

Ecological Processes/Functions WAC 173-26-201(3)(d)(i)(C)	Current Performance (Shoreline Inventory and Characterization Report - ESA Adolfsen, 2011)	Likely Development By Shoreline Environment Designation (SED)	SMP Provisions Protection or Restoration Protection = Proposed SMP regulations (with reference to SMP section number) Restoration = Draft Restoration Plan Policy	Future Performance By Shoreline Environment Designation (SED)
Snohomish River				
<p><b>Hydrology</b> Flow regime, sediment transport, and floodplain interaction</p>	<p>The Snohomish River experiences two periods of peak flows each year: during the heavy rains of November – January, and during snowmelt in May and June. Flows are typically lowest in August when there is little rain and the snowpack in the Cascades has melted. Swifty Creek is the outlet stream from Blackmans Lake and discharges to the Snohomish River near Cady Park. The floodplain of the Snohomish River is mapped as an aquifer recharge area.</p> <p>The construction of levees, rip rap and armoring on both the north and south shores of the Snohomish River have altered the river's flow patterns disconnecting the river from its floodplain and some associated wetlands. Because the extensive diking and channelization severely limit overbank flows, finer materials such as sand, silt, and clay tend to be deposited in the flatter, slower moving portions of the lower river channel rather than being distributed across the nearby floodplain affecting soils, vegetation, and floodplain habitat. Decades of industrial and commercial uses have increased the amount of impervious surfaces along the shoreline. As a result surface runoff, stormwater pollution, and sediment input to the river have increased while infiltration has decreased.</p> <p>Historical and intense in-stream gravel mining between 1962 and 1991 may have caused incision of the riverbed and a change in channel elevation; however, the degree to which the shorelines of the Snohomish River were affected by mining is not fully known. Mining has not occurred for several years.</p>	<p><b>AQUATIC</b> Limited development over or in the water may occur. Small overwater structures such as small marinas or private docks are allowed but few are anticipated because most of the shoreline is City-owned, and dock development on the river is complicated by flooding and other environmental constraints. Over the long term, larger infrastructure projects such as bridge work and utility easements may be constructed; however, no plans for such development exist. Relocation of the City's boat ramp would require shoreline stabilization and placing a paved ramp in the river.</p> <p><b>DOWNTOWN RIVERFRONT</b> The City owns all waterfront properties within designation east of Ave D. Plans for development of this area include potential moving of current boat launch at base of Maple Ave to location outside downtown riverfront designation, as well as improvements to the Riverfront Trail. Any trail improvements and subsequent increase in pedestrian traffic would be offset by mitigation (e.g additional overhanging vegetation). Properties west of Ave D are not likely to redevelop in near future, but could be developed for mixed use development.</p> <p><b>URBAN CONSERVANCY</b> For those City owned properties north of the Snohomish River and west of Ave D (wastewater treatment plant and City shop yard), the City has conducted numerous studies to redevelop this area with new parks and trails. Implementation and development of any new parks and trails is contingent upon funding. For the remaining privately owned commercial properties abutting the river, mixed-use redevelopment may</p>	<p><b>PROTECTION</b> General</p> <ul style="list-style-type: none"> <li>Land clearing, grading, filling and alteration of natural drainage features and landforms shall be limited to the minimum necessary for development. Surfaces cleared of vegetation that are not to be developed shall be replanted. Surface drainage systems or substantial earth modifications shall be professionally designed to prevent maintenance problems or adverse impacts on shoreline features (14.250.110.D.10).</li> <li>All shoreline uses and development shall be located, designed, constructed, and managed to minimize interference with or adverse impacts to beneficial natural shoreline processes such as water circulation, erosion and accretion (14.250.110.D.11)</li> <li>All shoreline uses and development shall be located and designed to minimize or prevent the need for shoreline defense and stabilization measures and flood protection works such as bulkheads, other bank stabilization, landfills, levees, dikes, groins, jetties or substantial site regrades (14.250.110.D12).</li> <li>All development in the floodplain shall include an assessment of potential effects the project would have on channel migration, and incorporate measures to mitigate any adverse impacts on channel migration (14.250.110.D13).</li> </ul> <p>Industrial</p> <ul style="list-style-type: none"> <li>Logs: Except where no practical alternative exists, log storage shall occur on land rather than in water; Free-fall dropping of logs into water is prohibited; Whenever possible, logs shall not be dumped, stored, or floated in areas where grounding will occur (14.250.120.G.4, 6, 8).</li> </ul> <p>Residential Development</p> <ul style="list-style-type: none"> <li>Below-grade swimming pools shall be sited and designed so that they do not adversely affect the flow of groundwater or endanger unstable slopes (14.250.120.H.1.e).</li> </ul> <p>Transportation</p> <ul style="list-style-type: none"> <li>Highway, street and railroad infrastructure that must be located over water, such as bridges and bridge supports, may be permitted provided that mitigation sequencing per SMC 14.255.120.E is employed, and the priorities of the City of Snohomish Shoreline Restoration Plan are considered in designing mitigation for impacts from the project (14.250.120.K.3).</li> <li>Bridge approach fills shall not encroach on the designated 100-year floodway of any river (14.250.120.K.5).</li> <li>Roadways and bridges shall be designed to avoid or minimize placement of fill or structures that would restrict floodplain capacity or limit channel migration. If transportation facilities are anticipated to impact floodplains or channel migration zones; mitigation sequencing as specified in SMC 14.255.120.E shall be employed to avoid and mitigate for impacts (14.250.120.K.6).</li> <li>Except within the Downtown Riverfront Environment, roads and off-street parking facilities shall be located so as not to require shoreline stabilization (14.250.120.K.8).</li> </ul> <p>In-Water Uses</p> <ul style="list-style-type: none"> <li>Dams and hydroelectric facilities are prohibited in all environments (14.250.120.P16) In-water fish and wildlife management, except aquaculture, is a Permitted Use (14.250.120.C).</li> </ul> <p>Boating Facilities</p> <ul style="list-style-type: none"> <li>Docks, piers, long-term moorage, and vehicular boat launches are prohibited on the Pilchuck River (14.250.130.D7).</li> <li>Marinas and boat launches shall not deflect river currents such that adverse impacts would occur on downstream properties. Marinas shall be designed to meet criteria by the State Department of Fish and Wildlife relative to disruption of currents, restriction of tidal prisms, flushing characteristics, and fish passage (14.250.120.J.3)</li> </ul> <p>Breakwaters, Jetties, Groins, and Weirs</p> <ul style="list-style-type: none"> <li>Breakwaters, jetties, groins and weirs shall only be permitted as a Conditional Use where necessary to support water dependent uses, public access, approved shoreline stabilization, or other public uses, as determined by the City Planner. Groins shall only be permitted as part of a restoration project sponsored or co-sponsored by a public agency (14.250.130.D5).</li> </ul> <p>Filling, Grading, and Dredging</p> <ul style="list-style-type: none"> <li>Fill may be permitted below the ordinary high water mark only: When necessary to support a water dependent use; To provide for public access; When necessary to mitigate conditions that endanger public safety, including flood risk reduction projects; To allow for cleanup and disposal of contaminated sediments as part of an interagency environmental cleanup plan; To allow for the disposal of dredged material considered suitable under, and conducted in accordance with, the dredged material management program of the Washington Department of Natural Resources; For expansion or alteration of transportation or utility facilities currently located on the shoreline upon demonstration that alternatives to fill are not feasible; or As part of mitigation actions, environmental restoration projects and habitat enhancement projects (14.250.130.F.2.a.i-vii).</li> <li>Stockpiling of dredged material in or under water is prohibited (14.250.130.F.7)</li> <li>The removal of gravel for flood management is allowed only after a biological and geomorphological study shows that extraction has a long-term benefit to flood hazard reduction, does not result in a net loss of ecological functions, and is part of a comprehensive flood management solution (14.250.130.F.8).</li> <li>Dredging and disposal of dredged material below the ordinary high water mark shall be permitted only: When necessary for the operation of a water dependent use; When necessary to mitigate conditions that endanger public safety or fisheries resources; Dredging and disposal of dredged material below the ordinary high water mark shall be permitted for establishing, maintaining, expanding, relocating or reconfiguring navigation channels and basins when necessary to ensure safe and efficient accommodation of existing navigation uses when: Significant ecological impacts are minimized; Mitigation is provided, employing the mitigation sequence in SMC 14.255.120.E; and Dredging is maintained to the authorized location, depth and width; Dredging and disposal of dredged material below the ordinary high water mark shall be permitted for restoration projects associated with implementation of the Model Toxics Control Act or the Comprehensive Environmental Response, Compensation, and Liability Act; or any enhancement or restoration project; Dredging and disposal of dredged material below the ordinary high water mark shall be permitted for flood risk reduction projects conducted in accordance with Chapter 14.270 SMC (14.250.130.F.3.a-e).</li> </ul> <p>Shoreline Stabilization</p> <ul style="list-style-type: none"> <li>Shoreline stabilization, including bulkheads and flood protection facilities, shall be permitted only when it is demonstrated that stabilization is necessary to protect existing legally-established primary structures, public improvements, proposed or existing water-dependent development, or projects for the restoration of ecological functions or</li> </ul>	<p><b>AQUATIC</b> <b>No Change</b> Since hydrological functions and processes are impaired by existing shoreline stabilization, changes to hydrology are unlikely. A new boat ramp would entail stabilization meeting standards that would protect hydrologic functions. No large scale over-water projects are planned for the future.</p> <p><b>DOWNTOWN RIVERFRONT</b> <b>No Change</b> Since hydrological functions and processes are impaired by existing shoreline stabilization, changes to hydrology are unlikely. Some soft-shore stabilization may replace existing structural stabilization, particularly if the existing boat ramp is removed.</p> <p><b>URBAN CONSERVANCY</b> <b>No Change</b> Since hydrological functions and processes are impaired by existing shoreline stabilization, changes to hydrology are unlikely. Some soft-shore stabilization may replace existing structural stabilization</p>

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Snohomish River				
		<p>occur which could bring in more human activity. However any redevelopment would occur within established standard set by the City including provisions for buffers.</p> <p>The Urban Conservancy area located by the base of Lincoln Ave is currently used for agriculture and recreation, providing periodic parking for soccer and other recreational uses. Potential exists for more formalized and enhanced public access, including a boat ramp, which would entail clearing, grading, paving, and increased vehicular activity at and near the water's edge.</p>	<p>hazardous substance remediation (14.250.130.D1)</p> <ul style="list-style-type: none"> <li>An existing legally established shoreline stabilization structure may be replaced with a similar structure when it is demonstrated there is a need to protect principal uses or structures from erosion caused by currents, tidal action, or waves. Normal maintenance and repair is allowed, provided that such work does not cause a net loss of ecological functions (14.250.130.D2).</li> <li>All shoreline stabilization and flood protection measures shall be designed and constructed so that downstream banks will not be adversely affected. (14.250.130.E.1).</li> <li>Shoreline stabilization and flood protection measures shall not be designed and constructed in such a manner as to result in channelization of normal stream flows (14.250.130.E.2).</li> <li>New shoreline stabilization may occur when a geotechnical analysis demonstrates: That erosion from waves or currents is imminently threatening and that damage is expected to occur if the shoreline stabilization is not constructed; The erosion rate exceeds that which would normally occur in a natural condition; The erosion is not caused by upland conditions on the project site that, if corrected, would eliminate the need for shoreline stabilization; The proposed shoreline stabilization is the least hardened solution that is feasible to protect the structures or improvements, including consideration of non-structural alternatives such as slope drainage systems, vegetative growth stabilization, and gravel berms; The proposal is the minimum necessary to protect existing legally-established primary structures, existing water-dependent development, or projects for the restoration of ecological functions or remediation of hazardous materials; The proposed shoreline stabilization would not interfere with normal fluvial hydrological and geomorphological processes in natural conditions (14.250.130.E.6.a.i-vi).</li> <li>Shoreline stabilization shall not interfere with surface or subsurface drainage into the water body (14.250.130.6.e).</li> <li>Shoreline stabilization shall be designed so as not to create a need for shoreline stabilization elsewhere (14.250.130.6.h).</li> <li>Shoreline stabilization measures shall not be allowed within any designated floodway except as may be necessary to protect existing development or prevent serious impairment of channel function (14.250.130.6.i).</li> <li>Shoreline stabilization shall comply with the Integrated Stream Protection Guidelines (Washington departments of Fish and Wildlife, Ecology, and Transportation, 2003) and shall be designed to allow for appropriate public access to the shoreline (14.250.130.E.6.j).</li> <li>Flood protection facilities shall be consistent with the standards in SMC 14.270 (Flood Hazard Areas), and the Integrated Stream Protection Guidelines (14.250.130.E.7).</li> <li>Flood control dikes shall be landward of the designated floodway and any marshes or swamps directly interrelated and interdependent with the river (14.250.130.E.8).</li> </ul>	
<p><b>Water Quality</b> Retention of particulates, nutrient cycling, pathogens, delivery movement, and loss</p>	<p>The Snohomish River near the city is included on Ecology's 303(d) list of impaired water bodies due to elevated fecal coliform levels and is a water of concern for temperature. Sources of fecal coliform bacteria and excess nutrients entering the river include runoff from agricultural and residential areas outside the City. Loss of riparian canopy has affected river temperature. The large extent of nearby impervious surfaces have increased surface runoff, stormwater pollution, and sedimentation. Particular pollutants include metals, phenols, and PCBs. The contribution of excess nutrients and pathogens is exacerbated by the removal of riparian vegetation and loss of wetlands that would otherwise capture or slow the entry of these pollutants into waterbodies. "Water quality is the poorest in the mainstems of the Stillaguamish and Snohomish rivers where the greatest alterations to forest cover, channel complexity, riparian vegetation, and wetlands have occurred." (Snohomish County, 2006)</p> <p>The City's wastewater treatment plant on the western edge of the city limits discharges treated effluent to the Snohomish River. On average the plant treats one million gallons of wastewater per day, but this can reach as much as 10 million gallons per day due to combined sewer and stormwater inputs from older parts of the city. The City has plans to separate the stormwater from sewage flows.</p>	<p><b>ALL ENVIRONMENTS</b> Construction of a new boat ramp would require in-water work, and likely involve a new parking area that would drain to the river.</p> <p><b>DOWNTON RIVERFRONT</b> Redevelopment in downtown could result in slight increases in impervious areas, although most non-City-owned parcels are nearly all impervious at present.</p>	<p><b>PROTECTION</b></p> <p>General</p> <ul style="list-style-type: none"> <li>All shoreline uses and development shall protect the quality and quantity of surface and ground water (14.250.110.D.5).</li> <li>All shoreline uses and development shall not release solid or liquid waste, oil, unwanted chemicals, hazardous materials, or untreated effluent to any water bodies or shorelands (14.250.110.D.6).</li> <li>Heating and cooling equipment may not be placed in waters of the state (14.250.110.D.8).</li> <li>Land clearing, grading, filling and alteration of natural drainage features and landforms shall be limited to the minimum necessary for development. Surfaces cleared of vegetation that are not to be developed shall be replanted. Surface drainage systems or substantial earth modifications shall be professionally designed to prevent maintenance problems or adverse impacts on shoreline features (14.250.110.D.10).</li> <li>All shoreline uses and development shall be located, designed, constructed, and managed to minimize interference with or adverse impacts to beneficial natural shoreline processes such as water circulation, erosion and accretion (14.250.110.D.11).</li> <li>All shoreline uses and development shall be located and designed to minimize or prevent the need for shoreline defense and stabilization measures and flood protection works such as bulkheads, other bank stabilization, landfills, levees, dikes, groins, jetties or substantial site regrades (14.250.110.D.12).</li> <li>All debris, overburden and other waste materials from construction shall be disposed of in such a way as to prevent their entry by erosion from drainage, high water or other means into any water body (14.250.110.D.14).</li> <li>The use of chemicals to control invasive aquatic weeds is prohibited, except that milfoil may be removed using chemicals, provided that the chemicals are applied by a licensed pesticide applicator and approved for aquatic use (14.250.110.D.7)</li> </ul> <p>Agriculture</p> <ul style="list-style-type: none"> <li>Creation of new agricultural areas and new structures for accessory uses on agricultural lands are subject to the requirements for structure setbacks and vegetation management in section SMC 14.250.140, and shall be located and designed to ensure no net loss of ecological function (14.250.120.D.2).</li> </ul> <p>Industrial</p> <ul style="list-style-type: none"> <li>Outdoor storage areas shall be designed in accordance with regulations for stormwater control in Chapter 15.16 SMC, and shall protect both groundwater and surface water from degradation. Unpaved storage areas underlain by permeable soils shall have at least a four (4) foot separation between ground surface and the winter water table (14.250.120.G.2)</li> <li>Log storage shall not be permitted in waters of the State where water quality standards cannot be met or where log storage precludes the public's use and navigation of waters of the State (14.250.120.G.5)</li> <li>Measures to control, collect and remove bark and wood debris shall be utilized where mill operations exist in or adjacent to the shoreline (14.250.120.G.7).</li> </ul> <p>Residential Development</p> <ul style="list-style-type: none"> <li>Residential development over water is prohibited (14.250.120.P8)</li> </ul> <p>Boating Facilities</p> <ul style="list-style-type: none"> <li>Marinas shall have facilities for handling wastes typically generated by marina patrons and visitors. Marinas shall not discharge or release any waste, treated or untreated, into the body of water on which they are located. Oil and gas handling systems shall be designed to minimize potential oil and gas spills. Marinas shall have provisions available for containment and cleanup of accidental spills (14.250.120.J.4)</li> </ul>	<p><b>ALL ENVIRONMENTS</b> <b>No Change</b> Water quality will likely not be degraded by new development since applicants would be required to meet stormwater management standards and develop an erosion and sedimentation control program. New development also would require maintaining and in some cases enhancing vegetated buffers.</p>

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	<p>There is only one property listed on any state or federal list for contaminated sites within the Snohomish shoreline planning area that is currently active. The Carterman Property site, on the south bank of the Snohomish River in the City of Snohomish UGA, was reported to have soils contaminated by metals and petroleum products. Ecology reports the status of this site as awaiting a site hazard assessment (Ecology, 2010).</p>		<p>Shoreline Habitat and Natural Systems Enhancement Projects</p> <ul style="list-style-type: none"> <li>When considering compensatory habitat enhancement as mitigation for impacts from new structures, such as when a reduced buffer or a non-water dependent use is requested, the enhancement should be proportional to the degree of impact of the new structure on shoreline ecological functions, and take into account the degree to which the existing buffer has already been compromised. Enhancement should focus on restoring ecological functions that are most critical and that have been most diminished in the city of Snohomish shorelines. In approving any compensatory habitat enhancement plan, the City Planner shall consider the changes in surface water runoff rates and water quality (such as through increased impervious area), habitat structure (such as loss or alteration of vegetation), and habitat quality (such as from lighting, noise, or activities) that the project would cause. Enhancements should generally focus on offsetting project impacts but may focus on restoring other critical ecological functions in the shoreline that have been lost or diminished (such as placement of large woody debris in water or restoring riparian vegetation). The City Planner may determine whether an enhancement that provides a broader benefit may be substituted for one that would offset the impacts of an individual project. The City Planner may deny a request to allow intrusion into a buffer or for development of a non-water dependent use if the enhancement proposed does not fully mitigate the impacts of the project or provide a sufficient broader benefit (14.250.140.A.8).</li> </ul> <p>Shoreline Stabilization</p> <ul style="list-style-type: none"> <li>Material that may release hazardous substances shall not be used for shoreline stabilization (14.250.130.E.6.f).</li> </ul>	
<p><b>LWD, Organics and Habitat</b> Maintain characteristic plant community and source of large woody debris (LWD)</p>	<p>Shoreline modifications and development have resulted in reduced shoreline vegetation, loss of wetlands, removal of large woody debris, and reduced off-channel habitat. Over 60% of the Snohomish River's banks (including areas both within and outside of the city) contain little or no riparian forest. Historic floodplains have had most native vegetation removed and have been developed with agricultural, industrial, and commercial uses.</p> <p>A large wetland complex is located adjacent to the City's wastewater treatment plant. This wetland includes palustrine emergent, scrub-shrub, and forested vegetation communities. The wetland covers approximately 18 acres. Cemetery Creek meanders through this wetland system and discharges to the Snohomish River at a point just north and west of the city limits. This wetland is believed to be part of a historical meander of the Snohomish River that was cut off then the river was channelized. Tides now create large off-channel pools in the wetland that may provide salmonid juvenile rearing and adult holding habitat.</p> <p>The Snohomish River in the vicinity of the city supports several salmonid species, including Chinook salmon (federally listed threatened), Coho salmon, chum salmon, pink salmon, sockeye salmon, bull trout/Dolly Varden (federally listed threatened), and steelhead (federally listed threatened). Of these species, summer Chinook salmon are documented to spawn in this portion of the river. The loss of riparian vegetation and large woody debris on the Snohomish River has impacted salmonid habitat by reducing the food supply for fry, increasing solar heating of the water, and reducing cover and refuge habitat. Water quality problems and physical barriers have reduced fish access to tributaries. Most of the subbasins in the Snohomish watershed have peak flows that</p>	<p><b>ALL ENVIRONMENTS</b> Some clearing would be necessary to create a new boat ramp; any buffer clearing would be offset by required buffer enhancement.</p> <p><b>DOWNTOWN RIVERFRONT</b> Public access improvements in downtown could include changes to vegetation, but would be required to meet "no net loss" standard.</p>	<p><b>PROTECTION</b></p> <p>General</p> <ul style="list-style-type: none"> <li>The use of chemicals to control invasive aquatic weeds is prohibited, except that milfoil may be removed using chemicals, provided that the chemicals are applied by a licensed pesticide applicator and approved for aquatic use (14.250.110.D7).</li> <li>All shoreline uses and development shall be located, designed, constructed and managed to avoid disturbance of, or minimize adverse impacts to protect fish and wildlife habitat conservation areas, including, but not limited to, spawning, nesting, rearing and habitat areas, and migratory routes. Where avoidance of adverse impacts is not practicable, the City Planner may require that mitigation measures to protect species and habitat functions be developed, in consultation with state resource management agencies and federally recognized tribes (14.250.110.D.9).</li> <li>Land clearing, grading, filling and alteration of natural drainage features and landforms shall be limited to the minimum necessary for development. Surfaces cleared of vegetation that are not to be developed shall be replanted. Surface drainage systems or substantial earth modifications shall be professionally designed to prevent maintenance problems or adverse impacts on shoreline features (14.250.110.D.10).</li> <li>Land development, land uses, and modifications within the shoreline jurisdiction shall not result in a net loss of shoreline ecological functions and processes. Mitigation for impacts resulting from development, uses, and modifications shall follow the mitigation sequencing requirements of SMC 14.255.120.E and consider the priorities specified in the Shoreline Restoration Plan (14.255.110.A).</li> </ul> <p>Agriculture</p> <ul style="list-style-type: none"> <li>Creation of new agricultural areas and new structures for accessory uses on agricultural lands are subject to the requirements for structure setbacks and vegetation management in section SMC 14.250.140, and shall be located and designed to ensure no net loss of ecological function (14.250.120.D.2).</li> </ul> <p>Commercial</p> <ul style="list-style-type: none"> <li>Except for commercial structures that is dependent on direct, contiguous access to the water, all commercial structures shall be set back from the ordinary high water mark as required by the SMC 14.250.050.A (14.250.120.F.1)</li> <li>On parcels that abut the Snohomish River directly: Water-dependent and water-related commercial uses are permitted; Non-water oriented commercial uses may be permitted as part of a mixed use development that includes water-oriented uses, and provides substantial public access improvements; Water-enjoyment uses may be permitted if they include habitat enhancement and public access improvements that provide a public benefit commensurate with the scale of the proposed use (14.250.120.C.3.a).</li> <li>On parcels that are separated from the water by a public right-of-way or a publicly owned parcel that is primarily dedicated to providing public access to the shoreline: Water-oriented commercial uses are permitted; Non-water-oriented commercial uses may be permitted in existing buildings in the Historic District; Non-water-oriented commercial uses may be permitted when expanding existing buildings in the Historic District, when the development includes habitat enhancement and/or public access improvements that provide a public benefit commensurate with the scale of the proposed use; Non-water oriented commercial uses may be permitted as part of a mixed use development that includes water-oriented uses, and provides substantial public access improvements; Principal use parking lots may be permitted provided they include a direct pedestrian connection to and signage for a shoreline public access trail (14.250.120.C.3.b).</li> <li>To ensure no net loss of ecological function, vegetation enhancement may be required and may include off-site vegetation enhancement, provided it is in or immediately adjacent to the Downtown Riverfront environment. (14.250.120.C.3.c).</li> </ul> <p>Cultural</p> <ul style="list-style-type: none"> <li>To ensure no net loss of ecological function, vegetation enhancement may be required and may include off-site vegetation enhancement, provided it is in or immediately adjacent to the Downtown Riverfront environment. (14.250.120.C.3.c).</li> <li>Limited lighting is permitted where necessary to promote safety. Such lighting shall be directed away from habitat areas and shall not directly illuminate the water. Such lighting shall be the minimum necessary to promote safety (14.250.120.I.3).</li> <li>Parking for recreational uses shall comply with the regulations for parking in SMC 14.250.120.K and shall be located outside of required critical area buffers and shoreline setback areas (14.250.120.I.4).</li> </ul> <p>Industrial</p> <ul style="list-style-type: none"> <li>Logs: Except where no practical alternative exists, log storage shall occur on land rather than in water; Free-fall dropping of logs into water is prohibited; Whenever possible, logs shall not be dumped, stored, or floated in areas where grounding will occur (14.250.120.G.4, 6, 8).</li> </ul>	<p><b>AQUATIC</b> <b>No Change</b> Establishing a riparian management zone for non-water-dependent uses will result in protection of existing vegetation.</p> <p><b>DOWNTOWN RIVERFRONT</b> <b>No Change</b> Establishing a riparian management zone for non-water-dependent uses will result in protection of existing vegetation. Any trail or park improvements will be accompanied by mitigation measures (e.g. overhanging vegetation).</p> <p><b>URBAN CONSERVANCY</b> <b>No Change</b> Establishing a riparian management zone for non-water-dependent uses will result in protection of existing vegetation.</p>

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Snohomish River				
	are considered unhealthy for salmon conservation, based on analyses of forest cover, road density, and impervious surface.		<p>Park/Recreation</p> <ul style="list-style-type: none"> <li>Golf courses, playing fields, and other large areas devoted to athletic activities shall be allowed only outside of the buffers required under SMC 14.250.140, and then only if buffers include a full range of native riparian vegetation. Buffer enhancement shall be required as necessary to meet this requirement (14.250.120.P11).</li> </ul> <p>Residential</p> <ul style="list-style-type: none"> <li>Non-water-dependent accessory structures and facilities such as sheds, gazebos, swimming pools, and driveways shall not be located in Native Growth Protection Areas described in SMC 14.250.140 (14.250.120.H.2.c).</li> <li>Stairs and paths to a dock or beach may be allowed in the Native Growth Protection Areas described in SMC 14.250.140, but shall be limited to the minimum necessary to provide pedestrian access (14.250.120.H.2.d).</li> <li>Private boat ramps serving a single residence shall not be located in Native Growth Protection Areas described in SMC 14.250.140 (14.250.120.H.2.e).</li> </ul> <p>Public Marinas and Boat Launches</p> <ul style="list-style-type: none"> <li>All marinas shall include landscaping pursuant to a landscaping plan that includes appropriate screening and native plantings to be submitted and approved as a part of the Substantial Development Permit process (14.250.120.J.9).</li> <li>Parking for boat launches and marinas shall be located outside of required critical area buffers and shoreline setbacks required under SMC 14.250.140 (14.250.120.J.13).</li> </ul> <p>Transportation</p> <ul style="list-style-type: none"> <li>Highway, street and railroad infrastructure that must be located over water, such as bridges and bridge supports, may be permitted provided that mitigation sequencing per SMC 14.255.120.E is employed, and the priorities of the City of Snohomish Shoreline Restoration Plan are considered in designing mitigation for impacts from the project (14.250.120.K.3)</li> <li>Major roads and railroads shall cross shoreline areas by the shortest, most direct route feasible, unless such route would cause significant environmental damage (14.250.120.K.2)</li> <li>Off-street parking shall be located outside of required critical area buffers and shoreline setbacks (14.250.120.K.9).</li> <li>Exterior lighting from parking areas shall be designed to avoid illumination of fish and wildlife habitat areas and their buffers (14.250.120.K.13).</li> </ul> <p>Utilities</p> <ul style="list-style-type: none"> <li>Utility facilities that cannot be located below ground and outside the shoreline jurisdiction shall be located as far landward as feasible, and shall be screened (14.250.120.L.2).</li> <li>Where feasible or where environmental benefit is achieved through use of aerial utility lines, utility lines and facilities shall be located underground (14.250.120.L.3).</li> <li>If crossing beneath a river or stream, utilities shall be designed to avoid river bed/streambed mobilization and adverse environmental impacts in general. Such utility lines shall be placed in a sleeve or conduit to facilitate replacement without additional boring or excavation (14.250.120.L.6.c).</li> </ul> <p>In-Water Uses</p> <ul style="list-style-type: none"> <li>Dams and hydroelectric facilities are prohibited in all environments (14.250.120.P16).</li> <li>Highway, street and railroad infrastructure, such as bridge supports or structural shoreline stabilization for existing infrastructure, may be permitted in water as conditional uses, provided that it is not feasible to locate them on land, mitigation sequencing requirements of SMC 14.255.120.E. are followed, and the priorities of the City of Snohomish Shoreline Restoration Plan are considered in designing mitigation for impacts from the project (14.250.120.P18).</li> </ul> <p>Boating Facilities</p> <ul style="list-style-type: none"> <li>Marinas and boat launches shall not deflect river currents such that adverse impacts would occur on downstream properties. Marinas shall be designed to meet criteria by the State Department of Fish and Wildlife relative to disruption of currents, restriction of tidal prisms, flushing characteristics, and fish passage (14.250.120.J.3)</li> <li>New subdivisions, temporary lodging, and multi-family residences may only include moorage in a single, joint-use moorage facility (14.250.130.H.1).</li> <li>Joint-use piers shall be preferred for commercial and industrial enterprises in close proximity to each other (14.250.130.H.2).</li> <li>Only one boat lift, dock, pier, moorage, buoy, float and launching facility may be permitted for each parcel developed with a single detached residential unit, and only if the applicant demonstrates there is no other feasible option for shared use facilities. However, installation or retention of additional watercraft lifts beyond one, without a canopy, at a single residential use waterfront structure is allowed. A maximum of three lifts are allowed at a single residential use overwater structure. However, only two lifts can be ground-based, all other lift(s) shall be floating or suspended lift(s) (14.250.130.H.6).</li> <li>Only joint use docks or piers are allowed on lots with less than 50 feet of waterfront except when lots abutting both sides of the subject lot already have a dock or pier (14.250.130.H.7).</li> <li>Surface coverage (includes all overwater portions of the floats, ramps, and ells) shall be limited as follows: Moorage facilities serving only one residential waterfront lot shall not exceed 480 square feet; Moorage facilities serving two residential waterfront lots shall not exceed 700 feet; and Moorage facilities serving three or more residential waterfront lots shall not exceed 1,000 square feet (14.250.130H.9.a-c).</li> <li>All marinas shall include landscaping pursuant to a landscaping plan that includes appropriate screening and native plantings to be submitted and approved as a part of the Substantial Development Permit process (14.250.120.J.9).</li> <li>Parking for boat launches and marinas shall be located outside of required critical area buffers and shoreline setbacks required under SMC 14.250.140 (14.250.120.J.13).</li> <li>Applications for piers and docks on the Snohomish River shall include an assessment of impacts on anadromous salmon habitat, and a mitigation plan addressing any impacts expected from the project. Compensatory mitigation shall be required for impacts that cannot be avoided through design and siting. Prior to issuance of a permit for a pier or dock on these shorelines, the applicant shall provide evidence of all required state and federal permits (14.250.130.H.4).</li> <li>Docks and piers shall be subject to the requirements of SMC 14.250.130.H.6-14, or shall demonstrate that the project provides an equal or greater degree of protection of ecological functions and anadromous species habitat. For the purposes of meeting this requirement, the City Planner may require a habitat management plan to determine whether the project is adequately protective (14.250.130.H.5).</li> <li>In order to mitigate the impacts of new or expanded commercial moorage facilities on sites where riparian vegetation is degraded or absent, the applicant shall plant emergent vegetation (if site-appropriate) and a buffer of vegetation a minimum of ten feet wide along the entire length of the lot immediately landward of the ordinary high water mark. Planting shall consist of native shrubs and trees and, when possible, emergent vegetation. At least five native trees will be included in a planting plan containing one or more</li> </ul>	

Ecological Processes/Functions WAC 173-26-201(3)(d)(i)(C)	Current Performance (Shoreline Inventory and Characterization Report - ESA Adolphson, 2011)	Likely Development By Shoreline Environment Designation (SED)	SMP Provisions Protection or Restoration Protection = Proposed SMP regulations (with reference to SMP section number) Restoration = Draft Restoration Plan Policy	Future Performance By Shoreline Environment Designation (SED)
Snohomish River				
			<p>evergreen trees and two or more trees that survive well with wet roots (e.g., willow species), per every 100 lineal feet of shoreline. On sites with mature riparian vegetation, exiting native vegetation should be retained and the buffer enhanced to the equivalent of these standards. Plantings shall be monitored for a period of five years according to an approved monitoring plan. This subsection is not intended to prevent reasonable access through the shoreline critical area buffer to the shoreline, or to prevent recreational use of the shoreline critical area. This requirement may be waived or reduced for water-dependent transportation uses where it is demonstrated that vegetation could result in safety or navigation hazards. Removal of riparian vegetation is subject to the requirements of SMC 14.280.060. including compensatory replacement if buffers are reduced (14.250.130.H.10).</p> <ul style="list-style-type: none"> <li>No covered boat lift, dock, pier, covered moorage, covered float, or other covered structure is permitted waterward of the ordinary high water mark, except submerged, free-standing mechanical boat lifts associated with single detached residential docks or piers and recreational watercraft, which may be covered with a canopy, provided: No canopy shall be more than twenty-five feet in length or wider than fifteen (15) feet; No portion of the canopy shall exceed a height of twelve (12) feet above the ordinary high water mark; The canopy shall at no time have any side partly or wholly enclosed; The highest portion of the canopy shall be located below the lowest grade point on the waterward side of the existing homes on surrounding properties; Canopies shall be made out of non-toxic materials; Canopies shall be of a translucent material to allow light transmission; The total overwater coverage of the piers, floats, ramps, ells, and canopy for a single family residence with a single-use moorage shall not exceed six hundred (600) square feet ; and Only one boat lift canopy per single detached residence shall be allowed (14.250.130.H.12.a-h).</li> </ul> <p>Breakwaters, Jetties, Groins, and Weirs</p> <ul style="list-style-type: none"> <li>Breakwaters, jetties, groins and weirs shall only be permitted as a Conditional Use where necessary to support water dependent uses, public access, approved shoreline stabilization, or other public uses, as determined by the City Planner. Groins shall only be permitted as part of a restoration project sponsored or co-sponsored by a public agency (14.250.130.D5).</li> </ul> <p>Filling, Grading, and Dredging</p> <ul style="list-style-type: none"> <li>Fill may be permitted below the ordinary high water mark only: When necessary to support a water dependent use; To provide for public access; When necessary to mitigate conditions that endanger public safety, including flood risk reduction projects; To allow for cleanup and disposal of contaminated sediments as part of an interagency environmental cleanup plan; To allow for the disposal of dredged material considered suitable under, and conducted in accordance with, the dredged material management program of the Washington Department of Natural Resources; For expansion or alteration of transportation or utility facilities currently located on the shoreline upon demonstration that alternatives to fill are not feasible; or As part of mitigation actions, environmental restoration projects and habitat enhancement projects (14.250.130.F.2.a.i-vii).</li> <li>Dredging and disposal of dredged material below the ordinary high water mark shall be permitted for restoration projects associated with implementation of the Model Toxics Control Act or the Comprehensive Environmental Response, Compensation, and Liability Act; or any enhancement or restoration project (14.250.130.F.3.d).</li> <li>Disposal of dredged material shall be done only in approved upland disposal sites and is not allowed within critical areas or their buffers (14.250.130.F.5).</li> </ul> <p>Shoreline Habitat and Natural Systems Enhancement Projects</p> <ul style="list-style-type: none"> <li>Non-native vegetation may be retained unless otherwise required to be replaced as part of an enhancement associated with development or expansion of development on the property (14.250.140.A.2).</li> <li>When considering compensatory habitat enhancement as mitigation for impacts from new structures, such as when a reduced buffer or a non-water dependent use is requested, the enhancement should be proportional to the degree of impact of the new structure on shoreline ecological functions, and take into account the degree to which the existing buffer has already been compromised. Enhancement should focus on restoring ecological functions that are most critical and that have been most diminished in the city of Snohomish shorelines. In approving any compensatory habitat enhancement plan, the City Planner shall consider the changes in surface water runoff rates and water quality (such as through increased impervious area), habitat structure (such as loss or alteration of vegetation), and habitat quality (such as from lighting, noise, or activities) that the project would cause. Enhancements should generally focus on offsetting project impacts but may focus on restoring other critical ecological functions in the shoreline that have been lost or diminished (such as placement of large woody debris in water or restoring riparian vegetation). The City Planner may determine whether an enhancement that provides a broader benefit may be substituted for one that would offset the impacts of an individual project. The City Planner may deny a request to allow intrusion into a buffer or for development of a non-water dependent use if the enhancement proposed does not fully mitigate the impacts of the project or provide a sufficient broader benefit (14.250.140.A.8).</li> <li>Where development is proposed within the minimum buffer width, or where development is proposed adjacent to a buffer (except a buffer that is well vegetated with intact native vegetation), compensatory mitigation shall be provided and depicted on the landscaping plan to compensate for impacts of the development remaining after mitigation sequencing has been applied (14.250.140.A.9).</li> <li>Habitat Conservation Area Buffers between 50 – 100 feet from the OHWM applies to all shorelines (14.250.140.A.9 see table).</li> </ul> <p>Shoreline Stabilization</p> <ul style="list-style-type: none"> <li>Shoreline stabilization, including bulkheads and flood protection facilities, shall be permitted only when it is demonstrated that stabilization is necessary to protect existing legally-established primary structures, public improvements, proposed or existing water-dependent development, or projects for the restoration of ecological functions or hazardous substance remediation (14.250.130.D1).</li> <li>Shoreline vegetation shall be preserved to the maximum extent feasible consistent with safe construction requirements (14.250.130.E.3).</li> <li>Cut-and-fill slopes and backfill areas shall be revegetated with natural grasses, shrubs and/or trees in keeping with existing or planned riverbank vegetation (14.250.130.E.4).</li> <li>Adequate mitigation measures that maintain existing shoreline processes and critical fish and wildlife habitat will be provided that ensure no net loss or function of riparian habitat (14.250.130.E.6.a.vii).</li> </ul>	

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<b>Pilchuck River</b>				
<p><b>Hydrology</b> Flow regime, sediment transport, and floodplain interaction</p>	<p>The river's floodplain is constrained by steep bluffs on the western bank and levees along the eastern bank. The levees disconnect the river from its floodplain and contribute to channelization. Rip rap and other types of shoreline armoring are evident in places, especially beneath the bridges. The floodplain widens near the confluence with the Snohomish River. Because the river is cut off from its floodplain, sediments become deposited within the channel. The floodplain of the Pilchuck River is mapped as an aquifer recharge area.</p> <p>The Pilchuck River is the only river in the Snohomish watershed where water withdrawals are known to cause low flows. The City water treatment plant is located approximately 16 miles northeast from the city center at RM 26.4. A dam diverts river water to the treatment plant which produces approximately one million gallons of potable water a day at full operation. There are numerous other private water withdrawals on the river for agriculture, irrigation, and other uses. During summer months, it is estimated that withdrawals by the City of Snohomish can remove 5 to 20 percent of the summer low flows from the river. Alternatively, the river receives high flows from Swifty Creek, the outlet stream from Blackmans Lake.</p> <p>Gravel mining between 1969 and 1991 removed gravel from the river channel, gravel bars, and floodplain may have altered channel profile. Gravel mining and bank erosion have contributed to excess sediment in the river.</p>	<p><b>RURAL CONSERVANCY</b> The City's water intake facility property encompasses the entirety of the designation. Potential projects to reduce the effects of the dam on fish passage have been studied. However, final plans and funding have not been identified.</p> <p><b>URBAN CONSERVANCY</b> Parks and open space exist at the north (Morgantown Park) and south (Averill Youth Complex) ends of the urban conservancy designation and little redevelopment potential exists with in these areas. The western bank of the river between these two points consists mostly of steep banks with upland development outside of the steep slope and required buffer. Overall, redevelopment is not likely within the designation as there is little room for additional development within the shoreline planning area. Provisions may allow some non-water dependent uses as long as they are outside the buffer.</p>	<p><b>PROTECTION</b></p> <p><b>General</b></p> <ul style="list-style-type: none"> <li>Land clearing, grading, filling and alteration of natural drainage features and landforms shall be limited to the minimum necessary for development. Surfaces cleared of vegetation that are not to be developed shall be replanted. Surface drainage systems or substantial earth modifications shall be professionally designed to prevent maintenance problems or adverse impacts on shoreline features (14.250.110.D.10).</li> <li>All shoreline uses and development shall be located, designed, constructed, and managed to minimize interference with or adverse impacts to beneficial natural shoreline processes such as water circulation, erosion and accretion (14.250.110.D.11)</li> <li>All shoreline uses and development shall be located and designed to minimize or prevent the need for shoreline defense and stabilization measures and flood protection works such as bulkheads, other bank stabilization, landfills, levees, dikes, groins, jetties or substantial site regrades (14.250.110.D12).</li> <li>All development in the floodplain shall include an assessment of potential effects the project would have on channel migration, and incorporate measures to mitigate any adverse impacts on channel migration (14.250.110.D13).</li> </ul> <p><b>Industrial</b></p> <ul style="list-style-type: none"> <li>Logs: Except where no practical alternative exists, log storage shall occur on land rather than in water; Free-fall dropping of logs into water is prohibited; Whenever possible, logs shall not be dumped, stored, or floated in areas where grounding will occur (14.250.120.G.4, 6, 8).</li> </ul> <p><b>Transportation</b></p> <ul style="list-style-type: none"> <li>Highway, street and railroad infrastructure that must be located over water, such as bridges and bridge supports, may be permitted provided that mitigation sequencing per SMC 14.255.120.E is employed, and the priorities of the City of Snohomish Shoreline Restoration Plan are considered in designing mitigation for impacts from the project (14.250.120.K.3).</li> <li>Bridge approach fills shall not encroach on the designated 100-year floodway of any river (14.250.120.K.5).</li> <li>Roadways and bridges shall be designed to avoid or minimize placement of fill or structures that would restrict floodplain capacity or limit channel migration. If transportation facilities are anticipated to impact floodplains or channel migration zones; mitigation sequencing as specified in SMC 14.255.120.E shall be employed to avoid and mitigate for impacts (14.250.120.K.6).</li> <li>Roads and off-street parking facilities shall be located so as not to require shoreline stabilization (14.250.120.K.8).</li> </ul> <p><b>In-Water Uses</b></p> <ul style="list-style-type: none"> <li>Dams and hydroelectric facilities are prohibited in all environments (14.250.120.P16) In-water fish and wildlife management, except aquaculture, is a Permitted Use (14.250.120.C).</li> </ul> <p><b>Boating Facilities</b></p> <ul style="list-style-type: none"> <li>Docks, piers, long-term moorage, and vehicular boat launches are prohibited on the Pilchuck River (14.250.130.D7).</li> <li>Joint-use piers shall be preferred for commercial and industrial enterprises in close proximity to each other (14.250.130.H.2).</li> </ul> <p><b>Breakwaters, Jetties, Groins, and Weirs</b></p> <ul style="list-style-type: none"> <li>Breakwaters, jetties, groins and weirs shall only be permitted as a Conditional Use where necessary to support water dependent uses, public access, approved shoreline stabilization, or other public uses, as determined by the City Planner. Groins shall only be permitted as part of a restoration project sponsored or co-sponsored by a public agency (14.250.130.D5).</li> </ul> <p><b>Filling, Grading, and Dredging</b></p> <ul style="list-style-type: none"> <li>Fill may be permitted below the ordinary high water mark only: When necessary to support a water dependent use; To provide for public access; When necessary to mitigate conditions that endanger public safety, including flood risk reduction projects; To allow for cleanup and disposal of contaminated sediments as part of an interagency environmental cleanup plan; To allow for the disposal of dredged material considered suitable under, and conducted in accordance with, the dredged material management program of the Washington Department of Natural Resources; For expansion or alteration of transportation or utility facilities currently located on the shoreline upon demonstration that alternatives to fill are not feasible; or As part of mitigation actions, environmental restoration projects and habitat enhancement projects (14.250.130.F.2.a.i-vii).</li> <li>Dredging is not allowed waterward of the ordinary high water mark for the primary purpose of obtaining fill material (14.250.130.F.4).</li> <li>Stockpiling of dredged material in or under water is prohibited (14.250.130.F.7)</li> <li>The removal of gravel for flood management is allowed only after a biological and geomorphological study shows that extraction has a long-term benefit to flood hazard reduction, does not result in a net loss of ecological functions, and is part of a comprehensive flood management solution (14.250.130.F.8).</li> <li>Dredging and disposal of dredged material below the ordinary high water mark shall be permitted only: When necessary for the operation of a water dependent use; When necessary to mitigate conditions that endanger public safety or fisheries resources; Dredging and disposal of dredged material below the ordinary high water mark shall be permitted for establishing, maintaining, expanding, relocating or reconfiguring navigation channels and basins when necessary to ensure safe and efficient accommodation of existing navigation uses when: Significant ecological impacts are minimized; Mitigation is provided, employing the mitigation sequence in SMC 14.255.120.E; and Dredging is maintained to the authorized location, depth and width; Dredging and disposal of dredged material below the ordinary high water mark shall be permitted for restoration projects associated with implementation of the Model Toxics Control Act or the Comprehensive Environmental Response, Compensation, and Liability Act; or any enhancement or restoration project; Dredging and disposal of dredged material below the ordinary high water mark shall be permitted for flood risk reduction projects conducted in accordance with Chapter 14.270 SMC (14.250.130.F.3.a-e).</li> </ul> <p><b>Shoreline Stabilization</b></p> <ul style="list-style-type: none"> <li>Shoreline stabilization, including bulkheads and flood protection facilities, shall be permitted only when it is demonstrated that stabilization is necessary to protect existing</li> </ul>	<p><b>RURAL CONSERVANCY</b> <b>No Change</b> The dam at the water intake facility is to be maintained indefinitely. As a result, no changes to hydrology are expected.</p> <p><b>URBAN CONSERVANCY</b> <b>No Change</b> Steep-sloped and non-armed quality of western bank to be maintained indefinitely.</p> <p>If additional non-water development uses are developed outside of buffers, such as in parks or commercial areas, it would be required to be designed to avoid the need for stabilization in the future.</p>

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Pilchuck River				
			<p>legally-established primary structures, public improvements, proposed or existing water-dependent development, or projects for the restoration of ecological functions or hazardous substance remediation (14.250.130.D1)</p> <ul style="list-style-type: none"> <li>• An existing legally established shoreline stabilization structure may be replaced with a similar structure when it is demonstrated there is a need to protect principal uses or structures from erosion caused by currents, tidal action, or waves. Normal maintenance and repair is allowed, provided that such work does not cause a net loss of ecological functions (14.250.130.D2).</li> <li>• All shoreline stabilization and flood protection measures shall be designed and constructed so that downstream banks will not be adversely affected. (14.250.130.E.1).</li> <li>• Shoreline stabilization and flood protection measures shall not be designed and constructed in such a manner as to result in channelization of normal stream flows (14.250.130.E.2).</li> <li>• New shoreline stabilization may occur when a geotechnical analysis demonstrates: That erosion from waves or currents is imminently threatening and that damage is expected to occur if the shoreline stabilization is not constructed; The erosion rate exceeds that which would normally occur in a natural condition; The erosion is not caused by upland conditions on the project site that, if corrected, would eliminate the need for shoreline stabilization; The proposed shoreline stabilization is the least hardened solution that is feasible to protect the structures or improvements, including consideration of non-structural alternatives such as slope drainage systems, vegetative growth stabilization, and gravel berms; The proposal is the minimum necessary to protect existing legally-established primary structures, existing water-dependent development, or projects for the restoration of ecological functions or remediation of hazardous materials; The proposed shoreline stabilization would not interfere with normal fluvial hydrological and geomorphological processes in natural conditions (14.250.130.E.6.a.i-vi).</li> <li>• Shoreline stabilization shall not interfere with surface or subsurface drainage into the water body (14.250.130.6.e).</li> <li>• Shoreline stabilization shall be designed so as not to create a need for shoreline stabilization elsewhere (14.250.130.6.h).</li> <li>• Shoreline stabilization measures shall not be allowed within any designated floodway except as may be necessary to protect existing development or prevent serious impairment of channel function (14.250.130.6.i).</li> <li>• Shoreline stabilization shall comply with the Integrated Stream Protection Guidelines (Washington departments of Fish and Wildlife, Ecology, and Transportation, 2003) and shall be designed to allow for appropriate public access to the shoreline (14.250.130.E.6.j).</li> <li>• Flood protection facilities shall be consistent with the standards in SMC 14.270 (Flood Hazard Areas), and the Integrated Stream Protection Guidelines (14.250.130.E.7).</li> <li>• Flood control dikes shall be landward of the designated floodway and any marshes or swamps directly interrelated and interdependent with the river (14.250.130.E.8).</li> </ul>	
<p><b>Water Quality</b> Retention of particulates, nutrient cycling, pathogens, delivery movement, and loss</p>	<p>The Pilchuck River is included in Ecology's Total Maximum Daily Load (TMDL) plan for fecal coliforms. Pollution sources in the watershed appear to be livestock access to the river, poor pasture management, failing on-site septic systems, and bacterial contributions from urbanized tributary areas. The Pilchuck River is also included on Ecology's list of impaired waters as a water of concern for elevated temperatures. Removal of native riparian vegetation has adversely affected temperature in the river.</p> <p>There were no contaminated or hazardous waste sites identified within the Pilchuck River shoreline planning area.</p>	<p><b>RURAL CONSERVANCY</b> The City's water intake facility property encompasses the entirety of the designation. Potential projects to reduce the effects of the dam on fish passage have been studied. However, final plans and funding have not been identified.</p> <p><b>URBAN CONSERVANCY</b> Parks and open space exist at the north (Morgantown Park) and south (Averill Youth Complex) ends of the urban conservancy designation and little redevelopment potential exists within these areas. The western bank of the river between these two points consists mostly of steep banks with upland development outside of the steep slope and required buffer. Overall, redevelopment is not likely within the designation as there is little room for additional development within the shoreline planning area. Provisions may allow some non-water dependent uses as long as they are outside the buffer.</p>	<p><b>PROTECTION</b></p> <p>General</p> <ul style="list-style-type: none"> <li>• All shoreline uses and development shall protect the quality and quantity of surface and ground water (14.250.110.D.5).</li> <li>• All shoreline uses and development shall not release solid or liquid waste, oil, unwanted chemicals, hazardous materials, or untreated effluent to any water bodies or shorelands (14.250.110.D.6).</li> <li>• Heating and cooling equipment may not be placed in waters of the state (14.250.110.D.8).</li> <li>• Land clearing, grading, filling and alteration of natural drainage features and landforms shall be limited to the minimum necessary for development. Surfaces cleared of vegetation that are not to be developed shall be replanted. Surface drainage systems or substantial earth modifications shall be professionally designed to prevent maintenance problems or adverse impacts on shoreline features (14.250.110.D.10).</li> <li>• All shoreline uses and development shall be located, designed, constructed, and managed to minimize interference with or adverse impacts to beneficial natural shoreline processes such as water circulation, erosion and accretion (14.250.110.D.11).</li> <li>• All shoreline uses and development shall be located and designed to minimize or prevent the need for shoreline defense and stabilization measures and flood protection works such as bulkheads, other bank stabilization, landfills, levees, dikes, groins, jetties or substantial site regrades (14.250.110.D.12).</li> <li>• All debris, overburden and other waste materials from construction shall be disposed of in such a way as to prevent their entry by erosion from drainage, high water or other means into any water body (14.250.110.D.14).</li> </ul> <p>Agriculture</p> <ul style="list-style-type: none"> <li>• Creation of new agricultural areas and new structures for accessory uses on agricultural lands are subject to the requirements for structure setbacks and vegetation management in section SMC 14.250.140, and shall be located and designed to ensure no net loss of ecological function (14.250.120.D.2).</li> </ul> <p>Industrial</p> <ul style="list-style-type: none"> <li>• Outdoor storage areas shall be designed in accordance with regulations for stormwater control in Chapter 15.16 SMC, and shall protect both groundwater and surface water from degradation. Unpaved storage areas underlain by permeable soils shall have at least a four (4) foot separation between ground surface and the winter water table (14.250.120.G.2)</li> <li>• Log storage shall not be permitted in waters of the State where water quality standards cannot be met or where log storage precludes the public's use and navigation of waters of the State (14.250.120.G.5)</li> <li>• Measures to control, collect and remove bark and wood debris shall be utilized where mill operations exist in or adjacent to the shoreline (14.250.120.G.7).</li> </ul> <p>Residential Development</p> <ul style="list-style-type: none"> <li>• Residential development over water is prohibited (14.250.120.P8)</li> </ul> <p>Shoreline Habitat and Natural Systems Enhancement Projects</p> <ul style="list-style-type: none"> <li>• When considering compensatory habitat enhancement as mitigation for impacts from new structures, such as when a reduced buffer or a non-water dependent use is requested, the enhancement should be proportional to the degree of impact of the new structure on shoreline ecological functions, and take into account the degree to which the existing buffer has already been compromised. Enhancement should focus on restoring ecological functions that are most critical and that have been most diminished in</li> </ul>	<p><b>RURAL CONSERVANCY</b> <b>No Change</b> Water quality will not be degraded as the dam at the water intake facility is to be maintained indefinitely.</p> <p><b>URBAN CONSERVANCY</b> <b>No Change</b> Water quality will likely not be degraded by new development since applicants would be required to meet stormwater management standards and develop an erosion and sedimentation control program and buffer requirements ensure that most uses are set back from the water.</p>

Ecological Processes/Functions WAC 173-26-201(3)(d)(i)(C)	Current Performance (Shoreline Inventory and Characterization Report - ESA Adolfsen, 2011)	Likely Development By Shoreline Environment Designation (SED)	SMP Provisions Protection or Restoration Protection = Proposed SMP regulations (with reference to SMP section number) Restoration = Draft Restoration Plan Policy	Future Performance By Shoreline Environment Designation (SED)
Pilchuck River				
			<p>the city of Snohomish shorelines. In approving any compensatory habitat enhancement plan, the City Planner shall consider the changes in surface water runoff rates and water quality (such as through increased impervious area), habitat structure (such as loss or alteration of vegetation), and habitat quality (such as from lighting, noise, or activities) that the project would cause. Enhancements should generally focus on offsetting project impacts but may focus on restoring other critical ecological functions in the shoreline that have been lost or diminished (such as placement of large woody debris in water or restoring riparian vegetation). The City Planner may determine whether an enhancement that provides a broader benefit may be substituted for one that would offset the impacts of an individual project. The City Planner may deny a request to allow intrusion into a buffer or for development of a non-water dependent use if the enhancement proposed does not fully mitigate the impacts of the project or provide a sufficient broader benefit (14.250.140.A.8).</p> <p>Shoreline Stabilization</p> <ul style="list-style-type: none"> <li>Material that may release hazardous substances shall not be used for shoreline stabilization (14.250.130.E.6.f).</li> </ul>	
<p><b>LWD, Organics and Habitat</b> Maintain characteristic plant community and source of large woody debris (LWD)</p>	<p>Removal of native riparian vegetation has adversely affected temperature in the river. Areas of near-shore vegetation removal are evident at Pilchuck Park, between 4th and 5th Streets, and sporadically near some single-family homes. Most back-shore vegetation has been removed for residential, parks and commercial development. Large woody debris is lacking, and the river channel lacks habitat complexity such as pools and off-channel areas. Invasive vegetation such as reed canarygrass, Himalayan blackberry, and knotweed is dominant along the river.</p> <p>No wetlands are mapped within the Pilchuck River shoreline planning area.</p> <p>The Pilchuck River in the vicinity of the city supports several salmonid species, including Chinook salmon (federally listed threatened), coho salmon, chum salmon, pink salmon, sockeye salmon, bull trout/Dolly Varden (federally listed threatened), steelhead (federally listed threatened), whitefish, and rainbow and cutthroat trout. The lower Pilchuck River provides spawning habitat for fall Chinook, winter steelhead and pink salmon, and rearing habitat for coho and bull trout/Dolly Varden. Salmon habitat in the river is affected by changes in river flows, bank armoring, lack of habitat complexity in the channel, lack of off-channel habitat, and high water temperatures. Potential low instream flow is a factor affecting aquatic habitat degradation in the Pilchuck River. A fish ladder at the dam at the City water treatment plant at RM 26.4 provides passage for migrating fish. However, constant maintenance of the ladder is required to keep it free of debris and sediment.</p>	<p><b>RURAL CONSERVANCY</b> The City's water intake facility property encompasses the entirety of the designation. Potential projects to reduce the effects of the dam on fish passage have been studied. However, final plans and funding have not been identified.</p> <p><b>URBAN CONSERVANCY</b> Parks and open space exist at the north (Morgantown Park) and south (Averill Youth Complex) ends of the urban conservancy designation and little redevelopment potential exists with in these areas. The western bank of the river between these two points consists mostly of steep banks with upland development outside of the steep slope and required buffer. Overall, redevelopment is not likely within the designation as there is little room for additional development within the shoreline planning area. Provisions may allow some non-water dependent uses as long as they are outside the buffer.</p>	<p>General</p> <ul style="list-style-type: none"> <li>The use of chemicals to control invasive aquatic weeds is prohibited, except that milfoil may be removed using chemicals, provided that the chemicals are applied by a licensed pesticide applicator and approved for aquatic use (14.250.110.D7).</li> <li>All shoreline uses and development shall be located, designed, constructed and managed to avoid disturbance of, or minimize adverse impacts to protect fish and wildlife habitat conservation areas, including, but not limited to, spawning, nesting, rearing and habitat areas, and migratory routes. Where avoidance of adverse impacts is not practicable, the City Planner may require that mitigation measures to protect species and habitat functions be developed, in consultation with state resource management agencies and federally recognized tribes (14.250.110.D.9).</li> <li>Land clearing, grading, filling and alteration of natural drainage features and landforms shall be limited to the minimum necessary for development. Surfaces cleared of vegetation that are not to be developed shall be replanted. Surface drainage systems or substantial earth modifications shall be professionally designed to prevent maintenance problems or adverse impacts on shoreline features (14.250.110.D.10).</li> <li>Land development, land uses, and modifications within the shoreline jurisdiction shall not result in a net loss of shoreline ecological functions and processes. Mitigation for impacts resulting from development, uses, and modifications shall follow the mitigation sequencing requirements of SMC 14.255.120.E and consider the priorities specified in the Shoreline Restoration Plan (14.255.110.A).</li> </ul> <p>Agriculture</p> <ul style="list-style-type: none"> <li>Creation of new agricultural areas and new structures for accessory uses on agricultural lands are subject to the requirements for structure setbacks and vegetation management in section SMC 14.250.140, and shall be located and designed to ensure no net loss of ecological function (14.250.120.D.2).</li> </ul> <p>Commercial</p> <ul style="list-style-type: none"> <li>Commercial uses that are not water-dependent or water-related shall be prohibited on Urban Conservancy Shorelines EXCEPT for the following uses if they are permitted in the underlying zoning, located outside of the buffers required in SMC 14.250.140, and do not substantially change the character of the shoreline: Restaurants, campgrounds, group camps, and similar recreational facilities; hunting and fishing and other private club; game preserves and private parks; and commercial uses in restoration of historical structures. Principal use parking lots are prohibited, except lots located landward of a public right-of-way. (14.250.120.P4)</li> <li>Except for commercial structures that is dependent on direct, contiguous access to the water, all commercial structures shall be set back from the ordinary high water mark as required by the SMC 14.250.140.A (14.250.120.F.1)</li> <li>On parcels that are separated from the water by a public right-of-way or a publicly owned parcel that is primarily dedicated to providing public access to the shoreline: Water-oriented commercial uses are permitted; Non-water-oriented commercial uses may be permitted in existing buildings in the Historic District; Non-water-oriented commercial uses may be permitted when expanding existing buildings in the Historic District, when the development includes habitat enhancement and/or public access improvements that provide a public benefit commensurate with the scale of the proposed use; Non-water oriented commercial uses may be permitted as part of a mixed use development that includes water-oriented uses, and provides substantial public access improvements; Principal use parking lots may be permitted provided they include a direct pedestrian connection to and signage for a shoreline public access trail (14.250.120.C.3.b).</li> <li>To ensure no net loss of ecological function, vegetation enhancement may be required and may include off-site vegetation enhancement, provided it is in or immediately adjacent to the Downtown Riverfront environment. (14.250.120.C.3.c).</li> </ul> <p>Cultural</p> <ul style="list-style-type: none"> <li>To ensure no net loss of ecological function, vegetation enhancement may be required and may include off-site vegetation enhancement, provided it is in or immediately adjacent to the Downtown Riverfront environment. (14.250.120.C.3.c).</li> <li>Limited lighting is permitted where necessary to promote safety. Such lighting shall be directed away from habitat areas and shall not directly illuminate the water. Such lighting shall be the minimum necessary to promote safety (14.250.120.I.3).</li> <li>Parking for recreational uses shall comply with the regulations for parking in SMC 14.250.120.K and shall be located outside of required critical area buffers and shoreline setback areas (14.250.120.I.4).</li> </ul> <p>Industrial</p> <ul style="list-style-type: none"> <li>Logs: Except where no practical alternative exists, log storage shall occur on land rather than in water; Free-fall dropping of logs into water is prohibited; Whenever possible, logs shall not be dumped, stored, or floated in areas where grounding will occur (14.250.120.G.4, 6, 8).</li> </ul> <p>Park/Recreation</p> <ul style="list-style-type: none"> <li>Golf courses, playing fields, and other large areas devoted to athletic activities shall be allowed only outside of the buffers required under SMC 14.250.140, and then only if buffers include a full range of native riparian vegetation. Buffer enhancement shall be required as necessary to meet this requirement (14.250.120.P11).</li> </ul> <p>Residential</p> <ul style="list-style-type: none"> <li>When new residential lots having water access are created in the shoreline where a dock could be allowed, they shall be required to utilize shared dock facilities</li> </ul>	<p><b>RURAL CONSERVANCY</b> <b>No Change or Potential Improvement</b> Potential development projects to reduce the effects of the dam on fish passage have been studied. However, final plans and funding have not been identified. Additionally, habitat will not be degraded as the dam at the water intake facility is to be maintained indefinitely.</p> <p><b>URBAN CONSERVANCY</b> <b>No Change</b> Establishing a riparian management zone for non-water-dependent uses will result in protection of existing vegetation along the western bank of the river.</p>

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Pilchuck River			<p>(14.250.120.H.2.e).</p> <ul style="list-style-type: none"> <li>• Non-water-dependent accessory structures and facilities such as sheds, gazebos, swimming pools, and driveways shall not be located in Native Growth Protection Areas described in SMC 14.250.140 (14.250.120.H.2.c).</li> <li>• Stairs and paths to a dock or beach may be allowed in the Native Growth Protection Areas described in SMC 14.250.140, but shall be limited to the minimum necessary to provide pedestrian access (14.250.120.H.2.d).</li> <li>• Private boat ramps serving a single residence shall not be located in Native Growth Protection Areas described in SMC 14.250.140 (14.250.120.H.2.e).</li> </ul> <p>Public Marinas and Boat Launches</p> <ul style="list-style-type: none"> <li>• All marinas shall include landscaping pursuant to a landscaping plan that includes appropriate screening and native plantings to be submitted and approved as a part of the Substantial Development Permit process (14.250.120.J.9).</li> <li>• Parking for boat launches and marinas shall be located outside of required critical area buffers and shoreline setbacks required under SMC 14.250.140 (14.250.120.J.13).</li> </ul> <p>Transportation</p> <ul style="list-style-type: none"> <li>• Highway, street and railroad infrastructure that must be located over water, such as bridges and bridge supports, may be permitted provided that mitigation sequencing per SMC 14.255.120.E is employed, and the priorities of the City of Snohomish Shoreline Restoration Plan are considered in designing mitigation for impacts from the project (14.250.120.K.3)</li> <li>• Major roads and railroads shall cross shoreline areas by the shortest, most direct route feasible, unless such route would cause significant environmental damage (14.250.120.K.2)</li> <li>• Off-street parking shall be located outside of required critical area buffers and shoreline setbacks (14.250.120.K.9).</li> <li>• Exterior lighting from parking areas shall be designed to avoid illumination of fish and wildlife habitat areas and their buffers (14.250.120.K.13).</li> </ul> <p>Utilities</p> <ul style="list-style-type: none"> <li>• Utility facilities that cannot be located below ground and outside the shoreline jurisdiction shall be located as far landward as feasible, and shall be screened (14.250.120.L.2).</li> <li>• Where feasible or where environmental benefit is achieved through use of aerial utility lines, utility lines and facilities shall be located underground (14.250.120.L.3).</li> <li>• If crossing beneath a river or stream, utilities shall be designed to avoid river bed/streambed mobilization and adverse environmental impacts in general. Such utility lines shall be placed in a sleeve or conduit to facilitate replacement without additional boring or excavation (14.250.120.L.6.c.).</li> </ul> <p>In-Water Uses</p> <ul style="list-style-type: none"> <li>• Dams and hydroelectric facilities are prohibited in all environments (14.250.120.P16).</li> <li>• Highway, street and railroad infrastructure, such as bridge supports or structural shoreline stabilization for existing infrastructure, may be permitted in water as conditional uses, provided that it is not feasible to locate them on land, mitigation sequencing requirements of SMC 14.255.120.E. are followed, and the priorities of the City of Snohomish Shoreline Restoration Plan are considered in designing mitigation for impacts from the project (14.250.120.P18).</li> </ul> <p>Boating Facilities</p> <ul style="list-style-type: none"> <li>• Docks, piers, long-term moorage, and vehicular boat launches are prohibited on the Pilchuck River (14.250.130.D7).</li> <li>• Marinas and boat launches shall not deflect river currents such that adverse impacts would occur on downstream properties. Marinas shall be designed to meet criteria by the State Department of Fish and Wildlife relative to disruption of currents, restriction of tidal prisms, flushing characteristics, and fish passage (14.250.120.J.3)</li> <li>• New subdivisions, temporary lodging, and multi-family residences may only include moorage in a single, joint-use moorage facility (14.250.130.H.1).</li> <li>• Joint-use piers shall be preferred for commercial and industrial enterprises in close proximity to each other (14.250.130.H.2).</li> <li>• Only one boat lift, dock, pier, moorage, buoy, float and launching facility may be permitted for each parcel developed with a single detached residential unit, and only if the applicant demonstrates there is no other feasible option for shared use facilities. However, installation or retention of additional watercraft lifts beyond one, without a canopy, at a single residential use waterfront structure is allowed. A maximum of three lifts are allowed at a single residential use overwater structure. However, only two lifts can be ground-based, all other lift(s) shall be floating or suspended lift(s) (14.250.130.H.6).</li> <li>• Only joint use docks or piers are allowed on lots with less than 50 feet of waterfront except when lots abutting both sides of the subject lot already have a dock or pier (14.250.130.H.7).</li> <li>• Surface coverage (includes all overwater portions of the floats, ramps, and ells) shall be limited as follows: Moorage facilities serving only one residential waterfront lot shall not exceed 480 square feet; Moorage facilities serving two residential waterfront lots shall not exceed 700 feet; and Moorage facilities serving three or more residential waterfront lots shall not exceed 1,000 square feet (14.250.130.H.9.a-c).</li> <li>• All marinas shall include landscaping pursuant to a landscaping plan that includes appropriate screening and native plantings to be submitted and approved as a part of the Substantial Development Permit process (14.250.120.J.9).</li> <li>• Parking for boat launches and marinas shall be located outside of required critical area buffers and shoreline setbacks required under SMC 14.250.140 (14.250.120.J.13).</li> <li>• Applications for piers and docks on the Snohomish River shall include an assessment of impacts on anadromous salmon habitat, and a mitigation plan addressing any impacts expected from the project. Compensatory mitigation shall be required for impacts that cannot be avoided through design and siting. Prior to issuance of a permit for a pier or dock on these shorelines, the applicant shall provide evidence of all required state and federal permits (14.250.130.H.4).</li> <li>• Docks and piers shall be subject to the requirements of SMC 14.250.130.H.6-14, or shall demonstrate that the project provides an equal or greater degree of protection of ecological functions and anadromous species habitat. For the purposes of meeting this requirement, the City Planner may require a habitat management plan to determine whether the project is adequately protective (14.250.130.H.5).</li> <li>• In order to mitigate the impacts of new or expanded commercial moorage facilities on sites where riparian vegetation is degraded or absent, the applicant shall plant emergent vegetation (if site-appropriate) and a buffer of vegetation a minimum of ten feet wide along the entire length of the lot immediately landward of the ordinary high water mark. Planting shall consist of native shrubs and trees and, when possible, emergent vegetation. At least five native trees will be included in a planting plan containing one or more evergreen trees and two or more trees that survive well with wet roots (e.g., willow species), per every 100 lineal feet of shoreline. On sites with mature riparian</li> </ul>	

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Pilchuck River			<p>vegetation, exiting native vegetation should be retained and the buffer enhanced to the equivalent of these standards. Plantings shall be monitored for a period of five years according to an approved monitoring plan. This subsection is not intended to prevent reasonable access through the shoreline critical area buffer to the shoreline, or to prevent recreational use of the shoreline critical area. This requirement may be waived or reduced for water-dependent transportation uses where it is demonstrated that vegetation could result in safety or navigation hazards. Removal of riparian vegetation is subject to the requirements of SMC 14.280.060. including compensatory replacement if buffers are reduced (14.250.130.H.10).</p> <ul style="list-style-type: none"> <li>No covered boat lift, dock, pier, covered moorage, covered float, or other covered structure is permitted waterward of the ordinary high water mark, except submerged, free-standing mechanical boat lifts associated with single detached residential docks or piers and recreational watercraft, which may be covered with a canopy, provided: No canopy shall be more than twenty-five feet in length or wider than fifteen (15) feet; No portion of the canopy shall exceed a height of twelve (12) feet above the ordinary high water mark; The canopy shall at no time have any side partly or wholly enclosed; The highest portion of the canopy shall be located below the lowest grade point on the waterward side of the existing homes on surrounding properties; Canopies shall be made out of non-toxic materials; Canopies shall be of a translucent material to allow light transmission; The total overwater coverage of the piers, floats, ramps, ells, and canopy for a single family residence with a single-use moorage shall not exceed six hundred (600) square feet ; and Only one boat lift canopy per single detached residence shall be allowed (14.250.130.H.12.a-h).</li> </ul> <p>Breakwaters, Jetties, Groins, and Weirs</p> <ul style="list-style-type: none"> <li>Breakwaters, jetties, groins and weirs shall only be permitted as a Conditional Use where necessary to support water dependent uses, public access, approved shoreline stabilization, or other public uses, as determined by the City Planner. Groins shall only be permitted as part of a restoration project sponsored or co-sponsored by a public agency (14.250.130.D5).</li> </ul> <p>Filling, Grading, and Dredging</p> <ul style="list-style-type: none"> <li>Fill may be permitted below the ordinary high water mark only: When necessary to support a water dependent use; To provide for public access; When necessary to mitigate conditions that endanger public safety, including flood risk reduction projects; To allow for cleanup and disposal of contaminated sediments as part of an interagency environmental cleanup plan; To allow for the disposal of dredged material considered suitable under, and conducted in accordance with, the dredged material management program of the Washington Department of Natural Resources; For expansion or alteration of transportation or utility facilities currently located on the shoreline upon demonstration that alternatives to fill are not feasible; or As part of mitigation actions, environmental restoration projects and habitat enhancement projects (14.250.130.F.2.a.i-vii).</li> <li>Dredging and disposal of dredged material below the ordinary high water mark shall be permitted for restoration projects associated with implementation of the Model Toxics Control Act or the Comprehensive Environmental Response, Compensation, and Liability Act; or any enhancement or restoration project (14.250.130.F.3.d).</li> <li>Disposal of dredged material shall be done only in approved upland disposal sites and is not allowed within critical areas or their buffers (14.250.130.F.5).</li> </ul> <p>Shoreline Habitat and Natural Systems Enhancement Projects</p> <ul style="list-style-type: none"> <li>Non-native vegetation may be retained unless otherwise required to be replaced as part of an enhancement associated with development or expansion of development on the property (14.250.140.A.2).</li> <li>When considering compensatory habitat enhancement as mitigation for impacts from new structures, such as when a reduced buffer or a non-water dependent use is requested, the enhancement should be proportional to the degree of impact of the new structure on shoreline ecological functions, and take into account the degree to which the existing buffer has already been compromised. Enhancement should focus on restoring ecological functions that are most critical and that have been most diminished in the city of Snohomish shorelines. In approving any compensatory habitat enhancement plan, the City Planner shall consider the changes in surface water runoff rates and water quality (such as through increased impervious area), habitat structure (such as loss or alteration of vegetation), and habitat quality (such as from lighting, noise, or activities) that the project would cause. Enhancements should generally focus on offsetting project impacts but may focus on restoring other critical ecological functions in the shoreline that have been lost or diminished (such as placement of large woody debris in water or restoring riparian vegetation). The City Planner may determine whether an enhancement that provides a broader benefit may be substituted for one that would offset the impacts of an individual project. The City Planner may deny a request to allow intrusion into a buffer or for development of a non-water dependent use if the enhancement proposed does not fully mitigate the impacts of the project or provide a sufficient broader benefit (14.250.140.A.8).</li> <li>Where development is proposed within the minimum buffer width, or where development is proposed adjacent to a buffer (except a buffer that is well vegetated with intact native vegetation), compensatory mitigation shall be provided and depicted on the landscaping plan to compensate for impacts of the development remaining after mitigation sequencing has been applied (14.250.140.A.9).</li> <li>Habitat Conservation Area Buffers between 50 – 100 feet from the OHWM applies to all shorelines (14.250.140.A.9 see table).</li> </ul> <p>Shoreline Stabilization</p> <ul style="list-style-type: none"> <li>Shoreline stabilization, including bulkheads and flood protection facilities, shall be permitted only when it is demonstrated that stabilization is necessary to protect existing legally-established primary structures, public improvements, proposed or existing water-dependent development, or projects for the restoration of ecological functions or hazardous substance remediation (14.250.130.D1).</li> <li>Shoreline vegetation shall be preserved to the maximum extent feasible consistent with safe construction requirements (14.250.130.E.3).</li> <li>Cut-and-fill slopes and backfill areas shall be revegetated with natural grasses, shrubs and/or trees in keeping with existing or planned riverbank vegetation (14.250.130.E.4).</li> <li>Adequate mitigation measures that maintain existing shoreline processes and critical fish and wildlife habitat will be provided that ensure no net loss or function of riparian habitat (14.250.130.E.6.a.vii).</li> </ul>	

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<b>Blackmans Lake</b>				
<b>Hydrology</b> Flow regime, sediment transport, and floodplain interaction	<p>Water levels in Blackmans Lake fluctuate seasonally and during wet winter months the lake occasionally floods lakeside properties. High water levels result in part from the lake's constricted outlet through a set of culverts on the south side of the lake. In the summer, lake levels drop and affect recreational uses. By the mid-1990s half of the watershed had been urbanized leading to an associated increase in impervious surfaces and stormwater runoff. Removal of emergent vegetation from lake may have caused erosion of shoreline beach on south side of lake. No flood hazard areas are mapped by FEMA around the lake.</p> <p>The hydrology of Blackmans Lake has been significantly altered to maintain desired water levels in the lake. The lake historically discharged to Swifty Creek, which runs south through the city into the Snohomish River. In the 1980s, a flow splitter was installed to direct high flows in Swifty Creek through a pipe system along 6th Street that discharges into the Pilchuck River. Low flows discharge to the Snohomish River near Cady Park, while flows above 1 to 2 cfs discharge to the Pilchuck River bypass pipe.</p>	<p><b>AQUATIC</b> Limited development over the water may occur. The 23 of the 28 existing lots contain small docks, therefore, there is limited potential for new docks in the future. Overwater structures such as small public or private docks are allowed.</p> <p>The city is planning to further control the water levels in the lake by replacing the culverts and installing a flow control weir near 13th Street.</p> <p><b>SHORELINE RESIDENTIAL</b> This designation already has a developed shoreline with only one parcel having potential for future subdivision. Wetlands on the south shore and north shore also restrict future redevelopment due to critical area provisions and protections.</p> <p><b>URBAN CONSERVANCY</b> A large wetland complex comprises nearly the entirety of the designation. As a result, critical area rules severely limit any future development of the site. Potential does exist for some restoration, however, there are no funded projects at present.</p>	<p><b>PROTECTION</b> <b>General</b></p> <ul style="list-style-type: none"> <li>Land clearing, grading, filling and alteration of natural drainage features and landforms shall be limited to the minimum necessary for development. Surfaces cleared of vegetation that are not to be developed shall be replanted. Surface drainage systems or substantial earth modifications shall be professionally designed to prevent maintenance problems or adverse impacts on shoreline features (14.250.110.D.10).</li> <li>All shoreline uses and development shall be located, designed, constructed, and managed to minimize interference with or adverse impacts to beneficial natural shoreline processes such as water circulation, erosion and accretion (14.250.110.D.11)</li> <li>All shoreline uses and development shall be located and designed to minimize or prevent the need for shoreline defense and stabilization measures and flood protection works such as bulkheads, other bank stabilization, landfills, levees, dikes, groins, jetties or substantial site regrades (14.250.110.D12).</li> <li>All development in the floodplain shall include an assessment of potential effects the project would have on channel migration, and incorporate measures to mitigate any adverse impacts on channel migration (14.250.110.D13).</li> </ul> <p>Transportation</p> <ul style="list-style-type: none"> <li>Highway, street and railroad infrastructure that must be located over water, such as bridges and bridge supports, may be permitted provided that mitigation sequencing per SMC 14.255.120.E is employed, and the priorities of the City of Snohomish Shoreline Restoration Plan are considered in designing mitigation for impacts from the project (14.250.120.K.3).</li> <li>Bridge approach fills shall not encroach on the designated 100-year floodway of any river (14.250.120.K.5).</li> <li>Roadways and bridges shall be designed to avoid or minimize placement of fill or structures that would restrict floodplain capacity or limit channel migration. If transportation facilities are anticipated to impact floodplains or channel migration zones; mitigation sequencing as specified in SMC 14.255.120.E shall be employed to avoid and mitigate for impacts (14.250.120.K.6).</li> <li>Except within the Downtown Riverfront Environment, roads and off-street parking facilities shall be located so as not to require shoreline stabilization (14.250.120.K.8).</li> </ul> <p>In-Water Uses</p> <ul style="list-style-type: none"> <li>Dams and hydroelectric facilities are prohibited in all environments (14.250.120.P16) In-water fish and wildlife management, except aquaculture, is a Permitted Use (14.250.120.C).</li> </ul> <p>Boating Facilities</p> <ul style="list-style-type: none"> <li>Marinas and boat launches shall not deflect river currents such that adverse impacts would occur on downstream properties. Marinas shall be designed to meet criteria by the State Department of Fish and Wildlife relative to disruption of currents, restriction of tidal prisms, flushing characteristics, and fish passage (14.250.120.J.3)</li> </ul> <p>Breakwaters, Jetties, Groins, and Weirs</p> <ul style="list-style-type: none"> <li>Breakwaters, jetties, groins and weirs shall only be permitted as a Conditional Use where necessary to support water dependent uses, public access, approved shoreline stabilization, or other public uses, as determined by the City Planner. Groins shall only be permitted as part of a restoration project sponsored or co-sponsored by a public agency (14.250.130.D5).</li> </ul> <p>Filling, Grading, and Dredging</p> <ul style="list-style-type: none"> <li>Fill may be permitted below the ordinary high water mark only: When necessary to support a water dependent use; To provide for public access; When necessary to mitigate conditions that endanger public safety, including flood risk reduction projects; To allow for cleanup and disposal of contaminated sediments as part of an interagency environmental cleanup plan; To allow for the disposal of dredged material considered suitable under, and conducted in accordance with, the dredged material management program of the Washington Department of Natural Resources; For expansion or alteration of transportation or utility facilities currently located on the shoreline upon demonstration that alternatives to fill are not feasible; or As part of mitigation actions, environmental restoration projects and habitat enhancement projects (14.250.130.F.2.a.i-vii).</li> <li>Dredging is not allowed waterward of the ordinary high water mark for the primary purpose of obtaining fill material (14.250.130.F.4).</li> <li>Stockpiling of dredged material in or under water is prohibited (14.250.130.F.7)</li> <li>The removal of gravel for flood management is allowed only after a biological and geomorphological study shows that extraction has a long-term benefit to flood hazard reduction, does not result in a net loss of ecological functions, and is part of a comprehensive flood management solution (14.250.130.F.8).</li> <li>Dredging and disposal of dredged material below the ordinary high water mark shall be permitted only: When necessary for the operation of a water dependent use; When necessary to mitigate conditions that endanger public safety or fisheries resources; Dredging and disposal of dredged material below the ordinary high water mark shall be permitted for establishing, maintaining, expanding, relocating or reconfiguring navigation channels and basins when necessary to ensure safe and efficient accommodation of existing navigation uses when: Significant ecological impacts are minimized; Mitigation is provided, employing the mitigation sequence in SMC 14.255.120.E; and Dredging is maintained to the authorized location, depth and width; Dredging and disposal of dredged material below the ordinary high water mark shall be permitted for restoration projects associated with implementation of the Model Toxics Control Act or the Comprehensive Environmental Response, Compensation, and Liability Act; or any enhancement or restoration project; Dredging and disposal of dredged material below the ordinary high water mark shall be permitted for flood risk reduction projects conducted in accordance with Chapter 14.270 SMC (14.250.130.F.3.a-e).</li> </ul> <p>Shoreline Stabilization</p> <ul style="list-style-type: none"> <li>Shoreline stabilization, including bulkheads and flood protection facilities, shall be permitted only when it is demonstrated that stabilization is necessary to protect existing legally-established primary structures, public improvements, proposed or existing water-dependent development, or projects for the restoration of ecological functions or hazardous substance remediation (14.250.130.D1)</li> <li>An existing legally established shoreline stabilization structure may be replaced with a similar structure when it is demonstrated there is a need to protect principal uses or</li> </ul>	<p><b>AQUATIC</b> <b>No Change</b> Wetland habitat will be protected from development through the critical area requirements in the SMP.</p> <p><b>SHORELINE RESIDENTIAL</b> <b>No Change</b> A planned replacement of existing culverts and installing a flow control weir near 13th Avenue will not degrade the current hydrologic network.</p> <p><b>URBAN CONSERVANCY</b> <b>No Change</b> Wetland habitat will be protected from development through the critical area requirements in the SMP.</p>

Ecological Processes/Functions WAC 173-26-201(3)(d)(i)(C)	Current Performance (Shoreline Inventory and Characterization Report - ESA Adolfson, 2011)	Likely Development By Shoreline Environment Designation (SED)	SMP Provisions Protection or Restoration Protection = Proposed SMP regulations (with reference to SMP section number) Restoration = Draft Restoration Plan Policy	Future Performance By Shoreline Environment Designation (SED)
Blackmans Lake				
			<p>structures from erosion caused by currents, tidal action, or waves. Normal maintenance and repair is allowed, provided that such work does not cause a net loss of ecological functions (14.250.130.D2).</p> <ul style="list-style-type: none"> <li>All shoreline stabilization and flood protection measures shall be designed and constructed so that downstream banks will not be adversely affected. (14.250.130.E.1).</li> <li>Shoreline stabilization and flood protection measures shall not be designed and constructed in such a manner as to result in channelization of normal stream flows (14.250.130.E.2).</li> <li>New shoreline stabilization may occur when a geotechnical analysis demonstrates: That erosion from waves or currents is imminently threatening and that damage is expected to occur if the shoreline stabilization is not constructed; The erosion rate exceeds that which would normally occur in a natural condition; The erosion is not caused by upland conditions on the project site that, if corrected, would eliminate the need for shoreline stabilization; The proposed shoreline stabilization is the least hardened solution that is feasible to protect the structures or improvements, including consideration of non-structural alternatives such as slope drainage systems, vegetative growth stabilization, and gravel berms; The proposal is the minimum necessary to protect existing legally-established primary structures, existing water-dependent development, or projects for the restoration of ecological functions or remediation of hazardous materials; The proposed shoreline stabilization would not interfere with normal fluvial hydrological and geomorphological processes in natural conditions (14.250.130.E.6.a.i-vi).</li> <li>Shoreline stabilization shall not interfere with surface or subsurface drainage into the water body (14.250.130.6.e).</li> <li>Shoreline stabilization shall be designed so as not to create a need for shoreline stabilization elsewhere (14.250.130.6.h).</li> <li>Shoreline stabilization measures shall not be allowed within any designated floodway except as may be necessary to protect existing development or prevent serious impairment of channel function (14.250.130.6.i).</li> <li>Shoreline stabilization shall comply with the Integrated Stream Protection Guidelines (Washington departments of Fish and Wildlife, Ecology, and Transportation, 2003) and shall be designed to allow for appropriate public access to the shoreline (14.250.130.E.6.j).</li> <li>Flood protection facilities shall be consistent with the standards in SMC 14.270 (Flood Hazard Areas), and the Integrated Stream Protection Guidelines (14.250.130.E.7).</li> <li>Flood control dikes shall be landward of the designated floodway and any marshes or swamps directly interrelated and interdependent with the river (14.250.130.E.8).</li> </ul>	
<p><b>Water Quality</b> Retention of particulates, nutrient cycling, pathogens, delivery movement, and loss</p>	<p>Blackmans Lake is included on Ecology's 303(d) list of impaired water bodies due to elevated fecal coliform levels. Blackmans Lake Creek (inlet to the lake) is considered a water of concern for fecal coliforms. Sources of fecal coliforms include abundant waterfowl and pets on the lake, stormwater runoff drains, and livestock in pastures upstream of the lake. Swifty Creek was found to have E. coli concentrations above state standards for primary contact recreation in 2003.</p> <p>Between 1996 and 2009, the levels of phosphorous in the upper waters of the lake were moderate but increasing, indicating that nutrients are being carried into the lake from the surrounding watershed. Phosphorous levels in the deeper waters have been decreasing. Ecology's data indicate that the lake has recently met water quality standards for total phosphorous. However, toxic algae blooms likely caused by elevated phosphorus levels occurred in 2008 and 2009 in the lake's shallow waters. Water quality monitoring in the 1990s for tributaries to Blackmans Lake indicated seasonally high stream temperatures, low dissolved oxygen, and high nutrient concentrations. Low dissolved oxygen is possibly due to breakdown of emergent vegetation.</p> <p>There were no contaminated or hazardous waste sites identified within the Blackmans Lake shoreline planning area.</p>	<p><b>AQUATIC</b> Limited development over the water may occur. The 23 of the 28 existing lots contain small docks, therefore, there is limited potential for new docks in the future. Overwater structures such as small public or private docks are allowed.</p> <p>The city is planning to further control the water levels in the lake by replacing the culverts and installing a flow control weir near 13th Street.</p> <p><b>SHORELINE RESIDENTIAL</b> This designation already has a developed shoreline with only one parcel having potential for future subdivision. Wetlands on the south shore and north shore also restrict future redevelopment due to critical area provisions and protections.</p> <p><b>URBAN CONSERVANCY</b> A large wetland complex comprises nearly the entirety of the designation. As a result, critical area rules severely limit any future development of the site. Potential does exist for</p>	<p><b>PROTECTION</b></p> <p>General</p> <ul style="list-style-type: none"> <li>All shoreline uses and development shall protect the quality and quantity of surface and ground water (14.250.110.D.5).</li> <li>All shoreline uses and development shall not release solid or liquid waste, oil, unwanted chemicals, hazardous materials, or untreated effluent to any water bodies or shorelands (14.250.110.D.6).</li> <li>Heating and cooling equipment may not be placed in waters of the state (14.250.110.D.8).</li> <li>Land clearing, grading, filling and alteration of natural drainage features and landforms shall be limited to the minimum necessary for development. Surfaces cleared of vegetation that are not to be developed shall be replanted. Surface drainage systems or substantial earth modifications shall be professionally designed to prevent maintenance problems or adverse impacts on shoreline features (14.250.110.D.10).</li> <li>All shoreline uses and development shall be located, designed, constructed, and managed to minimize interference with or adverse impacts to beneficial natural shoreline processes such as water circulation, erosion and accretion (14.250.110.D.11).</li> <li>All shoreline uses and development shall be located and designed to minimize or prevent the need for shoreline defense and stabilization measures and flood protection works such as bulkheads, other bank stabilization, landfills, levees, dikes, groins, jetties or substantial site regrades (14.250.110.D.12).</li> <li>All debris, overburden and other waste materials from construction shall be disposed of in such a way as to prevent their entry by erosion from drainage, high water or other means into any water body (14.250.110.D.14).</li> <li>Land development, land uses, and modifications within the shoreline jurisdiction shall not result in a net loss of shoreline ecological functions and processes. Mitigation for impacts resulting from development, uses, and modifications shall follow the mitigation sequencing requirements of SMC 14.255.120.E and consider the priorities specified in the Shoreline Restoration Plan (14.255.110.A).</li> </ul> <p>Industrial</p> <ul style="list-style-type: none"> <li>Outdoor storage areas shall be designed in accordance with regulations for stormwater control in Chapter 15.16 SMC, and shall protect both groundwater and surface water from degradation. Unpaved storage areas underlain by permeable soils shall have at least a four (4) foot separation between ground surface and the winter water table (14.250.120.G.2)</li> <li>Log storage shall not be permitted in waters of the State where water quality standards cannot be met or where log storage precludes the public's use and navigation of waters of the State (14.250.120.G.5)</li> <li>Measures to control, collect and remove bark and wood debris shall be utilized where mill operations exist in or adjacent to the shoreline (14.250.120.G.7).</li> </ul> <p>Residential Development</p> <ul style="list-style-type: none"> <li>Residential development over water is prohibited (14.250.120.P8)</li> </ul> <p>Boating Facilities</p> <ul style="list-style-type: none"> <li>Marinas shall have facilities for handling wastes typically generated by marina patrons and visitors. Marinas shall not discharge or release any waste, treated or untreated, into the body of water on which they are located. Oil and gas handling systems shall be designed to minimize potential oil and gas spills. Marinas shall have provisions available for containment and cleanup of accidental spills (14.250.120.J.4)</li> </ul> <p>Shoreline Habitat and Natural Systems Enhancement Projects</p> <ul style="list-style-type: none"> <li>When considering compensatory habitat enhancement as mitigation for impacts from new structures, such as when a reduced buffer or a non-water dependent use is requested, the enhancement should be proportional to the degree of impact of the new structure on shoreline ecological functions, and take into account the degree to which the existing buffer has already been compromised. Enhancement should focus on restoring ecological functions that are most critical and that have been most diminished in</li> </ul>	<p><b>AQUATIC</b> <b>No Change</b> Water quality will likely not be degraded by new development within the lake since critical area provision applicants would be required to meet stormwater management standards and develop an erosion and sedimentation control program.</p> <p><b>SHORELINE RESIDENTIAL</b> <b>No Change</b> Water quality will likely not be degraded by new development since applicants would be required to meet stormwater management standards and develop an erosion and sedimentation control program. Existing development and wildlife will continue to contribute to water quality problems.</p> <p><b>URBAN CONSERVANCY</b> <b>No Change</b> Water quality will likely not be degraded by new development since applicants adjacent to or within critical areas would be required to meet stormwater management standards and develop an</p>

Ecological Processes/Functions WAC 173-26-201(3)(d)(i)(C)	Current Performance (Shoreline Inventory and Characterization Report - ESA Adolfsen, 2011)	Likely Development By Shoreline Environment Designation (SED)	SMP Provisions Protection or Restoration Protection = Proposed SMP regulations (with reference to SMP section number) Restoration = Draft Restoration Plan Policy	Future Performance By Shoreline Environment Designation (SED)
Blackmans Lake				
		some restoration, however, there are no funded projects at present.	<p>the city of Snohomish shorelines. In approving any compensatory habitat enhancement plan, the City Planner shall consider the changes in surface water runoff rates and water quality (such as through increased impervious area), habitat structure (such as loss or alteration of vegetation), and habitat quality (such as from lighting, noise, or activities) that the project would cause. Enhancements should generally focus on offsetting project impacts but may focus on restoring other critical ecological functions in the shoreline that have been lost or diminished (such as placement of large woody debris in water or restoring riparian vegetation). The City Planner may determine whether an enhancement that provides a broader benefit may be substituted for one that would offset the impacts of an individual project. The City Planner may deny a request to allow intrusion into a buffer or for development of a non-water dependent use if the enhancement proposed does not fully mitigate the impacts of the project or provide a sufficient broader benefit (14.250.140.A.8).</p> <p>Shoreline Stabilization</p> <ul style="list-style-type: none"> <li>Material that may release hazardous substances shall not be used for shoreline stabilization (14.250.130.E.6.f).</li> </ul>	erosion and sedimentation control program. CAO requires buffers on entire shoreline.
<p><b>LWD, Organics and Habitat</b> Maintain characteristic plant community and source of large woody debris (LWD)</p>	<p>Most natural vegetation has been removed in areas of residential and park development to provide views of and access to the water. Large woody debris has been removed for construction of docks, bulkheads, and landscaping. A survey of aquatic plants in Blackmans Lake in September 2009 identified both native and invasive water lilies. Patches of the invasive species, fragrant water lily, were dominant on the northern shore of the lake, while the native species, yellow water lily, was prevalent on the southern shoreline. There are also large waterfowl concentrations on the lake.</p> <p>Approximately 21 acres of wetland are mapped near the lake's inlet and outlet streams in the shoreline planning area</p> <p>Barriers such as perched culverts, long pipes, and poor water quality in Swifty Creek prevent fish passage into the stream from the Snohomish and Pilchuck Rivers. Blackmans Lake supports game fish such as rainbow trout, largemouth bass, yellow perch, and brown bullhead. WDFW stocks the lake with rainbow trout. Introduced carp prey upon and displace other fish species, and management includes periodic killing of fish to re-establish desired game fish populations.</p>	<p><b>AQUATIC</b> Limited development over the water may occur. The 23 of the 28 existing lots contain small docks, therefore, there is limited potential for new docks in the future. Overwater structures such as small public or private docks are allowed.</p> <p>The city is planning to further control the water levels in the lake by replacing the culverts and installing a flow control weir near 13th Street.</p> <p><b>SHORELINE RESIDENTIAL</b> This designation already has a developed shoreline with only one parcel having potential for future subdivision. Wetlands on the south shore and north shore also restrict future redevelopment due to critical area provisions and protections.</p> <p><b>URBAN CONSERVANCY</b> A large wetland complex comprises nearly the entirety of the designation. As a result, critical area rules severely limit any future development of the site. Potential does exist for some restoration, however, there are no funded projects at present.</p>	<p><b>PROTECTION</b> General</p> <ul style="list-style-type: none"> <li>The use of chemicals to control invasive aquatic weeds is prohibited, except that milfoil may be removed using chemicals, provided that the chemicals are applied by a licensed pesticide applicator and approved for aquatic use (14.250.110.D.7).</li> <li>All shoreline uses and development shall be located, designed, constructed and managed to avoid disturbance of, or minimize adverse impacts to protect fish and wildlife habitat conservation areas, including, but not limited to, spawning, nesting, rearing and habitat areas, and migratory routes. Where avoidance of adverse impacts is not practicable, the City Planner may require that mitigation measures to protect species and habitat functions be developed, in consultation with state resource management agencies and federally recognized tribes (14.250.110.D.9).</li> <li>Land clearing, grading, filling and alteration of natural drainage features and landforms shall be limited to the minimum necessary for development. Surfaces cleared of vegetation that are not to be developed shall be replanted. Surface drainage systems or substantial earth modifications shall be professionally designed to prevent maintenance problems or adverse impacts on shoreline features (14.250.110.D.10).</li> </ul> <p>Agriculture</p> <ul style="list-style-type: none"> <li>Creation of new agricultural areas and new structures for accessory uses on agricultural lands are subject to the requirements for structure setbacks and vegetation management in section SMC 14.250.140, and shall be located and designed to ensure no net loss of ecological function (14.250.120.D.2).</li> </ul> <p>Commercial</p> <ul style="list-style-type: none"> <li>Commercial uses that are not water-dependent or water-related shall be prohibited on Urban Conservancy Shorelines EXCEPT for the following uses if they are permitted in the underlying zoning, located outside of the buffers required in SMC 14.250.140, and do not substantially change the character of the shoreline: Restaurants, campgrounds, group camps, and similar recreational facilities; hunting and fishing and other private club; game preserves and private parks; and commercial uses in restoration of historical structures. Principal use parking lots are prohibited, except lots located landward of a public right-of-way. (14.250.120.P4)</li> <li>Except for commercial structures that is dependent on direct, contiguous access to the water, all commercial structures shall be set back from the ordinary high water mark as required by the SMC 14.250.140.A (14.250.120.F.1)</li> <li>To ensure no net loss of ecological function, vegetation enhancement may be required and may include off-site vegetation enhancement, provided it is in or immediately adjacent to the Downtown Riverfront environment. (14.250.120.C.3.c).</li> </ul> <p>Cultural</p> <ul style="list-style-type: none"> <li>To ensure no net loss of ecological function, vegetation enhancement may be required and may include off-site vegetation enhancement, provided it is in or immediately adjacent to the Downtown Riverfront environment. (14.250.120.C.3.c).</li> <li>Limited lighting is permitted where necessary to promote safety. Such lighting shall be directed away from habitat areas and shall not directly illuminate the water. Such lighting shall be the minimum necessary to promote safety (14.250.120.I.3).</li> <li>Parking for recreational uses shall comply with the regulations for parking in SMC 14.250.120.K and shall be located outside of required critical area buffers and shoreline setback areas (14.250.120.I.4).</li> </ul> <p>Industrial</p> <ul style="list-style-type: none"> <li>Logs: Except where no practical alternative exists, log storage shall occur on land rather than in water; Free-fall dropping of logs into water is prohibited; Whenever possible, logs shall not be dumped, stored, or floated in areas where grounding will occur (14.250.120.G.4, 6, 8).</li> </ul> <p>Park/Recreation</p> <ul style="list-style-type: none"> <li>Golf courses, playing fields, and other large areas devoted to athletic activities shall be allowed only outside of the buffers required under SMC 14.250.140, and then only if buffers include a full range of native riparian vegetation. Buffer enhancement shall be required as necessary to meet this requirement (14.250.120.P11).</li> </ul> <p>Residential</p> <ul style="list-style-type: none"> <li>When new residential lots having water access are created in the shoreline where a dock could be allowed, they shall be required to utilize shared dock facilities (14.250.120.H.2.e).</li> <li>Non-water-dependent accessory structures and facilities such as sheds, gazebos, swimming pools, and driveways shall not be located in Native Growth Protection Areas described in SMC 14.250.140 (14.250.120.H.2.c).</li> <li>Stairs and paths to a dock or beach may be allowed in the Native Growth Protection Areas described in SMC 14.250.140, but shall be limited to the minimum necessary to provide pedestrian access (14.250.120.H.2.d).</li> <li>Private boat ramps serving a single residence shall not be located in Native Growth Protection Areas described in SMC 14.250.140 (14.250.120.H.2.e).</li> </ul> <p>Public Marinas and Boat Launches</p> <ul style="list-style-type: none"> <li>All marinas shall include landscaping pursuant to a landscaping plan that includes appropriate screening and native plantings to be submitted and approved as a part of the</li> </ul>	<p><b>AQUATIC</b> <b>No Change</b> Establishing a lacustrine management zone for non-water-dependent uses will result in protection of existing vegetation.</p> <p><b>SHORELINE RESIDENTIAL</b> <b>No Change</b> Establishing a lacustrine management zone for non-water-dependent uses will result in protection of existing vegetation. Additional habitat safeguards are provided via critical area protections for wetlands.</p> <p><b>URBAN CONSERVANCY</b> <b>No Change</b> Establishing a lacustrine management zone for non-water-dependent uses will result in protection of existing vegetation. Additional habitat safeguards are provided via critical area protections for wetlands.</p>

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Blackmans Lake				
			<p>Substantial Development Permit process (14.250.120.J.9).</p> <ul style="list-style-type: none"> <li>Parking for boat launches and marinas shall be located outside of required critical area buffers and shoreline setbacks required under SMC 14.250.140 (14.250.120.J.13).</li> </ul> <p>Transportation</p> <ul style="list-style-type: none"> <li>Highway, street and railroad infrastructure that must be located over water, such as bridges and bridge supports, may be permitted provided that mitigation sequencing per SMC 14.255.120.E is employed, and the priorities of the City of Snohomish Shoreline Restoration Plan are considered in designing mitigation for impacts from the project (14.250.120.K.3)</li> <li>Major roads and railroads shall cross shoreline areas by the shortest, most direct route feasible, unless such route would cause significant environmental damage (14.250.120.K.2)</li> <li>Off-street parking shall be located outside of required critical area buffers and shoreline setbacks (14.250.120.K.9).</li> <li>Exterior lighting from parking areas shall be designed to avoid illumination of fish and wildlife habitat areas and their buffers (14.250.120.K.13).</li> </ul> <p>Utilities</p> <ul style="list-style-type: none"> <li>Utility facilities that cannot be located below ground and outside the shoreline jurisdiction shall be located as far landward as feasible, and shall be screened (14.250.120.L.2).</li> <li>Where feasible or where environmental benefit is achieved through use of aerial utility lines, utility lines and facilities shall be located underground (14.250.120.L.3).</li> <li>If crossing beneath a river or stream, utilities shall be designed to avoid river bed/streambed mobilization and adverse environmental impacts in general. Such utility lines shall be placed in a sleeve or conduit to facilitate replacement without additional boring or excavation (14.250.120.L.6.c.).</li> </ul> <p>In-Water Uses</p> <ul style="list-style-type: none"> <li>Dams and hydroelectric facilities are prohibited in all environments (14.250.120.P16).</li> <li>Highway, street and railroad infrastructure, such as bridge supports or structural shoreline stabilization for existing infrastructure, may be permitted in water as conditional uses, provided that it is not feasible to locate them on land, mitigation sequencing requirements of SMC 14.255.120.E. are followed, and the priorities of the City of Snohomish Shoreline Restoration Plan are considered in designing mitigation for impacts from the project (14.250.120.P18).</li> </ul> <p>Boating Facilities</p> <ul style="list-style-type: none"> <li>Docks, piers, long-term moorage, and vehicular boat launches are prohibited on the Pilchuck River (14.250.130.D7).</li> <li>Marinas and boat launches shall not deflect river currents such that adverse impacts would occur on downstream properties. Marinas shall be designed to meet criteria by the State Department of Fish and Wildlife relative to disruption of currents, restriction of tidal prisms, flushing characteristics, and fish passage (14.250.120.J.3)</li> <li>New subdivisions, temporary lodging, and multi-family residences may only include moorage in a single, joint-use moorage facility (14.250.130.H.1).</li> <li>Joint-use piers shall be preferred for commercial and industrial enterprises in close proximity to each other (14.250.130.H.2).</li> <li>Only one boat lift, dock, pier, moorage, buoy, float and launching facility may be permitted for each parcel developed with a single detached residential unit, and only if the applicant demonstrates there is no other feasible option for shared use facilities. However, installation or retention of additional watercraft lifts beyond one, without a canopy, at a single residential use waterfront structure is allowed. A maximum of three lifts are allowed at a single residential use overwater structure. However, only two lifts can be ground-based, all other lift(s) shall be floating or suspended lift(s) (14.250.130.H.6).</li> <li>Only joint use docks or piers are allowed on lots with less than 50 feet of waterfront except when lots abutting both sides of the subject lot already have a dock or pier (14.250.130.H.7).</li> <li>Surface coverage (includes all overwater portions of the floats, ramps, and ells) shall be limited as follows: Moorage facilities serving only one residential waterfront lot shall not exceed 480 square feet; Moorage facilities serving two residential waterfront lots shall not exceed 700 feet; and Moorage facilities serving three or more residential waterfront lots shall not exceed 1,000 square feet (14.250.130H.9.a-c).</li> <li>All marinas shall include landscaping pursuant to a landscaping plan that includes appropriate screening and native plantings to be submitted and approved as a part of the Substantial Development Permit process (14.250.120.J.9).</li> <li>Parking for boat launches and marinas shall be located outside of required critical area buffers and shoreline setbacks required under SMC 14.250.140 (14.250.120.J.13).</li> <li>Applications for piers and docks on the Snohomish River shall include an assessment of impacts on anadromous salmon habitat, and a mitigation plan addressing any impacts expected from the project. Compensatory mitigation shall be required for impacts that cannot be avoided through design and siting. Prior to issuance of a permit for a pier or dock on these shorelines, the applicant shall provide evidence of all required state and federal permits (14.250.130.H.4).</li> <li>Docks and piers shall be subject to the requirements of SMC 14.250.130.H.6-14, or shall demonstrate that the project provides an equal or greater degree of protection of ecological functions and anadromous species habitat. For the purposes of meeting this requirement, the City Planner may require a habitat management plan to determine whether the project is adequately protective (14.250.130.H.5).</li> <li>In order to mitigate the impacts of new or expanded commercial moorage facilities on sites where riparian vegetation is degraded or absent, the applicant shall plant emergent vegetation (if site-appropriate) and a buffer of vegetation a minimum of ten feet wide along the entire length of the lot immediately landward of the ordinary high water mark. Planting shall consist of native shrubs and trees and, when possible, emergent vegetation. At least five native trees will be included in a planting plan containing one or more evergreen trees and two or more trees that survive well with wet roots (e.g., willow species), per every 100 lineal feet of shoreline. On sites with mature riparian vegetation, existing native vegetation should be retained and the buffer enhanced to the equivalent of these standards. Plantings shall be monitored for a period of five years according to an approved monitoring plan. This subsection is not intended to prevent reasonable access through the shoreline critical area buffer to the shoreline, or to prevent recreational use of the shoreline critical area. This requirement may be waived or reduced for water-dependent transportation uses where it is demonstrated that vegetation could result in safety or navigation hazards. Removal of riparian vegetation is subject to the requirements of SMC 14.280.060. including compensatory replacement if buffers are reduced (14.250.130.H.10).</li> <li>No covered boat lift, dock, pier, covered moorage, covered float, or other covered structure is permitted waterward of the ordinary high water mark, except submerged, free-standing mechanical boat lifts associated with single detached residential docks or piers and recreational watercraft, which may be covered with a canopy, provided: No canopy shall be more than twenty-five feet in length or wider than fifteen (15) feet; No portion of the canopy shall exceed a height of twelve (12) feet above the ordinary high water mark; The canopy shall at no time have any side partly or wholly enclosed; The highest portion of the canopy shall be located below the lowest grade point on the</li> </ul>	

Ecological Processes/Functions WAC 173-26-201(3)(d)(i)(C)	Current Performance (Shoreline Inventory and Characterization Report - ESA Adolphson, 2011)	Likely Development By Shoreline Environment Designation (SED)	SMP Provisions Protection or Restoration Protection = Proposed SMP regulations (with reference to SMP section number) Restoration = Draft Restoration Plan Policy	Future Performance By Shoreline Environment Designation (SED)
Blackmans Lake				
			<p>waterward side of the existing homes on surrounding properties; Canopies shall be made out of non-toxic materials; Canopies shall be of a translucent material to allow light transmission; The total overwater coverage of the piers, floats, ramps, ells, and canopy for a single family residence with a single-use moorage shall not exceed six hundred (600) square feet ; and Only one boat lift canopy per single detached residence shall be allowed (14.250.130.H.12.a-h).</p> <p>Breakwaters, Jetties, Groins, and Weirs</p> <ul style="list-style-type: none"> <li>Breakwaters, jetties, groins and weirs shall only be permitted as a Conditional Use where necessary to support water dependent uses, public access, approved shoreline stabilization, or other public uses, as determined by the City Planner. Groins shall only be permitted as part of a restoration project sponsored or co-sponsored by a public agency (14.250.130.D5).</li> </ul> <p>Filling, Grading, and Dredging</p> <ul style="list-style-type: none"> <li>Fill may be permitted below the ordinary high water mark only: When necessary to support a water dependent use; To provide for public access; When necessary to mitigate conditions that endanger public safety, including flood risk reduction projects; To allow for cleanup and disposal of contaminated sediments as part of an interagency environmental cleanup plan; To allow for the disposal of dredged material considered suitable under, and conducted in accordance with, the dredged material management program of the Washington Department of Natural Resources; For expansion or alteration of transportation or utility facilities currently located on the shoreline upon demonstration that alternatives to fill are not feasible; or As part of mitigation actions, environmental restoration projects and habitat enhancement projects (14.250.130.F.2.a.i-vii).</li> <li>Dredging and disposal of dredged material below the ordinary high water mark shall be permitted for restoration projects associated with implementation of the Model Toxics Control Act or the Comprehensive Environmental Response, Compensation, and Liability Act; or any enhancement or restoration project (14.250.130.F.3.d).</li> <li>Disposal of dredged material shall be done only in approved upland disposal sites and is not allowed within critical areas or their buffers (14.250.130.F.5).</li> </ul> <p>Shoreline Habitat and Natural Systems Enhancement Projects</p> <ul style="list-style-type: none"> <li>Non-native vegetation may be retained unless otherwise required to be replaced as part of an enhancement associated with development or expansion of development on the property (14.250.140.A.2).</li> <li>When considering compensatory habitat enhancement as mitigation for impacts from new structures, such as when a reduced buffer or a non-water dependent use is requested, the enhancement should be proportional to the degree of impact of the new structure on shoreline ecological functions, and take into account the degree to which the existing buffer has already been compromised. Enhancement should focus on restoring ecological functions that are most critical and that have been most diminished in the city of Snohomish shorelines. In approving any compensatory habitat enhancement plan, the City Planner shall consider the changes in surface water runoff rates and water quality (such as through increased impervious area), habitat structure (such as loss or alteration of vegetation), and habitat quality (such as from lighting, noise, or activities) that the project would cause. Enhancements should generally focus on offsetting project impacts but may focus on restoring other critical ecological functions in the shoreline that have been lost or diminished (such as placement of large woody debris in water or restoring riparian vegetation). The City Planner may determine whether an enhancement that provides a broader benefit may be substituted for one that would offset the impacts of an individual project. The City Planner may deny a request to allow intrusion into a buffer or for development of a non-water dependent use if the enhancement proposed does not fully mitigate the impacts of the project or provide a sufficient broader benefit (14.250.140.A.8).</li> <li>Where development is proposed within the minimum buffer width, or where development is proposed adjacent to a buffer (except a buffer that is well vegetated with intact native vegetation), compensatory mitigation shall be provided and depicted on the landscaping plan to compensate for impacts of the development remaining after mitigation sequencing has been applied (14.250.140.A.9).</li> <li>Habitat Conservation Area Buffers between 50 – 100 feet from the OHWM applies to all shorelines (14.250.140.A.9 see table).</li> </ul> <p>Shoreline Stabilization</p> <ul style="list-style-type: none"> <li>Shoreline stabilization, including bulkheads and flood protection facilities, shall be permitted only when it is demonstrated that stabilization is necessary to protect existing legally-established primary structures, public improvements, proposed or existing water-dependent development, or projects for the restoration of ecological functions or hazardous substance remediation (14.250.130.D1).</li> <li>Shoreline vegetation shall be preserved to the maximum extent feasible consistent with safe construction requirements (14.250.130.E.3).</li> <li>Cut-and-fill slopes and backfill areas shall be revegetated with natural grasses, shrubs and/or trees in keeping with existing or planned riverbank vegetation (14.250.130.E.4).</li> <li>Adequate mitigation measures that maintain existing shoreline processes and critical fish and wildlife habitat will be provided that ensure no net loss or function of riparian habitat (14.250.130.E.6.a.vii).</li> </ul>	