</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
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<tr>
<td>Shoreline Use</td>
<td>Aquatic</td>
<td>Conservancy</td>
<td>Residential</td>
<td>Urban Conservancy</td>
<td>Urban General</td>
</tr>
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<td>------------------------------------------------</td>
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<td>-------------</td>
<td>-------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Water-enjoyment commercial uses</td>
<td>X</td>
<td>C</td>
<td>X</td>
<td>C</td>
<td>P</td>
</tr>
<tr>
<td>Eating establishments &amp; drinking places</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>C</td>
<td>P</td>
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<tr>
<td>Short-term lodging (e.g., hotel)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Water-related commercial uses</td>
<td>X</td>
<td>C</td>
<td>X</td>
<td>C</td>
<td>P</td>
</tr>
<tr>
<td>Nursery and garden center businesses</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Outdoor storage and outdoor bulk sales</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>Non-water-oriented uses other than those</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>specifically listed in the table</td>
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<td></td>
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<tr>
<td><strong>Manufacturing/ Industrial Uses</strong></td>
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<tr>
<td>Light industrial and manufacturing development</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
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<tr>
<td>Accessory outdoor storage incidental to a</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
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<tr>
<td>permitted use</td>
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<td>Warehousing</td>
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<td>X</td>
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<td>P</td>
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<td>Research and Development uses</td>
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<td>X</td>
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<td>Hazardous Waste Treatment Facilities</td>
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<td>X</td>
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<td>Junk/Salvage Facilities</td>
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<td>X</td>
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<td><strong>Utilities</strong></td>
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<td>Water-dependent utilities (i.e., outfalls)</td>
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<td>X</td>
<td>X</td>
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<td>Accessory utilities, except storm water</td>
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<td>P</td>
<td>P</td>
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<td>conveyance facilities</td>
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<tr>
<td>Accessory utilities - storm water</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
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<td>Water treatment facilities (potable)</td>
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<td>Solid waste transfer sites/ stations</td>
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<td>Sewage/ waste treatment</td>
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<td>Natural gas/ oil storage facilities</td>
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<td><strong>Transportation &amp; Parking Facilities</strong></td>
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<td>Minor arterials</td>
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<td>P</td>
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<td>Principal arterials/ collectors</td>
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<td>Neighborhood/ local access</td>
<td>X</td>
<td>C</td>
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<td>P</td>
<td>P</td>
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<tr>
<td>Bridge/ tunnels – general</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Railroad bridge/ tunnels</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Pedestrian, bicycle, equestrian trails</td>
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<td>P</td>
<td>P</td>
<td>P</td>
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<tr>
<td>Highways and freeways</td>
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<td>C</td>
<td>X</td>
<td>C</td>
<td>C</td>
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<tr>
<td>All accessory parking and loading areas</td>
<td>X</td>
<td>X</td>
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<td>P</td>
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<tr>
<td>incidental to a permitted use</td>
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<td>Surface parking lots (primary use)</td>
<td>X</td>
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<td>X</td>
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<td>Structured parking facilities (primary use)</td>
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<td>X</td>
<td>C</td>
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<td><strong>Recreational Uses</strong></td>
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<tr>
<td>Parks and associated park improvements</td>
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<td>P</td>
<td>P</td>
<td>P</td>
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<tr>
<td>(active, passive, and open space) not listed</td>
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<tr>
<td>below</td>
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</tr>
<tr>
<td>Shoreline Use</td>
<td>Aquatic</td>
<td>Shoreline Environment Designation</td>
<td>Urban Conservancy</td>
<td>Urban General</td>
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<td>------------------------------------------------------------------------------</td>
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<tr>
<td>Water-dependent recreational development – noncommercial (e.g., public swimming areas)</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
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<tr>
<td>Water-oriented recreational development - commercial</td>
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<td>X</td>
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<tr>
<td>Non-water oriented recreational development</td>
<td>X</td>
<td>X</td>
<td>P</td>
<td>P</td>
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<tr>
<td>Community gardens (e.g., group of small garden plots)</td>
<td>X</td>
<td>X</td>
<td>P</td>
<td>X</td>
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<td><strong>Resource Lands</strong></td>
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<tr>
<td>Forest management practices</td>
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<td>Agriculture</td>
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<td>X</td>
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<td>Aquaculture</td>
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<td>C</td>
<td>C</td>
<td>C</td>
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<tr>
<td>Mining</td>
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<td>X</td>
<td>X</td>
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<tr>
<td><strong>Shoreline Modifications</strong></td>
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</tr>
<tr>
<td>Breakwaters/jetties/rock weirs/groins</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Breakwaters/jetties/rock weirs/groins used with restoration activities</td>
<td>P</td>
<td>P</td>
<td>P</td>
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<tr>
<td>Dredging other than those specifically listed in the table</td>
<td>C</td>
<td>C</td>
<td>C</td>
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<tr>
<td>Dredging for fill material associated with MTCA or CERCLA habitat restoration project</td>
<td>P</td>
<td>P</td>
<td>P</td>
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<tr>
<td>Fill waterward of the ordinary high-water mark</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Fill waterward of the ordinary high-water mark which is part of an environmental restoration plan or required mitigation</td>
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<td>P</td>
<td>P</td>
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<td>Land surface modification</td>
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<td>Shoreline habitat and restoration activities</td>
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<td>Shoreline stabilization - nonstructural</td>
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<td>Shoreline stabilization – hard and soft structural</td>
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<td>C</td>
<td>C</td>
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<td>Flood control structures and activities</td>
<td>C</td>
<td>C</td>
<td>C</td>
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<td><strong>Boating Uses and Facilities</strong></td>
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<tr>
<td>Docks, floats, and moorage pilings accessory to a permitted residential use¹</td>
<td>C</td>
<td>C</td>
<td>P</td>
<td>P</td>
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<tr>
<td>Docks, floats, and moorage pilings accessory to a permitted non-residential use¹</td>
<td>C</td>
<td>C</td>
<td>P</td>
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<td>Piers accessory to a permitted residential or non-residential use</td>
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<td>X</td>
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<tr>
<td>Public piers, docks and floats</td>
<td>C</td>
<td>C</td>
<td>P</td>
<td>P</td>
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<tr>
<td>Piers, docks, floats, boat lifts, and moorage pilings other than those specifically listed in the table</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Shoreline Use</td>
<td>Shoreline Environment Designation</td>
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<td>Aquatic</td>
<td>Conservancy</td>
<td>Residential</td>
<td>Urban Conservancy</td>
<td>Urban General</td>
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<td>Marina</td>
<td>X</td>
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<tr>
<td>Access for non-motorized boats</td>
<td>P</td>
<td>P</td>
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<td>Access for motorized boats</td>
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<td><strong>Miscellaneous Uses</strong></td>
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<tr>
<td>Habitat conservation/ enhancement</td>
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<td>P</td>
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<td>Religious facilities</td>
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<td>Instream structures</td>
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</tr>
<tr>
<td>scientific research; cultural access</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharges of sewage, waste, rubbish,</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>litter, marine toilets and similar</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disposal of fuels, cleansers, hydraulic</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>fluid and other possible toxic substances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Signs</td>
<td>X</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
</tbody>
</table>

See explanation of “P”, “C” and “X” in WMC 21.72.020

Notes:

1 See restriction in WMC 21.76.020(1)
CHAPTER 21.73
GENERAL SHORELINE REGULATIONS

21.73.010 Applicability.
The regulations set forth in this chapter apply to all uses, development and activities within the shoreline jurisdiction.

21.73.020 No net loss of ecological functions and mitigation sequencing.

(1) Under Chapter 173-26 WAC, uses, development and shoreline modifications shall be designed, located, sized, constructed and/or maintained to achieve no net loss of shoreline ecological functions. At the project level, this is a balancing of unavoidable shoreline ecological function losses with replacement for those losses so that further reduction to shoreline ecological functions or ecosystem-wide processes may be prevented.

(2) To assure that development activities do not cause a net loss of shoreline ecological functions, a written mitigation sequencing analysis is required if any of the following conditions are present:

(a) Where a proposed use or activity is not listed in the shoreline master program, including shoreline conditional use for unclassified uses or shoreline variances;
(b) Where regulations reference a requirement for a mitigation sequencing analysis; or
(c) Where alternative compliance or mitigation measures not contained within the shoreline master program are proposed.

(3) A written mitigation sequencing analysis is not required where specific standards are provided in the shoreline master program unless the standard specifically references such a requirement.

(4) The written mitigation sequencing analysis must demonstrate that all reasonable efforts have been examined with the intent to avoid or, if this is not feasible, to minimize and then mitigate for any impacts to shoreline ecological functions caused by the use or activity.

(5) A written mitigation sequencing analysis must include the following:

(a) A description of the existing conditions, functions and values of the affected shoreline;
(b) A demonstration that mitigation sequencing has been followed in designing and locating the use or activity pursuant to WMC 21.73.020(6); and
(c) When avoiding the impacts altogether is not feasible, the analysis shall include an evaluation of the following:

(i) Anticipated impacts to the shoreline ecological functions;
(ii) Goals and objectives for achieving no net loss related to the functions and values of the impacted shoreline ecological functions;
(iii) Proposed mitigation actions and how these relate to the goals and objectives for achieving no net loss; and
(iv) Measurable criteria for evaluating whether the no net loss standard has been achieved.

(6) Mitigation sequencing includes the following in order of highest preference to lowest preference:
(a) Avoid the impact altogether, which means not taking an action or part of an action to prevent impacts to shoreline ecological functions such as moving structures further away from properly functioning shoreline areas, using different landscaping plants or techniques, substituting a less impactful use, or redesigning the proposal altogether;
(b) Minimizing the impact 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 the impacts;
(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
(d) Reducing or eliminating the impact over time through 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
(f) Monitoring the impact and taking appropriate corrective measures.

(7) WMC 21.73.020(6)(a) shall not be used to deny a use or activity authorized by the shoreline master program. Mitigation sequencing actions shall have the lower priority measures applied only where higher priority measures are determined to be infeasible or not applicable.

(8) When compensatory measures are appropriate, preferential consideration shall be given to measures that replace the impacted functions directly and in the immediate vicinity of the impact. However, alternative compensatory mitigation within the watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or comprehensive resource management plans applicable to the area of impact may be authorized. Authorization of compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions.

(9) Application of the mitigation sequencing should not result in required mitigation more than that necessary to assure no net loss of shoreline ecological functions.

21.73.030 Federal and state approvals.

(1) All work at or waterward of the ordinary high-water mark requires permits or approvals from one or more of the following federal and state agencies: U.S. Army Corps of Engineers, Washington State Department of Fish and Wildlife, Washington State Department of Natural Resources, or Washington State Department of Ecology.

(2) Documentation verifying necessary federal and state agency approvals must be submitted to the City prior to issuance of construction permits affecting shoreline areas.

21.73.040 Public access.

(1) There are a diversity of parks, open space, and public facilities providing access to the Sammamish River and Little Bear Creek. This includes the Sammamish River Trail, which parallels the Sammamish River, Wilmot Park, Woodin Creek Park, Little Bear Creek Rotary Park, and Little Bear Creek Lineal Park. The City’s intent is to develop visual and physical access to the shoreline and to develop connections between these facilities and with public rights-of-way and the larger city-wide trails and pedestrian network.
(2) Public access to the shoreline is required for the following when inside the shoreline jurisdiction:
   (a) New substantial development by any public entities, including but not limited to the City, state agencies, and public utility districts;
   (b) All new divisions of land creating five or more new lots and/or any development having five or more dwelling units;
   (c) Any new commercial or industrial development/redevelopment that may increase demand for public access to the shoreline or recreational facilities near or adjacent to the shorelines.

(3) Public access to the shoreline may be in the form of:
   (a) Physical access such as but not limited to trails, walkways, swimming areas, parks; or
   (b) Visual access such as view corridors; or
   (c) A combination of physical and visual access.

(4) Public access to the shoreline is required to incorporate the following elements:
   (a) Where applicable, public access shall be developed consistent with City, King County and regional parks and open space plans;
   (b) All residential development subject to public access requirements shall provide shared public open space on the shoreline for residents of the development;
   (c) Public trail easements and/or dedications are required by all developments, except for detached single-family residential, when such developments are located within any community or regional trail corridor identified in the Woodinville Comprehensive Plan and/or the City’s Non-motorized Transportation Plan;
   (d) Public access locations shall be clearly marked with visible signage;
   (e) Public access can consist of a dedication of land or a physical improvement in the form of a walkway, trail, bikeway, corridor, viewpoint, park, or other means approved by the director;
   (f) Shoreline public access provided by street ends, public utilities, and rights-of-way shall not be diminished consistent with RCW 35.79.035.

(5) Where public access is shown to be incompatible with a shoreline development due to reasons of safety, security, or impact to the shoreline environment, the Director may approve alternative measures for public access such as but not limited to contributing to public access at off-site locations.

(6) Maintenance responsibility by private parties for public benefits.
   (a) Property owners who construct or have a private party or public agency construct on their behalf, an improvement which encourages public access or use or has other public benefit, shall be responsible for the maintenance, upkeep, and provision of insurance thereof, if such improvement is on the property.
   (b) If an owner constructs an improvement which encourages public access or use or has other public benefit on other than his/her own property, responsibility of maintenance, upkeep, and provisions of insurance shall fall on the owner or owners of the property on which the improvement was made.
   (c) Maintenance specifications filed with the City shall be required before the issuance of a construction permit.
   (d) Documentation of the maintenance obligation set forth herein shall be recorded upon the title of the property upon which public access or public benefit improvements are constructed.
21.73.050 Shoreline vegetation management.

(1) General provisions.
   (a) This section applies in combination with other provisions of the Woodinville Municipal Code and the shoreline master program affecting shoreline vegetation such as vegetation clearing, tree pruning and removal, earth grading, vegetation restoration, and similar provisions.
   (b) This section provides the minimum requirements for vegetation management within the shoreline jurisdiction to assure no net loss of shoreline ecological functions resulting from new development activity.
   (c) Shoreline vegetation management shall not apply retroactively to existing legally established uses and development until such time that new uses, development and/or activities are proposed.

(2) Vegetation management.
   (a) Vegetation clearing shall be limited to the minimum necessary to accommodate approved shoreline development that is consistent with other provisions of this shoreline master program.
   (b) All land surface areas having vegetation removed and soils exposed due to development activity shall be re-vegetated, using native plants, to existing or better conditions than before the vegetation was removed.
   (c) The use of artificial chemicals including pesticides, herbicides and fertilizers shall be prohibited (organic plant treatments are acceptable) unless expressly allowed elsewhere by the shoreline master program.

(3) Vegetation conservation areas.
   (a) Wetland and fish and wildlife habitat conservation area buffers located within the shoreline jurisdiction are designated shoreline vegetation conservation areas (see WMC 21.77.100 and 21.77.120).
   (b) The following development standards apply within shoreline vegetation conservation areas:
      (i) Existing native vegetation shall be preserved to the extent feasible;
      (ii) Native trees and shrubs shall be preserved to maintain and provide shoreline ecological functions such as habitat, shade, and slope stabilization; and
      (iii) No more than 15 percent of the total native vegetation within the shoreline vegetation conservation area on the property can be cleared within any five-year period unless replacement native plantings are provided in a quality and quantity that provides greater benefit to shoreline ecological functions then a strict application of this section.
   (c) Tree management.
      (i) All native and nonnative trees shall be preserved within a shoreline vegetation conservation area, except where removal may be authorized, and replacement requirements are satisfied pursuant to Table 21.73.050.

Table 21.73.050: Vegetation Conservation Tree Replacement Requirements

<table>
<thead>
<tr>
<th>Size of Tree Removed</th>
<th>Replacement Requirement (each tree)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 6 inches diameter breast height</td>
<td>Permitted, provided either a native tree is planted, or native riparian vegetation is planted equal to or larger than the square footage of the drip line of the tree being removed</td>
</tr>
<tr>
<td>Size of Tree Removed</td>
<td>Replacement Requirement (each tree)</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>6 inches diameter breast height to 12 inches diameter breast height</td>
<td>Permitted, provided at least one native tree, 6-foot or more in height if a conifer, or 2-inch or more caliper if deciduous is planted</td>
</tr>
<tr>
<td>Greater than 12 inches diameter breast height, but less than 24 inches diameter breast height</td>
<td>Permitted, provided at least one native tree, 6-foot or more in height if a conifer, or 2-inch or more caliper if deciduous, is planted; plus, native riparian vegetation is planted equal to or larger than the square footage of the drip line of the tree being removed</td>
</tr>
</tbody>
</table>
| 24 inches diameter breast height and greater              | Only trees determined by the City to be hazardous or nuisance trees, or trees where retention is not feasible to reasonably allow a permitted shoreline use are permitted to be removed provided two native species replacement trees are planted meeting the following:  
• Each replacement conifer tree shall be at least six feet in height after planting; and/or  
• Each replacement deciduous tree shall be at least 3-inch caliper at the time of planting |
| Trees that fall because of natural causes, such as fire, flood, earthquake or storm | Replace with one native conifer or deciduous tree. Conifer trees shall be at least 6 feet in height after planting and deciduous trees shall be at least 2 inches in caliper at the time of planting.  
As an alternative, a fallen tree can be left in place provided conditions are included for the fallen tree to remain in place in perpetuity, including notification measures to future property owners of this restriction |

(ii) Permits for the removal of trees are set forth in Chapter 21.50 WMC, the City’s Tree Code.

(iii) Where Table 21.73.050 requires riparian vegetation plantings, at least 60 percent of the plantings shall be shrubs and the area dimensions of the shrubs shall be a minimum of three feet width in all directions at the time of the planting.

(iv) Tree removal mitigation shall be planted within the vegetation conservation area, except the Director may authorize alternative locations provide it is demonstrated that there is no net loss of shoreline ecological functions pursuant to WMC 21.73.020.

(d) Aquatic vegetation removal.
   (i) Aquatic vegetation control shall only occur when native plant communities and associated habitats are threatened or where an existing water-dependent use is restricted by the presence of invasive aquatic vegetation.
   (ii) The control of aquatic vegetation by hand pulling or placement of aquascreens, if proposed to maintain existing water depth for navigation, shall be considered normal maintenance and repair pursuant to WAC 173-27-040(2)(b).
Additionally, control of aquatic vegetation by mechanical methods may qualify as normal maintenance and repair, provided the bottom sediment or benthos is not disturbed in the process. If the bottom sediment or benthos is disturbed by mechanical methods, it shall not qualify as normal maintenance and repair under WAC 173-27-040(2)(b).

21.73.060 Archeological and historic resources.

The following requirements apply to archaeological and historic resources that are either recorded at the State Historic Preservation Office and/or by local jurisdictions or have been inadvertently uncovered:

1. Archaeological sites located in and outside shoreline jurisdiction are subject to Chapter 27.44 RCW (Indian graves and records) and Chapter 27.53 RCW (Archaeological sites and records) and development or uses that may impact such sites shall comply with Chapter 25-48 WAC as well as the provisions of the shoreline master program;

2. If archaeological resources are uncovered during excavation, all work shall immediately cease and the City, the Washington State Department of Archaeology and Historic Preservation, and affected Native American tribes shall be immediately notified;

3. A site inspection or evaluation by a professional archaeologist in coordination with affected Native American tribes shall be required for all permits issued in areas documented to contain archaeological resources;

4. Significant archaeological and historic resources shall be permanently preserved for scientific study, education and public observation. When the City determines that a site has significant archaeological, natural scientific or historical value:
   a. No permit authorizing development or land modification shall be issued which would pose a threat to the site; and
   b. The development may be required to be redesigned or postponed in such areas to allow investigation of public acquisition potential and/or retrieval and preservation of significant artifacts;

5. In the event an emergency as defined in RCW 90.58.030 necessitates rapid action to retrieve or preserve artifacts or data identified, the project may be exempted from the permit requirement of these regulations, provided the City notifies the Washington State Department of Ecology, the Washington State Attorney General’s Office and the Washington State Historic Preservation Office of such a waiver in a timely manner;

6. Identified historical or archaeological resources shall be considered in park, open space, public access, and site planning with access to such areas designed and managed to give maximum protection to the resource and surrounding environment; and

7. Clear interpretation of historical and archaeological features and natural areas shall be provided when appropriate.

21.73.070 Water quality, surface water runoff, and nonpoint pollution.

1. All shoreline development during and after construction shall minimize impacts related to surface runoff through control, treatment and release of surface water runoff such that there is no net loss of receiving water quality in the shoreline environment. Control measures include but are not limited to dikes, runoff intercepting ditches, catch basins, settling wet ponds, sedimentation ponds, oil/water separators, filtration systems, grassy swales, planted buffers, and fugitive dust controls.

2. Shoreline development and uses shall adhere to all required setbacks, buffers and standards for stormwater storage basins.
(3) All shoreline development shall comply with the applicable requirements of the City’s adopted Surface Water Design Manual and all applicable City stormwater regulations.


(5) Discharge of sewage, waste, rubbish, and litter into the water is not permitted. Disposal of fuels, cleansers, lubricants, or hydraulic fluids and other possible toxic substances into water bodies on shoreline areas or tributaries of shorelines is prohibited.

(6) If boats equipped with marine toilets and/or galleys do not have holding tanks, these facilities must be sealed from use to prevent their discharge into waterways.

21.73.080 Nonconformance.

(1) Finding. The City recognizes that land, structures, and uses of land and structures that do not conform to the Act or this shoreline master program are detrimental to the public interest. The City also recognizes that it would be unfair to require a nonconformance to immediately cease. The intent of this section is to establish regulations and procedures which protect rights associated with legally established nonconformance and for the eventual elimination of nonconformance.

(2) This section applies to:
   (a) All uses, structures and other forms of development regulated under, but not complying with the Act or the shoreline master program; and
   (b) All structures for which a shoreline variance was approved, which shall be considered legal nonconforming structures for which the requirements of this section shall apply.

(3) A person or party asserting the existence of a lawfully established nonconformance has the burden of proving that the condition satisfied the requirements of the shoreline master program in effect at its creation.

(4) Nonconforming uses. The following apply to all nonconforming uses:
   (a) Any legally established nonconforming use may continue until such time that the rights to the nonconformance are abandoned pursuant to WMC 21.73.080(4)(c);
   (b) A nonconforming use may not have its floor area, or any other element of the use increased or expanded except as may be allowed under approval as an unclassified use pursuant to WMC 21.72.020(4);
   (c) A nonconforming use shall be determined abandoned and all rights to the nonconformance lost if:
      (i) The use is changed to a different use (this does not include changes only involving ownership where the use otherwise is not affected); or
      (ii) The use is discontinued for a period of 12 consecutive months or more; or
      (iii) The use is discontinued for a total of 12 months or more during any 24-consecutive-month period; and
   (d) A structure conforming to the shoreline master program but containing a nonconforming use, or used in support of a nonconforming use, which experiences damage to the extent that it can no longer be occupied by the nonconforming use, may have the rights to the nonconforming use continued provided all the following apply:
      (i) The loss of the structure is the result of a fire or other casualty not intentionally caused by an owner or tenant of the property;
      (ii) The nonconforming use is eligible for and the property owner obtains approval of a shoreline conditional use permit;
(iii) A complete shoreline conditional use permit application or a complete building permit application to replace the structure(s) is filed with the City within three years of such fire, natural disaster, or casualty event; and

(iv) The Director may grant up to two one-year extensions to WMC 21.73.080(4)(d)(iii) if the property owner demonstrates with each extension request that extenuating circumstances not of the property owner’s own making (e.g., resolution of an insurance claim) caused a delay in the submission.

(5) Nonconforming structures. The following apply to all nonconforming structures:

(a) Any legally established nonconforming structure may continue until such time that the rights for the nonconformance are abandoned pursuant to WMC 21.73.080(5)(d);

(b) Where multiple structures exist on the same lot, the requirements of this section shall apply to each structure independent of other structures on the same lot; except where the nonconformance is due to impervious surface coverage, the requirements of this section shall apply to all impervious surfaces on the same lot as if they were one structure;

(c) A nonconforming structure may be enlarged, extended, repaired, remodeled, or structurally altered provided the work does not increase the nonconformance and no new structure bulk or area is added to those parts of the building that are the cause of the nonconformance, except the Director may approve an increase in a nonconformance where it is reasonably necessary, and is the minimum necessary, to improve access for elderly or disabled persons;

(d) A nonconforming structure shall be determined to have its nonconformance abandoned and all rights to the nonconformance lost if:
   (i) A nonconforming structure meeting the definition of building in WMC 21.70.211 experiences substantial destruction; or
   (ii) For all other structures other than a building, it experiences reconstruction;

(e) Where the rights to a nonconforming structure have been abandoned, continuation of the nonconformance shall cease and any subsequent repair, remodel, alteration, or rebuilding shall require the entire structure to be brought into compliance with the shoreline master program in effect;

(f) A nonconforming structure which is moved any distance must be brought into conformance with the shoreline master program; and

(g) A nonconforming structure that experiences substantial destruction or reconstruction may have the rights to the nonconformance continued provided all the following apply:
   (i) The loss of the structure is the result of a fire or other casualty not intentionally caused by the owner or tenant of the property;
   (ii) The nonconforming structure is a detached single-family dwelling or townhome, and replacement is within the original configuration of the building immediately prior to the substantial destruction;
   (iii) Alterations including additions to the original configuration may be authorized provided the alteration does not add any new bulk or area to those parts of the building that are the cause of the nonconformance;
   (iv) A complete building permit application to replace the building is filed with the City within three years of such fire, natural disaster, or casualty event; and
   (v) The Director may grant up to two one-year extensions to WMC 21.73.080(4)(g)(iv) if the property owner demonstrates with each extension request that extenuating circumstances not of the property owner’s own making (e.g., resolution of an insurance claim) caused a delay in the submission.

(6) Nonconforming site.
(a) A nonconforming site may not be altered unless the alteration conforms to the requirements of the shoreline master program, except parking lots may be reconfigured within existing paved surfaces.

(b) When a nonconforming site is altered:
   (i) If less than 50 percent of the site area, excluding the footprint of existing buildings, is altered and no substantial improvements will occur then only the area of the alteration is required to be brought into compliance with the shoreline master program; or
   (ii) If 50 percent or more of the site area, excluding the footprint of existing buildings, is altered or substantial improvement will occur then the entire site area must be brought into compliance with the shoreline master program.

7 Unlawful uses and structures.
(a) Uses and structures that do not comply with applicable development regulations in effect at the time of establishment are determined illegal and subject to enforcement as prescribed by law.
(b) Nothing in this section shall be interpreted as granting any right to continue occupancy of property containing an illegal use or structure.
(c) The intermittent, temporary, or illegal use of land or structures shall not be sufficient to establish the existence of a nonconforming use and/or structure.

21.73.090 In-water construction.

The following requirements apply to in-water work, including, but not limited to, installation of new structures, repair of existing structures, restoration projects, and aquatic vegetation removal:

1. In-water structures and activities shall be placed and designed to avoid the need for future shoreline stabilization activities and dredging, giving due consideration to watershed functions and processes, with special emphasis on protecting and restoring priority habitat and species;

2. Stream beds may not be disturbed during critical fish passage periods, unless authorized by a state or federal permit;

3. Waste material and unauthorized fill resulting from construction, such as construction debris, silt or excess dirt resulting from in-water structure installation, concrete blocks or pieces, bricks, asphalt, metal, treated wood, glass, paper and any other similar material upland of or below the ordinary high-water line, shall be removed;

4. Measures shall be taken in advance and during construction to ensure that no petroleum products, hydraulic fluid, cement, sediments, sediment-laden water, chemicals, or any other toxic or deleterious materials can enter or leach into the water body during in-water activities;

5. Appropriate spill clean-up materials must always be on site, and any spills must be contained and cleaned immediately after discovery;

6. In-water work must be conducted in a manner that causes little or no siltation to adjacent areas and shall require a sediment control curtain in those instances where siltation is expected;

7. Alteration or disturbance of the bank and bank vegetation shall be limited to that necessary to perform the in-water work and all disturbed areas will be protected from erosion using vegetation or other means; and

8. If at any time, because of in-water work, water quality problems develop, immediate notification shall be made to the Washington State Department of Ecology.
21.73.100 General shoreline regulations.

(1) King County River Protection Easement. Where shoreline regulations permit location of a structure closer to the Sammamish River than the edge of the King County River Protection Easement, each applicant must obtain approval of the construction location from the appropriate King County Department.

(2) Navigable waters. All developments and activities using navigable waters, or their beds shall be located and designed to minimize interference with surface navigation, to minimize adverse visual impacts, and to allow for the safe, unobstructed passage of fish and animals, particularly those whose life cycles are dependent on such migration.

(3) All new shoreline development proposals are required, where appropriate, to provide evidence of:
   (a) Coordination among affected jurisdictions and agencies;
   (b) Adequate means to mitigate, to the greatest extent possible, adverse environmental impacts to ensure no net loss of shoreline ecological functions;
   (c) Compliance with all relevant state and federal legislation related to air, noise, and water quality; and
   (d) Conformance with regional and local plans applicable to the proposal.

21.73.110 Financial guarantees.

Where a financial security is required, an applicant may choose to provide a bond, line of credit, cash deposit, or other form of financial guarantee that is acceptable to the City. The terms of the financial security shall include the following:

(1) An amount of funds equal to 100 percent of estimated costs for completion of all required enhancements, mitigation and/or other improvements are completed in a manner that complies with the conditions of approval and with satisfactory workmanship and materials;

(2) An amount of funds equal to 100 percent of the estimated costs of maintenance and/or monitoring requirements including correction of any failures;

(3) An amount equal to 100 percent to cover estimated expenses to administer the security should it become necessary to apply the financial security towards completing the enhancements, mitigation and/or other improvements;

(4) Conditions under which the financial security is providing a guarantee;

(5) Description of when some or all financial security may be released, including satisfactory completion of elements for which the financial security was provided.

21.73.120 Emergency actions.

(1) Emergency actions are those that pose an unanticipated and imminent threat to public health, safety, or the environment and that require action immediately or within a period of time too short to allow full compliance with the provisions of the shoreline master program.

(2) Emergency actions shall comply with the following conditions:
   (a) Limited to using reasonable methods necessary to address the emergency;
   (b) Have the least possible impacts on shoreline ecological functions and processes; and
   (c) Comply with the requirements of the shoreline master program, to the extent feasible.

(3) Notification Requirements.
   (a) The party undertaking the emergency action shall notify the City immediately of the existence of the emergency and the proposed emergency action, or when this is not reasonably possible, within two business days following commencement of the emergency action.
(b) The party undertaking the emergency action shall provide the City within seven days following completion of the emergency action, a written description of the work undertaken, a site plan, a description of the pre-emergency conditions, and other information requested by the City to determine whether the action was permitted within the scope of an emergency action.

(4) Decision.
   (a) The Director will evaluate the emergency action for consistency with WAC 173-27-040(2)(d) and determine whether the action taken, or any part of the action taken, was within the scope of an emergency action exempt from the requirements for a shoreline substantial development permit.
   (b) If the Director determines that the action does not qualify as an emergency action, the party may be required to obtain a permit and/or perform remediation. This shall not preempt the City from determining a particular action to be a violation subject to enforcement set forth in WMC 21.70.100.
   (c) Whether a situation qualified as an emergency action or not, the City may require the property owner and/or the party that undertook the emergency action to provide mitigation for impacts to shoreline ecological functions caused by the action.

21.73.130 Permits and approvals.

Chapters 21.70 through 21.77 contain provisions for permits and approvals applicable to development. Chapters 21.80 through 21.84 WMC provide the review procedures and criteria by which permits and other applications under the shoreline master program are reviewed and decisions rendered.
CHAPTER 21.74
SHORELINE DEVELOPMENT STANDARDS

21.74.010 Applicability.

(1) The requirements of this chapter apply when a property owner or their representative initiates new development or redevelopment on their property, which is also inside the shoreline jurisdiction.

(2) Existing uses and/or conditions not in compliance with the requirements of this chapter may continue unaffected subject to the limitations for shoreline nonconformance prescribed in WMC 21.73.080.

21.74.020 Maximum impervious surface.

(1) The total impervious surface within the shoreline jurisdiction shall not exceed the standards set forth in Table 21.74.020. The maximum impervious surface standard on a property is determined by the adjoining river to the shoreland and the corresponding shoreline environment.

(2) Compliance with the maximum impervious surface standards is calculated as a percentage using the total impervious surface on the lot divided by the lot area within the shoreline jurisdiction.

<table>
<thead>
<tr>
<th>River Adjoining the Shoreland</th>
<th>Aquatic</th>
<th>Conservancy</th>
<th>Residential</th>
<th>Urban Conservancy</th>
<th>Urban General</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sammamish River</td>
<td>Not Applicable*</td>
<td>15%</td>
<td>50%</td>
<td>10%</td>
<td>75%</td>
</tr>
<tr>
<td>Little Bear Creek</td>
<td></td>
<td>30%</td>
<td></td>
<td></td>
<td>80%</td>
</tr>
</tbody>
</table>

*Other shoreline development standards applicable to the Aquatic Environment shall govern the amount of impervious surface over water allowed

(3) Where a lot has both Conservancy Environment and one or more Residential, Urban Conservancy or Urban General Environments, the total maximum impervious surface allowed and how it may be distributed on the lot is determined as follows:

(a) The lot area exclusively within the Conservancy Environment is multiplied by the corresponding percentage in Table 21.74.020; and

(b) The lot area exclusively within each of the other Shoreline Environments is multiplied by the corresponding percentage in Table 21.74.020; and
(c) The impervious surface square footage calculated for each WMC 21.74.020(3)(a) and (b) are combined to produce the total square footage of impervious surface allowed on the lot within the shoreline jurisdiction; and
(d) The total square footage of impervious surface set forth in WMC 21.74.020(3)(c) may be distributed over the entire lot provided the total square footage of impervious surface exclusively inside the Conservancy Environment does not exceed the maximum impervious surface set forth for the Conservancy Environment in Table 21.74.020.

21.74.030 Maximum height.

(1) The maximum height of any new or expanded building or structure is 35 feet above average grade level, except height may be increased if:
(a) The additional height does not exceed height limitations set forth elsewhere in the Woodinville Municipal Code; and
(b) The building or structure will not substantially obstruct the views of 10 or more existing residential dwelling units; and
(c) The public interest is served by the additional height.

(2) The maximum height standard set forth in WMC 21.74.030 shall not apply to:
(a) Communication antennas;
(b) Flag poles;
(c) Temporary structures utilized during construction;
(d) Rooftop mechanical equipment that does not project more than 40 feet above average grade level; and
(e) Appurtenances similar to those identified in this subsection, except where such appurtenances substantially obstruct views of adjoining and nearby properties.

21.74.040 Shoreline setbacks.

The City does not establish shoreline setbacks as the buffers for Type S streams set forth in WMC 21.77.120(6) are found to provide adequate protections for no net loss to shoreline ecological functions.

21.74.050 Parking and loading facilities.

(1) The following apply to parking and loading facilities located within the shoreline jurisdiction:
(a) Only allowed pursuant to the Shoreline Use Table in WMC 21.72.030;
(b) New surface parking facilities may not be erected waterward of buildings unless other locations are not feasible on the site for meeting minimum parking requirements and it can be demonstrated that drainage runoff will not cause a net loss on shoreline ecological functions;
(c) Expansion of existing surface parking facilities within any stream buffer is prohibited;
(d) Must be designed and operated to avoid surface runoff of contaminants into nearby watercourses;
(e) Surface parking must incorporate low impact development techniques to address surface water runoff;
(f) Parking facilities must be screened from nearby publicly used trails, public streets, public parks and other public spaces using landscaping that at a minimum satisfies the following:
   (i) Landscaping around the perimeter and within the parking area to soften edges and break up large parking areas;
(ii) Landscaping must provide a sight-obscuring barrier from nearby publicly used trails and shoreline water bodies that includes the following:
- Plant species shall be of Northwest native stock;
- A minimum of one tree at least four feet in height is required for each 30 linear feet of planting area;
- The planting strip must be at least five feet wide and incorporate a variety of trees, shrubs and ground cover;

(2) Loading facilities located within the shoreline jurisdiction shall be:
(a) Screened from view of pedestrians waterward of the facility using a fence or wall and landscaping consistent with the standards in WMC 21.74.050(1)(f)(i) and (ii);
(b) New loading facilities may not be erected waterward of buildings unless other locations are not feasible on the site for meeting minimum loading space requirements and it can be demonstrated that drainage runoff will not cause a net loss on shoreline ecological functions; and
(c) Designed to muffle the noise of trucks maneuvering on site.

21.74.060 Landscaping requirements.

The following requirements apply to landscaping for new development within the shoreline jurisdiction:
(1) All new landscaping shall use Northwest native plantings;
(2) At least 60 percent of new landscaping shall consist of drought-tolerant species, unless it can be demonstrated that the landscape area will have enough moisture to ensure growth;
(3) Existing Northwest native vegetation may be used to augment new plantings to satisfy landscaping requirements;
(4) If a landscaping strip is greater than 20 feet in width, trees shall be staggered in a pattern approved by the City to create a design having a more natural appearance;
(5) Shrubs shall have a minimum 24 inches in height at the time of planting;
(6) Groundcover shall be planted and spaced to result in total ground coverage within three years of planting;
(7) Fences shall be placed on the inward side of any required perimeter landscaping;
(8) If a berm is incorporated into the landscaping, it should not exceed a slope of three horizontal feet to one vertical foot for lawns and two horizontal feet to one vertical foot for other plant materials; and
(9) Drought-tolerant and non-drought-tolerant species shall be distributed and irrigated in a manner that uses water efficiently.

21.74.070 Lighting.

The following requirements apply to lighting associated with new development within the shoreline jurisdiction:
(1) Lighting shall be designed and constructed to minimize glare and prevent glare and light from intruding on neighboring properties;
(2) Lighting shall not shine directly on the water and where lighting may intrude onto a water body, the lighting should use a color spectrum that avoids giving an advantage to salmonids predators;
(3) Lighting for active outdoor recreational uses shall not be illuminated by artificial light between 10:00 pm and 8:00 am daily;
(4) Lighting shall incorporate cutoff shields as necessary, and any impacts mitigated using landscape screening; and
(5) A lighting plan shall be submitted with development proposals and demonstrate how the proposal complies with this section.
CHAPTER 21.75
USE-SPECIFIC SHORELINE DEVELOPMENT STANDARDS

21.75.010 Applicability.
This chapter applies specific development standards to corresponding uses in the shoreline jurisdiction. This chapter is applied in combination with regulations set forth elsewhere in the shoreline master program.

21.75.020 Aquaculture.
The following apply to aquaculture uses:
(1) Aquaculture activity is allowed pursuant to the shoreline use table set forth in WMC 21.72.030;
(2) Aquaculture activity is not allowed in areas where it would result in a net loss of ecological functions, adversely impact existing uses, or involves significant risk of cumulative adverse effects on water quality, sediment quality, benthic and pelagic organisms, and/or fish populations;
(3) Aquaculture shall follow mitigation sequencing by avoiding if possible, minimizing, and mitigating for potential ecological impacts, including but not limited to water quality impacts (pollutants, temperature, and flow) and potential loss of either terrestrial or aquatic wildlife habitat; and
(4) Preference is given to those forms of aquaculture activity that involve lesser environmental and visual impacts, and lesser impacts to native plant and animal species as follows:
   (a) Projects that require either no structures or submerged structures are preferred over those that involve substantial floating structures;
   (b) Projects that involve little or no substrate modification are preferred over those that involve substantial modification; and
   (c) Projects that involve little or no supplemental food sources, pesticides, herbicides or antibiotic application are preferred over those that involve such practices.

21.75.030 Residential.
The following apply to residential development:
(1) Residential development is allowed pursuant to the shoreline use table set forth in WMC 21.72.030;
(2) Residential divisions of land and additions or modifications of existing residential development shall be designated at a level of density compatible with the underlying comprehensive plan designation of moderate density Five (5) Residential Units per acre to
Eight (8) Residential Units per Acre and subject to the physical capacities of the shoreline and water as regulated by this master program.

(3) Residential land divisions and additions or modifications of existing residential development shall be designed, configured, and developed in a manner that assures no net loss of ecological functions and to adequately protect the water and shoreline aesthetic characteristics at full build-out, and to prevent the need for new shoreline stabilization or flood hazard reduction measures.

(4) New residential development shall be sited, designed, and configured in a manner that avoids the need for new shoreline stabilization or flood hazard reduction measures;

(5) Adequate sewage disposal facilities must be provided in accordance with appropriate state and local health regulations;

(6) Adequate water supplies, and water facilities must be available so that the groundwater quantity or quality will not be endangered by over-pumping;

(7) In new residential developments having two or more dwellings, joint-use docks are required in lieu of individual docks for each residential dwelling where docks are allowed;

(8) Residential development shall be designed and located to blend into the site as much as possible;

(9) New townhome and multifamily dwelling developments having five or more dwellings, and divisions of land creating five or more new residential lots shall provide public access as set forth in WMC 21.73.040; and

(10) Residential development floating on or extending over water is prohibited.

(11) Residential development shall be consistent with applicable environment designation and standards set forth in this master program.

21.75.040 Commercial.

The following apply to commercial development:

(1) Commercial development is allowed pursuant to the shoreline use table set forth in WMC 21.72.030;

(2) Construction of buildings for commercial uses waterward of the ordinary high-water mark is prohibited;

(3) Commercial development within the shoreline management area must be connected to the public sewage system;

(4) Parking and loading facilities within the shoreline jurisdiction shall comply with requirement set forth in WMC 21.74.050;

(5) Landscaping within the shoreline jurisdiction shall comply with requirements set forth in WMC 21.74.060; and

(6) Public access shall be provided pursuant to WMC 21.73.040.

21.75.050 Industrial.

The following apply to industrial development:

(1) Industrial development is allowed pursuant to the shoreline use table set forth in WMC 21.72.030;

(2) Development/redevelopment of light manufacturing or industrial uses shall be located, designed, or constructed in a manner that assures no net loss of shoreline ecological functions and such that it does not have significant adverse impacts to other shoreline resources and values;

(3) Development/redevelopment of light manufacturing or industrial uses shall be designed to permit viewing of shoreline areas from viewpoints, waterfront restaurants, and similar public
facilities which do not interfere with business operations or endanger public health and safety;
(4) Outdoor storage of equipment, vehicles, materials, or supplies is prohibited within stream buffer areas and shall be landscaped to provide a visual barrier from public areas;
(5) Industrial development/redevelopment is encouraged to locate where environmental cleanup and restoration of the shoreline area can be incorporated;
(6) Buildings shall be sited to allow frequent visual access toward the shoreline;
(7) Special care shall be taken to avoid uses characterized by noise, glare, dust, etc.;
(8) Parking and loading facilities within the shoreline jurisdiction shall comply with requirement set forth in WMC 21.74.050;
(9) Landscaping within the shoreline jurisdiction shall comply with requirements set forth in WMC 21.74.060; and
(10) Public access shall be provided pursuant to WMC 21.73.040.

21.75.060 Transportation facilities.

The following apply to all transportation facilities:
(1) Transportation facilities are allowed pursuant to the shoreline use table set forth in WMC 21.72.030;
(2) Transportation projects shall be consistent with the master program public access policies, public access plan, and environmental protection provisions;
(3) Transportation facilities should incorporate scenic viewpoints of the shoreline, passive recreational facilities where feasible, and safe pedestrian and other non-motorized means of travel;
(4) Bridges and other water-crossing structures shall be designed to prevent the impediment of normal annual high water or the passage of wood and sediment;
(5) Where feasible, bridge structures should be located outside the floodway and bridge approaches should be planted with native ground cover;
(6) Railroad facilities shall be designed to ensure compatibility with pedestrian and recreational usages and shall incorporate public easements across tracks to provide convenient public access to publicly controlled water frontages;
(7) All debris, overburden, and other waste materials from construction should be disposed of to prevent their entry by erosion from drainage, high water, or other means into the stream way;
(8) All regional and local road systems and trail designs must satisfy the following:
   (a) Minimize paved surfaces within the Aquatic and Conservancy Environments to the extent feasible without reducing the intended function and safety design of the roadway;
   (b) Maximize the use of existing transportation corridors whenever possible;
   (c) Provide frequent safe crossings for pedestrians and bicycles seeking access to public portions of the shoreline;
   (d) Incorporate pedestrian, bicycle, and equestrian facilities whenever possible;
   (e) Provide scenic viewpoints and turnouts where they intersect or are adjacent to planned or existing pedestrian, bicycle, and equestrian trails along the water's edge;
   (f) For new transportation facilities, demonstrate that upland alignments are clearly infeasible;
   (g) Design new and replacement bridge crossings of the Sammamish River and Little Bear Creek corridors so that vertical supports are set back from the ordinary high-water mark to accommodate circulation of watercraft and non-motorized travel;
   (h) For those portions of minor arterials and neighborhood and local access streets within the Conservancy Environment, the following apply:
(i) Allowed only where essential connections must be made to circulate traffic to urban activity centers;
(ii) Roadway construction must be necessary for maintenance, security, and/ or low intensity access; and
(iii) Any substantial volumes of traffic or parking must be accommodated upland with consolidated parking facilities having pedestrian/bicycle/equestrian connections to the shoreline to the extent feasible;
(9) Roadway construction shall incorporate features that disturb existing beneficial hydrologic effects as little as possible;
(10) Roadway design shall incorporate landscaping consistent with WMC 21.74.060;
(11) The use of herbicides and pesticides is prohibited along roadways within or immediately adjacent to shoreline critical areas and their buffers; and
(12) Roadway construction shall include a design for impoundment structures that trap contaminants, such as oil and salt, and prevent runoff contaminants from entering waterways and wetlands.

21.75.070 Utilities.

The following apply to utility uses:
(1) Utilities are allowed pursuant to the shoreline use table set forth in WMC 21.72.030;
(2) All utility facilities must be designed and located to assure no net loss of shoreline ecological functions, preserve the natural landscape, and minimize obstructing scenic views;
(3) Transmission facilities for the conveyance of services, such as power lines, cables, and pipelines, shall be located outside of the shoreline area where feasible and when necessarily located within the shoreline area shall assure no net loss of shoreline ecological functions;
(4) Where feasible, accessory utilities should be placed underground or otherwise designed to do minimal damage to the shoreline ecological functions and aesthetic qualities of the shoreline area;
(5) Property owners possessing legal rights to water in the river or the creek may be allowed to retain those water-intake valves or structures existing on December 16, 2009, which are necessary to maintain those rights;
(6) All new utilities must include a reclamation plan restoring and enhancing shoreline areas disturbed by new construction;
(7) Publicly owned utilities shall be designed and operated to reserve the option of general public recreational usage of the right-of-way in the future provided:
   (a) The public will not be exposed to dangers from the utility equipment;
   (b) The utility itself will not be subjected to unusual risks of damage by the public; and
   (c) Adjacent land uses will not be negatively disrupted by the public usage of the site;
(8) All underwater pipelines or those paralleling the waterway transporting liquids potentially injurious to aquatic life or water quality are prohibited unless no feasible alternative exists in which case shut-off valves shall be provided at both sides of the water body except for public sanitary sewers of a gravity or siphon nature;
(9) Lines under the stream bed are allowed provided the stream bed is restored to existing or better conditions and in-water construction satisfies the requirements in WMC 21.73.090;
(10) If primary utility facilities that are located above ground (e.g., substations) are necessary to be constructed inside the shoreline jurisdiction, the facility must be landscaped to screen and minimize visual impacts from surrounding properties;
(11) Transmission facilities for the conveyance of services, such as power lines, cables, and pipelines, should be consolidated within a single easement and/or existing rights-of-way, whenever feasible; and
Application for shoreline permits involving the installation of new or substantively expanded primary utility facilities shall include the following:

(a) Statement why the utility must be located inside the shoreline jurisdiction;
(b) Alternative locations outside the shoreline jurisdiction considered and reasons for their elimination;
(c) Location of other similar primary utility facilities near the proposal;
(d) Plans for reclamation of areas to be disturbed during construction;
(e) Landscaping plans; and
(f) Documentation that installation of the primary utility is consistent with capital facilities plans for utilities.

21.75.080  Recreational.

The following apply to recreational uses:

(1) Recreational uses are allowed pursuant to the shoreline use table set forth in WMC 21.72.030;
(2) Water-dependent activities such as swimming, boating, and fishing, and activities that benefit from riverfront scenery such as picnicking, hiking, bicycling, and equestrian use shall be emphasized in planning public recreation sites in the shoreline management corridor;
(3) Access to public recreational locations such as fishing streams shall be by a combination of areas and linear access such as hiking paths, bicycle trails, and/or scenic drives to prevent concentrations of use pressure at a few points;
(4) The linkage of shoreline parks and public access points is encouraged using linear access such as the Sammamish River regional park and the Tolt River water line;
(5) Recreational facilities shall be located and designed to ensure no net loss to shoreline ecological function and to preserve, enhance, or create scenic views and vistas;
(6) Facilities for intensive recreational activities shall only be provided where sewage disposal and vector control can be accomplished to meet public health standards without adversely altering the natural features attractive for recreational uses;
(7) In locating proposed recreational facilities such as playing fields and other open areas which use fertilizers and pesticides in their turf maintenance programs, provisions must be made to prevent these chemicals from entering streams and water;
(8) Where appropriate, recreational uses with no permanent structures as defined by the Federal Emergency Management Agency may be permitted in floodplain areas; and
(9) All recreational facilities shall adequately provide for:
   (a) Vehicular and pedestrian access, both on- and off-site;
   (b) Proper water supply and solid and sewage waste disposal methods;
   (c) Security and fire protection; and
   (d) Overflow and trespass onto adjacent properties shall be prevented by methods, including but not limited to landscaping, fencing, and posting of property notices.

21.75.090  Instream structures.

The following apply to instream structures as defined in WMC 21.70.218:

(1) Instream structures are allowed per the shoreline use table in WMC 21.72.030;
(2) These structures are limited to providing for the protection and preservation, of ecosystem-wide processes, ecological functions, and cultural resources, including, but not limited to fish and fish passage, wildlife and water resources, hydrogeological processes, and shoreline critical areas;
(3) The location and planning of instream structures shall give due consideration to the full range of public interests, watershed functions and processes, and environmental concerns, with special emphasis on protecting and restoring priority habitats and species;

(4) Instream structures shall be designed, located, and constructed in such a manner as to avoid extensive topographical alteration and preserve natural scenic vistas;

(5) Instream structures that divert water shall return flow to the stream in as short a distance as possible;

(6) All instream structures shall be designed to allow the natural transport of bedload materials; and

(7) Instream structures and their support facilities shall be designed to minimize removal of vegetation consistent with WMC 21.73.050.

21.75.100 Signs.

(1) Signs are allowed pursuant to the shoreline use table set forth in WMC 21.72.030.

(2) The placement of signs shall not impair vistas, viewpoints and visual access to shorelines.

(3) Free-standing signs, excluding public controlled signs, shall be located where feasible on the upland side of public transportation routes running parallel or adjacent to shorelines, and in a manner so that views will not be substantially obstructed.

(4) Where feasible, signs shall be attached and flush against buildings to minimize visual obstructions of the shorelines and water bodies.

(5) Lighting of signs shall be by a steady, non-flashing and non-animated source and designed to minimize light spillover onto the shoreline.

(6) Indirect lighting of signs is preferable to internal illumination of signs.

(7) Only interpretive and trail signs, and signage required by critical areas regulations, shall be allowed within any riparian or wetland/wetland buffer areas.
CHAPTER 21.76
SHORELINE MODIFICATIONS

21.76.010 General provisions applicable to shoreline modifications.
21.76.020 Overwater structures – general requirements.
21.76.030 Design and dimensional standards for piers, docks, floats, moorage pilings.
21.76.040 Shoreline stabilization – general provisions.
21.76.050 Structural shoreline stabilization – limitations.
21.76.060 Structural shoreline stabilization – new or enlargement.
21.76.070 Repair or replacement of structural shoreline stabilization.
21.76.080 Structural shoreline stabilization – design consideration.
21.76.090 Shoreline stabilization – report and application requirements.
21.76.100 Breakwaters, jetties, groins, weirs.
21.76.110 Shoreline flood hazard reduction.
21.76.120 Fill.
21.76.130 Dredging and disposal.

21.76.010 General provisions applicable to shoreline modifications.

The following apply to all shoreline modifications expressed under this chapter:
(1) The shoreline modification must support a permitted shoreline use or be for shoreline mitigation and/or shoreline enhancement;
(2) The shoreline modification must comply with the policies and regulations of the specific shoreline environment designation and the general shoreline regulations found in Chapter 21.73 WMC; and
(3) The shoreline modification must be constructed and maintained in a safe and sound condition and any structures determined to be unsafe or abandoned shall be removed, repaired, or have the unsafe conditions remedied immediately by the property owner.

21.76.020 Overwater structures – general requirements.

The following apply to all overwater structures including piers, docks, moorage piles, floats, and similar types of structures:
(1) Except for overwater structures owned by a public agency; docks, floats, and moorage pilings are prohibited within the Little Bear Creek shoreline corridor;
(2) Where allowed, overwater structures must support a permitted shoreline use;
(3) New piers and docks are allowed only for water-dependent uses or public access - as used here, a dock associated with a single-family residence is a water-dependent use provided it is designed and intended as a facility for access to watercraft and otherwise complies with the shoreline master program;
(4) Overwater structures shall be designed and constructed consistent with mitigation sequencing set forth in WMC 21.73.020(6) to minimize impacts to shoreline ecological functions and fish and wildlife habitat;
(5) Where a new development meets any one of the following conditions, joint-use dock facilities are required rather than individual ownership use:
   (a) Divisions of land into two or more lots where waterfront access is provided to the new lots; or
   (b) Development of two or more dwellings where waterfront access is provided to the new dwellings; and
(6) Applications for overwater structures shall include the following information:
(a) Description of the proposed structure, including size, location, design, and any other shoreline modification associated with the project;
(b) Ownership of adjacent shorelands;
(c) Proposed location of overwater structures in relationship to property lines and the ordinary high-water mark;
(d) Location and general footprint of docks within 300 feet of the proposed structure; and
(e) Mitigation sequencing analysis pursuant to WMC 21.73.020.

21.76.030 Design and dimensional standards for piers, docks, floats, moorage pilings.

(1) Table 21.76.030 sets forth design and dimensional standards that apply to piers, docks, moorage piles, and floats.

Table 21.76.030: Design and Dimensional Standards for Piers, Docks, Floats, Moorage Pilings

<table>
<thead>
<tr>
<th>Design and Dimensional Standard</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum overwater coverage</strong></td>
<td></td>
</tr>
<tr>
<td>Single property owner</td>
<td>320 square feet</td>
</tr>
<tr>
<td>Shared/ Joint-use</td>
<td>480 square feet</td>
</tr>
<tr>
<td>Public</td>
<td>Minimum necessary to support the public use¹</td>
</tr>
<tr>
<td><strong>Maximum length</strong></td>
<td></td>
</tr>
<tr>
<td>Farthest extension points of all structures from the ordinary high-water mark</td>
<td>8 feet</td>
</tr>
<tr>
<td>Single property owner</td>
<td>40 feet</td>
</tr>
<tr>
<td>Shared/ Joint-use</td>
<td>60 feet</td>
</tr>
<tr>
<td>Public</td>
<td>Minimum necessary to support the public use¹</td>
</tr>
<tr>
<td><strong>Placement</strong></td>
<td></td>
</tr>
<tr>
<td>Minimum setback from property lines (as extended in a straight line waterward)</td>
<td>5 feet</td>
</tr>
<tr>
<td>Minimum setback for shared/joint-use where straddling a common property line</td>
<td>None</td>
</tr>
<tr>
<td>Minimum distance between piers and docks having private ownership</td>
<td>100 feet</td>
</tr>
<tr>
<td>Maximum waterfrontage that can be occupied by piers, docks, and floats</td>
<td>50 percent of the linear length of the waterfront lot, tract, or parcel</td>
</tr>
</tbody>
</table>

**Minimum waterfrontage**

<table>
<thead>
<tr>
<th>Piers, docks, and floats</th>
<th>Single ownership/Shared Joint Use</th>
<th>At least one lot, tract or parcel must have 50 feet of waterfrontage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
### Height

<table>
<thead>
<tr>
<th>Description</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum height above the plane of the ordinary high-water line and the</td>
<td>1 ½ feet</td>
</tr>
<tr>
<td>bottom of the stringers on a pier</td>
<td></td>
</tr>
<tr>
<td>Maximum height above the plane of the ordinary high-water line and the</td>
<td>5 feet</td>
</tr>
<tr>
<td>top of the decking of a pier</td>
<td></td>
</tr>
<tr>
<td>Maximum height above the surface of the water to the top of the decking</td>
<td>2 feet</td>
</tr>
<tr>
<td>of floats and docks</td>
<td></td>
</tr>
<tr>
<td>Maximum height above the surface of the water to the top of the decking</td>
<td>2 feet</td>
</tr>
<tr>
<td>of floats and docks</td>
<td></td>
</tr>
<tr>
<td>Maximum height of safety railing above surface decking²</td>
<td>42 inches</td>
</tr>
<tr>
<td>Walls, sheathing, lockers (except horizontal lockers not exceeding 42</td>
<td>Prohibited</td>
</tr>
<tr>
<td>inches above the deck in height) and similar construction not listed</td>
<td></td>
</tr>
<tr>
<td>Pier skirting</td>
<td>Prohibited</td>
</tr>
</tbody>
</table>

### Materials

<table>
<thead>
<tr>
<th>Description</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decking for piers, docks, and floats</td>
<td>Grating or other materials that allow a minimum 40 percent light to transmit through</td>
</tr>
<tr>
<td>Treatment with pentachlorophenol, creosote, chromate copper arsenate, or</td>
<td>Prohibited</td>
</tr>
<tr>
<td>similar toxic compounds</td>
<td></td>
</tr>
<tr>
<td>Other construction materials</td>
<td>Shiny metallic surfaces are prohibited where visible to the public from land or water</td>
</tr>
<tr>
<td></td>
<td>Styrofoam floats are prohibited</td>
</tr>
<tr>
<td></td>
<td>Materials should be consistent with the natural appearance of the shoreline</td>
</tr>
</tbody>
</table>

### Lighting

<table>
<thead>
<tr>
<th>Description</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum necessary for safety</td>
<td></td>
</tr>
<tr>
<td>Lighting (See WMC 21.74.070)</td>
<td>Lighting shall be focused downward, but shall not shine directly onto the water</td>
</tr>
<tr>
<td></td>
<td>Limited to a color spectrum that does not give salmonids predators an advantage</td>
</tr>
</tbody>
</table>

### Notes:

1 A written mitigation sequencing analysis is required pursuant to WMC 21.73.020.
2 Safety railing shall be designed to providing maximum opening to allow air and light to pass through.

(2) All overwater structures shall not impede the public use of the waterway or significantly interfere with use of navigable waters.
(3) Abandoned or overwater structures determined unsafe by the City shall be removed or repaired promptly.
(4) Where a new pier, dock, float, or moorage piling is established, a written mitigation sequencing analysis is required pursuant to WMC 21.73.020. At a minimum mitigation must include the following:
(a) Plant emergent vegetation waterward of the ordinary high-water line per Washington State Fish and Wildlife and/or Corps of Engineers requirements, unless it can be demonstrated that planting is not feasible or appropriate due to environmental constraints; and
(b) Install a riparian vegetative planting adjacent to the shoreline that results in no net loss of shoreline ecological functions standards to mitigate for impacts from the overwater structure.

21.76.040 Shoreline stabilization – general provisions.

Shoreline stabilization measures are used to address erosion impacts to property caused by natural processes such as water currents, floods, tides, wind, and/or wave actions. They can vary from nonstructural measures to structural measures and from soft measures to hard measures. Generally, the harder the construction measure, the greater the impact on shoreline processes, including sediment transport, geomorphology, and biological functions. The following requirements apply to all shoreline stabilization measures:
(1) New development should be located and designed to the extent feasible to avoid future needs for shoreline stabilization measures;
(2) Division of land must not create lots that will require shoreline stabilization for reasonable development to occur;
(3) New development shall be prohibited where shoreline stabilization measures will cause significant impacts to adjacent or down-current properties and shoreline areas;
(4) Shoreline stabilization shall not:
   (a) Significantly interfere with normal surface and/or subsurface drainage; and
   (b) Cause a hazard to navigation; and
   (c) Be for the purposes of creating land;
(5) Publicly financed or subsidized shoreline stabilization shall not restrict appropriate public access to the shoreline except where such access is determined to be infeasible because of incompatible uses, safety, security, or harm to shoreline ecological functions;
(6) Where feasible, publicly financed, or subsidized shoreline stabilization shall incorporate ecological restoration and public access improvements into the project;
(7) All shoreline stabilization measures shall provide mitigation as necessary to ensure no net loss of shoreline ecological functions pursuant to the analysis in WMC 21.73.020;
(8) Structural shoreline stabilization measures shall be limited to the minimum necessary; and
(9) The U.S. Army Corp of Engineers is responsible for bank armoring and maintenance along the Sammamish River.

21.76.050 Structural shoreline stabilization – limitations.

(1) For hard structural shoreline stabilization measures a geotechnical analysis must demonstrate there is a significant possibility that a primary structure or single-family dwelling will be damaged within three years because of shoreline erosion in the absence of such measures; or
(2) For soft structural shoreline stabilization measures a geotechnical analysis must demonstrate there is significant possibility that a primary structure or single-family dwelling will be damaged because of shoreline erosion in the absence of such measures, but the need does not have to be as immediate as three years.
21.76.060 Structural shoreline stabilization – new or enlargement.

New structural shoreline stabilization, and additions that increase the size of existing structural shoreline stabilization, are prohibited, except where necessity is demonstrated per this section.

1. To protect existing primary structures including single-family dwellings, provided:
   (a) On-site drainage has been directed away from the shoreline edge first;
   (b) Geotechnical analysis pursuant to WMC 21.76.090(1) provides conclusive evidence that the structure or dwelling is in danger from shoreline erosion caused by floods, winds, currents, and waves; and
   (c) The structural shoreline stabilization will not result in a net loss of shoreline ecological functions pursuant to the analysis in WMC 21.73.020.

2. To support a new non-water-dependent development, including single-family dwellings, provided:
   (a) Shoreline erosion is not being caused by upland conditions, such as the loss of vegetation and drainage;
   (b) Geotechnical analysis pursuant to WMC 21.76.090(1) demonstrates a need to protect the primary structure from damage due to erosion caused by natural processes such as floods, winds, currents, and waves;
   (c) Nonstructural measures such as placing the development further from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient in protecting the primary structure; and
   (d) The structural shoreline stabilization will not result in a net loss of shoreline ecological functions pursuant to the analysis in WMC 21.73.020.

3. To support a water-dependent development, provided:
   (a) Shoreline erosion is not being caused by upland conditions, such as the loss of vegetation and drainage;
   (b) Geotechnical analysis pursuant to WMC 21.76.090(1) demonstrates a need to protect primary structures from damage due to erosion;
   (c) Nonstructural measures, planting vegetation, or installing on-site drainage improvements are not feasible or not sufficient in protecting primary structures; and
   (d) The structural shoreline stabilization will not result in a net loss of shoreline ecological functions pursuant to the analysis in WMC 21.73.020.

4. To protect projects for the restoration of shoreline ecological functions, provided:
   (a) Nonstructural measures, planting vegetation, or installing on-site drainage improvements are not feasible or not sufficient; and
   (b) The structural shoreline stabilization will not result in a net loss of shoreline ecological functions pursuant to the analysis in WMC 21.73.020.

21.76.070 Repair or replacement of structural shoreline stabilization.

1. Existing structural shoreline stabilization may be repaired provided:
   (a) Repairs over a five-consecutive year period involve less than 60 percent of the lineal length of the structure on the property below the ordinary high-water mark;
   (b) The repair is in the same place as the existing structure; and
   (c) The repair does not increase the height, width, length, or depth of the existing structure.

2. An existing structural shoreline stabilization may be replaced up to 100 percent provided:
   (a) The existing structure cannot adequately perform a shoreline stabilization function;
   (b) Replacement involves constructing new structure to replace existing structure;
   (c) Replacement structure is with similar structure including using soft measures to replace hard measures;
(d) Replacement structure does not increase the height, width, length, or depth of the existing structure, except as may be necessary to implement soft structural shoreline stabilization;
(e) Replacement walls and bulkheads do not intrude further waterward of the ordinary high-water mark and existing structure unless the residence was occupied prior to January 1, 1992, and there are overriding safety or environmental concerns, in which case the replacement structure shall abut the existing shoreline stabilization structure;
(f) The replacement structure is designed, located, sized and constructed to assure no net loss of shoreline ecological functions per an analysis in WMC 21.73.020; and
(g) A demonstration of need is provided pursuant to WMC 21.76.090(2) showing the shoreline stabilization structure is necessary to protect principal use or structure from erosion caused by floods, currents, or waves, except this requirement does not apply if soft measures are used to replace hard structure that result in significant restoration of shoreline ecological functions or processes.

21.76.080 Structural shoreline stabilization – design consideration.

(1) Where structural shoreline stabilization is allowed, soft measures such as bioengineering or biotechnical measures shall be used unless it can be demonstrated such measures are not sufficient at protecting primary structures or dwellings, in which case hard measures may be used.
(2) All new, expanded or replacement shoreline stabilization measures shall be designed and constructed so that down-current banks will not be adversely affected.
(3) Shoreline stabilization measures, inducing riprap, shall be designed and constructed in a manner consistent with the Department of Fish and Wildlife, Corps of Engineers and/or other engineering and design specifications determined appropriate.
(4) Adequate toe protection shall be provided to ensure stability for the structure.
(5) Fill behind a hard-structural shoreline stabilization is limited to less than two cubic yards of material per linear foot of the shoreline stabilization structure.

21.76.090 Shoreline stabilization – report and application requirements.

(1) Where geotechnical analysis is required under WMC 21.76.050, the analysis shall be prepared by a qualified professional and have the following information:
   (a) An assessment of erosion potential including rates of erosion and estimated time frames of erosion from waves or other natural processes in the absence of shoreline stabilization;
   (b) An assessment of the processes causing the erosion including on-site drainage both waterward and landward of the ordinary high-water mark;
   (c) An assessment of the risk shoreline erosion might cause damage to primary structures and single-family dwellings in the absence of structural shoreline stabilization;
   (d) An assessment of the urgency and necessity for structural shoreline stabilization considering site-specific conditions;
   (e) An assessment of the feasibility of using soft structural shoreline stabilization measures in lieu of hard measures; and
   (f) Narrative on design recommendations for minimizing the use of shoreline stabilization materials and to assure no net loss of shoreline ecological functions.
(2) Where a demonstration of need is required pursuant to WMC 21.76.060, the following shall be provided:
   (a) A written narrative that demonstrates a need for the shoreline stabilization structure prepared by a qualified professional;
(b) The content of the narrative shall include the following:

(i) An assessment of the necessity for structural stabilization to protect principal use or structure, considering site-specific conditions such as water depth, orientation of the shoreline, wave fetch, and location of the nearest structure;

(ii) An assessment of erosion potential resulting from the action of waves or other natural processes operating at or waterward of the ordinary high-water mark in the absence of structural shoreline stabilization;

(iii) An assessment of the feasibility of using soft structural stabilization measures in lieu of hard structural shoreline stabilization measures; and

(iv) Design recommendations for minimizing impacts and ensuring that the replacement structure is designed, located, sized, and constructed to assure no net loss of shoreline ecological functions.

(3) The following are application submittal requirements for proposals involving structural shoreline stabilization:

(a) Plan and cross-section views of the existing and proposed shoreline configuration showing accurate existing and proposed topography and the ordinary high-water mark;

(b) Detailed construction sequence and specifications for all materials with the sizing and placement of materials selected to accomplish the following:

(i) Protect the property and structures from erosion and other damage over the long term;

(ii) Allow safe passage and migration of fish and wildlife; and

(iii) Minimize or eliminate juvenile salmon predator habitat;

(c) Where applicable, geotechnical analysis or narrative evaluating need;

(d) Where applicable, no net loss analysis; and

(e) Where applicable, enhancement plans and monitoring and maintenance reports.

The provisions of this section shall not limit the City’s ability to establish additional submittal requirements consistent with other provisions of the Woodinville Municipal Code.

21.76.100 Breakwaters, jetties, groins, weirs.

(1) Breakwaters, jetties, groins, and weirs located waterward of the ordinary high-water mark are allowed only for shoreline ecological function restoration activities, such as woody debris installed in streams.

(2) Breakwaters, jetties, groins, and weirs shall be designed to protect critical areas and shall provide mitigation in accordance with a no net loss of shoreline ecological functions set forth in WMC 21.73.020.

21.76.110 Shoreline flood hazard reduction.

(1) Flood protection and waterway modifications are those activities occurring within the waterway and wetland areas which are designed to reduce over-bank flow of high waters. Flood protection on the Sammamish River is regulated by the Corps of Engineers through the Sammamish River Flood Control Project. King County, via the King County Flood Control District, provides maintenance and repair of flood control facilities by an agreement with the Corps of Engineers.

(2) Flood hazard reduction measures may consist of nonstructural measures, such as setbacks, land use controls, wetland restoration, dike removal, use relocation, biotechnical measures, and stormwater management programs, and of structural measures, such as dikes, levees, revetments, floodwalls, channel realignment, and elevation of structures consistent with the National Flood Insurance Program.
(3) New structural flood hazard reduction measures shall be allowed under the following conditions:
   (a) When it can be demonstrated by a scientific and engineering analysis that they are necessary to protect existing development;
   (b) That nonstructural measures are not feasible;
   (c) That impacts to shoreline ecological functions and priority species and habitats can be successfully mitigated to assure no net loss pursuant to WMC 21.73.020; and
   (d) That appropriate vegetation restoration and conservation actions are undertaken consistent with WAC 173-26-221(5).

(4) Where flood protection measures such as dikes or levees are planned, they shall be placed landward of the streamway, including associated wetlands directly inter-related and interdependent with the stream proper.

(5) Flood protection measures which result in channelization shall be avoided.

(6) New flood protection measures shall not be designed and constructed in such a manner that impacts neighboring properties or creates the need for shoreline protection structures on other properties.

(7) Levees and dikes shall be designed to not interfere with the natural pattern of ground water drainage associated with the shoreline management corridor.

(8) Levee and dike structures and streambanks shall be designed to facilitate pedestrian access to the water's edge unless public access improvements would cause unavoidable health or safety hazards to the public, inherent and unavoidable security problems, unacceptable and unmitigable significant ecological impacts, unavoidable conflict with the proposed use, or a cost that is disproportionate and unreasonable to the total long-term cost of the development.

21.76.120 Fill.

(1) Fill used to create new land water-ward of the ordinary high-water mark is prohibited.

(2) Fill is not permitted waterward of the ordinary high-water mark unless necessary for a water-dependent use or to mitigate an environmental or public safety hazard.

(3) Shoreland fills or cuts shall be designed and located so that significant damage to existing shoreline ecological functions or natural resources, or alteration of local water currents will not occur and no hazard to on-site or adjacent life, property, or natural resources systems will be created.

(4) All perimeters of fills shall be planted with vegetation, retaining walls, soil compaction as necessary, or other mechanisms designed to avoid or eliminate erosion and sedimentation impacts.

(5) Priority shall be given to fill for water-dependent uses and for public uses. In evaluating fill projects, and in designating areas appropriate for fill, such factors as total water surface reduction, navigation restriction, impediment to water flow and circulation, reduction of water quality, and destruction of habitat shall be considered.

(6) Strict aesthetic controls shall be maintained to ensure that a fill restores or enhances the natural appearance of the area where it is applied.

(7) The timing of fill construction shall be regulated to minimize damage to water quality and aquatic life.

(8) Fill Material.
   (a) Fill material shall be of such quality that leachate resulting from it will not introduce contaminants to the watercourse which would violate or reduce the water quality below the existing State standards applicable at the time of development.
   (b) Refuse such as broken concrete or asphalt, building debris, appliances, car bodies, vegetation, flammable material, water soluble or toxic wastes, or similar materials or
the use of polluted dredge spoils, solid waste, and/or sanitary landfill materials are prohibited as fill within the shoreline management corridor.

(9) Applications for fill within the shoreline jurisdiction shall include the following information:
   (a) Proposed use of the fill area;
   (b) Physical, chemical, and biological characteristics of the fill material;
   (c) Source of fill material;
   (d) Method of placement and compaction;
   (e) Location of fill relative to natural and/or existing drainage patterns and wetlands;
   (f) Location of the fill perimeter relative to the ordinary high-water mark;
   (g) Best management practices that will be employed for erosion control or stabilization means;
   (h) Type of surfacing and runoff control devices; and
   (i) Contingency plan in the event of degradation of the water body when determined necessary by the City.

21.76.130 Dredging and disposal.

(1) New development should be placed and designed to avoid, or if that is not possible, to minimize the need for new and/or maintenance dredging.

(2) Dredging waterward of the ordinary high-water mark to obtain fill material is prohibited, except where the material is necessary for the restoration of shoreline ecological functions and processes.

(3) Dredging to establish, expand, relocate, or reconfigure navigation channels and basins is allowed provided:
   (a) The dredging is necessary for safe and efficient accommodation of existing navigational uses; and
   (b) Significant impacts to shoreline ecological functions are minimized.

(4) Dredging to restore a previously authorized configuration is allowed if it is limited to previously dredged and/or existing authorized locations, depth, and width.

(5) All dredging and dredge material disposal shall be done in a manner which avoids or minimizes significant impacts to shoreline ecological functions and impacts which cannot be avoided should be mitigated in a manner that assures no net loss of shoreline ecological functions pursuant to the analysis prescribed in WMC 21.73.020.

(6) Dredging operations must be designed and scheduled to:
   (a) Avoid impacts to aquatic life, including fish migrating, rearing, feeding and spawning;
   (b) Use techniques that minimize dispersal of bottom materials; and
   (c) Prevent direct and indirect adverse impacts on adjacent properties.

(7) Where dredging is for the purpose of restoring shoreline ecological functions, the site where the fill is to be placed must be waterward of the ordinary high-water mark.

(8) Where dredging will extract organic materials, measures must be taken to prevent unnecessary suspension of this material in the water.

(9) Dredging and dredge disposal are prohibited within archaeological sites listed or determined eligible for listing on the Washington State Register of Historic Places.

(10) Dryland and water area deposits.
   (a) Disposal of dredged material may be accomplished at approved, contained, upland disposal sites.
   (b) The outside face of diked cells for dredge disposal on land shall be sloped at 1.5:1 (horizontal: vertical) or less and must be seeded with grass or other plantings to prevent erosion.
(c) Individual disposal operations shall comply with the Department of Ecology Water Quality Certification process and the U.S. Army Corps of Engineers permit requirements.

(d) Organic material shall not wash or leach into an adjacent watercourse.

(e) Landscaping or soil stabilization techniques employed shall use native non-invasive species and shall be installed as soon as possible to retard wind and water erosion and to restore the wildlife habitat value of the site.

(f) Dredge spoils containing toxic sediments per state or federal criteria shall be contained in diked cells of sufficient capacity to allow settling of sediments and containment so that leachate cannot enter surface or ground water.

(11) Application submittals for dredging must include the following:

(a) A written description of the purpose for the dredging;

(b) Site plan drawing outlining the area proposed for dredging including water depth;

(c) A written description of the scope of work to be performed including dredging methods, timelines, and volume;

(d) Habitat survey identifying aquatic vegetation, potential native fish spawning areas, or other physical and biological habitat parameters;

(e) Information on disposal including information on chemical and physical analysis of dredge spoil material;

(f) Anticipated future dredging, if applicable;

(g) Copies of state and federal applications and/or approvals; and

(h) Other relevant information requested by the director.
CHAPTER 21.77
SHORELINE CRITICAL AREAS REGULATIONS

21.77.010 Purpose.

The purpose of this chapter is to designate and classify ecologically critical areas, and to protect these areas and their functions and values where they exist within the shoreline jurisdiction. The mechanisms established in this chapter are intended to protect critical areas in shoreline jurisdiction and achieve no net loss of shoreline ecological functions.

21.77.020 Shoreline critical areas – general provisions.

(1) This chapter shall not repeal, abrogate, or impair any existing regulations. However, where this chapter imposes more protective requirements for shoreline ecological functions, the requirements of this chapter shall prevail.

(2) The critical area regulations in this chapter apply as an overlay per WMC 21.70.070, except the critical area regulations set forth in Chapter 21.51 WMC shall not apply.

(3) Compliance with this chapter does not constitute compliance with other federal, state, and local regulations and permit requirements (e.g., substantial development permits, HPA permits, Army Corps of Engineers Section 404 permits, NPDES permits). The applicant is responsible for complying with other requirements apart from the requirements established in this chapter.

(4) Impacts to critical areas must be addressed through compliance with the policies and regulations of the specific shoreline environment designation, the general shoreline regulations found in Chapter 21.73 WMC, and the regulations of this chapter.

(5) If buffers for two or more contiguous critical areas overlap (such as a buffer for a stream and wetland), the buffer that extends the furthest out applies at any given point.

(6) Variances to the strict requirements of this chapter shall not be granted, except through the shoreline variance process set forth in WMC 21.84.050 and WAC 173-27-170. The provisions for a reasonable use permit set forth elsewhere in the Woodinville Municipal Code shall not apply to critical areas within the shoreline jurisdiction.

21.77.030 Applicability and critical area map.

(1) This chapter applies to all developments, activities and uses occurring within a critical area and/or critical area buffers as defined in this chapter, subject to the limits of the shoreline
jurisdictional boundaries set forth in WMC 21.70.050. For critical areas, including parts of critical areas outside of the shoreline jurisdiction see Chapter 21.51 WMC.

(2) The City’s critical area map is set forth in WMC 21.51.030. This map is for reference only and serves as a guide to identify possible critical areas on a site. Site-specific investigation and analysis are required to determine the actual presence or absence of the features that define critical areas.

21.77.040 Shoreline critical area permitted uses - all.

(1) Critical Area Allowances. The following development, activities and associated uses may be allowed in critical areas and their buffers without the need for a critical area review process. However, these activities must still satisfy other provisions of the shoreline master program, including the requirements for a substantial development, which are determined pursuant to WAC 173-27-040:

(a) Emergency actions as prescribed in WMC 21.73.120(1), (2) and (3);
(b) Minor site investigate work necessary for land use submittals, such as surveys, soil logs, percolation tests, and other related activities, where:
   (i) Such activities do not require construction of new roads or significant amounts of excavation in; and
   (ii) The disruption to the critical area shall be minimized and the disturbed areas immediately restored;
(c) Passive recreation, educational and scientific research that does not degrade critical areas or critical area buffers and that does not involve clearing or other types of construction activity;
(d) Construction or modification of navigational aids and boundary markers;
(e) Maintenance, operation, repair or replacement of publicly improved roadways or recreation areas, provided any such alteration does not: (1) involve the expansion of structures or related improvements into previously unimproved areas horizontally and in depth, and (2) result in an alteration of a critical area; and
(f) Operations, maintenance, remolds or repairs of existing structures and facilities, provided there is no further intrusion into a critical area or its buffers and there is no significant increase in risk to life or property as result of the action.
(g) Replacement, modification, installation or construction of streets and utilities in existing developed utility easements, improved street rights-of-way, or developed private streets if the activity does not further permanently alter or increase the impact to or encroach further within a critical area or buffer and must utilize best management practices. Utilities include water, sewer lines, and stormwater and franchise (private) utilities such as natural gas lines, telecommunication lines, cable communication lines, electrical lines and other appurtenances associated with these utilities.
(h) Public and private trails designed for non-motorized traffic only if:
   (i) There is no practicable alternative that would allow placement of the trail outside of critical area or critical area buffer;
   (ii) The trail surface shall meet all other requirements including water quality standards;
   (iii) Trails proposed in stream or wetland buffers shall be in the outer 25 percent of the buffer area, except where bridges or access points are proposed;
   (iv) Stream and wetland buffer widths shall be increased, where possible, equal to the width of the trail corridor, including disturbed areas;
   (v) Trail corridors in critical areas and buffers shall not exceed eight feet in width; and
(vi) Trails proposed to be in landslide or erosion hazard areas shall be constructed in a manner that does not increase the risk of landslide or erosion and in accordance with an approved geotechnical report.

(i) The select removal of vegetation as follows:
   (i) The removal of invasive weeds, including, but not limited to Himalayan blackberry, Evergreen blackberry, Ivy, Holly, laurel, Japanese knotweed and other species on the King County Noxious Weed List, provided the appropriate erosion-control measures are used, and the area is replanted with native vegetation;
   (ii) The cutting and removal of trees from critical areas and buffers that are hazardous and pose a threat to public safety, or pose an imminent risk of damage to private property provided WMC 21.73.050 is followed;
   (iii) Measures to control a fire or halt the spread of disease or damaging insects consistent with the State Forest Practices Act, Chapter 76.09 RCW, if the removed vegetation is replaced in-kind or with similar native species within one year in accordance with an approved restoration plan prepared by a qualified professional.

(j) Conservation, Preservation, Restoration and/or Enhancement.
   (i) Conservation and/or preservation of soil, water, vegetation, fish and/or other wildlife that does not entail alteration of the location, size, dimensions or functions of an existing critical area and/or buffer; and
   (ii) Restoration and/or enhancement of critical areas or buffers if the actions: (1) do not alter the location, dimensions or size of the critical area and/or buffer; (2) do not alter or disturb existing native vegetation or wildlife habitat attributes; (3) improve and do not reduce the existing functions of the critical areas or buffers; and (4) are implemented according to a restoration and/or enhancement plan that has been approved by the appropriate City staff.

21.77.050 General requirements applicable to shoreline critical areas.

The following apply to all critical areas and critical area buffers regulated under this chapter.

(1) Avoid impacts.
   (a) A proposal for a development, use or activity must avoid all impacts that result in a net loss of shoreline ecological functions. In the case of geologically hazardous areas, the development, use or activity must avoid all impacts resulting in an unacceptable level of risk.
   (b) Unless allowed otherwise by this chapter:
      (i) If alteration to a fish and wildlife habitat conservation area, wetland and/or associated buffers is proposed, all impacts to the critical areas caused by the development, use or activity proposal must be mitigated in accordance with mitigation sequencing as prescribed in WMC 21.77.070(2) and an approved critical area report as well as any applicable SEPA documents; or
      (ii) If alteration to a geologically hazardous area is proposed, the development, use or activity must comply with a City-approved geotechnical report that assesses the risk to health and safety, and includes recommendations for reducing all risks to an acceptable level through engineering, design, and/or construction practices.

(2) Shoreline critical area review. This subsection is intended to supplement other shoreline permitting requirements.
   (a) A critical area determination and/ or critical area alteration is required for all requests involving an alteration on a property where indicators of a critical area or a critical area
buffer exists. The review procedures are set forth in WMC 21.82.030. If indicators of a critical area or critical area buffer are present on or near a property, the Director may require a qualified professional to evaluate the property and provide a written report to the City on the presence of critical areas or critical area buffers.

(b) If approval of a critical area alteration is required, it shall not be construed as substituting for the requirements of a shoreline permit. Where an alteration of a critical area activates a shoreline permit or exemption, the critical area alteration review and determination must be decided as part of the shoreline permit or exemption decision.

(c) Review criteria. In lieu of the criteria for approval set forth in WMC 21.82.030(4), alterations to a shoreline critical area or critical area buffer shall demonstrate compliance with the following:

(i) The proposal will result in no net loss of shoreline ecological functions in accordance with the mitigation sequencing prescribed in WMC 21.77.070(2);

(ii) The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the proposal's development site;

(iii) The proposal is consistent with these critical area regulations, the shoreline master program and the public interest;

(iv) Any impacts permitted to the critical area and/or buffers are mitigated in accordance with the shoreline master program;

(v) The proposal protects critical area and/or buffer functions and values consistent with the most current, accurate, and complete scientific and technical information available;

(vi) The proposal is consistent with other applicable regulations and standards; and

(vii) Alterations to critical areas and their buffers that exceed those expressly allowed by the shoreline critical area regulations can only be authorized by a shoreline variance.

(d) The Director may condition the proposed alteration as necessary to mitigate impacts to critical areas and/or critical area buffers and to conform to the standards set forth by this chapter and the shoreline master program.

(e) The Director may require critical area reports under this chapter to be evaluated by an independent qualified professional selected by the City at the applicant’s expense when the Director determines the independent evaluation to be necessary for reviewing a proposal.

(3) Building and structure setbacks. A minimum 10-foot setback from the edge of streams and wetlands including associated buffers is required to provide adequate distance and prevent encroachments into buffer areas to allow for maintenance and repair activity on buildings and structures. The Director may approve reductions to the 10-foot setback on a case-by-case basis provided it can be demonstrated adequate measures are in place to prevent encroachment into streams and wetlands and associated buffers.

(4) Notice on Title. To inform subsequent purchasers of real property about the presence of critical areas, the owner of the property containing a critical area or critical area buffer and on which development is proposed, may be required to file for record with King County Auditor a notice indicating the presence of critical areas and/or critical area buffers. The notice must:

(a) Be in a form approved for recording by both the City and King County Auditor;

(b) State the presence of the critical area and/or critical area buffer on the property;

(c) Run with the land; and

(d) Include a statement to the effect that failure to provide such notice of the presence of critical areas to any purchaser prior to transferring any interest in the property is a violation of the Woodinville Municipal Code.
The City may require the property owner to provide proof that the notice has been filed and recorded within a timeframe to be determined by the director.

(5) Native growth protection areas (NGPA) are required for the following:
   (a) A delineated NGPA in accordance with WMC 21.77.050(5)(b) is required for those development proposals on a property comprising of the following:
      (i) New construction and/or reconstruction involving substantial improvement as defined in WMC 21.70.228; or
      (ii) Land divisions involving subdivisions, short subdivisions, or binding site plans;
   (b) A delineated NGPA in the form of a tract is required for the following:
      (i) All landslide hazard areas and associated buffers greater than one acre in size, excluding those landslide hazard and associated buffer areas approved for development per a geotechnical report accepted by the City;
      (ii) All wetlands and wetland buffers;
      (iii) All fish and wildlife habitat conservation areas, excluding ponds and lakes greater than one acre in size, and Type S streams; and
      (iv) All other lands to be protected from impacts as conditioned by project approval;
   (c) The NGPA tract shall be recorded on all documents of title of record for all affected lots;
   (d) A NGPA tract shall be held in an undivided interest by each owner of a lot within the development and this ownership interest shall pass with the ownership of the lot or shall be held by an incorporated homeowners’ association or other legal entity, which assures the ownership, maintenance, and protection of the NGPA tract;
   (e) The NGPA tract shall be designated on the face of plat, short plat, binding site plan or other recorded drawing in a format approved by the City and include restrictions consistent with the following:
      (i) The NGPA is designated as a protected habitat for fish and wildlife and as such shall be left in its natural state, except as enhancement to shoreline ecological functions might be provided; and
      (ii) Native vegetation shall be preserved in perpetuity within the NGPA to prevent harm to property and the environment;
      (iii) The City has the right to enforce NGPA restrictions; and
      (iv) The Director may modify these restrictions where it is found that such modifications are reasonable and will better implement the provisions of this chapter and the shoreline master program; and
   (f) The Director may require a restrictive easement to delineate a NGPA, and may authorize an easement in lieu of NGPA tract, provided the conditions set forth in WMC 21.77.050(4)(e) are included and protect the critical area in perpetuity.

(6) Divisions of lands and boundary line adjustments containing a critical area.
   (a) The division of land or alteration of a boundary line involving property containing a critical area, excluding aquifer recharge areas, must comply with the following:
      (i) Land located wholly within a critical area or its buffer may not be divided;
      (ii) Land located partially within a critical area or its buffer may be divided; provided the developable portion of each new lot and its access is located outside of the critical area or its buffer; and
      (iii) Any adjustment of property lines shall be consistent with WMC 21.77.050(6)(a)(i) and (ii).
   (b) Transfer of density credits. For divisions of land involving the placement of the critical area and critical area buffer in a tract pursuant to WMC 21.77.050(5), the square footage of the tract may be transferred to the unconstrained portions of the site for the purpose of calculating density or floor area ratio provided:
      (i) The transfer is within the proposed development site;
(ii) The transfer is not applied to other constrained areas of the site having critical areas, or to off-site properties; and

(iii) The minimum dimensions of each individual lot for residentially zoned properties may follow the dimensional standards in Table 21.77.050(6) to accommodate the transfer.

### Table 21.77.050(6) Reduced Lot Development Standards

<table>
<thead>
<tr>
<th>Zoning District</th>
<th>Minimum Lot Area</th>
<th>Maximum Building Coverage</th>
<th>Minimum Landscaping Coverage</th>
<th>Minimum Lot Width at Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-6</td>
<td>5,000 square feet</td>
<td>50%</td>
<td>25%</td>
<td>50 feet</td>
</tr>
<tr>
<td>R-12</td>
<td>None</td>
<td>60%</td>
<td>10%</td>
<td>30 feet</td>
</tr>
</tbody>
</table>

(iv) In applying the reduced lot development standards in Table 21.77.050(6), the maximum impervious surface standards set forth in Table 21.74.020 shall apply to the overall site provided no individual lot shall have less than the minimum landscaping coverage.

### 21.77.060 Critical areas report.

(1) If a critical area or critical area buffer might be affected by a proposed development, use, or activity, the applicant shall submit a critical area report to the City meeting the following:
   (a) Prepared by a qualified professional;
   (b) Incorporate the most current, accurate, and complete scientific and technical information available using scientifically valid methods and studies in the analysis of critical area data and field reconnaissance and reference the source of science used; and
   (c) Evaluate the proposal and all probable impacts to critical areas in accordance with the provisions of this chapter.

(2) The critical area report shall contain at a minimum the following information:
   (a) The applicant’s name and contact information, a project description, project location;
   (b) Project narrative describing the proposal; anticipated temporary and permanent impacts to critical areas and/or buffers; construction activities and sequencing; restoration, enhancement, or mitigation measures; and other relevant information;
   (c) A site plan showing:
      (i) The development proposal including the location of existing and proposed structures, fill, storage of materials, drainage facilities, with dimensions and any identified critical areas and buffers within 200 feet of the proposed project; and
      (ii) Limits of land areas to be cleared;
   (d) Other drawings to demonstrate construction techniques and anticipated final outcomes;
   (e) The date the report was prepared;
   (f) The names and qualifications of the persons preparing the report and documentation of any fieldwork performed to support the analysis;
   (g) Identification and characterization of the site and all critical areas and critical area buffers within, and adjacent to, the proposed project area. This information shall include, but is not limited to:
      (i) Size or acreage, if applicable;
      (ii) Applicable topographic with existing and final grade elevations at two-foot intervals, vegetative, faunal, soil, substrate and hydrologic characteristics; and
(iii) Relationship to other nearby critical areas;

(h) An assessment of the probable cumulative impacts to critical areas resulting from the proposed development;

(i) An analysis of site development alternatives;

(j) A description of reasonable efforts made to apply mitigation sequencing pursuant to WMC 21.77.070(2) to avoid or compensate for impacts to shoreline ecological functions provided by the critical areas;

(k) Plans for mitigation in accordance with WMC 21.77.070; and

(l) Other information required as specified in this chapter.

(3) The applicant may consult with the Director prior to or during preparation of the critical area report to have waived or modified the required contents of the critical area report when in the judgment of the Director such modification will still adequately address the potential critical area impacts and required mitigation.

(4) The Director may require the applicant to provide additional information in the critical area report, and/or may require the critical area report to include an evaluation by the Department of Ecology or an independent qualified expert when in the judgment of the Director to be necessary to review the proposed activity in accordance with this chapter.

(5) A permit or approval sought as part of a development proposal for which multiple permits are required may use a previously approved critical area report provided:

(a) There is no material change in the development proposal since the prior review;

(b) There is no new information available that would change the evaluation of the critical area review of the site or of a particular critical area; and

(c) No more than five years for reports involving wetlands or fish and wildlife habitats, and seven years for reports involving all other critical areas, has lapsed since the report was first approved by the City.

21.77.070 Shoreline critical area mitigation requirements.

(1) Mitigation.

(a) Mitigation shall be in-kind and on site, where feasible, and sufficient to maintain critical areas and shoreline ecological functions and values, and to prevent risk from hazards posed by a critical area.

(b) Required mitigation shall satisfy the following performance standards:

(i) One hundred percent survival of installed vegetation and less than 10 percent of the mitigation area covered in invasive species within the first two years of planting;

(ii) At least 50 percent vegetation coverage for installed vegetation after three years or more;

(iii) Less than 20 percent of the mitigation area covered by invasive species after three years or more; and

(iv) No infestation of knotweed at any time during the duration of the program period.

(c) Mitigation may not be implemented until after City approval of the applicable critical area report and mitigation plan. Mitigation must be implemented in accordance with the approved critical area report and mitigation plan.

(2) Mitigation Sequencing.

(a) Pursuant to WMC 21.73.020, applicants must demonstrate that all reasonable efforts have been examined with the intent to avoid, or if that is not possible, minimize and then mitigate impacts to shoreline ecological functions as provided by critical areas.

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(b) When an alteration to a critical area and/or critical area buffer is proposed, such alteration shall follow the mitigation sequencing set forth below rather than as set forth in WMC 21.73.020(6):

(i) For fish and wildlife habitat conservation areas, wetlands and/or associated buffers, avoiding the impact altogether by not taking a certain action or parts of an action, except this provision shall not be used to deny a use or activity specifically authorized by the shoreline master program;

(ii) For geologically hazards, minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods;

(iii) Minimizing impacts by limiting the degree or magnitude of the action by using appropriate technology, or by taking affirmative steps to avoid or reduce the impact;

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

(v) Reducing or eliminating the impacts over time by preservation and/or maintenance operations;

(vi) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and

(vii) Monitoring the impact and the compensation projects and taking appropriate corrective measures.

(3) Mitigation Plan. Where mitigation is required, the applicant shall have prepared by a qualified professional and submit to the City a mitigation plan in addition to the critical area report set forth in WMC 21.77.060. Approval of the mitigation plan consistent with this chapter is required to be obtained from the City.

(4) Mitigation Plan Content. The mitigation plan shall include the following:

(a) Descriptions of existing critical area and critical area buffer conditions, shoreline ecological functions provided by the critical area, and the anticipated impacts;

(b) A description of proposed mitigating actions and mitigation site selection criteria;

(c) A description of the goals and objectives of proposed mitigation relating to impacts to shoreline ecological functions provided by the critical area;

(d) A review of the most current, accurate, and complete scientific and technical information available supporting proposed mitigation, and a description of the qualified professional’s experience in restoring or creating the type of critical area proposed, and an analysis of the likelihood of success of the mitigation project;

(e) A description of specific measurable criteria for evaluating whether or not the goals and objectives of the mitigation plan have been successfully attained and whether or not the requirements of these critical area regulations have been satisfied;

(f) Detailed construction plans as applicable including site diagrams, cross-sectional drawings, topographic elevations at one- or two-foot contours, slope percentage, final grade elevations, and any other drawings appropriate to show construction techniques or anticipated outcomes;

(e) A maintenance and monitoring program containing, but not limited to:

(i) An outline of the schedule for site monitoring;

(ii) Use scientific procedures for establishing the success or failure of the project;

(iii) Performance standards for meeting the approval criteria consistent with WMC 21.77.070(1)(b);

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

(v) Contingency plans identifying courses of action and any corrective measures to be taken if monitoring or evaluation indicates performance standards have not been met;
(vi) A time schedule necessary to establish that performance standards have been satisfied, not to be less than three years;

(vii) Monitoring reports shall be prepared by a qualified professional and provided based on the following schedule: (1) at the time of construction; (2) 30 days after planting; (3) early in the growing season of the second year; (4) end of the growing season of the second year; and (5) annually thereafter.

(viii) Proposed construction sequence, timing, and duration;

(ix) Grading and excavation details;

(x) Erosion and sediment control features;

(xi) A planting plan specifying plant species, quantities, locations, size, spacing, and density, with density standards consistent with Table 21.77.070; and

(xii) Measures to protect and maintain plants until established;

<table>
<thead>
<tr>
<th>Condition to be Achieved</th>
<th>Plant Density Standards</th>
</tr>
</thead>
</table>
| **Forested**                   | • Trees: nine feet on center, or 0.012 trees per square foot (this assumes two- to five-gallon size);  
                                  |   • Shrubs: six feet on center, or 0.028 shrubs per square foot (this assumes one- to two-gallon size); and  
                                  |   • Herbs and groundcovers: four feet on center, or 0.063 plants per square foot (this assumes 10-inch plug or four-inch pot). |
| **Shrub**                      | • Shrubs: five feet on center, or 0.04 shrubs per square foot (this assumes one- to two-gallon size); and  
                                  |   • Herbs and groundcovers: four feet on center, or 0.063 plants per square foot (this assumes 10-inch plug or four-inch pot). |
| **Emergent, Herbaceous and/or Groundcover** | • Herbs and groundcovers: one foot on center, or one plant per square foot (this assumes 10-inch plug or four-inch pot); or  
                                  |   • Herbs and groundcovers: 18 inches on center, or 0.444 plants per square foot if supplemented by over-seeding of native herbs, emergent or graminoids as appropriate |

(f) Financial guarantees ensuring fulfillment of the compensation project, monitoring program, and any contingency measures shall be posted in accordance with WMC 21.73.110; and

(g) Other information determined necessary by the director.

21.77.080 Critical aquifer recharge area.

(1) Applicability.

(a) This section applies to critical aquifer recharge areas (CARA) that are mapped on the critical area map set forth in WMC 21.77.030. The critical aquifer recharge areas inside the city limits have medium to high susceptibility to ground water contamination and are not located in a sole source aquifer or wellhead protection area.

(b) An applicant can request that a specific area identified as a CARA on the critical area map be declassified from the CARA designation provided the applicant provides evidence by means of a critical area report that includes a hydrogeologic assessment supporting the subject area is not highly susceptible to having the ground water contaminated by development and/or development activity.
(2) Exempt and Prohibited uses and activities.
   (a) The following development or materials are exempt from this section:
      (i) Construction of noncommercial structures, improvements, and additions
covering less than 2,500 square feet of the total site surface area provided no
increase in risk from hazardous substances will occur;
      (ii) Development of parks, recreation facilities, or conservation areas that do not
increase risk from hazardous substances;
      (iii) Tree removal;
      (iv) Hazardous materials in properly functioning and sealed units or containers;
      and
      (v) Hazard materials of less than 20 gallons or less than 200 pounds stored or
used on premise.
   (b) The following new uses and activities are not allowed in a critical aquifer recharge
area:
      (i) Mining of any type below the water table;
      (ii) Processing, storage, and disposal of radioactive substances;
      (iii) Hydrocarbon extraction;
      (iv) Commercial wood treatment facilities on permeable surfaces;
      (v) Wrecking yards;
      (vi) Landfills for hazardous waste, municipal solid waste, or special waste; and
      (vii) On-site septic systems on lots smaller than one acre without a treatment
system that results in effluent nitrate-nitrogen concentrations below 10
milligrams per liter.

(3) Development standards. The following standards apply to any development proposal in a
critical aquifer recharge area:
   (a) All storage tanks must comply with building and fire code requirements for secondary
containment;
   (b) Commercial vehicle repair and servicing must be conducted over impermeable pads
and within a covered structure capable of withstanding normally expected weather
conditions;
   (c) 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;
   (d) No new dry wells are allowed on sites used for vehicle repair and servicing and existing
dry wells must be abandoned using techniques approved by the Washington State
Department of Ecology prior to commencement of the proposed activity; and
   (e) When applicable, activities shall be conditioned in accordance with applicable state
and federal regulations as necessary to protect critical aquifer recharge areas.

(4) Additional critical areas reporting. In addition to the requirements for a critical areas report
set forth in WMC 21.77.060, the report shall include the following:
   (a) Prepared by a qualified professional who is a licensed hydrogeologist, geologist, or
engineer with a minimum of five years of experience in the field and experience in
preparing hydrogeologic assessments;
   (b) A Level 1 hydrogeologic assessment pursuant to WMC 21.77.080(4)(c), except a
Level 2 hydrogeologic assessment pursuant to WMC 21.77.080(4)(d) may be required
by the Director for the following:
      (i) Activities that divert, alter, or reduce the flow of surface or ground water, or
significantly reduce the recharging of the aquifer;
      (ii) The use of hazardous substances, other than household chemicals used
accordding to the directions specified on the packaging for domestic applications;
(iii) The use of injection wells, including on-site septic systems, except those domestic septic systems releasing less than 14,500 gallons of effluent per day and that are limited to a maximum density of one system per one acre; or
(iv) Any other activity determined by the City that is likely to have an adverse impact on ground water quality or quantity, or on the recharge of the aquifer;

(c) Level 1 hydrogeologic assessment shall include the following information:
   (i) Available information regarding geologic and hydrogeologic characteristics of the site including the surface location of all critical aquifer recharge areas located on site or immediately adjacent to the site, and permeability of the unsaturated zone;
   (ii) Ground water depth, flow direction, and gradient based on available information;
   (iii) Currently available data on wells and springs within 1,300 feet of the project area;
   (iv) Location of other critical areas, including surface waters, within 1,300 feet of the project area;
   (v) Available historic water quality data for the area to be affected by the proposed activity; and
   (vi) Best management practices proposed to be utilized;

(d) Level 2 hydrogeologic assessment shall include the following information:
   (i) The same information as a Level 1 hydrogeologic assessment set forth in WMC 21.77.080(4)(c);
   (ii) Historic water quality data for the area to be affected by the proposed activity compiled for at least the previous five-year period;
   (iii) Ground water monitoring plan provisions;
   (iv) Discussion of the effects of the proposed project on the ground water quality and quantity, including:
      (A) Predictive evaluation of ground water withdrawal effects on nearby wells and surface water features; and
      (B) Predictive evaluation of contaminant transport based on potential releases to ground water; and
   (v) A spill plan that identifies equipment and/or structures that could fail, resulting in an impact to the CARA. Spill plans shall include provisions for regular inspection, repair, and replacement of structures and equipment that could fail.

21.77.090 Frequently flooded areas.

(1) Frequently flooded areas – designation.
   (a) Definition. Frequently flooded areas are those areas meeting one or more of the following components. These areas shall be designated as frequently flooded areas and shall be subject to the provisions of this chapter:
      (i) Floodplain;
      (ii) Flood fringe; and
      (iii) Floodway.
   (b) Designation. Frequently flooded areas shall include the following areas:
      (i) Areas Identified on Flood Insurance Map(s). Those areas identified as special flood hazard areas by the Federal Insurance Administrator pursuant to Chapter 21.53 WMC.
      (ii) Areas Identified by the City. Those areas of special flood hazard identified by the City pursuant to Chapter 21.53 WMC based on a review of base flood elevation and floodway data available from Federal, State, County or other
agency sources when base flood elevation data has not been provided from FEMA.

(2) Development requirements. All development within a frequently flooded area shall comply with the requirements set forth in Chapter 21.53 WMC for flood damage prevention and the requirements of this shoreline master program.

(3) Additional critical area reporting requirements. In addition to the general critical areas report requirements set forth in WMC 21.77.060, critical area reports for frequently flooded areas shall include a flood hazard assessment and the following information:

(a) Prepared by a Qualified Professional. The critical areas report shall be prepared by a qualified professional who is a hydrologist or engineer licensed in the State of Washington. The qualified professional shall have a minimum of five years of experience in the field and experience in preparing flood hazard assessments.

(b) Site Areas. The following areas shall be addressed:
   
   (i) The site area of the proposed activity;
   
   (ii) All areas of a special flood hazard, or other flood area as indicated in the flood insurance maps within 200 feet of the project area; and
   
   (iii) All other flood areas indicated on the flood insurance maps within 200 feet of the project area.

(c) Watercourse Alteration. Alteration of natural watercourses shall be avoided, if feasible. If unavoidable, a critical areas report shall include:
   
   (i) A description of and plan showing the extent to which a watercourse will be altered or relocated as a result of the proposal;
   
   (ii) A maintenance program that provides maintenance practices for the altered or relocated portion of the watercourse to ensure that the flood carrying capacity is not diminished; and
   
   (iii) Information describing and documenting how the proposed watercourse alteration complies with the requirements of Chapter 21.53 WMC and other applicable State or Federal permit requirements.

(d) Habitat Impact Assessment. A permit application to develop in a frequently flooded area shall include an assessment of the impact of the project on Federal, State, or locally protected species and habitat, water quality, and aquatic and riparian habitat. A habitat assessment shall be one of the following:
   
   (i) A biological evaluation or biological assessment developed in accordance with 50 CFR 402.12;
   
   (ii) Documentation that the activity fits within Section 4(d) of the Endangered Species Act;
   
   (iii) Documentation that the activity fits within a habitat conservation plan approved pursuant to Section 10 of the Endangered Species Act, where such assessment has been prepared and made available; or
   
   (iv) A habitat impact assessment prepared in accordance with the current adopted FEMA Regional Guidance for Floodplain Habitat Assessment and Mitigation, FEMA Region X. The assessment shall determine if the project would adversely affect:
       
       (A) Species that are Federal, State, or locally listed as threatened or endangered;
       
       (B) The primary constituent elements for critical habitat, when designated, including but not limited to water quality, water quantity, flood volumes, flood velocities, spawning substrate, and/or floodplain refuge for listed salmonids;
       
       (C) Essential fish habitat designated by the National Marine Fisheries Service;
       
       (D) Fish and wildlife habitat conservation areas; and
(E) Other protected areas and elements necessary for species conservation.

21.77.100 Wetlands.

(1) All developments, activities and uses that involve the alteration of a wetland and/or associated buffer are prohibited, except as provided for in this chapter.

(2) Identification and designation.
   (a) Wetlands are those areas designated in accordance with the approved federal wetland delineation manual and applicable regional supplements set forth in WAC 173-22-035.
   (b) All areas within the City meeting the wetland designation criteria in the manual, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this chapter.
   (c) Wetland delineations are valid for five years; after such date, the appropriate City staff shall determine whether a revision or additional assessment is necessary.

(3) Wetland Ratings.
   (a) Wetlands shall be rated according to the Washington Department of Ecology wetland rating system for Western Washington (Ecology Publication No. 14-06-029, or as revised and approved by Ecology). These documents contain the definitions and methods for determining if the criteria below are met.
   (b) Wetland Rating Categories. The following table provides a summary of the categories of wetland and the criteria for their categorization:

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria for Designation</th>
</tr>
</thead>
</table>
| Category I | • Represent a unique or rare wetland type; or  
| | • Are more sensitive to disturbance than most wetlands; or  
| | • Are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or  
| | • Provide a high level of functions.  
| | • Score 23 points or higher on the rating system. |
| Category II | • Are not defined as Category I wetlands;  
| | • Are difficult, though not impossible, to replace;  
| | • Provide high levels of some functions;  
| | • Score 20 to 22 points on the rating system. |
| Category III | • Do not satisfy Category I or II criteria;  
| | • Provide moderate levels of functions;  
| | • Score 16 to 19 on the rating system. |
| Category IV | • Do not satisfy Category I, II or III criteria;  
| | • Provide the lowest levels of functions;  
| | • Often are heavily disturbed;  
| | • Score fewer than 16 points on the rating system. |

(c) Date of Wetland Rating. Wetland rating categories shall be applied as the wetland exists on the date of adoption of the rating system by the City, as the wetland naturally changes thereafter, or as the wetland changes in accordance with permitted activities.

(d) Wetland rating categories shall not change due to illegal modifications.

(4) Mapping.
(a) The approximate location and extent of known wetlands are identified in the City’s critical areas inventory pursuant to WMC 21.77.030(2).
(b) The exact location of a wetland’s boundary is determined through the performance of a field investigation by a qualified professional in accordance with the approved federal wetland delineation manual and applicable regional supplements set forth in WAC 173-22-035.

(5) Regulated activities.

(a) The following development, uses and activities are allowed in wetlands without the requirement to submit a critical area report, except where such activities result in a loss of the functions and values of a wetland or wetland buffer:
   (i) Conservation or preservation of soil, water, vegetation, fish, and wildlife that does not entail changing the structure or functions of the existing wetland;
   (ii) Drilling for utilities/ utility corridors under a wetland, with entrance and exit portals located completely outside of the wetland and its buffer, provided:
      (A) The drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column; and
      (B) A study by a hydrologist demonstrates the ground water connections to the wetland or percolation of surface water down through the soil columns will not be interrupted;
   (iii) Enhancement of a wetland through the removal of non-native invasive plant species by hand or by approved biological or chemical treatments where permits have been obtained from the appropriate regulatory agencies;
   (iv) Normal and routine maintenance and repair of any existing public or private facilities within an existing public right-of-way, provided that the maintenance or repair does not expand the footprint of the facility or right-of-way within the wetland or buffer;
   (v) The physical or hydrological alteration of a wetland for a stormwater management facility to meet the requirements of a Low Impact Development, Runoff Treatment, or Flow Control best management practice if conditions in Table 21.77.100(5)(a) are all satisfied.

Table 21.77.100(5)(a): Stormwater Facilities in a Wetland

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>The wetland is a Category III or IV wetland with a habitat score of 3 – 4 points</td>
</tr>
<tr>
<td>b.</td>
<td>No net loss of functions and values of the wetland</td>
</tr>
<tr>
<td>c.</td>
<td>The wetland does not contain a breeding population of any native amphibian species</td>
</tr>
<tr>
<td>d.</td>
<td>The hydrologic functions of the wetland can be improved as outlined in questions 3, 4, 5 of Charter 4 and questions 2, 3, 4 of Chart 5 in the “Guide for Selecting Mitigation Sites Using a Watershed Approach” available from the Washington State Department of Ecology; or the wetland is part of a priority restoration plan that achieves restoration goals identified in the shoreline master program or regional watershed plan</td>
</tr>
<tr>
<td>e.</td>
<td>The wetland lies in the natural routing of the runoff, and the discharge follows the natural routing</td>
</tr>
<tr>
<td>f.</td>
<td>All regulations regarding stormwater and wetland management are followed, including but not limited to local and state wetland and stormwater codes, manuals, and permits</td>
</tr>
</tbody>
</table>
g. Modifications that alter the structure of a wetland or its soils require existing functions and values that are lost to be compensated/ replaced

Note: A site specific characterization is required to determine if a low impact storm water best management practice is feasible

(b) In addition to the uses and activities listed in WMC 21.77.100(5)(b), the following uses and activities are allowed within a wetland buffer in accordance with the review procedures of this chapter, provided they are conducted in a manner that minimizes impacts to the buffer and adjacent wetland:

(i) Passive recreational facilities such as walkways and trails if the conditions in Table 21.77.100(5)(b) are satisfied:

Table 21.77.100(5)(b):
Criteria for Passive Recreational Facilities

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>The pathway is limited to minor crossings having no adverse impact on water quality</td>
</tr>
<tr>
<td>b.</td>
<td>The pathway is generally parallel to the perimeter of the wetland</td>
</tr>
<tr>
<td>c.</td>
<td>The pathway is in the outer 25 percent of the wetland buffer area and avoids removal of trees having a 10-inch diameter breast height and larger size</td>
</tr>
<tr>
<td>d.</td>
<td>Any impervious surface materials used are no more than five feet in width, or as an alternative a raised boardwalk utilizing non-treated pilings may be acceptable</td>
</tr>
</tbody>
</table>

(ii) Wildlife-viewing structures;
(iii) Education and scientific research activities; and
(iv) Repair and maintenance of non-conforming uses or structures, where legally established within the buffer, provided they do not increase the existing footprint within the wetland or buffer.

(a) Buffer requirements.

(i) The minimum width of a wetland buffer is determined in accordance with the wetland category and habitat scoring of the wetland and Table 21.77.100(6)(a)(i).

Table 21.77.100(6)(a)(i): Standard Wetland Buffer Widths

<table>
<thead>
<tr>
<th>Wetland Category</th>
<th>Minimum buffer width based on habitat score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 – 5</td>
</tr>
<tr>
<td>Category I – High Conservation Value</td>
<td>250 feet</td>
</tr>
<tr>
<td>Category I</td>
<td>100 feet</td>
</tr>
<tr>
<td>Category II</td>
<td>80 feet</td>
</tr>
<tr>
<td>Category III</td>
<td></td>
</tr>
<tr>
<td>Category IV</td>
<td>50 feet</td>
</tr>
</tbody>
</table>

(ii) The minimum width of a wetland buffer may be reduced in accordance with the wetland category and habitat scoring of the wetland and Table
21.77.100(6)(a)(ii)(A) if the required measures in Table 21.77.100(6)(b)(ii)(B) and WMC 21.77.100(6)(a)(iii) are all implemented.

Table 21.77.100(6)(a)(ii)(A): Wetland Buffer Width Reduction

<table>
<thead>
<tr>
<th>Wetland Category</th>
<th>Minimum buffer width based on habitat score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 – 5</td>
</tr>
<tr>
<td>Category I – High Conservation Value</td>
<td>190 feet</td>
</tr>
<tr>
<td>Category I</td>
<td>75 feet</td>
</tr>
<tr>
<td>Category II</td>
<td>60 feet</td>
</tr>
<tr>
<td>Category III</td>
<td>40 feet</td>
</tr>
</tbody>
</table>

Table 21.77.100(6)(b)(ii)(B): Measures to Reduce Wetland Buffer Width

<table>
<thead>
<tr>
<th>Disturbance</th>
<th>Required Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light</td>
<td>• Direct lights away from wetland</td>
</tr>
<tr>
<td>Noise</td>
<td>• Locate activities that generate noise away from wetland</td>
</tr>
<tr>
<td></td>
<td>• If warranted, enhance existing buffer with native vegetation plantings adjacent to noise sources</td>
</tr>
<tr>
<td></td>
<td>• For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10-foot wide heavily vegetated buffer strip immediately adjacent to the outer wetland buffer</td>
</tr>
<tr>
<td>Toxic runoff</td>
<td>• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered</td>
</tr>
<tr>
<td></td>
<td>• Establish covenants limiting use of pesticides within 150 ft of wetland</td>
</tr>
<tr>
<td></td>
<td>• Apply integrated pest management</td>
</tr>
<tr>
<td>Storm water runoff</td>
<td>• Retrofit stormwater detention and treatment for roads and existing adjacent development</td>
</tr>
<tr>
<td></td>
<td>• Prevent channelized flow from lawns that directly enters the buffer</td>
</tr>
<tr>
<td></td>
<td>• Use Low Intensity Development techniques (for more information refer to the drainage ordinance and manual)</td>
</tr>
<tr>
<td>Change in water regime</td>
<td>• Infiltrate or treat, detain, and disperse into buffer new stormwater runoff from impervious surfaces and new lawns</td>
</tr>
<tr>
<td>Pets and human disturbances</td>
<td>• Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion</td>
</tr>
</tbody>
</table>
• Place wetland and its buffer in a separate tract or protect with a conservation easement

Dust
• Use best management practices to control dust

(iii) The minimum wetland buffer width assumes the buffer is vegetated with native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should be either planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.

(iv) Except as otherwise specified or allowed in accordance with this chapter, wetland buffers shall be retained in an undisturbed or enhanced condition.

(v) Measurement of wetland buffers shall be from the outer edges of the wetland boundaries as determined through the performance of a field investigation by a qualified professional applying the wetlands identification and delineation and as surveyed in the field.

(b) Buffer averaging - general. Averaging of a wetland buffer width can be allowed when the following are satisfied:

(i) Averaging improves wetland protection;

(ii) The wetland has significant differences in characteristics that affect its habitat functions, such as a “dual-rate” wetland with a Category I area adjacent to a lower-rated area;

(iii) The buffer is increased adjacent to the higher-functioning area of habitat or more-sensitive portion of the wetland and decreased adjacent to the lower-functioning or less-sensitive portion;

(iv) The total area of the buffer after averaging is at least equal to the area required without averaging;

(v) The buffer at its narrowest point is never less than the greater of either three-quarters (75 percent) of the required width, or 75 feet for a Category I and II wetland, 50 feet for a Category III wetland, and 25 feet for a Category IV wetland; and

(vi) A critical area report meeting the requirements set forth in WMC 21.77.060 indicates the criteria in this subsection are satisfied.

(7) Compensatory Mitigation. In addition to the mitigation requirements set forth in WMC 21.77.070, supplemental compensatory mitigation is required for impacts that cannot be avoided or minimized in accordance with this subsection. (WMC 21.77.100(7)).

(a) Types of compensatory mitigation are described below in order of preference:

(i) Restoration, which is the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former or degraded wetland;

(ii) Establishment (Creation), which is the manipulation of the physical, chemical, or biological characteristics of a site to develop a wetland on an upland or deep-water site where a wetland did not previously exist;

(iii) Enhancement, which is the manipulation of the physical, chemical, or biological characteristics of a site to heighten, intensify, or improve specific function(s) or to change the growth stage or composition of the vegetation present; and

(iv) Protection/Maintenance (Preservation), which is removing a threat to, or preventing the decline of, wetland conditions by an action in or near a wetland.

(b) Compensatory mitigation shall achieve equivalent or greater shoreline ecological functions existing prior to the proposed alteration and shall be consistent with Wetland
Mitigation in Washington State – Part 2: Developing Mitigation Plans – Version 1, (Ecology Publication #06-06-011b), and Selecting Wetland Mitigation Sites Using a Watershed Approach (Western Washington) (Ecology Publication #09-06-032), as revised.

(c) Compensatory mitigation actions for wetlands or wetland buffers shall not result in a net loss of wetland or buffer area except when the lost wetland or buffer area provides minimal functions and the mitigation action(s) results in a net gain in wetland or buffer functions as determined by a site-specific function assessment.

(d) Compensatory mitigation actions shall be in-kind and conducted within the same basin and on the same site as the alteration except when the following apply:
   (i) There are no reasonable on-site opportunities for mitigation or on-site opportunities do not have a high likelihood of success due to development pressures, adjacent land uses, or on-site buffers or connectivity are inadequate;
   (ii) Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland; and
   (iii) Off-site locations shall be in the same basin and the same water resource inventory area (WRIA).

(e) Alternative Mitigation Plans. The Director may approve alternative wetland mitigation plans that are based on scientific and technical information consistent with WAC 173-26-201 such as priority restoration plans that achieve restoration goals set forth in the shoreline master program provided the alternative mitigation proposals must provide an equivalent or better level of protection of wetland functions and values than would be provided by the strict application of this chapter.

(f) Mitigation Timing. Where feasible, compensatory mitigation projects shall be completed prior to activities that will disturb wetlands. In all other cases, compensatory mitigation shall be completed immediately following disturbance and prior to use or occupancy of the activity or development. Construction of compensatory mitigation projects shall be timed to reduce impacts to existing wildlife and flora.

(g) Compensatory Mitigation Ratios.
   (i) These ratios in the following table apply to wetland creation, rehabilitation or restoration that is in-kind, on site, the same category, and has a high probability of success. The first number specifies the acreage of replacement wetlands and the second specifies the acreage of wetlands altered.

<table>
<thead>
<tr>
<th>Wetland Category</th>
<th>Creation or Reestablishment</th>
<th>Rehabilitation</th>
<th>Enhancement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category I</td>
<td>4:1</td>
<td>8:1</td>
<td>16:1</td>
</tr>
<tr>
<td>Category II</td>
<td>3:1</td>
<td>6:1</td>
<td>12:1</td>
</tr>
<tr>
<td>Category III</td>
<td>2:1</td>
<td>4:1</td>
<td>8:1</td>
</tr>
<tr>
<td>Category IV</td>
<td>1.5:1</td>
<td>3:1</td>
<td>6:1</td>
</tr>
</tbody>
</table>

(ii) Increased Replacement Ratio. The Director may increase the ratios in Table 21.77.100(7) under the following circumstances:
   (A) Uncertainty exists as to the probable success of the proposed restoration or creation; or
   (B) A significant time period will elapse between impact and replication of wetland functions; or
(C) Proposed mitigation will result in a lower category wetland or reduced functions relative to the wetland being impacted; or

(D) The impact was an unauthorized impact.

(iii) Decreased Replacement Ratio. The Director may decrease the ratios in Table 21.77.100(7) under the following circumstances:

(A) Documentation by a qualified wetlands specialist demonstrates that the proposed mitigation actions have a very high likelihood of success;

(B) Documentation by a qualified wetlands specialist demonstrates that the proposed mitigation actions will not result in a net loss of shoreline ecological functions; and

(C) The proposed mitigation actions are conducted in advance of the impact and have been shown to be successful.

(iv) Minimum Replacement Ratio. In all cases, a minimum acreage replacement ratio of one-to-one is required.

(v) Compensatory Mitigation requirements may also be determined using the credit/debit tool described in Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report (Ecology Publication #10-06-011, Olympia, WA, March 2012, or as revised).

(h) Wetland Mitigation Banks.

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

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

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

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

(ii) Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the bank’s certification.

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

(i) Wetland enhancement as mitigation.

(i) Impacts to wetlands may be mitigated by enhancement of existing significantly degraded wetlands.

(ii) Applicants proposing to enhance wetlands must produce a critical area report that identifies how enhancement will increase the functions of the degraded wetland and how this increase will adequately mitigate for the loss of wetland area and function at the impact site.

(iii) The enhancement acreage shall be pursuant to the ratios in Table 21.77.100(7).

(j) In-lieu fee mitigation. Credits from an approved in-lieu-fee program may be used for compensatory mitigation if the following are all applied:

(i) The Director determines that it would provide environmentally appropriate compensation for the proposed impacts;

(ii) The proposed use of credits is consistent with the terms and conclusions of the approved in-lieu-fee program instrument;

(iii) Projects using in-lieu-fee credits shall have debits associated with the proposed impacts calculated by the applicant’s qualified wetland professional using the credit assessment method specified in the approved instrument for the in-lieu-fee program; and
(iv) The impacts are located within the serve area specified in the approved in-lieu-fee instrument.

(k) Compensatory mitigation plan. When a project involves wetland and/or buffer impacts, a compensatory mitigation plan prepared by a qualified professional shall be required and satisfying the following:

(i) The requirements for a critical area report pursuant to WMC 21.77.060;

(ii) A Compensation Mitigation Report following the guidance found in Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication #06-06-011b) as revised; and

(iii) The monitoring plan shall not be for a period of less than five years.

(8) Required signage.

(a) Temporary Markers. The outer perimeter of the wetland or buffer and the limits of those areas to be disturbed pursuant to an approved permit or authorization shall be marked in the field in such a way as to ensure that no unauthorized intrusion will occur and inspected by the City prior to the commencement of permitted activities. This temporary marking shall be maintained throughout construction, and shall not be removed until permanent signs, if required, are in place pursuant to WMC 21.77.100(6)(h).

(b) Permanent Signs.

(i) As a condition of any permit or authorization issued pursuant to this chapter, City staff may require the applicant to install permanent signs along the boundary of a wetland or buffer.

(ii) Permanent signs shall be made of a metal face and attached to a metal post, or another material of equal durability. The sign shall be worded as follows or with alternative language approved by the City staff:

Protected Wetland Area
Do Not Disturb.
Contact the City of Woodinville
Regarding Uses and Restriction

(iii) Signs must be posted at an interval of one per lot or every 50 feet, whichever is less, and must be maintained by the property owner in perpetuity.

(9) Protective fencing.

(a) The Director may condition any permit or authorization issued pursuant to this chapter to require the applicant to install a permanent fence at the edge of the wetland buffer, when fencing will prevent future impacts to the wetland.

(b) Fencing installed as part of a proposed activity or as required in this subsection shall be designed to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes impacts to the wetland and associated habitat.

(10) Monitoring. Compensatory mitigation projects shall be monitored for a period necessary to establish the performance standards, but not for a period of less than five years.

21.77.110 Geologically hazardous areas.

(1) Geologically hazardous areas include those areas susceptible to erosion, sliding, earthquake, or other geologic events. They pose a threat to the health and safety of citizens when incompatible development is sited in areas of significant hazard. Such incompatible development may not only place itself at risk, but also may increase the hazard to surrounding development and use. In the City of Woodinville, areas susceptible to one or more of the following types of hazards shall be designated as a geologically hazardous area:
(a) Erosion hazard;
(b) Landslide hazard; and
(c) Seismic hazard.

(2) Specific geological hazard areas – designation.
(a) Erosion Hazard Areas. Erosion hazard areas are those areas identified by the U.S. Department of Agriculture’s Natural Resources Conservation Service as having a “moderate to severe,” “severe,” or “very severe” rill and inter-rill erosion hazard.
(b) Landslide Hazard Areas. Landslide hazard areas are those areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include areas susceptible because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors, and at a minimum include the following:
   (i) Areas of historic failures, such as:
       (A) Those areas delineated by the U.S. Department of Agriculture’s Natural Resources Conservation Service as having a “severe” limitation for building site development;
       (B) Areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published by the U.S. Geological Survey or Department of Natural Resources;
   (ii) Areas with all three of the following characteristics:
       (A) Slopes steeper than 15 percent; and
       (B) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
       (C) Springs or ground water seepage;
   (iii) Slopes that are parallel or sub-parallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;
   (iv) Areas potentially unstable because of rapid stream incision, stream bank erosion, and undercutting by wave action;
   (v) Areas located in a canyon or on an active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding; and
   (vi) Steep slopes, which are any area with a slope of 40 percent or steeper and with a vertical relief of 10 or more feet, excluding areas composed of bedrock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least 10 feet of vertical relief.
(c) Seismic Hazard Areas. Seismic hazard areas are those areas subject to severe risk of damage because of earthquake-induced ground shaking, slope failure, settlement, soil liquefaction, lateral spreading, or surface faulting. One indicator of potential for future earthquake damage is a record of earthquake damage in the past. Ground shaking is the primary cause of earthquake damage in Washington state. The strength of ground shaking is primarily affected by:
   (i) The magnitude of an earthquake;
   (ii) The distance from the source of an earthquake;
   (iii) The type and thickness of geologic materials at the surface; and
   (iv) The subsurface geologic structure.
Settlement and soil liquefaction conditions occur in areas underlain by cohesionless, loose, or soft-saturated soils of low density, typically in association with a shallow ground water table.
(d) Other geological hazard areas:
   (i) Volcanic hazard areas must include areas subject to pyroclastic flows, lava flows, debris avalanche, or inundation by debris flows, lahars, mudflows, or related flooding resulting from volcanic activity.
(ii) Mine hazard areas are those areas underlain by, adjacent to, or affected by mine workings such as adits, gangways, tunnels, drifts, or air shafts. Factors which should be considered include: Proximity to development, depth from ground surface to the mine working, and geologic material.

(3) Mapping. The approximate location and extent of geological hazardous areas are shown on the adopted critical area maps. These include:
   (i) U.S. Geological Survey landslide hazard, seismic hazard and volcano hazard maps;
   (ii) Department of Natural Resources seismic hazard maps for Western Washington;
   (iii) Department of Natural Resources slope stability maps;
   (iv) Federal Emergency Management Administration flood insurance maps; and
   (v) Locally adopted maps.

These maps are guides for project applicants and/or property owners and may be continuously updated as new critical areas are identified. They are a reference and do not represent a final critical area designation.

(4) Additional report requirements.
   (a) For development and alterations proposed within erosion or landslide hazard areas, the applicant is required to submit a geotechnical report prepared by a qualified professional.

   (b) The Director may require a geotechnical report for development and alterations proposed within a seismic hazard area.

(5) Where a geotechnical report is required, a geotechnical assessment of the geological hazards including the following site- and proposal-related information shall be included in either a geotechnical report or a critical area report.

   (a) Site and construction plans for the proposal showing:
      (i) The type and extent of geologic hazard areas, any other critical areas, and any critical area buffers on, adjacent to, within 200 feet of, or that are likely to impact the proposal or be impacted by the proposal;
      (ii) Proposed development, including the location of existing and proposed structures, fill, storage of materials, and drainage facilities, with dimensions indicating distances to the geologically hazardous area; and
      (iii) The topography, in two-foot contours of the project area and all hazard areas addressed in the report.

   (b) An assessment of the geologic characteristics and engineering properties of the soils, sediments, and/or rock of the project area and potentially affected adjacent properties, and a review of the site history regarding landslides, erosion, and prior grading. Soils’ analysis shall be accomplished in accordance with accepted taxonomic classification systems in use in the region. The assessment shall include, but not be limited to:
      (i) A description of the surface and subsurface geology, hydrology, soils, and vegetation found in the project area and in all hazard areas addressed in the report;
      (ii) A detailed overview of the field investigations published data and references; data and conclusions from past assessments of the site; and site-specific measurements, tests, investigations, or studies that support the identification of geologically hazardous areas; and
      (iii) A description of the vulnerability of the site to the relevant geologic hazard.

   (c) A geotechnical analysis including a detailed description of the project, its relationship to the geologic hazard(s), and its potential impact upon the hazard area, the subject property and affected adjacent properties.
(d) Recommendations for the minimum no-disturbance buffer and minimum building setback from any geologic hazard based upon the geotechnical analysis. The Director may assign buffer and building setbacks based on this information. For steep slopes, the minimum buffer widths are specified in WMC 21.77.110(9)(c).

(e) When hazard mitigation is required:
   (i) The mitigation plan shall specifically address how the activity maintains or reduces the pre-existing level of risk to the site and adjacent properties on a long-term basis (equal to or exceeding the projected lifespan of the activity or occupation);
   (ii) Proposed mitigation techniques shall be considered to provide long-term hazard reduction only if they do not require regular maintenance or other actions to maintain their function; and
   (iii) Mitigation may also be required to avoid any increase in risk above the pre-existing conditions following abandonment of the activity.

(f) Where a valid geotechnical report has been prepared and approved by the City within the last five years for a specific site, and where the proposed land use activity and surrounding site conditions are unchanged, said report may be incorporated into a required critical area or satisfy the requirements for a geotechnical report, provided the applicant submits a geotechnical assessment detailing any changed environmental conditions associated with the site.

(g) Additional information determined by the Director to be necessary to the review of the proposed activity and the subject hazard.

(6) In addition to the geotechnical report requirements specified in WMC 21.77.110(5), a geotechnical or critical area report (as specified in WMC 21.77.060) for an erosion hazard or landslide hazard shall include the following information:
   (a) A site plan drawing for the proposal showing the following:
      (i) The height of slope, slope gradient, and cross section of the project area;
      (ii) The location of springs, seeps, or other surface expressions of ground water on or within 200 feet of the project area or that have potential to be affected by the proposal; and
      (iii) The location and description of surface water runoff.
   (b) The geotechnical analysis shall specifically include:
      (i) A description of the extent and type of vegetative cover;
      (ii) An estimate of load capacity including surface and ground water conditions, public and private sewage disposal systems, fills and excavations, and all structural development;
      (iii) An estimate of slope stability and the effect construction and placement of structures will have on the slope over the estimated life of the structure;
      (iv) An estimate of the bluff retreat rate that recognizes and reflects potential catastrophic events such as seismic activity or a 100-year storm event;
      (v) Consideration of the run-out hazard of landslide debris and/or the impacts of landslide run-out on down-slope properties;
      (vi) A study of slope stability including an analysis of proposed angles of cut and fills and site grading;
      (vii) Recommendations for building limitations, structural foundations, and an estimate of foundation settlement; and
      (viii) An analysis of proposed surface and subsurface drainage, and the vulnerability of the site to erosion.
   (c) For any development proposal within an erosion hazard area, an erosion and sediment control plan acceptable to the City is required.
(d) A drainage plan for the collection, transport, treatment, discharge and/or recycle of water.

(e) Whenever development, including, but not limited to, stairs, pathways, trams and their support structures, retaining walls, and structures, is performed on any erosion, landslide hazard, or steep slope area as defined in this section, a mitigation plan shall be prepared that includes the following:

(i) The location and methods of drainage, surface water management, locations and methods of erosion control, a vegetation management and/or replanting plan, and/or other means for maintaining long-term soil stability;

(ii) Including requirements for all disturbed areas to be re-vegetated; and

(iii) Re-vegetation shall include planting of species indigenous to the Northwest, together with a schedule of their maintenance.

(f) If the Director determines there is a significant risk of damage to downstream receiving waters due to potential erosion from the site, a monitoring surface water report can be required. The report shall include a plan to monitor the surface water discharge from the site and include a recommended schedule for submitting monitoring reports to the City.

(7) Seismic hazard areas require geotechnical reporting consistent with WMC 21.77.110(4)(b), WMC 21.77.110(5) and the following:

(a) The site map shall show all known and mapped faults within 200 feet of the project area or that have potential to be affected by the proposal; and

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

(8) Geologically hazardous areas – general development standards.

(a) Alterations to geologically hazardous areas and/or associated buffers may only occur for activities that a qualified professional determines:

(i) Will not increase the threat of the geologic hazard to adjacent properties beyond predevelopment conditions;

(ii) Will not adversely impact other critical areas or critical area buffers;

(iii) Are designed so that the hazard is eliminated or mitigated to a level equal to or less than predevelopment conditions; and

(iv) Are certified as safe by a qualified engineer or geologist, licensed in the state of Washington.

(b) Essential Public Facilities Prohibited. Essential public facilities shall not be placed within geologically hazardous areas unless there is no practical alternative.

(9) Geologically hazardous areas – specific development standards.

(a) Alterations of an erosion or landslide hazard area and/or associated buffers may only occur for which a geotechnical report is submitted and certifies:

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

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

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

(b) A buffer shall be established from the top and bottom edges of steep slopes as defined in Table 21.77.110(2). The size of the buffer shall be determined by the Director consistent with WMC 21.77.110(9)(c) to eliminate or minimize the risk of property damage, death or injury resulting from erosion and landslides caused in whole or part by the development, based upon review of and concurrence with a geotechnical and/or critical area report prepared by a qualified professional.

(c) Minimum buffer from landslide hazards.
(i) The minimum buffer shall be equal to the height of the slope or 50 feet, whichever is greater;
(ii) The buffer may be reduced to a minimum of 10 feet when a qualified professional demonstrates to the City’s satisfaction that the reduction will adequately protect the proposed development, adjacent developments, and uses and the subject critical area.
(iii) The buffer may be increased where the Director determines a larger buffer is necessary to prevent risk of damage to proposed and existing development.

(d) Development within erosion or landslide hazard areas and/or associated buffers shall be designed to meet the following basic requirements unless it can be demonstrated that an alternative design that deviates from one or more of these standards provides equivalent or greater long-term slope stability while meeting all other provisions of these critical area regulations. The requirement for long-term slope stability shall exclude designs that require periodic maintenance or other actions to maintain their level of function. The basic development design standards are:
   (i) The proposed development shall not decrease the factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions. Analysis of dynamic conditions shall be based on a minimum horizontal acceleration as established by the current version of the International Building Code;
   (ii) Structures and improvements shall minimize alterations to the natural contour of the slope and foundations shall be tiered where possible to conform to existing topography;
   (iii) Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;
   (iv) The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;
   (v) The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes; and
   (vi) Development shall be designed to minimize impervious surfaces.

(e) Unless otherwise provided or as part of an approved alteration, removal of vegetation from an erosion or landslide hazard area or related buffer shall be prohibited.

(f) Clearing shall be allowed only from May 1st to October 1st of each year; provided, that the Director may extend or shorten the dry season on a case-by-case basis depending on actual weather conditions.

(g) Utility lines and pipes shall be permitted in erosion and landslide hazard areas only when the applicant demonstrates that no other practical alternative is available. The line or pipe shall be located above ground and properly anchored and/or designed so that it will continue to function in the event of an underlying slide. Stormwater conveyance shall be allowed only through a high-density polyethylene pipe with fuse-welded joints, or similar product that is technically equal or superior.

(h) Point discharges from surface water facilities and roof drains onto or upstream from erosion or landslide hazard area shall be prohibited except as follows:
   (i) Conveyed via continuous storm pipe down-slope to a point where there are no erosion hazards areas downstream from the discharge;
   (ii) Discharged at flow durations matching pre-developed conditions, with adequate energy dissipation, into existing channels that previously conveyed stormwater runoff in the pre-developed state; or
   (iii) Dispersed discharge upslope of the steep slope onto a low-gradient undisturbed buffer demonstrated to be adequate to infiltrate all surface and stormwater runoff.
(i) The division of land in erosion and landslide hazard areas and associated buffers is subject to the following:

   (i) Land that is located wholly within erosion or landslide hazard area or its associated buffer may not be subdivided. Land that is located partially within erosion or landslide hazard area or associated buffer may be divided; provided, that each resulting lot has sufficient buildable area outside of the erosion and landslide hazard and associated buffers, and will not affect, the erosion or landslide hazard or associated buffer.

   (ii) Access roads and utilities may be permitted within the erosion or landslide hazard area and associated buffers if the Director determines that no other feasible alternative exists.

(j) On-site sewage disposal systems, including drain fields and infiltration drainage systems are prohibited within erosion and landslide hazard areas and related buffers.

(k) New stabilization structures for existing primary residences shall be permitted within shoreline areas only where no alternatives (including relocation or reconstruction of existing structures) are feasible and less expensive than the proposed stabilization measure, and then only if no net loss of shoreline ecological functions will result.

(l) Activities proposed to be in seismic hazard areas shall meet the standards of WMC 21.77.110(8)(a).

21.77.120 Fish and wildlife habitat conservation areas.

(1) Fish and wildlife habitat conservation areas include:

   (a) Areas with which state or federally designated endangered, threatened, and sensitive species have a primary association.

      (i) Federally designated endangered and threatened species are those fish and wildlife species identified by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service that are in danger of extinction or are threatened to become endangered. The U.S. Fish and Wildlife Service and the National Marine Fisheries Service should be consulted as necessary for current listing status.

      (ii) State designated endangered, threatened, and sensitive species are those fish and wildlife species native to the state of Washington, identified by the 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). The State Department of Fish and Wildlife maintains the most current listing and should be consulted as necessary for current listing status.

   (b) State Priority Habitats and Species. Priority habitats and species are priorities for conservation and management. Priority species require protective measures for their perpetuation due to their population status; sensitivity to habitat alteration; and/or recreational, commercial, or tribal importance. Priority habitats are those habitat types or elements with unique or significant value to a diverse assemblage of species. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element. Priority habitats and species are identified by the State Department of Fish and Wildlife.

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(c) Habitats and Species of Local Importance. Habitats and species of local importance are those identified by the City as approved by the Woodinville city council, including those that possess unusual or unique habitat warranting protection.

(i) Table 21.77.120(1)(c) sets forth species that are designated as species of local importance.

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
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<tbody>
<tr>
<td>Bald eagle</td>
<td>Haliaeetus leucocephalus</td>
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<td>Peregrine falcon</td>
<td>Falco peregrines</td>
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<td>Common loon</td>
<td>Gavia immer</td>
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<td>Chaetura vauxi</td>
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<td>Salvelinus confluentus</td>
<td>Salvelinus confluentus</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>Chinook salmon</td>
</tr>
<tr>
<td>Oncorhynchus tshawyscha</td>
<td>Oncorhynchus tshawyscha</td>
</tr>
</tbody>
</table>

(ii) When nominating additional habitats or species, the following criteria shall be considered in designating species of local importance:

(A) Habitat or species rarity or vulnerability to rarity, as evidenced by restricted, small, or declining species population and habitats or community loss or degradation;

(B) The need for protection, maintenance, and/or restoration of the nominated habitat to ensure the long-term survival of a species;

(C) If applicable, the ability of the site to maintain connectivity between habitat areas or to contribute significantly to regional biodiversity as evidenced by species use, richness, abundance, and/or rarity;

(D) Why special protection is needed and how existing County, State and Federal programs and regulations do not provide adequate protection; and

(E) Any proposed management strategies for the affected species or habitat supported by best available science.
(d) Naturally Occurring Ponds Under 20 Acres. Naturally occurring ponds are those ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds. Naturally occurring ponds do not include ponds deliberately designed and created from dry sites, such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds, and landscape amenities, unless such artificial ponds were intentionally created for mitigation.

(e) Waters of the State. In the City of Woodinville, waters of the state include lakes, ponds, streams, inland waters, underground waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington, as classified in WAC 222-16-031.

(f) State Natural Area Preserves and Natural Resource Conservation Areas. Natural area preserves, and natural resource conservation areas are defined, established, and managed by the State Department of Natural Resources.

(g) Land found by the Woodinville city council to be essential for preserving connections between habitat blocks and open spaces.

(2) Water Typing. Streams shall be designated in accordance with Table 21.77.120(2):

<table>
<thead>
<tr>
<th>Water Typing</th>
<th>Brief Description</th>
<th>Designation Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type S</td>
<td>Shorelines of the State</td>
<td>Sammamish River and Little Bear Creek including periodically inundated areas of their associated wetlands</td>
</tr>
<tr>
<td></td>
<td>Fish Bearing Streams/ Continuous and Seasonal Flows</td>
<td>Segments of natural waters that are not classified as a Type S stream and are at least seasonally utilized by fish for spawning, rearing or migration. Stream segments which are fish passable are presumed to have at least seasonal fish use. Fish passage should be determined using the best professional judgment of a qualified professional.</td>
</tr>
<tr>
<td>Type F Stream</td>
<td>Non-fish Bearing Streams/ Continuous Flows</td>
<td>Segments of natural waters that are perennial non-fish-bearing streams. Perennial streams do not go dry any time during a year of normal rainfall. However, for the purpose of stream typing, Type Np streams include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow. If the uppermost point of perennial flow cannot be identified with simple, nontechnical observations, then the point of perennial flow should be determined using the best professional judgment of a qualified professional.</td>
</tr>
<tr>
<td>Type Np Stream</td>
<td>Non-fish Bearing Streams/ Seasonal Flows</td>
<td>Segments of natural waters that are not classified as Type S, F, or Np streams. These are seasonal, non-fish-habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from any stream reach that is a Type Np water. Ns waters must be physically connected</td>
</tr>
</tbody>
</table>

Table 21.77.120(2): Stream Water Type
<table>
<thead>
<tr>
<th>Water Typing</th>
<th>Brief Description</th>
<th>Designation Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>by an above ground channel system to Type S, F, or Np waters.</td>
</tr>
</tbody>
</table>

Note: “Natural waters” only excludes water conveyance systems which are artificially constructed and actively maintained for irrigation.

(3) Mapping.  
(a) The approximate location and extent of the fish and wildlife habitat conservation areas are shown on the critical area maps adopted by the City of Woodinville, as most recently updated. The following critical area maps are hereby adopted:
   (i) Department of Fish and Wildlife Priority Habitat and Species Maps;
   (ii) Department of Natural Resources, Official Water Type Reference Maps, as amended;
   (iii) Anadromous and resident salmonid distribution maps contained in the Habitat Limiting Factors Reports published by the Washington Conservation Commission;
   (iv) Department of Natural Resources State Natural Area Preserves and Natural Resource Conservation Area Maps; and
   (v) City of Woodinville official habitat maps.
(b) These maps are guides for project applicants and/or property owners and may be continuously updated as new critical areas are identified. They are a reference and do not represent a final critical area designation.

(4) In addition to the critical area report requirements prescribed in WMC 21.77.060, a habitat assessment shall be included. A habitat assessment is an investigation of the project area to evaluate the presence or absence of potential critical fish or wildlife habitat. The habitat assessment shall include the following site- and proposal-related information:
(a) Identification of any species of local importance, priority species, or endangered, threatened, sensitive or candidate species that has 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;
(b) A discussion of any federal, state, or local special management recommendations, including Department of Fish and Wildlife habitat management recommendations that have been developed for species or habitats located on or adjacent to the project area;
(c) A discussion of any ongoing management practices that will protect habitat after the project site has been developed, including any proposed monitoring and maintenance programs;
(d) 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:
   (i) An evaluation by the State Department of Fish and Wildlife, local Native American Indian tribe, 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; and/or
   (ii) Detailed surface and subsurface hydrologic features both on and adjacent to the site.

(5) Fish and wildlife habitat conservation areas – general development standards.  
(a) A fish and wildlife habitat conservation area may be altered only if consistent with mitigation sequencing as prescribed in WMC 21.77.070(2) and the proposed alteration of the habitat or the mitigation proposed does not result in a net loss of shoreline...
ecological functions. All new structures and land alterations shall be prohibited within fish and wildlife habitat conservation areas, except as allowed in accordance with this chapter.

(b) Whenever activities are proposed in or adjacent to a fish and wildlife habitat conservation area, which state or federally endangered or threatened species have a primary association, such area shall be protected through the application of measures in accordance with a critical area report prepared by a qualified professional and approved by the City, and guidance provided by the appropriate state and/or federal agencies.

(c) All activities, uses, and alterations proposed to be located in or within the established buffers of water bodies used by anadromous fish shall give special consideration to the preservation and enhancement of anadromous fish and fish habitat.

(d) Plant, wildlife, or fish species not indigenous to western Washington State shall be excluded from fish and wildlife habitat conservation areas unless authorized by a state or federal permit or approval.

(e) The Director shall condition approvals of activities allowed within or adjacent to a fish and wildlife habitat conservation areas and associated buffers as follows:

   (i) Establishment of buffer zones;
   (ii) Preservation of critically important vegetation;
   (iii) Limitation of public access to the habitat area, including fencing to deter unauthorized access;
   (iv) Seasonal restriction of construction activities;
   (v) Establishment of a duration and timetable for periodic review of mitigation activities; and
   (vi) Requirement of a performance bond, when necessary, to ensure completion and success of proposed mitigation; and
   (vii) Other conditions deemed necessary to ensure no net loss of ecological functions.

(f) Any approval of alterations or impacts to a fish and wildlife habitat conservation area shall be supported by the most current, accurate, and complete scientific and technical information available.

6 Fish and wildlife habitat conservation area – buffers.

(a) The Director shall require the establishment of buffer areas for activities in, or adjacent to, fish and wildlife habitat conservation areas when needed to protect fish and wildlife habitat conservation areas.

   (i) Buffers shall consist of an undisturbed area of native vegetation, or areas identified for restoration, established to protect the integrity, functions and values of the affected habitat.

   (ii) Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted nearby.

   (iii) The determination of a specific area being a fish and wildlife habitat conservation area shall be made on a site specific, case-by-case basis.

(b) The following standard buffers shall be established, measured outward on the horizontal plane from the ordinary high-water mark or from the top of bank if the ordinary high-water mark cannot be identified:
Table 21.77.120(6)(b): Stream Buffers

<table>
<thead>
<tr>
<th>Water Type</th>
<th>Standard Buffer Width</th>
<th>Minimum Buffer Width with Enhancement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type S Stream</td>
<td>150 feet</td>
<td>100 feet</td>
</tr>
<tr>
<td>Type F Stream</td>
<td>100 feet</td>
<td>50 feet</td>
</tr>
<tr>
<td>Type Np Stream</td>
<td>75 feet</td>
<td>37.5 feet</td>
</tr>
<tr>
<td>Type Ns Stream</td>
<td>50 feet</td>
<td>35 feet</td>
</tr>
</tbody>
</table>

(c) Minimum Buffer Width with Enhancements. The Director may approve using the minimum buffer width with enhancements in Table 21.77.120(6)(b) if:

(i) The proposal is within a Residential and/or General Urban Environment and only when the existing stream buffer is degraded;

(ii) The incentive-based action measures set forth in Table 21.77.120(6)(c) are employed;

(iii) A critical area report and mitigation plan approved by the City, and the most current, accurate, and complete scientific and technical information available applied on a case-by-case basis determine that a smaller area is adequate to protect the habitat functions and values based on site-specific characteristics and the proposal will result in a net improvement of stream and buffer functions;

(iv) An enhancement plan for mitigating buffer-reduction impacts is prepared;

(v) Where a substantial portion of the remaining buffer is degraded, re-vegetation with native plants in the degraded portions shall be included in the remaining buffer area; and

(vi) A monitoring and maintenance plan shall be included for a period necessary to establish the performance standards, but not for a period of less than five years.

Table 21.77.120(6)(c): Enhanced Stream Buffer Incentive Options

<table>
<thead>
<tr>
<th>Description of Action</th>
<th>Options</th>
<th>Allowed Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Removal of impervious surface</td>
<td>Remove at least 50 percent of the impervious surface within the reduced buffer, and where the total impervious surface removed is more than 500 square feet</td>
<td>10 percentage points</td>
</tr>
<tr>
<td></td>
<td>Remove 100 percent of impervious surfaces within the reduced buffer, where at least 50 percent of the reduced buffer presently contains impervious surface</td>
<td>20 percentage points</td>
</tr>
<tr>
<td>Installation of biofiltration/infiltration mechanisms</td>
<td>Install bioswales, created and/or enhanced wetlands, or ponds supplemental to existing</td>
<td>20 percentage points</td>
</tr>
<tr>
<td>Description of Action</td>
<td>Options</td>
<td>Allowed Reduction</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>or required surface water drainage and water quality requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Removal of invasive, nonnative vegetation and replanting with native species vegetation</td>
<td>Remove and employ extended (minimum five-year) monitoring and continued-removal maintenance of relatively dense stands of invasive, nonnative vegetation from significant portions of the remaining buffer area</td>
<td>10 percentage points</td>
</tr>
<tr>
<td>In-stream habitat enhancement</td>
<td>Placement of log structure, bioengineered bank stabilization, or culvert removal</td>
<td>20 percentage points</td>
</tr>
<tr>
<td></td>
<td>Improve fish passage and/or creation of side channel or backwater areas</td>
<td>25 percentage points</td>
</tr>
<tr>
<td></td>
<td>Remove piped streams and restore as open stream with restored buffer areas</td>
<td>25 percentage points</td>
</tr>
<tr>
<td>Installation of oil/water separators</td>
<td>If not required by other provisions of the Woodinville Municipal Code, install oil/water separator for stormwater quality control</td>
<td>10 percentage points</td>
</tr>
<tr>
<td>Off-site restoration, if no on-site area is possible</td>
<td>Restoration is provided at a 2:1 ratio or greater</td>
<td>10 percentage points</td>
</tr>
<tr>
<td></td>
<td>Restoration is provided at a 4:1 ratio or greater</td>
<td>20 percentage points</td>
</tr>
<tr>
<td>Remove toxic material</td>
<td>Remove significant refuse or sources of toxic material</td>
<td>5 percentage points</td>
</tr>
</tbody>
</table>

**Notes:**
- Where multiple options for an action are prescribed, only one option per an action may be applied.
- 10 percent points means the buffer width can be reduced by 10 percent. If two or more incentive options are used, the percent points are added together to determine the percentage of buffer reduction. However, in no case can the buffer width be reduced below the minimum buffer width with enhancement set forth in Table 21.77.120(6)(c).

(d) Averaging of standard stream buffer width. Averaging of the standard stream buffer width can be allowed when the following are all satisfied:
- (i) The averaging will result in a net improvement of habitat functions and values;
- (ii) The averaging includes revegetation of the entire stream buffer on the property using native plants, as needed;
- (iii) The total area square footage contained within the stream buffer on the property is not decreased;
- (iv) The stream buffer width is not reduced by more than 25 percent of the standard stream buffer width in any one location;
(v) A critical area report and mitigation plan demonstrating compliance with this section is provided using the most current, accurate, and complete scientific and technical information available applied on a case-by-case basis; and
(vi) Buffer averaging cannot be used in combination with the minimum buffer width with enhancement standards.

(7) Permitted activities. Provided the use or activity is consistent with the use table in WMC 21.72.030, the following uses and activities may be permitted within a fish and wildlife habitat conservation area:

(a) Primary utilities, excluding storm drainage facilities, if:
   (i) No practical alternative location is available;
   (ii) Use of an approved utility corridor by more than one utility may be required by the director;
   (iii) The location is the least adversely impactful to the fish and wildlife habitat; and
   (iv) The following measures are incorporated into the construction of the utility:
       (A) Located in already existing cleared areas whenever possible;
       (B) Minimize crossings of fish-bearing watercourses;
       (C) Use bio-stabilization, riprap, or other innovative engineering techniques to prevent erosion where lines may need to follow steep slopes;
       (D) Avoid utility improvements that would increase fish passage barriers; and
       (E) Promote utility improvements that are designed to remove fish and wildlife passages barriers wherever possible.

(b) Storm drainage facilities if:
   (i) Conveyance systems are designed to allow discharge to a stream only from a detention facility, pre-settlement pond, or other stormwater treatment facilities, provided discharge to a stream is authorized and City stormwater regulations are followed;
   (ii) Grass-lined swales and dispersal trenches that are placed in the outer 25 percent of the buffer width; and
   (iii) No other storm drainage facilities are allowed.

(c) Accessory Utilities if:
   (i) No practical alternative location is available;
   (ii) The utilities are placed in the outer 25 percent of the buffer area;
   (iii) The location is the least adversely impactful to the fish and wildlife habitat.

(d) Public and private trails and/or visual access designed for non-motorized traffic if:
   (i) The surface of the trail uses pervious materials, except a public trail designed for multi-purpose may use impervious materials if requirements for water quality and quantity control are satisfied; and
   (ii) The buffers are expanded at a minimum to equal the width of the trail corridor including disturbed areas.

(e) The following requirements apply to areas with endangered or threatened species:
   (i) No development is allowed within a fish and wildlife habitat conservation area or its buffer within which State or Federally endangered, threatened, or sensitive species have a primary association, except as provided by a management plan established by the Washington Department of Fish and Wildlife or applicable State or Federal agency;
   (ii) All activities, uses, and alterations proposed to be in water bodies used by anadromous fish or in areas that affect such water bodies shall give special consideration to the preservation and enhancement of anadromous fish habitat, including, but not limited to the following:
(A) Activities shall be timed to occur consistent with restrictions on work windows required by state and federal agencies;
(B) An alternative alignment or location is not feasible;
(C) The activity, use or alteration is designed so that it will not degrade the functions or values of the fish habitat or other critical areas;
(D) Shoreline erosion control measures shall be designed to use bioengineering methods or soft armoring techniques according to an approved critical area report; and
(E) Any impacts to the functions or values of the fish and wildlife habitat conservation area are mitigated in accordance with an approved critical area report; and

(iii) Structures that prevent the migration of salmonids are prohibited in the portion of water bodies currently or historically used by anadromous fish. Fish bypass facilities are required that allow the upstream migration of adult fish and shall prevent fry and juveniles migrating downstream from being trapped or harmed.

(f) Alterations to streams and stream buffers, excluding associated wetlands, are permitted, as follows:
   (i) For S streams, only the uses prescribed in the use table set forth in WMC 21.72.030, provided all other requirements of the shoreline master program including mitigation sequencing are satisfied.
   (ii) Widening of existing roadways where:
       (A) The widening is within the outer 25 percent of the standard buffer area;
       (B) The widening minimizes impact to the stream and provides mitigation consistent with WMC 21.77.070 for unavoidable impacts;
       (C) The widening does not change the overall stream hydrology;
       (D) The widening does not diminish the flood storage capacity of the stream;
       (E) Construction occurs consistent with restrictions on work windows required by state and federal agencies; and
       (F) The widening is the minimum necessary to support road functions.
   (iii) Stream crossings if:
       (A) Expansion of existing crossings is preferred to create new crossings;
       (B) Crossings shall use bridges or other construction techniques in accordance with best management practices which do not disturb the stream bed, except that bottomless culverts or other appropriate methods demonstrated to provide fisheries protection may be used that disturb the stream bed for Type F or Np streams if it can be demonstrated that such methods and their implementation will pose no harm to the stream or inhibit migration of fish;
       (C) Bridge piers or abutments are not placed within the floodway or waterward of the ordinary high-water mark;
       (D) Crossings cannot diminish the flood-carrying capacity of the stream;
       (E) Crossings do not occur over resident or anadromous fish spawning areas;
       (F) Construction occurs consistent with restrictions on work windows required by state and federal agencies;
       (G) 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 licensed civil engineer; and
(H) The expansion of existing crossings or the construction of new crossings are the minimum necessary to support transportation goals and policies.

(iv) Excluding S Streams, stream relocations if:
   (A) the relocation is for enhancing or restoring resources in the stream;
   (B) The relocation is onsite, except offsite may be allowed if onsite relocation is not feasible and the offsite location is within the same drainage sub-basin as the original stream;
   (C) The relocation occurs consistent with restrictions on work windows required by state and federal agencies;
   (D) The relocation is not solely to allow for a development and will improve ecological functions;
   (E) Appropriate floodplain protection measures are employed, and equivalent base flood storage volume and function will be maintained as certified by a qualified civil engineer;
   (F) No adverse impact to local ground water will occur;
   (G) No increase in velocity will occur upstream or downstream;
   (H) No increase in the sediment load will occur upstream or downstream;
   (I) Requirements set out in a mitigation plan are satisfied;
   (J) Relocation conforms to other applicable laws;
   (K) All work will be carried out under the direct supervision of a qualified biologist; and
   (L) All required state and federal permits and authorization are obtained prior to conducting site work.

(v) For Type S streams, stream channel stabilization if consistent with WMC 21.76.040 through 21.76.070.

(vi) For Type F, Np, and Ns Streams, stream channel stabilization if:
   (A) Water movement threatens existing residential or commercial structures, public facilities or improvements, unique natural resources or the only existing access to property;
   (B) Stabilization is done in compliance with the requirements of the shoreline master program; and
   (C) Soft-bank stabilization techniques are utilized unless it can be demonstrated that soft-bank techniques are not a reasonable alternative due to site-specific soil, geologic and/or hydrologic conditions.

(vii) Enhancements beyond those exempt under WMC 21.77.040(2)(f), and not associated with any other development proposal, are allowed if accomplished according to a plan for design, implementation, maintenance and monitoring prepared by qualified professionals and carried out under the direct supervision of a qualified biologist.

(viii) Minor stream restoration projects sponsored or approved by a public agency with a mandate to do such work if:
   (A) The enhancements are not associated with mitigation of a specific development proposal;
   (B) Limited to placement of rock weirs, log controls, spawning gravel, culvert replacement and other specific habitat improvements for resident and anadromous fish including salmonid;
   (C) Involves the use of hand labor and light equipment; and/or the use of helicopters and cranes that deliver supplies to the project site; provided, that they have no contact with critical areas or critical area buffers; and
Attachment A

(D) Performed under the direct supervision of a qualified biologist.
(8) Mitigation.

(a) The alteration of a fish and wildlife habitat conservation area and or buffer requires mitigation to be provided consistent with WMC 21.77.070 and shall include:

(i) Achievement of equivalent or superior shoreline ecological functions than existing;

(ii) Include mitigation for impacts upstream and downstream from the development as appropriate;

(iii) Mitigation shall address each function affected by the alteration to achieve functional equivalency or improvement on a per-function basis; and

(iv) Mitigation should occur in the same sub-drainage basin as the habitat impacted.

(b) Mitigation sites shall be located to achieve contiguous wildlife habitat corridors in accordance with a mitigation plan that is part of an approved critical area report to minimize the isolating effects of development on habitat areas, so long as mitigation of aquatic habitat is located within the same aquatic ecosystem as the area disturbed.

(c) Restoration or mitigation is required as part of a development proposal whereby impacts, either direct or indirect, to the fish and wildlife habitat conservation area occur.

(d) Restoration is required in addition to mitigation when a fish and wildlife habitat conservation area 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 or mitigation, included as part of the critical areas report, shall demonstrate:

(i) Fish and wildlife habitat conservation area is degraded and will not further be degraded by the restoration or mitigation activity;

(ii) Restoration or mitigation will reliably and demonstrably improve the water quality and fish and wildlife habitat;

(iii) Restoration or mitigation will result in no net loss and no significant adverse impact will occur to habitat functions;

(iv) On sites where nonnative vegetation was cleared, restoration shall include installation of native vegetation with a density equal to or greater than the predevelopment site conditions; and

(v) Restoration or mitigation will assist in stabilizing the stream channel.

(e) All restoration and/or mitigation projects for streams shall meet the following:

(i) All work shall be carried out under the direct supervision of a qualified biologist;

(ii) Basin analysis shall be performed to determine hydrologic conditions;

(iii) 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;

(iv) Identical or similar materials shall be used to restore the stream bottom;

(v) Bank and buffer configuration shall be restored to its original condition;

(vi) Channel, bank and buffer areas shall be replanted with native vegetation which replicates the original vegetation in species, sizes and densities; and

(vii) Preexisting biologic functions of the stream shall be recreated.

(f) Replacement or enhancement for approved stream or buffer alterations shall be accomplished in streams and on the site unless the applicant demonstrates:

(i) Enhancement or replacement on the site is not possible or on-site opportunities do not have a high likelihood of success due to development pressures, adjacent land uses, or on-site buffers or connectivity are inadequate;

(ii) Off-site location is in the same drainage sub-basin as the original stream; and

(iii) Greater biologic and hydrologic functions will be achieved.
(g) Surface Water Management. Surface water management or flood control alterations shall not be considered enhancement unless other functions are simultaneously improved.

(h) Daylighting a stream is encouraged when redeveloping. The Director may modify the requirements pertaining to aquatic areas and associated buffers when locating or daylighting a stream.

(i) Mitigation sites shall be monitored and maintained consistent with this chapter.

(9) Required signage.

(a) Temporary Markers. The outer perimeter of the wetland or buffer and the limits of those areas to be disturbed pursuant to an approved permit or authorization shall be marked in the field in such a way as to ensure that no unauthorized intrusion will occur and inspected by the City prior to the commencement of permitted activities. This temporary marking shall be maintained throughout construction, and shall not be removed until permanent signs, if required, are in place pursuant to WMC 21.77.120(9)(b).

(b) Permanent Signs.

(i) As a condition of any permit or authorization issued pursuant to this chapter, City staff may require the applicant to install permanent signs along the boundary of a wetland or buffer.

(ii) Permanent signs shall be made of a metal face and attached to a metal post, or another material of equal durability. The sign shall be worded as follows or with alternative language approved by the City staff:

```
Fish and Wildlife
Habitat Conservation Area
Do Not Disturb.
Contact the City of Woodinville
Regarding Uses and Restriction
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(iii) Signs must be posted at an interval of one per lot or every 50 feet, whichever is less, and must be maintained by the property owner in perpetuity.
9.1 SHORELINE MASTER PROGRAM

Introduction

The Washington State Legislature passed into law the Shoreline Management Act (SMA) in 1971 with the paramount objectives to protect and restore the valuable natural resources that shorelines represent and to plan for and foster all "reasonable and appropriate uses" that are dependent upon a waterfront location or which will offer the opportunities for the public to enjoy the state’s shorelines. The goals and policies of the SMA constitute one of the goals of the Growth Management Act as set forth in RCW 36.70A.020.

Administration of the SMA is a cooperative effort balancing local and state-wide interests in the management and development of shoreline areas. The City manages the shoreline areas through implementation of its shoreline master program. The goals and policies set forth in this sub-element are combined with the regulations set forth in Subtitle 21.7 of the Woodinville Municipal Code and together constitute the Woodinville Shoreline Master Program. This master program represents the City’s participation in a coordinated planning effort to protect the public interest associated with the shorelines of the state, at the same time, recognizing and protecting private property rights consistent with the public interest.

The City of Woodinville first adopted a shoreline master program in 1993 and updated it in 1997. The shoreline master program was again updated in 2009 to be consistent with the Ecology adopted 2005 SMP guidelines.

VISION FOR THE SHORELINE MASTER PROGRAM

The Northwest Woodland nature of the City makes preservation of this character, while encouraging good stewardship and enjoyment of the shoreline, including protecting and preserving shoreline ecological functions, the primary vision of the shoreline master program.

GOALS AND POLICIES

The City's Shoreline Master Program provides goals and policies involving the protection of, and appropriate uses for, the shoreline. The goals and policies are grouped into the following categories:

- Shoreline Use
- Economic Development
- Public Access
- Circulation
- Recreation
- Archeological and Historic Resources
- Flood Hazard Management
- Conservation
- Restoration
- Process
SHORELINE USES.
These goals deal with the distribution, location and extent of: (1) the use of shorelines and adjacent areas for housing, commerce, transportation, public buildings, utilities, education and natural resources; (2) the use of the water for recreation and transportation; and (3) the use of the water, shoreline and uplands for other categories of land and water uses and activities not specified in this master program.

Land use allocation within the different environment designations along the shorelines of the state inside the city shall be applied in the order of priority listed in Policy SMP-1.1 and the comprehensive plan. Shoreline of state-wide significance shall also be governed by the use preferences listed in prioritized order in Policy SMP-1.3.

Goal SMP-1: To provide a management system which will plan for and foster all reasonable and appropriate uses and provide guidance to property owners for appropriate uses and their locations.

Policy SMP-1.1. When assigning environment designations, determining permitted uses within the different designations and use categories, and reviewing individual applications, uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the state's shoreline. Alterations of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for:

1. Development that will provide an opportunity for substantial numbers of the people to enjoy the shorelines of the state.

2. Shoreline recreational uses including but not limited to parks, marinas, piers, and other improvements facilitating public access to the shorelines of the state.

3. Shoreline and fish restoration activities including scientific research.

4. Industrial and commercial developments that are particularly dependent on their location on or use of the shorelines of the state, or which provide significant public access opportunities.

5. Single family residences and their appurtenant structures.

Policy SMP-1.2. When assigning environmental designations, determining permitted uses within the different designations and use categories, and reviewing individual applications, the City shall consider the carrying capacity of lands involving an intensification of land use.

Policy SMP-1.3. The City of Woodinville shall, with regard to shorelines of state-wide significance within the City's jurisdiction, give preference (in the following order of preference) to uses that:
1. Recognize and protect the state-wide interest over local interest.
2. Preserve the natural character of the shoreline.
4. Protect the resources and ecology of the shoreline.
5. Increase public access to publicly owned areas of the shorelines.
6. Increase recreational opportunities for the public in the shorelines.

**Policy SMP-1.4.** Development regulations as contained elsewhere in this master program shall be applied to all existing and future uses within the shoreline jurisdiction, when a permit for development activity is submitted to:

1. Ensure visual access to waterways.
2. Promote interesting development.
3. Prevent encroachment over water.
4. Ensure the implementation of the above policy in permitting uses along shorelines of state-wide significance.
5. Protect the natural resources, including natural vegetation, of the Master Program's jurisdiction.

**Policy SMP-1.5.** Ensure that all uses on the shoreline will protect and improve water quality by proper design of drainage, sewer connections, and other measures made necessary by particular uses and locations.

**Policy SMP-1.6.** Ensure that development regulations adequately protect the aesthetic and natural characteristics of the water and shoreline.

**Goal SMP-2:** To plan for and encourage the location of similar or compatible uses in suitable areas already dedicated to such use.

**Policy SMP-2.1.** Encourage maintenance and expansion of existing concentrations of compatible uses through establishment of criteria of suitability for shoreline locations within the City's development regulations and this Master Program.

**Goal SMP-3:** Where appropriate and permitted by law, to establish an open space corridor (an urban separator of a minimum of 100 feet) along the Sammamish River through reservation of easements [RCW 84.34], acquisition of property by the City or other public entity, transfer of development rights, location within otherwise established buffer areas, or other mechanism.
Policy SMP-3.1. Coordinate the City’s Shoreline Master Program and Parks, Recreation, and Open Space Element of the Woodinville Comprehensive Plan when acquiring park lands.

Policy SMP-3.2. Coordinate the City’s Shoreline Master Program and the Woodinville Comprehensive Plan with King County.

ECONOMIC DEVELOPMENT.
These goals and policies are for the location and design of transportation, port, tourist and commercial facilities, and other developments dependent upon shoreline locations.

Goal SMP-4: To encourage a multiple-use concept for land used for economic activity to maintain the tax base while providing public access to the shoreline, respecting the natural environment, and preserving or enhancing the quality of life in the community.

Policy SMP-4.1. Ensure consistency with the Woodinville Comprehensive Plan’s land use designations and urban design criteria so that public purposes can be served while compatible with securing a return on private investment.

Policy SMP-4.2. Upland uses designated by the Woodinville Comprehensive Plan on adjacent lands outside of immediate SMP jurisdiction (in accordance with RCW 90.58.340) shall be consistent with the purpose and intent of this Master Program as they affect the shoreline.

Policy SMP-4.3. Develop a means of identifying the additional economic benefit gained by shoreline location.

Goal SMP-5: To provide for and encourage economic activity and development of water-dependent uses and/or water-related uses in appropriate shoreline locations, which create the most positive impact on the environment and take into consideration the capacities of the area’s natural resources, public services, and public facilities.

Policy SMP-5.1. Give priority to land uses that give preference to economic activities that either leave natural shoreline features such as trees, grasses, and wildlife habitat unmodified, or that modify them in a way that enhances human awareness and appreciation of the river's or creek's natural functions and beauty.

Policy SMP-5.2. Ensure that industrial and commercial structures and site developments are in harmony with general design criteria to be established for the riverfront and river valley landscape in this master program, the Woodinville Comprehensive Plan, and development regulations.

Policy SMP-5.3. Encourage non-water-dependent uses to locate inland, leaving shorelines natural, open, or dedicated to water-dependent uses.
Goal SMP-6: To concentrate intensive economic development dependent on shoreline locations at suitable locations already used for like economic pursuits.

Policy SMP-6.1. Water-dependent and water-related economic activities will be given preference in areas where limited commercial and industrial development space along shorelines is in demand for a number of competing uses.

Policy SMP-6.2. Promote industrial or commercial development contiguous to existing business areas relating to the shoreline to avoid scattering such development into new areas.

PUBLIC ACCESS.
These goals and policies are for public access to publicly owned shorelines and assessing the need for providing public access to shoreline areas.

Goal SMP-7: To provide for an adequate amount of public access, both physical and visual, to the shorelines as part of a total system, consistent with the Woodinville Comprehensive Plan's Parks, Recreation, and Open Space element, and the needs of other shoreline uses.

Policy SMP-7.1. The City shall develop and implement an integrated plan for public shoreline access. This plan shall identify ways for the City to provide effective public access.

Policy SMP-7.2. Private development on the shoreline shall provide as much visual and physical access as possible in line with the reasonable needs for privacy.

Policy SMP-7.3. Continue acquisition of land or easements for the public along the shoreline in concert with the Woodinville Comprehensive Plan and recreation programs to preserve a visual corridor, increase parklands, and expand trail linkages.

Policy SMP-7.4. Encourage footbridges in areas where both sides of the shoreline are related due to economic activities or recreational uses, subject to the permission of all jurisdictional agencies (including, but not limited to the U.S. Army Corps of Engineers, the state Department of Natural Resources, the Department of Ecology, the Department of Fish and Wildlife, and King County).

Policy SMP-7.5. Utilize as many existing public rights-of-way and easements as possible to expand the network of public access to shoreline amenities.

Policy SMP-7.6. Where possible, publicly owned street ends that abut the shoreline should be reclaimed and converted to public access points.
Policy SMP-7.7. Allow controlled public access to water resources for passive recreation, while still protecting the resource.

Goal SMP-8: To ensure that the creation of public access will not endanger life or property or have adverse effects on fragile natural features.

Policy SMP-8.1. Discourage public access that damages the shoreline’s natural features on either private or public property.

Policy SMP-8.2. Discourage public access that would endanger life or public or private safety.

CIRCULATION.
These goals and policies are for assessing the location and extent of existing and proposed major thoroughfares, transportation routes, terminals and other public facilities, and correlating those facilities with the shoreline use elements.

Goal SMP-9: To plan and develop a balanced, efficient, and visually aesthetic circulation network which is most compatible with the shoreline environment.

Policy SMP-9.1. Circulation facilities are to be designed to meet the following criteria:

1. Functionally acceptable, including safety.
2. Visually aesthetic amenities for the citizens of Woodinville.
3. Minimal disruption in access to users on other circulation networks.
4. The least possible impact to existing ecological systems along the shorelines within the jurisdiction of this Master Program.
5. Complementary to the economic and recreational usage of shorelines as set forth in this Master Program and the Woodinville Comprehensive Plan.
6. Buffered with landscaping to reduce impacts.
7. Encouraged to locate in existing rights-of-way.

Policy SMP-9.2. Parking areas shall be designed for minimal interference with the 100-year floodplain’s hydrologic function, and the shoreline's aesthetic potential, and to minimize degradation of water quality.

Policy SMP-9.3. Where possible, circulation facilities should be located outside of buffer and conservancy areas.
Policy SMP-9.4. Whenever feasible, major highways, freeways, and railways should be located away from shorelands and allowed only when related to and necessary for the support of permitted shoreline activities.

Policy SMP-9.5. Roads located in shoreland areas should be designed and maintained to prevent erosion and to permit the natural movement of groundwater.

Policy SMP-9.6. Since land-use and transportation facilities are highly interrelated, the plans for each should be coordinated. The designation of potential high-use areas in the Woodinville Shoreline Master Program should be done after the environmental impact of the transportation facilities needed to serve those areas has been assessed.

Goal SMP-10: To encourage relocation or improvement of circulation elements that are functionally or aesthetically disruptive to the shoreline, public waterfront access, and other shoreline uses.

Policy SMP-10.1. Locate land circulation systems, which are not shoreline dependent, as far from the land-water interface as feasible to reduce interference with either natural shoreline resources or other appropriate shoreline uses to avoid creating new barriers between adjacent uplands and the shoreline.

Policy SMP-10.2. Road locations should be planned to fit the topography so that minimum alterations of natural conditions will be necessary.

Policy SMP-10.3. Extensive loops or spurs of old highways with high aesthetic quality should be kept in service as pleasure bypass routes, especially where main highways paralleling the old highway must carry large traffic volumes at high speeds. When existing transportation corridors abandon their original function, they should be reused for water-dependent use or public access and maintained in public ownership.

Goal SMP-11: To coordinate circulation plans for pedestrian, bicycle, and equestrian access routes connected to the shorelines so that there is minimum conflict between the different users.

Policy 11.1. Access by various modes will be controlled by either reducing speeds of vehicles or designing separate ways for fast- and slow-moving traffic, consistent with the City of Woodinville Comprehensive Plan Transportation Element and Parks, Recreation and Open Space Element. Where compatible, multiple-use corridors are encouraged.

Policy 11.2. Trail and bicycle paths should be encouraged along shorelines where they are compatible with the natural character, resources, and ecology of the shoreline.
RECREATION.
These goals are for the preservation and expansion of recreational opportunities through programs of acquisition/developments, and various means of less-than-fee acquisition.

Goal SMP-12: To provide for and increase the amount of shorelines dedicated to passive and active public recreation where the use is consistent with the ability of the site to support such use.

Policy SMP-12.1. In providing space for public recreation along Woodinville’s shoreline, give primary emphasis to providing for the local recreation needs of Woodinville citizens for swimming, bicycling, horseback riding, fishing, picnicking, and other activities benefiting from shoreline access while recognizing Woodinville’s location along existing or planned regional trail systems.

Policy SMP-12.2. Encourage the counties and state to provide additional shoreline property for public recreation and uses that complement City-owned recreation areas in both a visual and functional way.

Policy SMP-12.3. Develop recreational activity areas that complement the passive natural habitats located along the shoreline and give relief from the more intensive commercial/industrial uses.

Policy SMP-12.4. Coordinate provision of recreational space and uses to be consistent with the Woodinville Comprehensive Plan.

Policy SMP-12.5. Ensure that recreation areas meet the demands of population growth consistent with the carrying capacity of the land and water resources.

Policy SMP-12.6. Give priority to developments that provide recreational uses and other improvements facilitating public access to shorelines.

Policy SMP-12.7. The supply of active or passive recreation facilities shall be compatible with the environmental designations and should relate to local population characteristics, density, and special activity demands. Provision of active recreation and/or park facilities shall be based on the City-wide parks and recreation level-of-service standards adopted by the City of Woodinville’s Comprehensive Plan, Parks and Recreation Element or Parks, Recreation, and Open Space Plan.

Policy SMP 12.8. The City of Woodinville shall consult with state and local health agency guidelines in preparing use regulations for this Master Program and in siting new recreation and open space areas.

Policy SMP-12.9. The use of shoreline street ends, utility rights-of-way, and other publicly owned lands for public access and development of recreational opportunities should be encouraged.
Goal SMP-13: To protect, for public use and enjoyment, areas containing special shoreline recreation qualities that cannot be easily duplicated.

Policy SMP-13.1. Identify along the existing shoreline any unique features (views, topography, vegetation, wildlife, etc.) and assign public acquisition priorities to each.

Policy SMP-13.2. Utilize the high-water table and alluvial soil characteristics along Woodinville’s shorelines to guide the landscaping of public recreation land; use grasses, shrubs, and trees that thrive in that environment; require minimum maintenance expense; and provide cover, shading, and habitat along the shoreline.

Policy SMP-13.3. Utilize the Sammamish River’s characteristics to guide the design of new public parks: e.g., (a) develop groves of trees appropriate to the soil and moisture characteristics of the former floodplain, (b) develop swimming areas that utilize the river’s currents and stream-bank characteristics to maximum advantage, (c) develop footpaths that provide viewing access to the habitat without excessive intrusion into those habitats, and (d) ensure that shoreline parks are located in places where they make optimum use of water for recreation purposes.

Policy SMP-13.4. Make use of street ends and other public property for recreational development and access.

ARCHEOLOGICAL AND HISTORIC RESOURCES.
These goals and policies are for the protection and restoration of buildings, sites, and areas having historic, cultural, educational or scientific values, including unknown archaeological resources that may be located in the shoreline area.

Goal SMP-14: To protect and restore those aspects, buildings, sites, and areas of shoreline having historic, cultural, scientific, or educational values or significance.

Policy SMP-14.1. The use regulations of this Master Program shall contain development regulations as necessary to encourage a compatible surrounding environment to ensure planning for the preservation of significant archaeological resources, especially Native American sites in river and stream corridors.

Policy SMP-14.2. Protect structures culturally or historically significant to the City of Woodinville.

Policy SMP-14.3. Educational opportunities should be provided for the public appreciation of shoreline processes and features.

Policy SMP-14.4. Restrict access to scientifically significant areas where appropriate for the protection of the resource.
Policy SMP-14.5. Require interpretational signage in areas of historic, cultural, or scientific significance, provided it would not endanger the resource.

FLOOD HAZARD MANAGEMENT.
Flood hazard management projects are those actions taken with the primary purpose of preventing or mitigating damage due to flooding. Flood hazard management projects or programs may employ any of several physical or regulatory controls including dikes, dams, lakes, engineered floodways, bioengineering, planning, and zoning (land use management). These provisions also apply to repair and maintenance of flood hazard management systems if the systems are enlarged or otherwise modified.

Goal SMP-15: To manage flood waters along the Sammamish River and Little Bear Creek in a manner which reflects and balances City goals and policies for water quality, fish and wildlife habitat, flood hazard management, recreation, aesthetics, and other beneficial uses of the waterways and their shorelines.

Policy SMP-15.1. Manage flood prone areas and storm and flood waters of the City through the City's Comprehensive Stormwater Management Plan and frequently flooded area regulations in a manner consistent with the Shoreline Management Act and this master program.

Policy SMP-15.2. Work with other cities, King and Snohomish Counties, and state agencies to deal effectively with regional flooding issues.

Policy SMP-15.3. Control stormwater runoff in a manner which utilizes natural detention, retention, and recharge techniques to the maximum extent possible.

Policy SMP-15.4. Prohibit any development within the floodplain that would individually or cumulatively increase the base flood elevation and pursue the discontinuation of such uses which now exist in the floodplain as these uses lose their economic life.

CONSERVATION.
These goals and policies are for the preservation of the natural shoreline resources, considering such characteristics as scenic vistas, parkways, water quality, vegetation, beaches and other valuable natural or aesthetic features. They promote and encourage restoration of shoreline functions and ecological processes that have been impaired as a result of past development activities.

Goal SMP-16: To preserve nonrenewable resources and enhance and/or restore natural resources that make Woodinville shorelines uniquely attractive and valuable to a large ecosystem.

Policy SMP-16.1. Protect, preserve, rehabilitate, and, where possible, enhance water and habitat quality in the Sammamish River and Little Bear Creek.
Policy SMP-16.2. Work with other jurisdictional agencies in the region and with the private sector to deal effectively with regional natural environment issues and the maintenance and enhancement of both the Sammamish River and Little Bear Creek as fish habitat.

Policy SMP-16.3. Restore the vegetative cover most appropriate to the Woodinville shoreline for its aesthetic and biological value, selecting plant material that provides feed and cover for birds, fish, and other wildlife as well as an attractive setting for human leisure enjoyment.

Policy SMP-16.4. The City should ensure that development of private upland property maintains sufficient volumes of surface and subsurface drainage into the biological wetland areas associated with the shorelines, to sustain existing vegetation and wildlife habitat. The content and velocity of this drainage should be controlled by design, as required by engineering standards adopted and administered by the City's Department of Public Services, so that stream habitat and properties along the shoreline below will not be adversely affected.

Policy SMP-16.5. Protect features along the shoreline that provide ecological or recreational benefits.

Policy SMP-16.6. Uses or activities that substantially degrade natural resources should not be allowed.

Policy SMP-16.7. Assess the environmental impacts and mitigation of any new development prior to issuance of permits.

Goal SMP-16: To protect the scenic and aesthetic qualities of shorelines to the fullest extent practical.

Policy SMP-16.1. Concentrate development on shorelines of least visual or natural value.

Policy SMP-16.2. Require the undergrounding of existing or new utility lines when physically feasible during development or redevelopment of shoreline areas.

RESTORATION:
These goals and policies promote and encourage restoration of shoreline functions and ecological processes that have been impaired as a result of past development activities.

Goal SMP-17. Restore shoreline habitats that support listed endangered and threatened species, as well as other anadromous fisheries.
Policy SMP-17.1. Work with the public and any other interested parties to investigate and identify any environmentally sensitive areas within the shoreline jurisdiction which deserve public reclamation, restoration, or preservation and inclusion within the City's open space system.

Policy SMP-17.2. Prioritize those properties identified in accordance with RES-1.1 above as to their value to the City and their vulnerability to degradation or loss. Emphasis should be given to those areas which provide fish and wildlife habitat, facilitate the development of uninterrupted natural passageways for wildlife, provide for continuous urban separators between jurisdictions and within the community, or enhance public access to the waterfront.

Policy SMP-17.3. Use this restoration framework to integrate compensatory mitigation projects into the broader restoration vision for the City.

Policy SMP-17.4. Encourage voluntary restoration projects in degraded shoreline environments.

Policy SMP-17.5. Use the City's critical area buffer enhancement program to help restore stream conditions with new development as well as redevelopment.

Policy SMP-17.6. Encourage the use of Low Impact Development (LID) techniques for development and redevelopment projects.

Policy SMP-17.7. Evaluate opportunities for City acquisition of land or easements along the Sammamish River and Little Bear Creek.

Policy SMP-17.8. Evaluate existing City land use plans and regulations to identify opportunities to encourage protection and restoration of shorelines.

Policy SMP-17.9. Evaluate opportunities to provide more public access along Little Bear Creek.

Policy SMP-17.10. Provide monitoring and adaptive management of restoration projects implemented within the City. Utilize the adaptive management principles developed as part of the WRIA 8 Conservation Plan.

GOAL SMP-18. Develop regional solutions with others to resolve the challenge of protecting shoreline ecological functions while also protecting shoreline developments.

Policy SMP-18.1. Identify opportunities in the Sammamish River and Little Bear Creek watersheds where the City can support WRIA 8 restoration projects.

Policy SMP-18.2. Identify specific restoration opportunities within the City where the City can take the lead with support from other regional entities.
Policy SMP-18.3. Cooperate with King County and WRIA 8 to identify opportunities to work with the US Army Corps of Engineers to modify operation of the Sammamish River Flood Control Project to improve opportunities for shoreline restoration.

Policy SMP-18.4. Cooperate with the WRIA 8 public education program to develop education materials that promote stream-friendly practices as a component of long-term shoreline management.

Goal SMP-19: To restore those shoreline areas that are now blighted by abandoned and dilapidated structures or otherwise non-water related uses and encourage the restoration of those shoreline areas to either water-dependent or water-related uses.

Policy SMP-19.1. Develop zoning or other incentives which will make it economically attractive for private capital investment to upgrade shoreline development.

Policy SMP-19.2. Utilize the City's own capital improvement program to develop the basic network of public amenities in shoreline areas which might in tum attract and improve the quality of related private development.

Policy SMP-19.3. Work with the public and any other interested parties to investigate and identify any environmentally sensitive areas within the shorelines jurisdiction which deserve public reclamation, restoration, or preservation and inclusion within the City1's open space system.

Goal SMP-20: To upgrade and beautify the shoreline to a level commensurate with its public value.

Policy SMP-20.1. Provide regulations for shoreline restoration and beautification which will restore to suitable condition those areas damaged by people's misuse.

Goal SMP-21: provide monitoring and adaptive management of restoration projects implemented within the City. Utilize the adaptive management principles developed as part of the Washington Salmon Recovery Funding Board Effectiveness Monitoring Program.

Policy SMP-21.1. Determine whether fish passage projects are effective in restoring upstream passage to targeted species of salmon and trout.

Policy SMP-21.2. Determine if projects that place artificial in stream structures (AIS) into streams are effective in improving stream morphology and increasing local fish abundance in the treated area at the stream reach level.

Policy SMP-21.3. Determine whether riparian plantings are effective in restoring riparian vegetation, stream bank stability and reducing sedimentation.
Policy SMP-21.4. Determine whether projects that remove or set back dikes, riprap, roads, or landfills are effective at the reach scale in restoring stream morphology and eliminating channel constraints in the treated area.

Policy SMP-21.5. Determine whether projects that restore connectivity to channels that have previously been disconnected from the stream are effective at the reach scale in improving stream morphology and increasing fish abundance in the impacted area. This would include side channels, meander bends, old oxbows, and wetlands.

Policy SMP-21.6. Determine if projects that place spawning gravel into streams are effective in improving salmon spawning and increasing local adult fish abundance in the impacted area at the stream reach level.

Policy SMP-21.7. Determine whether habitat protection parcels as a whole and individually are effective in maintaining and/or improving salmon habitat and fish and invertebrate species assemblages within the parcel boundaries.

Policy SMP-21.8 Determine whether water quality and quantity perimeters are being met in accordance with federal and state water quality standards such as flows, dissolved oxygen, temperature, and pollutants such as temperature, fecal coliform, heavy metals, etc.

Goal SMP-22: Measure the effectiveness of the Shoreline Master Program.

Policy SMP-22.1. Annually the City shall monitor, measure, and report on the effectiveness of the Shoreline Master Program.

Policy SMP-22.2. Use reported monitoring results to determine future capital improvement projects for fish and wildlife projects.

PROCESS.
These goals and policies address revision of the master program and efficient implementation.

Goal SMP-23: To provide adequate funding and a process to periodically update the inventory, goals, policies, and use regulations of this Master Program to respond to changing attitudes and conditions and to maintain consistency with the Woodinville Comprehensive Plan.

Policy SMP-23.1. Provide for periodic review and report by staff to the Woodinville Planning Commission and City Council to assess the performance and the need for change in the master program, especially with regard to natural resources and critical area protection.

Policy SMP-23.2. Citizen participation shall be encouraged in the implementation of this master program.
Goal SMP-24: To provide a system for shoreline permit processing that is fast and decisive and eliminates unnecessary duplication of effort and jurisdiction yet ensures complete coordination and review.

Policy SMP-24.1. Property rights of landowners shall be protected from arbitrary and discriminatory actions.

Policy SMP-24.2. Develop administrative procedures which will help the applicant, the City, and other interested parties reach a quick and accurate assessment of a proposed development.

Policy SMP-24.3. Work toward a 1-stop permit system both within the City government and between appropriate Federal, state, and local agencies.

Policy SMP-24.4. Review of referred related permits (e.g., U.S. Army Corps of Engineer Permits) shall be considered using the criteria set forth herein.

Policy SMP-24.5. Reconcile conflicting public policy goals by considering the overall needs of the community including public access, infrastructure requirements, utility corridor alignments and facilities, and natural resource protection.

Goal SMP-25: To emphasize long-range shoreline planning and coordination and consistency with the Woodinville Comprehensive Plan.

Policy SMP-25.1. Implement shoreline improvements annually through the City's Capital Facilities Element and Capital Improvement Program processes.

Policy SMP-25.2. Provide annual review for consistency with Woodinville’s Comprehensive Plan and for achievement of long-term planning goals. See Policy SMP-25.1 for process.
WOODINVILLE
SHORELINE MASTER PROGRAM

RESTORATION PLAN
December 2009
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1. Introduction

The Sammamish River and Little Bear Creek are central features in the City of Woodinville. The Sammamish River serves as an important connection between the upland drainages of the Cascade foothills to the rest of the Lake Washington watershed and is an important migration route for Chinook salmon. The Shoreline Management Act (SMA or the Act) (RCW 90.58) is charged with balancing how shorelines should be developed, protected, and restored. The Act has three broad policies or mandates; it strives to: 1) encourage water-dependent uses, 2) protect shoreline natural resources, and 3) promote public access. Restoration planning is an important component of the environmental protection policy of the Act.

The City of Woodinville's Shoreline Master Program (SMP), originally adopted in 1993 and revised in 1997 is being updated to comply with the SMA requirements (RCW 90.58), and the state's 2003 SMP guidelines (Washington Administrative Code [WAC] 173-26, Part III). This report supports the development of a restoration element for the SMP update.

The 2003 SMP guidelines specify that local governments must include a "real and meaningful" strategy to address restoration of shorelines. The guidelines also specify how the policies in the SMP promote "restoration" of impaired shoreline ecological functions, where such functions are found to have been impaired based on the inventory and characterization of shoreline ecological functions and ecosystem processes. Local governments are further encouraged to contribute to restoration by planning for and supporting restoration through the SMP and other regulatory and non-regulatory programs.

This report provides a framework to:

a) Identify primary goals for ecological restoration of the Sammamish River and Little Bear Creek ecosystems;

b) Identify how restoration of ecological function can be accomplished;

c) Suggest pathways for how the SMP process may be utilized to accomplish the restoration of impaired shoreline functions associated with the Sammamish River and Little Bear Creek ecosystems; and

d) Prioritize restoration projects so that the highest value restoration actions may be accomplished first.

Regulatory Background

The state has directed local governments to develop SMP provisions "...to achieve overall improvements in shoreline ecological functions over time when compared to the status upon adoption of the master program."
The concept of no net loss of shoreline ecological function is embedded in the Act and in the goals, policies and governing principles of shoreline guidelines and other federal and state environmental protections (e.g., the Clean Water Act). Washington's general policy goals for shorelines of the state include the "protection and restoration of ecological functions of shoreline natural resources." This goal derives from the Act, which states, "permitted uses in the shoreline shall be designed and conducted in a manner that minimizes insofar as practical, any resultant damage to the ecology and environment of the shoreline area." Furthermore, the governing principles of the guidelines clarify that protection of shoreline ecological functions is accomplished through the following (WAC 173-26-186):

a) Meaningful understanding of the current shoreline ecological conditions,
b) Regulations and mitigation standards that ensure that permitted developments do not cause a net loss of ecological functions,
c) Regulations that ensure exempt developments in the aggregate do not result in net loss of ecological functions,
d) Goals and policies for restoring ecologically impaired shorelines,
e) Regulations and programs that fairly allocate the burden of mitigating cumulative impacts among development opportunities, and
f) Incentives or voluntary measures designed to restore and protect ecological functions.

It is important to note that the restoration planning component of the SMP is focused on voluntary mechanisms, not regulatory provisions. Restoration planning is focused on economic incentives, available funding sources, volunteer programs, and other programs that can contribute to a no net loss strategy. However, the restoration framework developed for these non-compensatory mitigation projects can also be applied to compensatory mitigation projects. In this way, all efforts to improve ecosystem functioning are coordinated and will be designed to work together.

To date, restoration, rehabilitation, enhancement or other improvements to shoreline ecological functions have either been voluntary or in the form of mitigation for impacts resulting from development. Preservation of existing conditions has been, and continues to be, the primary regulatory approach to protecting ecosystem functions:

Through numerous references to and emphasis on the maintenance, protection, restoration, and preservation of "fragile" shoreline "natural resources," "public health," "the land and its vegetation and wildlife," "the waters and their aquatic life," "ecology," and "environment," the act makes protection of the shoreline environment an essential statewide policy goal consistent with the other policy goals of the act (WAC 173-26-186(8)).
Defining Restoration

There are numerous definitions for "restoration" in scientific and regulatory publications. Specific elements of these definitions often differ, but the core element of repairing damage to an existing, degraded ecosystem remains consistent. In the SMP context, the WAC defines "restoration" or "ecological restoration" as:

"...the reestablishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including, but not limited to, revegetation, removal of intrusive shoreline structures and removal or treatment of toxic materials. Restoration does not imply a requirement for returning the shoreline area to aboriginal or pre-European settlement conditions" (WAC 173-26-020(27)).

Using the WAC definition of restoration in regard to state shorelines, it is clear the effort should be focused on specific shoreline areas where natural ecological functions have been impaired or degraded. The emphasis in the WAC is to achieve overall improvement in existing shoreline processes or functions, if these functions are impaired. Therefore, the goal is not to restore historically natural conditions, but rather to improve on existing, degraded conditions. In this context, restoration can be broadly implemented through a combination of programmatic measures (such as surface water management; water quality improvement; public education) and site-specific projects (such as riparian plantings and wetland restoration). It is important to note that the guidelines do not state that local programs should or could require individual permittees to restore past damages to an ecosystem as a condition of a permit for new development (Ecology, 2004). The required restoration planning element, therefore, focuses on the City as a whole rather than parcel by parcel, or permit by permit.

Table I below summarizes the key elements included in restoration planning within the context of an SMP update under the state's current guidelines (WAC 173-26-201(2)(f)). These key elements provide the organization and content for this report.

**Table 1. Restoration Planning Structure**

<table>
<thead>
<tr>
<th>Key elements for the shoreline restoration planning process</th>
<th>WAC 173-26-201(2)(f)</th>
<th>Section in this report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify degraded areas, impaired ecological functions, and sites with potential for ecological restoration.</td>
<td>Assessment of Functions; Programmatic and specific restoration opportunities are described in Restoration Opportunities</td>
<td></td>
</tr>
<tr>
<td>Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions.</td>
<td>Policy Development</td>
<td></td>
</tr>
<tr>
<td>Identify existing and ongoing projects and programs that are currently being implemented which are designed to contribute to local restoration goals (such as capital improvement programs (CIPs) and watershed planning efforts (WRIA habitat/recovery plans).</td>
<td>Restoration Planning</td>
<td></td>
</tr>
</tbody>
</table>
Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies, including identifying prospective funding sources for those projects and programs.

<table>
<thead>
<tr>
<th>Restoration Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals.</td>
</tr>
<tr>
<td>Provide for mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals (e.g., monitoring of restoration project sites).</td>
</tr>
</tbody>
</table>

2. Restoration Planning

The guidelines for the SMP process direct that local shoreline master programs shall include "goals, policies and actions for restoration of impaired shoreline ecological functions." Under the guidelines, restoration planning has a purpose distinct from development regulations and mitigation standards. "The guidelines expressly focus restoration requirements on the use of master program policies, as opposed to development regulations" (Ecology, 2004). Therefore, to develop specific restoration goals and policies, an overall restoration framework was considered to maintain consistency with an approach to restoration currently recommended at the national level. This restoration framework includes elements that go beyond the traditional no net loss philosophy to target a long-term improvement in a broad base of ecosystem functions where feasible in the City of Woodinville.

Restoration Framework

Significant national attention has recently been applied to the development of an approach to restoring riverine ecosystems that will more consistently result in long-term improvement in ecosystem functioning (Brinson, 1993, Kondolf, 1995, Palmer et al., 2005, Bernhardt et al., 2005). The National River Restoration Science Synthesis project recently focused efforts on developing both: 1) a database of existing and proposed river restoration projects; and 2) criteria to consistently determine if a restoration is successful (Palmer and Allan, 2006). This work is intended to provide a consistent restoration approach across jurisdictions, and to improve the probability of future success by learning from existing river restoration projects.

These national efforts have resulted in the recent publication of a recommended approach to river restoration (Palmer and Allan, 2006). A slightly modified version for use within this restoration framework is presented in Figure I, below. The approach has three phases: (1) Decision, (2) Design and Implementation, and (3) Monitoring and Assessment. This framework is offered here to provide the following:
a) Background and insight into how current approaches to ecosystem restoration have been developed;
b) A way to consider how to integrate new information as it becomes available; and
c) A basis for integrating the City’s efforts into regional efforts.

![Figure 1. Schematic View of Overall Restoration Framework.](image)

**Assessment of Functions**

Shoreline restoration planning begins with the identification of "degraded areas" or areas with "impaired ecological functions." The City’s *Shoreline Inventory and Characterization Report* (Adolfson, 2006) examined riverine ecosystem processes that maintain shoreline ecological functions; and identified impaired ecological functions. Key findings of the inventory and characterization are summarized below.

**Watershed Context and Shoreline Modifications**

The City of Woodinville includes approximately 2.5 miles of the Sammamish River and 1.8 miles of Little Bear Creek within its boundary and designated urban growth area (UGA). The Sammamish River drains a large area of the Cascade foothills from its origin at Lake Sammamish to its mouth at Lake Washington. Little Bear Creek is one of several tributaries to the Sammamish River, with its confluence located in the City.

The Sammamish River basin is part of the Lake Washington/Cedar River Watershed Resource Inventory Area (WRIA 8). WRIA 8 covers an area of approximately 692 square...
miles. The City and its UGA occupy approximately 7 square miles, or one percent of the land area included in WRIA 8. The portion of the Sammamish River within the City and its UGA is approximately 22 percent of the total length of the river.

Historically, the Sammamish River corridor consisted of complex wetland systems, with numerous braided channels. The floodplain was heavily forested. The first significant change resulted from the construction of the Hiram Chittenden Locks in 1917 built to connect Lake Washington with Puget Sound. The navigational project resulted in lowering Lake Washington by 9 feet and Lake Sammamish by 6 feet. This reduced the river gradient and altered flow patterns. Drainage districts formed during the 1910s drained wetlands and diked and straightened the river for flood control to allow agriculture in the floodplain. In the 1960s, the U.S. Army Corps of Engineers took over flood control on the Sammamish River. The river was dredged and deepened, and as a result, the Sammamish River was channelized and straightened reducing the river's length by approximately half, to 14 miles. Although there is no formal levee system along the river, the excavated material from dredging was deposited along the channel creating de facto levees or berms. All riparian vegetation was subsequently removed along the channelized river and continues to be maintained by the Corps as a grass-lined channel.

The Little Bear Creek basin encompasses a drainage area of approximately 15 square miles. Although it is the least developed of the three main lowland tributaries to the Sammamish River (the other two are North and Swamp Creeks), the creek has been impacted by the processes of urbanization resulting in the degradation of channel and habitat conditions.

**Habitat and Species**

The shorelines within the City of Woodinville provide important habitat for a number of fish and wildlife species. Most notably, Chinook salmon have been documented in the entire length of the Sammamish River within the city limits. Chinook salmon are also known to occur in Little Bear Creek. Chinook are listed as threatened under the federal Endangered Species Act. Coho salmon are also known to occur within the City's shoreline jurisdiction, both in the Sammamish River and Little Bear Creek. Therefore, fish passage, especially for federally listed species, is an important function of the shorelines within the City.

Modifications to the Sammamish River system have resulted in reduced levels of ecosystem functioning, including hydrology, water quality, riparian habitat, and instream habitat. Changes to hydrology are caused by levees/dikes, channel modifications, and urbanization, which have modified the timing and volume of flow. The two main factors influencing the Sammamish River within the City's shoreline planning area are the channelization of the main channel and the rapid rate of urbanization. Overall, habitat conditions are highly degraded compared to historic conditions. River management and berms have reduced the river's connection with adjacent wetlands and off-channel habitats, changing the spatial extent of habitats, and increasing the potential for pollutants to impact water quality. Urbanization and agricultural development have resulted in impaired water quality, especially temperature and dissolved oxygen. Disturbances to the channel banks have resulted in areas that are dominated by non-native, invasive species. Large woody debris, in the form of riparian trees and in-channel wood, is generally lacking throughout the
system, which decreases the quality and quantity of riparian and aquatic habitats. Channel straightening has resulted in an overall lack of habitat complexity.

Habitat in Little Bear Creek is also affected by urbanization that has decreased water quality, changed stream flow, and increased sedimentation in the creek. Urbanization has reduced riparian buffers and habitat. Approximately 98 percent of the reach from the mouth to 132nd Avenue NE is armored, reducing potential stream connections to riparian wetlands. As a result, this reach of Little Bear Creek offers little off-channel habitat for salmonids. In addition, several improperly constructed road crossings and culverts present barriers to upstream salmonid migration.

**Land Use and Public Access**

The Sammamish watershed is a sub-basin of the greater Lake Washington/Cedar River drainage, encompassing the land area that drains to Lake Sammamish and the Sammamish River. Land use in the Sammamish watershed consists primarily of forestry uses in the eastern portions of the watershed and residential development further west. Agricultural uses are common along the Sammamish River from Woodinville upstream to the outlet of Lake Sammamish in Redmond.

While the predominant land use in and around the City of Woodinville is residential, land use near the Sammamish River is predominantly industrial, particularly on the west bank of the river. The east bank includes multi-family uses and a mix of parks, open space, and multi-family housing. The Sammamish River Trail, owned by King County, follows the west bank of the Sammamish River near the City.

Land use within the City's Little Bear Creek shoreline jurisdiction is predominantly commercial and general business, however, there are several park and open space areas located near the confluence with the Sammamish River. There is also a residential area and parkland on the northwestern shore.

There are significant opportunities for public access to the shorelines of the Sammamish River and Little Bear Creek. There are approximately 45 acres of land that are zoned parks within the City. Shoreline access (both physical and visual) is available for most of the 10-mile length of the Sammamish River Trail through the City. Other parks with shoreline access include Woodin Creek Park, Wilmot Park, Little Bear Creek Rotary Park, Little Bear Creek Lineal Park Property and a small residential pocket park in the Wedge Neighborhood.

**Condition of Ecosystem Processes**

Key findings regarding current levels of ecosystem functioning within the Sammamish River and Little Bear Creek systems are reported in Sections 6 and 7 of the *City of Woodinville Shoreline Inventory and Characterization Report* (Adolfson, 2006). The inventory report identified key ecosystem processes and provided a qualitative assessment of their levels of functioning at both a watershed and City reach scale.
The method used for assessing watershed-wide processes, shoreline ecological functions, and restoration opportunities is derived from the five-step approach to understanding and analyzing watershed processes described in Protecting Aquatic Ecosystems: A Guide for Puget Sound Planners to Understand Watershed Processes (Stanley et al., 2005). This approach defines watershed processes as the delivery, movement, and loss of water, sediments, nutrients, toxins, pathogens, and large woody debris. Factors evaluated in the City of Woodinville under this approach include:

a) River hydrology,
b) Sediment delivery,
c) Water quality, and
d) Habitat formation and structure.

Examining conditions and processes at the watershed and City scales informs local restoration planning by providing a broader understanding of how ecosystem-wide processes form and influence shoreline ecological functions. As illustrated above in Figure 2, this approach evaluates ecosystem-wide processes at both the watershed and shoreline area scales to determine the appropriate restoration opportunities and potential for specific sites. Tables 2 and 3, taken from the City’s Inventory and Characterization Report, summarize the assessment of shoreline functions and the impairments or alterations of functions, and identify programmatic approaches to restoration of the functions in the Sammamish River and Little Bear Creek, respectively. As indicated in the tables, many of the alterations to shoreline functions and ecosystem processes in the Sammamish River and Little Bear Creek are due to watershed scale issues within the upper watershed, which cannot be fully restored or addressed in the reaches that flow through Woodinville. However, hydrologic, water quality, and habitat restoration measures in the City do have the potential to improve the overall functioning of this section of the Sammamish River system and improve conditions lower in the Lake Washington basin.
Table 2. Summary of Shoreline Functions and Programmatic Restoration Opportunities, Sammamish River

<table>
<thead>
<tr>
<th>CONDITION AND CAUSES OF IMPAIRMENT</th>
<th>SCALE OF ALTERATIONS AND IMPAIRMENT</th>
<th>SHORELINE ECOLOGICAL FUNCTIONS AFFECTED</th>
<th>PROGRAMMATIC RESTORATION OPPORTUNITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak and base flows may be impaired. Summer low flows in the Sammamish River have declined. Potential causes include increased impervious area and increased demand for groundwater and tributary withdrawals in the watershed.</td>
<td>Watershed scale</td>
<td>Hydrologic</td>
<td>Protect groundwater sources to the River, particularly in the Little Bear Creek basin.</td>
</tr>
<tr>
<td>Movement and storage of water has been highly altered. Channelization has isolated the river from its former floodplain and associated wetlands, reducing flood storage capacity and increasing flow velocities. Berms have likely altered groundwater movement, infiltration capacity, and capacity for groundwater exchange.</td>
<td>Watershed scale</td>
<td>Hydrologic</td>
<td>Support efforts to reestablish connectivity to former floodplain and associated wetlands. However, the potential for setbacks is limited by Corps of Engineer policy and adjacent trails, roads, and development.</td>
</tr>
<tr>
<td>Wetlands cut off from the river can no longer provide essential storage, recharge, or water quality functions.</td>
<td>Watershed, UGA-wide, and reach scale</td>
<td>Hydrologic Water quality</td>
<td>Target local wetland restoration and storage, detention, and water quality functions. Restore and reconnect wetlands adjacent to tributary streams of the Sammamish River. Continue to restore wetlands within the berms.</td>
</tr>
<tr>
<td>Channel migration has been eliminated by the levee system along the river and the ability to incorporate new sediments (gravels) has been impaired.</td>
<td>Watershed scale</td>
<td>Hydrologic Instream habitat structure Off-channel habitat formation</td>
<td>Opportunities are limited. Localized setback berms could reestablish some sediment delivery processes.</td>
</tr>
<tr>
<td>Sources of suspended sediment in the river are natural, but increased flow velocities from channelization have resulted in increased bedloads, habitat homogenization, and lack of refugia for rearing and migrating salmonids.</td>
<td>Watershed scale</td>
<td>Hydrologic Instream habitat structure</td>
<td>Protect tributaries to the river that provide off-channel habitat.</td>
</tr>
<tr>
<td>Habitat is impaired. Channelization via dikes and berms has reduced riparian and off-channel habitats thus</td>
<td>Watershed scale</td>
<td>Instream and riparian habitat structure</td>
<td>Protect tributaries to the river which currently provide off-channel habitat.</td>
</tr>
<tr>
<td>CONDITION AND CAUSES OF IMPAIRMENT</td>
<td>SCALE OF ALTERATIONS AND IMPAIRMENT</td>
<td>SHORELINE ECOLOGICAL FUNCTIONS AFFECTED</td>
<td>PROGRAMMATIC RESTORATION OPPORTUNITIES</td>
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<tr>
<td>reducing instream habitat types. The lack of instream structure has limited the rearing and spawning habitat in the Sammamish River.</td>
<td></td>
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</tr>
<tr>
<td>No forested riparian vegetation exists along the Sammamish River. Some areas along the river have been planted with trees in the last 10 years as part of riparian and wetland restoration projects. Vegetation management practices for the berms have eliminated large woody debris recruitment potential.</td>
<td>Watershed and reach scale</td>
<td>Instream and riparian habitat structure</td>
<td>Where feasible under Corps of Engineers regulations, restore riparian habitats, particularly conifers, through shoreline plantings. Continue riparian and wetland restoration plantings. Minimize future tree removal within the berms.</td>
</tr>
<tr>
<td>The potential causes of water quality impairment (i.e., contamination by fecal coliform) include leaking septic systems and animal wastes entering the stream (in the City and upstream in the watershed). Agricultural runoff and residential landscaping (in the City and upstream in the watershed) may be delivering increased nitrates and phosphorus. Dissolved oxygen, turbidity, temperature, and other heavy metals are issues of concern. Stormwater related pollutants (concentrated in urbanized areas including the City) may be the primary cause of metals. Wetlands cut off from the river can no longer provide essential water quality functions.</td>
<td>Watershed, UGA-wide, and reach scale</td>
<td>Water quality</td>
<td>Manage, detain and treat stormwater discharging to the Sammamish. Coordinate with King County to develop BMPs with existing agricultural property owners to reduce runoff and pollutant loading. Target wetland restoration and mitigation in areas where they would provide water quality functions.</td>
</tr>
<tr>
<td>Summer water temperatures in the river are elevated above levels that are safe for salmonids.</td>
<td>Watershed</td>
<td>Water quality and instream habitat.</td>
<td>Coordinate with WRJA 8 plans to reduce river temperature. These plans include riparian plantings to shade the river and protecting tributaries, which provide cooler water to the river.</td>
</tr>
<tr>
<td>CONDITION AND CAUSES OF IMPAIRMENT</td>
<td>SCALE OF ALTERATIONS AND IMPAIRMENT</td>
<td>SHORELINE ECOLOGICAL FUNCTIONS AFFECTED</td>
<td>PROGRAMMATIC RESTORATION OPPORTUNITIES</td>
</tr>
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</tr>
<tr>
<td>Development of residential and industrial land uses, and transportation corridors has resulted in the use of shoreline armoring in the lower reach to limit channel migration and protect private properties. This channelizes flow, limits sediment supply to the stream, reduces habitat complexity, and reduces off-channel habitat. Reduction in connectivity between streams and off-channel and riparian wetlands can reduce overall flood storage capacity, water quality, and biotic diversity, and simplify habitat types.</td>
<td>Reach scale</td>
<td>Hydrologic Instream habitat structure Off-channel habitat formation Water quality</td>
<td>Utilize the City’s buffer enhancement program in the Environmentally Critical Areas Code as an opportunity for restoration for new development and redevelopment. Where feasible, consider removal of bank armoring (riprap/concrete) and replacement with soft armoring and bioengineering measures (i.e., riparian plantings). More engineered types of armoring that would still maintain protection of private property but would also allow more natural processes to occur could be employed.</td>
</tr>
<tr>
<td>Development (including bank armoring) has resulted in the removal of riparian vegetation. Riparian vegetation serves to protect water quality by providing thermal cover, serves to attenuate flooding by reducing the rate of flow entering streams, provides nesting, roosting, and foraging habitat for a variety of wildlife, and improves channel complexity by contributing large woody debris to streams, which is essential for forming pools.</td>
<td>Reach scale</td>
<td>Hydrologic Instream and riparian habitat structure Water quality</td>
<td>On a programmatic level, potential opportunities to increase habitat complexity through the introduction of large woody debris should be evaluated. Given the location of Little Bear Creek within the urban landscape, the amount of impervious surface in the basin, and general channel morphology, it is recommended that any placement of large woody debris be accompanied by carefully engineered design to assess potential scouring, erosion, and channel migration resulting from such activities. Given the density of residential and industrial land use encroaching on</td>
</tr>
<tr>
<td>CONDITION AND CAUSES OF IMPAIRMENT</td>
<td>SCALE OF ALTERATIONS AND IMPAIRMENT</td>
<td>SHORELINE ECOLOGICAL FUNCTIONS AFFECTED</td>
<td>PROGRAMMATIC RESTORATION OPPORTUNITIES</td>
</tr>
<tr>
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<td>---------------------------------------</td>
</tr>
<tr>
<td>Poorly constructed and maintained culverts have blocked fish passage on the creek and its tributaries.</td>
<td>Reach scale</td>
<td>Instream habitat</td>
<td>Implement programs to remove and improve culverts.</td>
</tr>
<tr>
<td>Little Bear Creek suffers from fecal coliform contamination and high pH levels. Stormwater runoff and animal wastes (predominantly waterfowl) contribute to fecal coliform contamination. A TMDL is being developed to address fecal coliform problems.</td>
<td>UGA-wide and reach scale</td>
<td>Water quality Instream habitat quality</td>
<td>Continue off-site stormwater improvements; runoff should be treated and detained prior to release to streams. Continue to work with Ecology to develop and implement a TMDL. Educational materials and outreach could be made available to all streamside landowners addressing proper use of fertilizers and herbicides.</td>
</tr>
</tbody>
</table>

**Existing Plans and Programs**

**Regional Work**

The Sammamish River plays an important role in the Cedar River/Lake Washington ecosystem and continues to be the focus of several restoration efforts. With the federal listing of Chinook salmon as an endangered species, the WRIA 8 watershed planning has focused on developing a Salmon Conservation Plan (WRIA 8, 2005). The plan establishes goals, objectives, and programmatic and site-specific actions to address restoration of habitat critical to salmon species in the Cedar River/Lake Washington watershed. In general, the WRIA 8 approach appears to be consistent with the overall national restoration framework in the sense that the proposed projects address a broad base of ecosystem functions.
City Progress to Date

Woodinville has made significant progress in shoreline restoration projects. The City has engaged the Decision, Design and Implementation stages of the restoration framework and is moving toward Monitoring and Assessment. The City has identified and implemented several restoration projects with a focus on shoreline plantings and wetland restoration projects along the Sammamish River and Little Bear Creek. Fish passage improvements have been made on Little Bear Creek and a habitat assessment has been prepared for the creek. Woodinville has been an active participant in the WRIA 8 Conservation Plan development and has identified several restoration projects within that framework. In addition to restoration projects within the City, Woodinville has provided support to the regional WRIA 8 restoration projects.

The Monitoring and Assessment phase of the restoration framework is especially important, because it helps to form a continuous-improvement loop where lessons learned from earlier restoration efforts are used to improve later restoration phases. The inclusion of maintenance is also important; success of restoration projects is often directly attributable to maintenance during the early formative years of the restored system. The City conducts maintenance on its completed restoration projects. The City should consider developing a more formalized monitoring and assessment program for the sites.

Completed Projects

Several projects have already been completed in the City. These projects provide an excellent opportunity to learn about what river restoration measures are the most effective. Most of the planting projects were undertaken as part of the Sammamish ReLeaf project, funded by the King County Conservation District.

Table 4. Completed Projects

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>145th Street, Sammamish River—planting and bank enhancement</td>
<td>Maintenance and monitoring</td>
</tr>
<tr>
<td>Woodin Creek confluence and Sammamish River—planting and bank enhancement</td>
<td>Maintenance and monitoring</td>
</tr>
<tr>
<td>Little Bear Creek confluence and Sammamish River—planting and bank enhancement</td>
<td>Maintenance and monitoring</td>
</tr>
<tr>
<td>Little Bear Creek—Acquisition of two parcels and planting</td>
<td>Maintenance and monitoring</td>
</tr>
<tr>
<td>NE 205th Street, Little Bear Creek—baffle installation and planting (cooperative project with Snohomish County)</td>
<td>Maintenance and monitoring Completed 2000</td>
</tr>
<tr>
<td>NE 205th Street, Little Bear Creek—fish passage improvements including installation of log weirs, pool enhancement, and plantings</td>
<td>Maintenance and monitoring Completed 2002</td>
</tr>
<tr>
<td>Little Bear Creek-habitat assessment study</td>
<td>Completed 2002</td>
</tr>
<tr>
<td>Rotary Park, Little Bear Creek—some restoration work completed, a boardwalk installed, and a restoration plan developed for volunteers.</td>
<td>On-going projects</td>
</tr>
<tr>
<td>Little Bear Creek Linear Park—shoreline restoration</td>
<td>Some work has been completed</td>
</tr>
</tbody>
</table>
The City has learned several lessons from the Sammamish River planting projects. The projects were undertaken in the early rush to complete shoreline restoration projects in response to the listing of salmon. The projects were undertaken without a comprehensive restoration plan and did not have specific goals and objectives, planting plans, maintenance needs, or monitoring goals. The City began a new enhancement project each year without plans for monitoring or maintaining completed projects. In retrospect, City staff think they should have developed plans for one area and planted, maintained and monitored that area until the re-vegetation was well established before moving on to another project. In response to those lessons learned, the City is developing a monitoring and maintenance program for all of the sites.

3. Policy Development

The current Woodinville Shoreline Master Program (SMP) (adopted in 1997) contains specific goals and policies related to restoration of shoreline habitat and ecological functions. The following objectives and supporting policies are located in Goal RES-1 and RES-2 of the Restoration Element:

RES-1.3. Work with the public and any other interested parties to investigate and identify any environmentally sensitive areas within the shorelines jurisdiction which deserve public reclamation, restoration, or preservation and inclusion within the City's open space system.

RES-1.4. Prioritize those properties identified in accordance with RES-1.3 as to their value to the City and their vulnerability to degradation or loss. Emphasis should be given to those areas which facilitate the development of uninterrupted natural passageways for wildlife, provide for continuous urban separators between jurisdictions and within the community, and enhance public access to the waterfront.

RES-2.1. Provide regulations for shoreline restoration and beautification which will restore to suitable condition those areas damaged by misuse.

Other adopted planning goals, objectives, and policies related to enhancement, improvement, or restoration of shoreline resources are established in the City's Comprehensive Plan (City of Woodinville, 2002). Stated objectives and supporting policies in Goal Env-3, Preserve and Enhance Aquatic and Wildlife Habitat, include the following:

Env-3.3. Maintain a standard of no net loss in the functions and values of sensitive habitat features, including wetlands, streams, lakes, and shoreline areas.

Env-3.4. Maintain connectivity between sensitive areas, including the Sammamish River and related streams, to provide safe travel routes for wildlife and fish and improve the biological integrity of sensitive habitat areas.

Env-3.5 Support watershed-based salmon recovery efforts and compliance with the requirements of the Endangered Species Act (ESA).
Env-3.9. Employ adaptive management for natural habitat. Adaptive management allows the City to monitor and make adjustments to its regulations as appropriate in response to changing conditions or new information.

Env-3.10. Encourage acquisition of sites that protect habitat, stream corridors, and provide aquatic habitat.

Env-3.11. Encourage the restoration of ecological functions and the natural environment in environmentally damaged areas.

Env-3.12. Participate in efforts to minimize draw-downs and warming of the Sammamish River.

Proposed SMP Restoration Policies

We have developed nine policies that the City could use to promote restoration of ecosystem functioning in the Sammamish River and Little Bear Creek ecosystems. These proposed policies would add a regional component to restoration of the shoreline, provide incentives for landowner restoration, and encourage public education for shoreline landowners.

Policy 1. Identify opportunities in the Sammamish River and Little Bear Creek watersheds where the City can support WRIA 8 restoration projects.

Policy 1 is intended to allow Woodinville to support restoration efforts throughout the basin. As noted in the Inventory and Characterization Report, there are some issues, including water temperature, that are better addressed at a watershed level. For example, by the time high temperature river water reaches Woodinville, it is not possible to cool the water sufficiently to have a meaningful effect on local habitat conditions.

Policy 2. Identify specific restoration opportunities within the City where the City can take the lead with support from other regional entities.

Policy 2 is intended to continue Woodinville's support of ecosystem restoration efforts. The restoration framework and goals presented above provide a preliminary method for the City to identify high-priority restoration projects. This method is intended to help the City focus its efforts in an organized way.

Policy 3. Use the City's critical area buffer enhancement program to help restore stream conditions with new development as well as redevelopment.

Policy 3 is intended to provide the City with a way to coordinate implementation of the critical areas ordinance and shoreline restoration.

Policy 4. Provide monitoring and adaptive management of restoration projects implemented within the City. Utilize the adaptive management principles developed as part of the WRIA 8 Conservation Plan.
Policy 4 is intended to move the City into a leading role in monitoring and maintaining restoration projects that occur within the City. The City is well-suited to day-to-day maintenance (e.g., maintenance of irrigation systems) and adaptive management of these restoration sites to ensure that they have the highest potential for success. Monitoring and maintenance are key elements of the restoration framework and will be essential to the continuous improvement of restoration projects.

Policy 5. Use this restoration framework to integrate compensatory mitigation projects into the broader restoration vision for the City.

Policy 5 is intended to recognize that future development allowed under the SMP may have unavoidable adverse impacts to shoreline functions. In those cases, the restoration planning element of the SMP should help inform development of mitigation.

Policy 6. Cooperate with King County and WRIA 8 to identify opportunities to work with the US Army Corps of Engineers to modify operation of the Sammamish River Flood Control Project to improve opportunities for shoreline restoration.

Policy 6 is intended to provide an opportunity to remove some of the restrictions to shoreline restoration currently imposed by the flood control project.

Policy 7. Cooperate with the WRIA 8 public education program to develop education materials that promote stream-friendly practices as a component of long-term shoreline management.

Policy 7 is intended to recognize the importance of public education and the role that individual actions play in stream restoration.

Policy 8. Evaluate opportunities for City acquisition of land along the Sammamish River and Little Bear Creek.

Policy 8 is intended to recognize that City acquisition of key shoreline areas may be needed to provide restoration and public access opportunities.

Policy 9. Evaluate existing City land use plans and regulations to identify opportunities to encourage protection and restoration of shorelines.

Policy 9 is intended to encourage coordination between the Shoreline Management Program and other City policies and regulations. For example, the Downtown Little Bear Creek Master Plan should be reviewed to evaluate implications for the Little Bear Creek shoreline.

Policy 10. Evaluate opportunities to provide more public access along Little Bear Creek.

Policy 10 recognizes that opportunities for public access are more limited on Little Bear Creek than on the Sammamish River and encourages the City to continue to improve public access.
4. Restoration Opportunities

Based on the alteration of key ecosystem functions, there appear to be two types of restoration actions that will benefit the Sammamish River and Little Bear Creek ecosystems most in Woodinville. These actions are intended to boost the levels of ecosystem functioning as part of a self-sustaining ecosystem that will limit the need for future manipulation. While these projects are intended to restore many ecosystems, it should be acknowledged that restoration must exist within the highly urban valley bottom and cannot fully achieve pre-disturbance channel conditions.

1. Enhance existing habitats. This action will improve the functioning of the existing aquatic, riverine wetland, and riparian habitats that currently exist along the Sammamish River and Little Bear Creek.

2. Coordinate with on-going watershed planning for the Sammamish River watershed. This action will allow the City to participate in watershed scale projects that will benefit ecosystem functions of the Sammamish River including reducing water temperature. Future watershed actions may include coordination with the Corps of Engineers to set back berms and improve floodplain connections.

Identify Restoration Opportunities

Significant work has occurred to identify both programmatic and site-specific opportunities for shoreline restoration or enhancement in Woodinville. Opportunities have been identified by regional plans such as the Sammamish River Action Plan, the WRIA 8 Near Term Action Agenda, the WRIA 8 Salmon Conservation Plan, and the City's Shoreline Inventory and Characterization (Adolfson, 2006).
Programmatic Opportunities

Tables 5 and 6 summarize the programmatic restoration opportunities that have been identified in the City of Woodinville for the Sammamish River and Little Bear Creek. The opportunities represented in the tables could be pursued to focus resources on impaired areas and provide a net improvement in ecosystem functioning. Each programmatic opportunity is keyed to ecosystem functions.

Table 5. Summarized Programmatic Opportunities - Sammamish River

<table>
<thead>
<tr>
<th>PROGRAMMATIC OPPORTUNITY</th>
<th>ECOSYSTEM FUNCTIONS ADDRESSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protect groundwater sources to the River.</td>
<td>Hydrologic</td>
</tr>
<tr>
<td>Support efforts to set back berms to reestablish connectivity to former floodplains and associated wetlands.</td>
<td>Hydrologic</td>
</tr>
<tr>
<td>Target local wetland restoration and mitigation so they provide storage, detention, and water quality functions.</td>
<td>Hydrologic Water quality</td>
</tr>
<tr>
<td>Restore and reconnect wetlands adjacent to tributary streams of the Sammamish River. Continue to restore wetlands within the berms.</td>
<td>Hydrologic Water quality</td>
</tr>
<tr>
<td>Localized setback berms could reestablish some sediment delivery processes.</td>
<td>Hydrologic Instream habitat structure Off-channel habitat formation</td>
</tr>
<tr>
<td>Protect tributaries to the river that provide off-channel habitat.</td>
<td>Hydrologic Instream habitat structure</td>
</tr>
<tr>
<td>Where feasible under Corps of Engineers regulations, restore riparian habitats, particularly conifers, through shoreline plantings.</td>
<td>Instream and riparian habitat structure</td>
</tr>
<tr>
<td>Minimize future tree removal within the berms.</td>
<td>Riparian habitat structure</td>
</tr>
<tr>
<td>Manage, detain and treat stormwater discharging to the Sammamish</td>
<td>Water quality</td>
</tr>
<tr>
<td>Coordinate with King County to develop BMPs with existing agricultural property owners to reduce runoff and pollutant loading.</td>
<td>Water quality</td>
</tr>
<tr>
<td>Target wetland restoration and mitigation in areas where they would provide water quality functions.</td>
<td>Water quality</td>
</tr>
<tr>
<td>Coordinate with the WRIA 8 plans to reduce river temperature. These plans include riparian plantings to shade the river and protecting tributaries, which provide cooler water to the River.</td>
<td>Water quality and instream habitat.</td>
</tr>
<tr>
<td>Include public outreach and education promoting stream-friendly practices as a component of long-term shoreline management. Utilize existing resources such as City staff and the Sammamish River Stewards to provide education on shorelines at special events and use the City web site and Woodinville Weekly to provide restoration briefings.</td>
<td>Hydrologic Instream and riparian habitat Structure Water quality</td>
</tr>
<tr>
<td>Coordinate with the Washington Department of Ecology and WRIA 8 to evaluate water rights and water withdrawals from the Sammamish River</td>
<td>Hydrologic Water quality</td>
</tr>
</tbody>
</table>
Table 6. Summarized Programmatic Opportunities - Little Bear Creek

<table>
<thead>
<tr>
<th>PROGRAMMATIC OPPORTUNITY</th>
<th>ECOSYSTEM FUNCTIONS ADDRESSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where feasible, consider removal of bank armoring (riprap/concrete) and replacement</td>
<td>Hydrologic</td>
</tr>
<tr>
<td>with soft armoring and bioengineering measures (i.e., riparian plantings).</td>
<td>Instream habitat structure</td>
</tr>
<tr>
<td></td>
<td>Off-channel habitat formation</td>
</tr>
<tr>
<td>Increase habitat complexity through the introduction of large woody debris where</td>
<td>Hydrologic</td>
</tr>
<tr>
<td>appropriate.</td>
<td>Instream and riparian habitat structure</td>
</tr>
<tr>
<td></td>
<td>Water quality</td>
</tr>
<tr>
<td>Include public outreach and education promoting stream-friendly practices as a</td>
<td>Hydrologic</td>
</tr>
<tr>
<td>component of long-term shoreline management. Utilize existing resources such as</td>
<td>Instream and riparian habitat structure</td>
</tr>
<tr>
<td>City staff and the Sammamish River Stewards to provide education on shorelines</td>
<td>Water quality</td>
</tr>
<tr>
<td>at special events and use the City web site and Woodinville Weekly to provide</td>
<td></td>
</tr>
<tr>
<td>restoration briefings.</td>
<td></td>
</tr>
<tr>
<td>Implement programs to remove and improve culverts.</td>
<td>Instream habitat</td>
</tr>
<tr>
<td>Continue off-site stormwater improvements; runoff should be treated and detained</td>
<td>Water quality</td>
</tr>
<tr>
<td>prior to release to streams.</td>
<td>Instream habitat quality</td>
</tr>
<tr>
<td>Continue to work with Ecology to develop and implement a TMDL to identify and</td>
<td>Water quality</td>
</tr>
<tr>
<td>address point and non-point source pollution problems.</td>
<td>Instream habitat quality</td>
</tr>
<tr>
<td>Continue riparian and wetland restoration plantings.</td>
<td>Instream and riparian habitat structure</td>
</tr>
<tr>
<td>Manage, detain and treat stormwater discharging to Little Bear Creek.</td>
<td>Water quality</td>
</tr>
<tr>
<td>Coordinate with Snohomish County to develop BMPs with existing property owners to</td>
<td>Water quality</td>
</tr>
<tr>
<td>reduce runoff and pollutant loading.</td>
<td></td>
</tr>
<tr>
<td>Target wetland restoration and mitigation in areas where they would provide water</td>
<td>Water quality</td>
</tr>
<tr>
<td>quality functions.</td>
<td></td>
</tr>
<tr>
<td>Coordinate with Washington Department of Transportation to improve water quality of</td>
<td>Water quality</td>
</tr>
<tr>
<td>runoff from SR 522</td>
<td></td>
</tr>
</tbody>
</table>

Site-Specific Opportunities

Past work within WRIA 8 has resulted in the collection of a useful set of data that establishes baseline conditions and identifies potential restoration opportunities (WRIA 8 Steering Committee, 2002 and 2005). The WRIA 8 planning process also identified several site-specific opportunities along Little Bear Creek, which are primarily opportunities to remove fish passage barriers. The opportunity areas are described below in Tables 7 and 8 and shown in Figure 3. Note that the tables do not include the preservation of existing functioning areas.
### Table 7. Site-Specific Opportunities for the Sammamish River in the City of Woodinville

<table>
<thead>
<tr>
<th>IDENTIFIER (FIG. 4)</th>
<th>ACTION</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-1</td>
<td>Restore the riparian area adjacent to and downstream of the Little Bear Creek confluence.</td>
<td>Sammamish River Action Plan</td>
</tr>
<tr>
<td>S-2</td>
<td>Create and enhance pools in the Sammamish River to provide cool water refuges for migrating adult salmon in the entire Sammamish River system. In the Woodinville area, the mouths of the tributary streams, and Woodin and Derby Creeks, provide opportunities for pool creation.</td>
<td>WRIA 8 Near Term Action Agenda and Salmon Conservation Plan</td>
</tr>
<tr>
<td>S-3</td>
<td>Enhance tributary confluences of Woodin and Derby Creeks. Enhancements could include correction of fish passage barriers, riparian restoration and placement of large woody debris.</td>
<td>WRIA 8 Near Term Action Agenda and Salmon Conservation Plan</td>
</tr>
<tr>
<td>S-4</td>
<td>Restore riparian areas along the full length of the river corridor in Woodinville. The City has been actively involved in the Sammamish River ReLeaf Program, an annual planting event along the river. Continuation of the ReLeaf Program will increase riparian vegetation and provide shaded refuge areas for migrating salmon.</td>
<td>WRIA 8 Near Term Action Agenda and Salmon Conservation Plan</td>
</tr>
</tbody>
</table>

### Table 8. Opportunities for Little Bear Creek in the City of Woodinville

<table>
<thead>
<tr>
<th>IDENTIFIER</th>
<th>ACTION</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LBC-1</td>
<td>Fish passage barrier removal at 132nd Avenue NE, 134th Avenue NE, and NE 195th Street.</td>
<td>WRIA 8 Near Term Action Agenda and Salmon Conservation Plan</td>
</tr>
<tr>
<td>LBC-2</td>
<td>City plans to develop a linear park along the west bank of Little Bear Creek. This will provide opportunities for riparian restoration and providing public access to the Creek.</td>
<td>City of Woodinville</td>
</tr>
<tr>
<td>LBC-3</td>
<td>The City plans to restore the banks of Little Bear Creek and the associated wetland system at Rotary Park (17 acres).</td>
<td>City of Woodinville</td>
</tr>
<tr>
<td>LBC-4</td>
<td>The City proposes to prepare a plan for habitat restoration of all of Little Bear Creek.</td>
<td>City of Woodinville</td>
</tr>
</tbody>
</table>
**Restoration Priorities**

To aid the City in developing an internal ranking system, a preliminary qualitative (high, medium, low) project ranking system is employed.

High priority projects will typically:

a) Address both hydrologic and habitat ecosystem functions,

b) Be eligible for additional funding sources, and

c) Be included in the WRIA 8 Conservation Plan.

Medium priority projects will typically:

a) Address only hydrologic or habitat ecosystem functions, and

b) Be eligible for additional funding sources.

Low priority projects will typically:

a) Address only hydrologic or habitat enhancement, or

b) Not be eligible for additional funding sources.

This ranking system has been applied to the projects from Tables 7 and 8 (shown on Figure 3) that the City will undertake in the near future. The City will prioritize the other proposed projects in the future.
Table 9. Initial Project Ranking

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>RANKING</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restore Sammamish River riparian area adjacent to and downstream of Little Bear Creek confluence. Map ID  S-1</td>
<td>3</td>
<td>Planting has been completed along most of the river. City is currently maintaining and monitoring.</td>
</tr>
<tr>
<td>Restore riparian areas along the length of the Sammamish River corridor. Map ID  S-4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fish passage barrier removal on Little Bear Creek. Map ID  LBC 1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Develop a linear park along the west bank of Little Bear Creek. Map ID  LBC 2</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

5. Implementation

The following section is intended to provide information about a general implementation approach that is consistent with guidance offered for SMP development (WAC 173-26-201(2)(f)(vi)). The City can use this framework to develop a more detailed implementation plan in the future.

Funding and Partnership Opportunities

There are a variety of funding sources available for restoration projects, including federal and state grants and legislative funds administered by state agencies. For the City of Woodinville, the greatest likelihood to obtain funding would be through continued participation in implementation of the WRIA 8 Conservation Plan. Local and regional funding options for the implementation stage of restoration planning are described in Appendix B.

Timelines and Benchmarks

Restoration planning is a long-term effort. As stated earlier, the SMP guidelines for restoration include the general goal that local master programs "include planning elements that, when implemented, serve to improve the overall condition of habitat and resources within the shoreline area" (WAC 173-26-20l(c)). Because the SMP restoration plan is a long-range policy plan, it is difficult to establish meaningful timelines and measurable benchmarks in the SMP by which to evaluate the effectiveness of restoration planning or actions. Nonetheless, the legislature has provided an overall timeframe for future amendments to the SMP. In 2003, Substitute Senate Bill 6012 amended the Shoreline Management Act (RCW 90.58.080) to establish an amendment schedule for all
jurisdictions in the state. Once the City of Woodinville amends its SMP (on or before August 30, 2007), the City is required to review, and amend if necessary, the SMP once every seven years (RCW 90.58.080(4)). During this review period, the City should provide documentation of the progress achieved toward meeting shoreline restoration goals. The review should include:

a) Re-evaluating adopted restoration goals, objectives, and policies,

b) Summarizing both planning efforts (including application for and securing grant funds) and on-the-ground actions undertaken in the interim to meet those goals, and

c) Revising the SMP restoration planning element to reflect changes in priorities or objectives.

Another mechanism that may serve to establish timelines and benchmarks would be establishment of a shoreline restoration program organized like or integrated with the City's capital improvement program (CIP). Similar to an infrastructure CIP, a shoreline restoration CIP would be evaluated and updated regularly. The shoreline restoration CIP would be focused on site-specific projects that could largely be funded through grants. In addition, other CIP projects, such as stormwater facility improvements, could be evaluated to determine if their design could advance shoreline restoration goals.

Mechanisms and Strategies for Effectiveness

The SMP guidelines for restoration planning state that local programs should "... appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals" (WAC 173-26-201(2)(f)). Phase 3 of the restoration framework described previously (based on Palmer et al., 2005) provides a general roadmap for assessing restoration actions and revising the approach to meeting restoration goals. It includes the following core objectives:

a) Monitor post-restoration conditions,

b) Adaptively manage restoration projects, and

c) Use monitoring and maintenance results to inform future restoration activities.

These core objectives have been expanded upon by regional entities focused on restoration such as the WRIA 8 Salmon Recovery Council. Strategic principles and concepts intended to guide ecosystem recovery are expressed in the WRIA 8 Salmon Conservation Plan (WRIA 8, 2005).

While the WRIA 8 Salmon Recovery Council has not yet finished the monitoring and adaptive management work plan, the Salmon Conservation Plan identifies monitoring principles that will likely form the basis of the work plan (Shared Strategy, 2005). Three types of monitoring are defined: 1) implementation monitoring to track which potential
programs and projects are carried out, 2) direct effectiveness monitoring to determine the degree of effectiveness achieved and for improving the design and execution of action where needed, and 3) cumulative effectiveness monitoring to evaluate how multiple actions are affecting habitat condition and fish populations, and what kinds of overall adjustments in conservation priorities may be needed. In addition, the WRIA 8 Salmon Conservation Plan identifies monitoring protocols specific to achieving Chinook recovery goals (WRIA 8, 2005).

6. Conclusions

State guidelines require all jurisdictions to address shoreline restoration planning as part of the Shoreline Master Program update process (WAC 173-26-201(2)(f)). This restoration plan presents an overall framework to allow the City of Woodinville to pursue the restoration of ecosystem functioning of the Sammamish River and Little Bear Creek ecosystems. Key alterations to ecosystem functioning were identified in previous inventory and characterization work:

1. The Sammamish River has been greatly altered from historical conditions. The Sammamish River Flood Control Project limits shoreline restoration potential along the river.

2. Aquatic and wetland habitats on the Sammamish River are largely homogeneous in terms of both hydrology and vegetative structure, and these habitats are typically restricted to the area between the berms within the City of Woodinville.

3. The transitional riparian zones between terrestrial and aquatic habitats have been highly simplified reducing the quality and quantity of habitat for fish and wildlife within the City of Woodinville.

4. Degradation of water quality, especially water temperature in the watersheds above Woodinville, has effects that cannot be fully mitigated within the City.

5. Development along Little Bear Creek has resulted in bank armoring and channelization, which restricts channel functions.

Based on these alterations, we identified two key restoration actions for the aquatic ecosystems within Woodinville:
1. Enhance existing habitats. This action will improve the functioning of the existing aquatic, riverine wetland, and riparian habitats that currently exist along the Sammamish River and Little Bear Creek.

2. Coordinate with on-going watershed planning for the Sammamish River watershed. This action will allow the City to participate in watershed scale projects that will benefit ecosystem functions of the Sammamish River including reducing water temperature. Future watershed actions may include coordination with the Corps of Engineers to set back the berms and improve floodplain connections.

Based on our review of existing projects, it appears that these goals are at the core of most of the projects being implemented via regional restoration efforts. The City of Woodinville is the lead on at least one of these projects and is pursuing additional projects. The City will maintain its active role in regional restoration efforts and continue to focus on improvement of functions in the Sammamish River and Little Bear Creek ecosystems.

7. References


King County. 2006. Draft Flood Hazard Management Plan: King County, Washington.

King County Department of Natural Resources and Parks, Water and Land Resources Division, Seattle, Washington.


APPENDIX 1

PUGET SOUND RESTORATION PLANS AND PROGRAMS

Puget Sound Restoration Plans and Programs

A number of plans and programs have been developed in the Puget Sound region to improve water management and water quality and to benefit salmon recovery. These efforts are summarized below. Woodinville has been actively involved in many of these efforts and will coordinate restoration efforts in the City with these plans and programs.

Regional

Water Resource Inventory Area (WRIA) 8 Steering Committee: Chinook Salmon Conservation Plan

Woodinville's shoreline includes the Sammamish River within WRIA 8. The City is a participating local agency in WRIA 8 watershed planning. After several years of planning and scientific study, WRIA 8 recently completed the Chinook Salmon Conservation Plan (WRIA 8, 2005). The plan is both broad in scope and specific in recommendations for protection, enhancement, and restoration of habitat in the North Lake Washington tributaries, including along the Sammamish River and Little Bear Creek. The plan identifies the following general land use, planning and infrastructure actions for the Sammamish River:

1. Protect and restore cool clean water sources and inflows to the Sammamish River by protecting and restoring large and small tributaries to the Sammamish River, and protecting sources of groundwater. Impact of surface and groundwater withdrawals on flow conditions should be investigated and addressed. Protect and restore water quality.

2. Protect and restore riparian vegetation along the mainstream and tributaries to the Sammamish River to provide shade and reduce water temperatures as well as provide future sources of large woody debris. In reaches 3 through 6, restore floodplain connections and increase meandering of river by regarding river banks, creating flood benches at or below ordinary high-water mark.

The plan identifies the following general land use, planning and infrastructure actions for Little Bear Creek:

1. Protect forest cover, soil infiltrative capacity, and wetland areas, and minimize impervious areas, in order to maintain watershed function and hydrologic integrity (especially maintenance of sufficient base flows) and protect water quality.
Protect and restore riparian function such as revegetation, which provides sources of large woody debris to improve channel stability, contributes to pool creation, and reduces peak water temperatures.

Protect and improve water quality to prevent adverse impacts from fine sediments, metals (both is sediments and in water), and high temperatures to key Chinook life stages. Adverse impacts from road runoff should be prevented through stormwater BMPs and the minimization of the number and width of roads in the basin.

Maintain and restore floodplain connectivity and channel complexity. Road crossings should be minimized to maintain floodplain connectivity.

Provide adequate stream flow to allow upstream migration and spawning, by establishing in-stream flow levels, enforcing water rights compliance, and providing for hydrologic continuity.

**Shared Strategy for Puget Sound: Draft Puget Sound Salmon Recovery Plan**

Shared Strategy for Puget Sound (Shared Strategy) is a collaborative effort to protect and restore salmon runs across Puget Sound that was initiated as a result of Endangered Species Act (ESA) listings of salmonid species in the Puget Sound region. Shared Strategy engages local citizens, tribes, technical experts and policy makers to build a practical, cost-effective recovery plan endorsed by the people living and working in the watersheds of Puget Sound.

Shared Strategy has developed a draft salmon recovery plan (Shared Strategy, 2005) that provides a blueprint for salmon recovery strategies throughout Puget Sound and incorporates, by reference, local watershed plans for salmon recovery. Amongst other strategies described in the draft plan, Shared Strategy describes their 'Top 10 Actions Needed for Salmon Recovery', many of which have additional beneficial impacts for humans. The specific actions that are relevant to the City of Woodinville are:

a) Restoring riparian areas to stabilize river banks and create complex side channel and pool habitats,

b) Setting instream flow requirements, successfully achieving flow requirements, and forming a 'toolbox' of strategies needed to maintain flow requirements for individual systems,

c) Improving water quality by reducing or eliminating sources of point and non-point pollution and by cleaning up contaminated sediments, and

d) Implementing 'H-Integration' strategies, which encourage restoration efforts to examine habitat, hatcheries, and harvest (the major factors influencing salmon population dynamics).
Cascade Land Conservancy

The Cascade Land Conservancy (CLC) seeks to conserve urban and rural natural spaces within the Central Puget Sound region, including areas throughout King County. Priority natural areas include lands along streams, rivers, other areas in the cascade foothills, and estuary areas. Additionally, the CLC also works to preserve working farms and forests. The CLC conservation strategies have included securing lands through purchase and donation, conservation easements, and ownership agreements. Since 1989, the CLC has completed 139 projects that have conserved a total 117,783 acres (85% in King County). Although no CLC protected lands currently exist within the City of Woodinville, the shoreline landscapes of both the Sammamish River and Little Bear Creek basins could provide conservation opportunities for the CLC.

County and City

King County's Water and Land Resources Division

Working with the Water and Land Resources Division, the King County Executive recently released the Proposed 2006 King County Flood Hazard Management Plan (KCFHMP). The KCFHMP identifies a series of countywide priority repairs and improvements that are needed within the coming decade. No projects specific to the Sammamish River at or above the City of Woodinville are included in the plan.

The Sammamish River is unique among King County's rivers in that the entire river is considered a flood protection facility. Under a maintenance agreement developed 40 years ago, management objectives and even specific practices are dictated. Any modification, natural or constructed, to the river or its banks must therefore be consistent with the flood control objective for the design flood. Specifically, the channel and its banks are expected to be kept sufficiently free from obstructions that could impede the conveyance of flood flows.

City of Woodinville Surface Water Management Program

The City of Woodinville adopted by reference King County's Surface Water Management Plan (WMC 13.03.010). King County Code (KCC) Chapter 9.08 identifies as its priority methods of surface water management the protection or enhancement of natural surface water drainage systems.

The City is currently in the design phase for a sedimentation facility on Woodin Creek.

On-going Restoration Projects

Specific restoration projects that the City has completed or is currently involved with are described in Section 3 and Table 4. This section describes on-going restoration programs in the City of Woodinville.
Samamish ReLeaf

The Samamish ReLeaf program is a City of Woodinville sponsored annual planting event to restore native habitat along the Sammamish River. Sammamish ReLeaf is focused on, 1) removing non-native vegetation (primarily blackberry, thistles and Scot's broom), thereby improving the growing conditions for native species, 2) mulching cleared areas, and 3) planting native vegetation to achieve greater plant diversity. Specific projects undertaken as part of the ReLeaf program are described in Section 3.

Sammamish River Stewards

City has established a volunteer base called the Sammamish River Stewards. This group of about 8 people conduct maintenance and monitoring work at the Sammamish River restoration sites once or twice a month.

Maintenance and Monitoring Projects

All of the completed Sammamish ReLeaf sites have been mapped into the City's GIS system and are being monitored for success rates.

The City has two other events (spring and fall) that volunteers attend to maintain restoration areas. Typically, at least 100 people attend to plant, pull weeds, water, etc.

The City has received grants to hire Earth Corp to do some of the maintenance at restoration sites.

Additional and/or Needed Programs

The significant focus on natural resources within the City of Woodinville, and more broadly within WRIA 8, appears to cover the primary areas necessary to track existing conditions and propose restoration activities. The existing programs appear to be well suited to apply a watershed-based approach consistent with the national framework discussed above and have the ability to identify impaired ecosystem functions and propose restoration actions that have a good chance of resulting in long-term improvement in ecosystem function.
APPENDIX 2

FUNDING OPPORTUNITIES

Funding and Partnership Opportunities

Funding opportunities for restoration projects include both federal and state grants and legislative funds administered by state agencies. For potential projects in Woodinville, the greatest likelihood to obtain funding would result from continued participation in the WRIA 8 Steering Committee and/or strategic partnering with King County and state and federal agencies. Targeting funding requests to address levee setback projects would fit well into the scientific and restoration plans/goals of the organizations listed below. A few of these programs and organizations most relevant to Woodinville are described below.

Salmon Recovery Funding Board (SRFB)

With the listing of salmonid species under the Endangered Species Act in 1999, the Legislature created the Salmon Recovery Funding Board. Composed of citizens appointed by the Governor and five state agency directors, the Board provides grant funds to protect or restore salmon habitat and assist related activities. It works closely with local watershed groups and has helped finance over 500 projects. The Salmon Recovery Funding Board awarded over $5 million during the first five funding cycles for salmon habitat protection, restoration, and assessment projects in the Lake Washington/Cedar River watershed (WRIA 8). These grants build on other funding sources such as the King County Conservation District and Waterways 2000. Salmon Recovery Funding Board funding requires lead entity approval and is coordinated through WRIA 8. Typically, the projects put forward by WRIA 8 for Salmon Recovery Board funding have been for projects in the "Tier I" areas-Cedar River, Bear Creek, etc. None of the WRIA 8 restoration projects currently identified in Woodinville appear to meet the criteria for Salmon Recovery Board funding. However, the City should continue to coordinate with WRIA 8 to identify projects that might meet Salmon Recovery Board criteria in the future.

King County Conservation District

The King Conservation District (KCD) is a non-regulatory natural resources assistance agency founded in 1949. The District promotes conservation through demonstration projects, educational events, and technical assistance. Through a special assessment, KCD funds natural resource conservation work. A portion of the assessment is allocated to the WRIAs in King County for salmon restoration. The WRIA 8 lead entity prioritizes projects in the WRIA that meet the criteria for KCD funding. KCD also allocates a portion of the assessment to local jurisdictions. These funds are available non-competitively. The City has used the non-
competitive grants to fund the Sammamish ReLeaf projects. The funding has ranged from $15,000 to $20,000 per year from 1998 to 2005.

Community Salmon Fund

The Community Salmon Fund is established by the National Fish and Wildlife Foundation (NFWF) and Salmon Recovery Funding Board (SRFB) to stimulate small-scale, voluntary action by community groups, in cooperation with landowners and businesses, to support salmon recovery on private property in the Cedar River, Lake Washington, and Sammamish Watershed (WRIA 8). Grants are jointly selected by NFWF and King County and administered by the foundation to fund habitat protection and restoration projects that have a substantial benefit to watershed health and are consistent with local salmon habitat plans.

The Fund awards grants of up to $75,000. Grant requests in the $10,000-$20,000 range are strongly encouraged. The program's primary focus is smaller, community-based restoration projects, so requests for funds for large-scale restoration projects (such as SRFB proposals) will not be considered. The following costs are eligible:

a) Restoration of habitat within and along salmon-bearing rivers and streams.

b) Project design and development that is anticipated to lead to an on-the-ground restoration project within 18 months.

c) Some funds are also available for less than fee acquisition.