The Cowlitz County Planning Staff would like to extend their thanks and appreciation to the residents of Cowlitz County for their contributions throughout development of this Shoreline Master Program. Special thanks to members of the Shoreline Technical Advisory Committee for their thoughtful input and countless hours of dedication.

*Shoreline Master Program Update Ordinance #18-037 adopted May 29, 2018.
# Table of Contents

1. **Introduction** ................................................................. 1-1
   - 1.1 Title .............................................................................. 1-1
   - 1.2 Adoption Authority ....................................................... 1-1
   - 1.3 Purpose and Intent ....................................................... 1-1
   - 1.4 Governing Principles .................................................... 1-2
   - 1.5 Liberal Construction ..................................................... 1-3
   - 1.6 Severability ................................................................. 1-3
   - 1.7 Relationship to Other Plans and Regulations .................. 1-3
   - 1.8 Effective Date ............................................................. 1-4

2. **Definitions** ...................................................................... 2-1

3. **Applicability, Exemptions, and Nonconforming Development** ........................................ 3-1
   - 3.1 Applicability .................................................................... 3-1
   - 3.2 Exemptions from a Shoreline Substantial Development Permit .................................. 3-4
   - 3.3 Nonconforming Uses and Development ........................................ 3-4

4. **Shoreline Master Program Goals and Policies** ............. 4-1
   - 4.1 Introduction .................................................................... 4-1
   - 4.2 General Shoreline Goals ............................................... 4-2
     - 4.2.1 Goal .......................................................................... 4-2
     - 4.2.2 Policies ...................................................................... 4-2
   - 4.3 Historic, Cultural, Archaeological and Educational Resources .................................. 4-3
     - 4.3.1 Goal .......................................................................... 4-3
     - 4.3.2 Policies ...................................................................... 4-3
   - 4.4 Conservation and Restoration ......................................... 4-4
4.4.1 Goal ............................................................................................................... 4-4
4.4.2 Policies .......................................................................................................... 4-4
4.5 Economic Development ....................................................................................... 4-6
4.5.1 Goal ............................................................................................................... 4-6
4.5.2 Policies .......................................................................................................... 4-6
4.6 Flood Prevention and Flood Damage Minimization ........................................... 4-10
4.6.1 Goal ............................................................................................................... 4-10
4.6.2 Policies ........................................................................................................ 4-10
4.7 Public Access ..................................................................................................... 4-12
4.7.1 Goal ............................................................................................................... 4-12
4.7.2 Policies ........................................................................................................ 4-12
4.8 Recreation .......................................................................................................... 4-13
4.8.1 Goal ............................................................................................................... 4-13
4.8.2 Policies ........................................................................................................ 4-13
4.9 Transportation and Utilities ................................................................................ 4-15
4.9.1 Goal ............................................................................................................... 4-15
4.9.2 Policies ........................................................................................................ 4-15
4.10 Other Shoreline Uses and Modifications ......................................................... 4-17
4.10.1 Other Shoreline Use Policies .................................................................... 4-17
4.10.2 Shoreline Modification Policies ................................................................. 4-18

5. SHORELINE DESIGNATIONS AND SHORELINES OF STATEWIDE SIGNIFICANCE ............................................................................................................. 5-1
5.1 Introduction ........................................................................................................ 5-1
5.2 Authority ........................................................................................................... 5-1
5.3 Shoreline Designation Interpretation .............................................................. 5-1
5.4 Shoreline Environment Designations ............................................................. 5-2
5.4.1 High-Intensity Environment ................................................................... 5-2
5.4.2 Residential Environment ......................................................................... 5-3
5.4.3 Urban Conservancy Environment ............................................................... 5-4
5.4.4 Rural Conservancy Environment ............................................................... 5-5
5.4.5 Natural Environment .................................................................................. 5-7
5.4.6 Aquatic Environment .................................................................................. 5-8
5.4.7 Recreation Environment ............................................................................ 5-9
5.5 Shorelines of Statewide Significance .............................................................. 5-9

6. GENERAL SHORELINE REGULATIONS .............................................. 6-1
6.1 No Net Loss of Ecological Function ............................................................... 6-1
6.2 Archaeological, Cultural, and Historic Resources .......................................... 6-3
6.3 Critical Areas Protection ................................................................................ 6-3
   6.3.1 Applicable Critical Areas ........................................................................ 6-3
   6.3.2 General Provisions .................................................................................. 6-4
6.4 Flood Prevention and Flood Damage Minimization ....................................... 6-6
6.5 Public Access ................................................................................................ 6-8
6.6 Vegetation Conservation ............................................................................... 6-13
6.7 Water Quality and Quantity ......................................................................... 6-14

7. SHORELINE USE AND MODIFICATION REGULATIONS ..................... 7-1
7.1 Shoreline Use, Modification, and Standards Table ...................................... 7-1
7.2 Shoreline Use Regulations .......................................................................... 7-10
   7.2.1 Agriculture ............................................................................................... 7-10
   7.2.2 Aquaculture ............................................................................................. 7-11
   7.2.3 Boating Facilities ...................................................................................... 7-11
   7.2.4 Commercial ............................................................................................... 7-16
   7.2.5 Forest Practices ......................................................................................... 7-18
   7.2.6 Industrial .................................................................................................. 7-18
   7.2.7 Institutional ............................................................................................... 7-20
   7.2.8 In-Stream Structures ............................................................................... 7-20
7.2.9 Log Storage ..................................................................................................... 7-23
7.2.10 Mining .......................................................................................................... 7-24
7.2.11 Recreational ............................................................................................... 7-26
7.2.12 Residential ................................................................................................. 7-27
7.2.13 Transportation and Parking ....................................................................... 7-28
7.2.14 Utilities ........................................................................................................ 7-30
7.3 Shoreline Modification Regulations ................................................................... 7-32
  7.3.1 General Regulations .................................................................................. 7-32
  7.3.2 Shoreline Stabilization .............................................................................. 7-32
  7.3.3 Breakwaters, Jetties, Weirs, and Groins .................................................... 7-36
  7.3.4 Residential Moorage and Launch Facilities: Docks, Buoys, and Marine Railways ........................................................................................................... 7-37
  7.3.5 Fill and Excavation .................................................................................. 7-38
  7.3.6 Dredging and Dredge Material Disposal .................................................. 7-39
  7.3.7 Shoreline Habitat and Ecological Enhancement Projects ....................... 7-42

8. SHORELINE ADMINISTRATION AND PERMITS ............................................. 8-1
  8.1 Purpose ........................................................................................................... 8-1
  8.2 Shoreline Overlay .......................................................................................... 8-1
  8.3 Coordination with Other Agencies ................................................................. 8-2
  8.4 Development Compliance ............................................................................ 8-2
  8.5 Administration ............................................................................................... 8-2
    8.5.1 Responsible Official ............................................................................... 8-2
    8.5.2 County Compliance with SEPA ............................................................. 8-3
    8.5.3 Fees and Charges .................................................................................. 8-3
    8.5.4 Violation Reports .................................................................................. 8-4
  8.6 Shoreline Permit Application Procedures .................................................... 8-4
    8.6.1 Application for Permit ......................................................................... 8-4
    8.6.2 Hearing Examiner Action ................................................................... 8-4
8.6.3 Public Notice Requirement........................................................................... 8-5
8.6.4 Approval Criteria for All Development ...................................................... 8-6
8.6.5 Written Findings Required.......................................................................... 8-6
8.6.6 Time Requirements for Shoreline Permits ................................................ 8-7
8.6.7 Surety Devices ............................................................................................ 8-8
8.6.8 Construction Permit Compliance .............................................................. 8-8
8.6.9 Filing Permits with the State ...................................................................... 8-8
8.6.10 Appeals...................................................................................................... 8-9
8.7 Permit Review and Processing Requirements................................................. 8-9
8.8 Letters of Exemption ..................................................................................... 8-14
8.9 Revisions to Permits ...................................................................................... 8-14
8.10 Enforcement.................................................................................................. 8-15
  8.10.1 Rescission of Permits ............................................................................. 8-15
  8.10.2 Violation and Penalties ......................................................................... 8-15
8.11 Shoreline Moratorium .................................................................................. 8-16
8.12 Restoration Project Relocation of OHWM.................................................... 8-17
8.13 Land Division ............................................................................................... 8-18
8.14 Amendments Authorized ............................................................................. 8-18
  8.14.1 Procedures .............................................................................................. 8-18
  8.14.2 Transmittal to the Department of Ecology .............................................. 8-19
8.15 Shoreline Activity Tracking ......................................................................... 8-19

Appendices

Appendix A. Shoreline Environment Designations Map
Appendix B. Shoreline Restoration Plan
1. Introduction

1.1 Title

This document shall be known and may be cited as the Cowlitz County (County) Shoreline Master Program (referred to in this document as Program or SMP).

1.2 Adoption Authority

This Program is adopted under the authority granted by the Shoreline Management Act (SMA, or the Act) of 1971 (Revised Code of Washington [RCW] 90.58) and Chapter 173-26 of the Washington Administrative Code (WAC) as amended.

1.3 Purpose and Intent

A. To guide the future development of shorelines in the County in a positive, effective, and equitable manner consistent with the Act;

B. To promote the public health, safety, and general welfare of the community by providing long range, comprehensive policies and effective, reasonable regulations for development and use of the County’s shorelines; and

C. To ensure, at minimum, no net loss of shoreline ecological functions and processes and to plan for restoring shorelines that have been impaired or degraded by adopting and fostering the following policy contained in RCW 90.58.020, Legislative Findings for shorelines of the state:

"It is the policy of the state to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses. This policy is designed to insure the development of these shorelines in a manner, which, while allowing for limited reduction of rights of the public in the navigable waters, will promote and enhance the public interest. This policy contemplates protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the State and their aquatic life, while protecting generally public rights of navigation and corollary rights incidental thereto. . . .

In the implementation of this policy the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the State shall be preserved to the greatest extent feasible consistent with the overall best interest of the State and the people generally. To this end uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment or are unique to or dependent upon use of the State's shoreline. Alterations of the natural condition of the shorelines of the State, in those limited instances when
authorized, shall be given priority for single family residences, ports, shoreline recreational uses including but not limited to parks, marinas, piers, and other improvements facilitating public access to shorelines of the State, industrial and commercial developments which are particularly dependent on their location on or use of the shorelines of the State, and other development that will provide an opportunity for substantial numbers of the people to enjoy the shorelines of the State.

Permitted uses in the shorelines of the State shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water."

1.4 Governing Principles

A. The goals, policies, and regulations of this Program are intended to be consistent with the Washington State (State) shoreline master program guidelines in Chapter 173-26 of the WAC. The goals, policies, and regulations are informed by the Governing Principles in WAC 173-26-186 and the policy statements of RCW 90.58.020.

B. Any inconsistencies between this Program and the Act must be resolved in accordance with the Act.

C. Regulatory or administrative actions contained herein in Chapter 8, Shoreline Administration and Permits, must not unconstitutionally infringe on private property rights or result in an unconstitutional taking of private property.

D. The regulatory provisions of this Program are limited to shorelines of the state, whereas the planning functions of this Program extend beyond the designated shoreline boundaries, given that activities outside the shoreline jurisdiction may affect shorelines of the state.

E. The policies and regulations established by this Program must be integrated and coordinated with those policies and rules of the Cowlitz County Comprehensive Plan and development regulations.

F. Protecting the shoreline environment is an essential statewide policy goal, consistent with other policy goals. This Program protects shoreline ecosystems from impairment in the following ways:

1. By using a process that identifies, inventories, and ensures meaningful understanding of current and potential ecological functions provided by shorelines;
2. By including policies and regulations that require mitigation of adverse impacts in a manner that ensures no net loss of shoreline ecological functions. The required mitigation shall include avoidance, minimization, and compensation of impacts in accordance with the policies and regulations for mitigation sequencing in WAC 173-26-201(2)(e), Environmental impact mitigation;

3. By including policies and regulations to address cumulative impacts, ensuring that the cumulative effect of development, including development exempt from permitting, will not cause a net loss of shoreline ecological functions, and by fairly allocating the burden of addressing such impacts among development opportunities; and

4. By including regulations and regulatory incentives designed to protect shoreline ecological functions, and to restore impaired ecological functions where such impairments have been identified.

1.5 Liberal Construction

As provided for in RCW 90.58.900, Liberal Construction, the Act is exempted from the rule of strict construction; the Act and this Program shall therefore be liberally construed to give full effect to the purposes, goals, objectives, and policies for which the Act and this Program were enacted and adopted.

1.6 Severability

Should any section, subsection, paragraph, sentence, clause or phrase of this Program or its application to any person or situation be declared unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of this Program or its application to any other person or situation. The Board of County Commissioners of Cowlitz County hereby declares that it would have adopted this Program and each section, subsection sentence, clause, phrase or portion thereof irrespective of the fact that any one or more sections, subsections, clauses, phrases or portions be declared invalid or unconstitutional.

1.7 Relationship to Other Plans and Regulations

A. Proponents of shoreline use or development shall comply with all applicable laws prior to commencing any shoreline use, development, or activity.

B. Where this Program makes reference to any RCW, WAC, or other state or federal law or regulation, the most recent amendment or current edition shall apply.

C. Uses, developments and activities regulated by this Program may also be subject to the provisions of the following: the Cowlitz County Comprehensive Plan; the Washington State Environmental Policy Act (SEPA; RCW 43.21C and WAC 197-11);
other provisions of Cowlitz County Code (CCC); and various other provisions of local, state, and federal law, as may be amended.

D. In the event this Program conflicts with other applicable County policies or regulations, they must be interpreted and construed so that all the language used is given effect, with no portion rendered meaningless or superfluous, and unless otherwise stated, the provisions that provide the most protection to shoreline ecological processes and functions shall prevail.

E. Permits in the shoreline jurisdiction that have been previously granted through local and state reviews in accordance with the Shoreline Master Program in effect at the time, shall remain in full force and effect until such time that they expire or are expressly changed by the County and the Department of Ecology (Ecology) as appropriate.

1.8 Effective Date

This Program and all amendments thereto shall take effect immediately upon adoption and shall apply to new applications submitted on or after that date and to applications that have not been determined to be fully complete by that date.
2. Definitions

When a term defined in this Program is defined differently in CCC 19.15.050, Definitions for the Critical Areas Ordinance, the definition in this Program applies.

**Accessory** – A use, building, or structure that is subordinate to and the use of which is incidental to that of the main activity, structure, building or use on the same lot or parcel. If an accessory structure is attached to the main building by a common wall or roof, such accessory building shall be considered a main part of the main building.

**Accretion** – The growth of land by the addition of material transported by wind and/or water.


**Adjacent** – Adjoining a critical area, and/or within a distance where activities may affect functions and values of a critical area.

**Adjacent lands** – Lands adjacent to the shorelines of the state (not within shoreline jurisdiction) (RCW 90.58.340).

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

**Agricultural equipment and agricultural facilities** – Includes, but is not limited to:

1. The following used in agricultural operations: Equipment; machinery; constructed shelters, buildings, and ponds; fences; upland finfish rearing facilities; water diversion, withdrawal, conveyance, and use equipment and facilities including, but not limited to, pumps, pipes, tapes, canals, ditches, and drains;

2. Corridors and facilities for transporting personnel, livestock, and equipment to, from, and within agricultural lands;

3. Farm residences and associated equipment, lands, and facilities; and
4. Roadside stands and on-farm markets for marketing fruit or vegetables.

**Agricultural land** – Those specific land areas on which agricultural activities are conducted as of the date of adoption of a local master program pursuant to these guidelines as evidenced by aerial photography or other documentation. After the effective date of the master program, land converted to agricultural use is subject to compliance with the requirements of the master program.

**Agricultural products** – Includes, but is not limited to, horticultural, viticultural, floricultural, vegetable, fruit, berry, grain, hops, hay, straw, turf, sod, seed, and apiary products; feed or forage for livestock; Christmas trees; hybrid cottonwood and similar hardwood trees grown as crops and harvested within twenty years of planting; and livestock including both the animals themselves and animal products including, but not limited to, meat, upland finfish, poultry and poultry products, and dairy products.

**Alteration** – A human action which results in a physical change to the existing condition of land or improvements including, but not limited to: clearing vegetation, filling and grading, and construction of structures or facilities including impervious surfaces.

**Amendment** – A revision, update, addition, deletion, and/or reenactment to an existing shoreline master program.

**Applicant** – The person, party, firm, corporation, Indian tribe or federal, state or local government, or any other entity that proposes any activity in shoreline jurisdiction.

**Appurtenance** – A structure or development incidental to a primary use.

**Appurtenance, residential** – A structure or development necessarily connected to the use and enjoyment of a single-family residence and located within contiguous ownership of the primary residential use and landward of the ordinary high water mark and the perimeter of a wetland. Examples of residential appurtenances include, but are not limited to: a garage, deck, driveway, utilities, fences, installation of a septic tank and drainfield, and grading which does not exceed two hundred fifty (250) cubic yards and which does not involve placement of fill in any wetland or waterward of the ordinary high water mark. Appurtenances do not include bulkheads and other shoreline modifications or over-water structures.

**Aquaculture** – The culture or farming of fish, shellfish, or other aquatic plants and animals. Aquaculture does not include the harvest of wild geoduck associated with the state managed wildstock geoduck fishery.

**Aquifer** – A geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well, spring or natural watercourse.

1. Aquifer, Confined – An aquifer bounded by formations of distinctly lower permeability than that of the aquifer itself and that contains groundwater under sufficient pressure for the water to rise above the top of the aquifer.
2. Aquifer, Unconfined – An aquifer where groundwater is in a formation which is not bound by a formation of lower permeability and in which the groundwater surface is at atmospheric pressure.

**Aquifer recharge area** – Areas where water infiltrates into soil and/or rock and reaches the groundwater.

**Associated wetlands** – Those wetlands that are in proximity to and either influence or are influenced by tidal waters or a lake, river, or stream subject to the Shoreline Management Act.

**Base flood** – A flood event having a one percent chance of being equaled or exceeded in any given year, also referred to as the 100-year flood. Designations of base flood areas on flood insurance map(s) always include the letters A or V.

**Berm** – A linear mound or series of mounds of earth, sand or gravel generally paralleling the water at or landward of the OHWM. Also a linear mound used to screen an adjacent activity, such as a parking lot, from transmitting excess noise and glare.

**Best management practices (BMP)** – The schedules of activities, prohibitions of practices, maintenance procedures, and structural or managerial practices approved by the Washington Department of Ecology that, when used singly or in combination:

1. Control soil loss and reduce water quality degradation caused by nutrients, animal waste, and toxins;

2. Control the movement of sediment and erosion caused by land alteration activities to protect water quality and slope stability;

3. Minimize adverse impacts to surface and groundwater quality, flow and circulation patterns and to the chemical, physical, and biological characteristics of wetlands;

4. Minimize adverse impacts to the chemical, physical and biological characteristics of a critical area;

5. Protect trees and vegetation designated to be retained during and following site construction and use native plant species appropriate to the site for revegetation of disturbed areas; and

6. Monitor mitigation measures to ensure functions and values impacted by a project are provided and maintained.

**Bioengineering** – The use of biological elements, such as the planting of vegetation, often in conjunction with engineered systems, to provide a structural shoreline stabilization measure with minimal negative impact to the shoreline ecology.

**Board** – The Cowlitz County Board of Commissioners.
**Boat launch** - Graded slopes, slabs, pads, or planks used for launching boats by means of a trailer, hand, or mechanical device.

**Boating facility** (for the purposes of this Program) – Any public or private facility for mooring, storing, or transfer of materials from vessels on the water, such as docks and piers, including on-land related facilities such as approaches and ramps, and including any private and publicly accessible launch sites or facilities. A boating facility does not include on-land accessory facilities such as parking or storage. Docks, buoys, boat launches and marine railways that are accessory to and serve four (4) or fewer single-family residences are not considered boating facilities.

**Breakwater** – A structure aligned parallel to shore, sometimes shore-connected, that provides protection from waves.

**Buffer** – An area adjacent to a critical area that functions to avoid loss or diminution of the ecologic functions and values of the critical area. Specifically, a buffer may:

1. Preserve the ecologic functions and values of a system including, but not limited to, providing microclimate conditions, shading, input of organic material, and sediments; room for variation and changes in natural wetland, river, or stream characteristics; providing for habitat for lifecycle stages of species normally associated with the resource; and

2. Physically isolate a critical area such as a wetland, river, or stream from potential disturbance and harmful intrusion from surrounding uses using distance, height, visual, and/or sound barriers, and generally including dense native vegetation, but also may include human-made features such as fences and other barriers;

3. Act to minimize risk to the public from loss of life, well-being, or property damage resulting from natural disasters such as from landslide or flooding.

**Building** – Any structure used or intended for supporting or sheltering any use or occupancy.

**Building height** (in Shoreline Management Act jurisdiction only) – The vertical distance between average grade and the highest part of the coping of a flat roof, or the deck line of a mansard roof, or the average height of the highest gable of a pitched or hipped roof. The height of a stepped or terraced building is the maximum height of any segment of the building. Provided, that television antennas, chimneys, and similar appurtenances shall not be used in calculating building height, except where such appurtenances obstruct the view of the shoreline of a substantial number of residences on areas adjoining such shorelines. Temporary construction equipment is also excluded in this calculation.

**Bulkhead** – A structure of timber, concrete, steel, rock, or similar substance located parallel to the shore and near the ordinary high water mark, which has as its primary purpose to contain and prevent the loss of soil by erosion, wave, or current action in order to protect adjacent uplands.
**Channel migration zone (CMZ)** – The area along a river within which the channel(s) can be reasonably predicted to migrate over time as a result of natural and normally occurring hydrological and related processes when considered with the characteristics of the river and its surroundings. The “channel migration zone” does not include areas that are separated from the active channel by a legally existing artificial structure(s) that is likely to restrain channel migration, including transportation facilities such as state or federal highways or a railroad, as well as dikes and levees, built above or constructed to remain intact through the 100 year flood.

**Clearing** – The destruction or removal of vegetation from a site by physical, mechanical, chemical or other means. This does not include landscape maintenance or pruning consistent with accepted horticultural practices, which does not impair the health or survival of the trees or native vegetation.

**Commercial** – A business use or activity at a scale greater than a home occupancy business involving retail or wholesale marketing of goods and services. Commercial uses are further defined in CCC Chapter 18.10 Land Use Ordinance.

**Commercial fishing** – The activity of capturing fish and other seafood under a commercial license.

**Compensatory mitigation** – Replacement of project-induced losses or impacts to a critical area or its buffer.

**Conditional use** – A use, development, or substantial development that is classified as a conditional use, or is not classified within this Program, and requires a Shoreline Conditional Use Permit pursuant to WAC 173-27-160.

**Conservation easement** – An interest or right of use over a property, less than fee simple, to protect, preserve, maintain, improve, restore, limit the future use of, or conserve for open space purposes any land or improvement on the land.

**Covered moorage** – A roofed structure over a boat, either with or without walls and typically supported by posts mounted on the dock.

**Critical aquifer recharge area** – Areas with a critical recharging effect on aquifers used for potable water as defined by the Washington State Growth Management Act.

**Critical areas** – Critical areas include any of the following areas or ecosystems: critical aquifer recharge areas, fish and wildlife habitat conservation areas, geologically hazardous areas, frequently flooded areas, and wetlands, as defined in RCW 36.70A and this Program.

**Critical habitat** – Specific geographical areas that possess physical or biological features that are essential to the conservation of federally listed species. These designated areas may require special management considerations or protection.

**Cumulative impacts** – The results of incremental actions when added to past, present, and reasonably foreseeable future actions. Cumulative impacts can be deemed substantial and
subject to mitigation conditions even though they may consist of individual actions having relatively minor impacts.

**Date of filing** – The date of actual receipt by Ecology of the County’s permit decision except as provided for below:

1. With regard to a permit for a variance or a conditional use, “date of filing” means the date the decision of Ecology is transmitted by Ecology to the County.

2. When the County simultaneously transmits to Ecology its decision on a Shoreline Substantial Development Permit with its approval of either a Shoreline Conditional Use Permit or Shoreline Variance, or both, “date of filing” has the same meaning as defined in 1.

**Department** – The Cowlitz County Department of Building and Planning.

**Development** – An activity consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature that may interfere with the normal public use of the surface of the waters overlying lands subject to the Shorelines Management Act of 1971 at any state of water level (RCW 90.58.030(3a)). Development does not include dismantling or removing structures if there is no other associated development or redevelopment. See also Substantial Development.

**Dike** – An artificial embankment normally set back from the bank or channel in the floodplain for the purpose of keeping floodwaters from inundating adjacent land.

**Director** – The Director of the Department of Building and Planning, or a designated delegate.

**Dock** – A structure built over or floating upon the water and used as a landing place for boats and other marine transport, fishing, swimming, and other recreational uses. A dock typically consists of the combination of one or more of the following elements: pier, ramp, and/or float.

**Dredging** – The removal of earth, sand, gravel, silt, or debris from below the ordinary high water mark of any river, stream, pond, lake, or other waterbody and beneath the area of seasonal saturation of any wetland.

**Ecological functions** or **shoreline functions** – The work performed or role played by the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments that constitute the shoreline’s natural ecosystem. Shoreline ecological functions include, but are not limited to hydrologic (transport of water and sediment across the natural range of flow variability; attenuating flow energy; developing pools, riffles, gravel bars, nutrient flux, recruitment and transport of large woody debris and other organic material), shoreline vegetation (maintaining temperature;
removing excessive nutrients and toxic compound, sediment removal and stabilization; attenuation of high stream flow energy; and provision of woody debris and other organic matter), hyporheic functions (removing excessive nutrients and toxic compounds, water storage, support of vegetation, and sediment storage and maintenance of base flows), and habitat for native aquatic and shoreline-dependent birds, invertebrates, mammals; amphibians; and anadromous and resident native fish (e.g., space or conditions for reproduction; resting, hiding and migration; and food production and delivery).

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

**Enhancement** – Alterations performed to improve the condition of an existing environmentally degraded area so that the functions provided are of a higher quality. Enhancements are to be distinguished from resource creation/establishment or restoration projects.

**Erosion** – The general process or the group of processes whereby the material of the earth’s crust are loosened, dissolved, or worn away, and simultaneously moved from one place to another, by natural forces, that include weathering, solution, corrosion, and transportation, but usually exclude mass wasting (American Geological Institute, 1998).

**Excavation** – The removal of earth material either by hand-held tools or machinery.

**Exempt/Exemption** – Developments that are set forth in WAC 173-27-040 and RCW 90.58.030(3)(e), 90.58.140(9), 90.58.147, 90.58.355, and 90.58.355, as hereafter amended, that are not required to obtain a Shoreline Substantial Development Permit, but which must otherwise comply with applicable provisions of the act and this Program.

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

**Feasible** – That an action, such as a development project, mitigation, or restoration requirement, meets all of the following conditions:

1. The action can be accomplished with technologies and methods that have been used in the past in similar circumstances, or studies or tests have demonstrated in similar circumstances that such approaches are currently available and likely to achieve the intended results;

2. The action provides a reasonable likelihood of achieving its intended purpose; and
3. The action does not physically preclude achieving the project's primary intended legal use.

In cases where this Program requires certain actions unless they are infeasible, the burden of proving infeasibility is on the applicant. In determining an action's infeasibility, the County may weigh the action's relative public costs and public benefits, considered in short- and long-term timeframes.

**Fill** – The addition of soil, sand, rock, gravel, sediment, earth retaining structure, or other material to an area waterward of the OHWM, in wetlands, or on shorelands in a manner that raises the elevation or creates dry land.

**Fish and wildlife habitat conservation areas** – Those areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. These areas may include, but are not limited to, rare or vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors; and areas with high relative population density or species richness. Fish and wildlife habitat conservation areas in Cowlitz County are designated in Table 3-A of the Critical Areas Regulations.

**Fish habitat** – Habitat that is used by fish at any life stage at any time of the year, including potential habitat likely to be used by fish that could be recovered by restoration or management and includes off-channel habitat.

**Float** – An anchored (not directly to the shore) floating platform that is free to rise and fall with water levels and is used for water-dependent recreational activities such as boat mooring, swimming or diving. Floats may stand alone with no over-water connection to shore or may be located at the end of a pier or ramp.

**Floating Home** – A single-family dwelling unit constructed on a float, that is moored, anchored, or otherwise secured in water, and is not a vessel, even though it may be capable of being towed.

**Floating on-water residence** – Any floating structure other than a floating home:

(a) That is designed or used primarily as a residence on the water and has detachable utilities; and

(b) Whose owner or primary occupant has held an ownership interest in space in a marina, or has held a lease or sublease to use space in a marina, since a date prior to July 1, 2014.

**Flood** or **flooding** – A temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters and/or the unusual and rapid accumulation of runoff of surface waters from any source.

**Flood hazard reduction** – Measures taken to reduce flood damage or hazards. Flood hazard reduction measures may consist of nonstructural or indirect measures, such as setbacks, land use controls, wetland restoration, dike removal, use relocation, bioengineering
measures, and storm water management programs; and of structural measures, such as dikes, levees, and floodwalls intended to contain flow within the channel, channel realignment, and elevation of structures consistent with the National Flood Insurance Program.

**Floodplain** – Synonymous with one hundred-year flood plan and means that land area susceptible to inundation with a one percent chance of being equaled or exceeded in any given year. The limit of this area shall be based upon flood ordinance regulation maps or a reasonable method which meets the objectives of the act.

**Floodway** – The area that has been established in effective federal emergency management agency flood insurance rate maps or floodway maps.

The floodway shall not include those lands that can reasonably be expected to be protected from flood waters by flood control devices maintained by or maintained under license from the federal government, the state, or a political subdivision of the state.

**Food web** – The system of interlocking and interdependent food chains.

**Forest practices** – Any activity conducted on or directly related to forest land and relating to growing, harvesting, or processing timber. These activities include but are not limited to: road and trail construction, final and intermediate harvesting, pre-commercial thinning, reforestation, fertilization, prevention and suppression of disease and insects, salvage of trees, and brush control. A forest practice consisting of timber cutting only is not considered development under the Shoreline Management Act (SMA) and does not require a shoreline Substantial Development Permit. Forest practices such as building roads, trails, and bridges and placing culverts are considered development under the SMA and are regulated under this Program as well as the Forest Practices Act (RCW 76.09).

**Frequently flooded areas** – Those areas of special flood hazard which are commonly identified as critical areas in local government development regulations.

**Geological formation** – An assemblage of earth materials grouped together into a unit that is convenient for description or mapping.

**Geologist** – See definition under “qualified professional.”

**Geotechnical assessment** – An assessment prepared by a qualified professional, which evaluates the site conditions and the effects of a proposal, identifies mitigating measures to ensure that the risks associated with geologic hazards will be substantially reduced, and provides a professional evaluation of the need for additional studies.

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

**Grading** – The movement or redistribution, including excavation or fill, of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land.

**Groin** – A barrier-type structure extending from the stream bank into a waterbody for the purpose of the protection of a shoreline and adjacent upland by influencing the movement of water and/or deposition of material.

**Groundwater** – That part of the subsurface water that is in the saturated zone. All waters that exist beneath the land surface or beneath the bed of any stream, lake or reservoir, or other body of surface water within the boundaries of this state, including underground streams, from which wells, springs, and ground water runoff are supplied, whatever may be the geological formation or structure in which such water stands or flows, percolates or otherwise moves.

**Growth Management Act** – Chapters 36.70A and 36.70B RCW, as amended. Note: Cowlitz County is not required and has not elected to “fully plan” under the Growth Management Act. Cowlitz County is required to plan for critical areas and natural resource land.

**Guidelines** – Those standards adopted by the Washington Department of Ecology (Ecology) to implement the policy of RCW 90.58 for regulation of use of the shorelines of the state prior to adoption of master programs. Such standards shall also provide criteria for local governments and Ecology in developing and amending master programs.

**Habitat conservation areas** – Areas designated as fish and wildlife habitat conservation areas. See WAC 365-190-130.

**Hazard areas** – Areas designated as frequently flooded areas or geologically hazardous areas due to potential for erosion, landslide, seismic activity, mine collapse, or other geologically hazardous condition.

**Hydraulic project approval (HPA)** – A permit issued by the Washington Department of Fish and Wildlife for modifications to waters of the state in accordance with Chapter 77.55 RCW.

**Impervious surface** – A hard surface area that either prevents or severely restricts the entry of water into the soil mantle.

**In-stream structure** – means a structure placed by human within a stream or river waterward of the ordinary high-water mark that either causes or has the potential to cause
water impoundment or the diversion, obstruction, or modification of water flow. In-stream structures may include those for hydroelectric generation, irrigation, water supply, flood control, transportation, utility service transmission, fish habitat enhancement, or other purpose.

**Indigenous** – Any native species of plant or wildlife that occurs naturally on a particular site.

**Industrial** – Activities and their supporting developments that relate to processing or manufacturing of materials; marine terminal and transportation areas and facilities; fabrication, assembly, treatment, or distribution of manufactured products; or storage of bulk materials.

**Infiltration** – The entry (usually downward) of water into the immediate surface of soil.

**Institutional** – A use or development for the provision of government, educational, medical, charitable, cultural, social, public safety, recreational or religious services. Examples include, but are not limited to: community centers, schools and colleges, government offices, health care facilities, religious facilities, or museums, among others.

**Invasive** – A nonnative plant or animal species that either:

1. Causes or may cause significant displacement in range to, a reduction in abundance of, or otherwise threatens, native species in their natural communities;
2. Threatens or may threaten natural resources or their use in the state;
3. Causes or may cause economic damage to commercial or recreational activities that are dependent upon state waters; or
4. Threatens or harms human health (RCW 77.08.010(28)).

**Lake** – A naturally existing or artificially created body of standing water, including reservoirs, 20 acres or greater in size, which exists on a year-round basis and occurs in a depression of land.

**Landslide** – Uncontrolled abrupt or gradual downslope movement of a mass of soil and/or rock.

**Marina** – Any facility consisting of docks or piers with the capacity to serve 10 or more vessels.

**Marine railway** – Inclined tracks extending from the shoreline into the water so that a vessel can be hauled up on a cradle or platform.

**May** – The action is acceptable, provided it conforms to the provisions of this Program.

**Merchantable trees** – Live trees, 6 inches in diameter at breast height (DBH) and larger, unless documentation of current, local market conditions are submitted and accepted by the local jurisdiction indicating non-marketability.
**Mining** – The removal of sand, gravel, soil, minerals, and other earth materials for commercial and other uses.

**Mitigation** and **Mitigation sequencing** – Avoiding, minimizing, or compensating for adverse shoreline or critical areas impacts induced from a project. Mitigation, in the following sequential order of preference, is:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
3. Rectifying the impact by repairing, rehabilitating or restoring the affected sensitive area;
4. Reducing or eliminating the impact over time by preservation or maintenance operations during the life of the development proposal;
5. Compensating for the impact by replacing, enhancing or providing substitute sensitive areas and environments;
6. Monitoring the impact and taking appropriate corrective measures.

Mitigation for individual actions may include a combination of the above measures.

**Mitigation plan** – A plan that outlines the activities that will be undertaken to alleviate project impacts.

**Monitoring** – The ongoing evaluation of the impacts of a development proposal on the biological, hydrologic, and geologic conditions of shorelines and critical areas. Monitoring includes the gathering of baseline data and the assessment of the performance of required mitigation measures through the collection and analysis of data for the purposes of understanding and documenting changes in natural ecosystems and features.

**Mixed-use** (in Shoreline Management Act jurisdiction only) – A combination of compatible uses within one development, in which at least one water-dependent use is included.

**Multiple use** – A combination of compatible uses within one development, and may include commercial, multi-family, and recreation uses, among others.

**Must** – A mandate; the action is required.

**Native vegetation** – Plant species that are indigenous to the area.

**Natural** or **existing topography** – The topography of the lot, parcel, or tract of real property immediately prior to any site preparation or grading, including excavation or filling;
**Natural waters** – Waters, excluding water conveyance systems that are artificially constructed and actively maintained for irrigation, drainage and/or stormwater management facilities.

**Navigable water** – A body of water that is capable or susceptible of having been or being used for the transport of useful commerce. The state of Washington considers all bodies of water meandered by government surveyors as navigable unless otherwise declared by a court.

**Non-conforming lot, use, or structure** – A pre-existing parcel which was lawfully created prior to the effective date of this Program but does not meet minimum size or other dimensional requirements; a use which was legally established prior to the effective date of this Program, which would not be permitted as a new use in the area in which it is located under the terms of this Program; or a structure lawfully erected prior to the effective date of this Program or a site altered or improved which does not meet current standards for setbacks, buffers, vegetation conservation, landscaping, public access, screening, or other regulations for the area in which it is located due to changes in regulations since its establishment.

**No net loss of ecological functions** – The maintenance of existing ecological processes and functions.

1. No net loss of ecological functions on the level of the County - that the ecological processes and functions are maintained within a watershed or other functional catchment area. Regulations may result in cumulative impacts or loss of some localized ecological processes and functions, as long as the ecological processes and functions of the system are maintained. Maintenance of system ecological processes and functions may require compensating measures that offset localized degradation.

2. On a project basis - that permitted use or alteration of a site will not result in on-site or off-site deterioration of the existing condition of ecological functions that existed prior to initiation of use or alterations as a direct or indirect result of the project.

3. No net loss is achieved both through avoidance and minimization of adverse impacts as well as compensation for impacts that cannot be avoided. Compensation may include on-site or off-site mitigation of ecological functions to compensate for localized degradation.

**Non-water-dependent use** – Those uses which are not dependent on a waterfront location.

**Non-water-oriented use** – Those uses which are not water-dependent, water-related, or water-enjoyment.

**Noxious weeds** – Any nonnative plant which, when established, is highly destructive, competitive or difficult to control.
**Off-site mitigation** – Compensation for project impacts in a different location than the project site.

**Open space** – An area that is intended to provide light and air, view, use, or passage of persons or animals which is almost entirely unobstructed by buildings, paved areas, or other human-made structures, and is designed or preserved for environmental, habitat, scenic, or recreational purposes.

**Ordinary high water mark (OHWM) on all lakes, streams, and tidal water** – That mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by the County or the Department of Ecology: PROVIDED, That in any area where the ordinary high water mark cannot be found, the ordinary high water mark adjoining salt water shall be the line of mean higher high tide and the ordinary high water mark adjoining freshwater shall be the line of mean high water.

**Over-water structure** – A structure or other construction located waterward of the ordinary high water mark or a structure or other construction erected on piling above the surface of the water, or upon a float.

**Permeability** – The capacity of soil or rock to transmit water.

**Permit** – Any Substantial Development, Variance, Conditional Use Permit, or revision authorized under the Act (RCW 90.58).

**Pier** – Docks and similar structures consisting of a fixed and/or floating platform extending from the shore over the water. This definition does not include overwater trails.

**Pond** – A naturally existing or artificially created body of standing water under 20 acres, which exists on a year-round basis and occurs in a depression of land or expanded part of a stream.

**Potable water** – Water that is safe for human consumption.

**Preservation** – Actions taken to ensure the permanent protection of existing, high-quality wetlands or other critical areas and shoreline habitats.

**Priority species** – Species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels. Priority species are those that meet any of the criteria listed below.

1. Criterion 1. State-listed or state proposed species. State-listed species are those native fish and wildlife species legally designated as endangered (WAC 232-12-014), threatened (WAC 232-12-011), or sensitive (WAC 232-12-011). State proposed species are those fish and wildlife species that will be reviewed by the department
of fish and wildlife (POL-M-6001) for possible listing as endangered, threatened, or sensitive according to the process and criteria defined in WAC 232-12-297.

2. Criterion 2. Vulnerable aggregations. Vulnerable aggregations include those species or groups of animals susceptible to significant population declines, within a specific area or statewide, by virtue of their inclination to congregate. Examples include heron colonies, seabird concentrations, and marine mammal congregations.

3. Criterion 3. Species of recreational, commercial, and/or tribal importance. Native and nonnative fish, shellfish, and wildlife species of recreational or commercial importance and recognized species used for tribal ceremonial and subsistence purposes that are vulnerable to habitat loss or degradation.

4. Criterion 4. Species listed under the federal Endangered Species Act as either proposed, threatened, or endangered.

**Prohibited** – Forbidden by law. In this Shoreline Master Program, means those uses, modifications, activities or materials that are forbidden in shoreline jurisdiction, and are not eligible for approval through a Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, or Shoreline Variance.

**Project area** – All areas proposed to be disturbed, altered, or used by the proposed activity for temporary construction activities (i.e., materials staging, construction access, soil stockpiling, etc.), permanent development (i.e., residential homes, driveways, detached garages, decks, fences, etc.), or regulatory alteration (i.e., rezoning or Comprehensive Plan designation change). For subdivisions, short subdivisions, binding site plans, planned unit developments, or rezones, the project area shall include the entire parcel.

**Provisions** – Policies, regulations, standards, guideline criteria or environment designations.

**Public access** – Physical and/or visual approach to and along the shoreline available to the general public.

**Public benefit** – Provision of or access to a service, natural resource, or economic opportunity available to the general public.

**Public cost** – Direct and indirect costs spread among the general public, such as, but not limited to loss of a service provided to the public, loss of access to publicly accessible natural resources, or loss of economic opportunity.

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

**Qualified professional** – A person with experience, education, and/or professional degrees and training pertaining to the critical area in question as described for each critical area below. Qualified professionals will also possess experience with performing site evaluations,
analyzing critical area functions and values, analyzing critical area impacts, and recommending critical area mitigation and restoration. The Director shall require professionals to demonstrate the basis for qualifications and shall make a final determination as to qualifications. Demonstration of qualifications may include, but not be limited to, professional certification(s) and/or recognition through publication of technical papers or journals. Qualified professionals for each critical area are as follows:

1. Wetlands. Biologist or wetland ecologist who has a bachelor’s degree in wetland science, hydrology, soil science, botany, ecology, resource management, or a related field, from an accredited college or university; and at least two years of full-time work experience under the supervision of a practicing wetland professional and has experience delineating wetlands, preparing wetland reports, conducting function assessments, and developing and implementing mitigation plans.

2. Fish and Wildlife Habitat Conservation Areas. Biologist/wildlife biologist/stream ecologist/habitat ecologist who has a bachelor’s degree in biological, wildlife and/or stream ecology science from an accredited college or university and has at least two years of experience under the supervision of a practicing professional biologist or ecologist.


a. Geologist - a person who has a bachelor’s degree in geologic sciences from an accredited college or university and at least five years of professional experience as described in WAC 308-15-040 and is licensed as a professional geologist in the State of Washington. The licensed geologist shall have demonstrated experience analyzing geologic hazards and preparing reports for the relevant type of hazard.

b. Hydrogeologist - a licensed geologist in the State of Washington with a specialty license in hydrogeology meeting the requirements of WAC 308-15-057. The licensed hydrogeologist shall have demonstrated experience analyzing hydrogeologic hazards and preparing reports for the relevant type of hazard.

c. Engineering geologist - a licensed geologist in the State of Washington with a specialty license in engineering geology meeting the requirements of WAC 308-15-055. The licensed engineering geologist shall have demonstrated experience analyzing geologic hazards and preparing reports for the relevant type of hazard.

d. Geotechnical engineer - a person who has a bachelor’s degree in civil engineering from an accredited college or university and at least five years of experience as a practicing geotechnical engineer, and is a registered professional engineer in the State of Washington (meeting the requirements of RCW 18.43.040). The licensed engineer shall have demonstrated
experience conducting geotechnical investigations, analyzing geologic hazards, and preparing reports for the relevant type of hazard.

4. Critical Aquifer Recharge Areas. Hydrogeologist - a licensed geologist in the State of Washington with a specialty license in hydrogeology meeting the requirements of WAC 308-15-057. The licensed hydrogeologist shall have demonstrated experience analyzing hydrogeologic hazards and preparing reports for the relevant type of hazard.

5. Frequently Flooded Areas.

a. Hydrogeologist - a licensed geologist in the State of Washington with a specialty license in hydrogeology meeting the requirements of WAC 308-15-057. The licensed hydrogeologist shall have demonstrated experience analyzing hydrogeologic hazards and preparing reports for the relevant type of hazard.

b. Fluvial geomorphologist - a person who has a bachelor’s degree in earth sciences from an accredited college or university with applicable course work in fluvial geomorphology and at least five years of professional experience in fluvial geomorphology.

c. Hydraulics engineer - a person who has a bachelor’s degree in civil engineering from an accredited college or university and at least five years of experience as a practicing hydraulics engineer, and is a registered professional engineer in the State of Washington (meeting the requirements of RCW 18.43.040). The licensed engineer shall have demonstrated experience conducting, analyzing and preparing reports for hydraulic investigations.

**Recharge** – The process involved in the absorption and/or addition of water to groundwater.

**Recreation areas or facilities** – Any commercial or publicly owned passive or active facility that provides for activities undertaken for pleasure or relaxation and for the refreshment of the mind and body that takes place in the outdoors or in a facility dedicated to the use including walking, fishing, photography, viewing, and bird-watching and may include parks, playgrounds, sports fields, paths and trails, beaches, or other recreation areas or facilities

**Repair or maintenance** – An activity that restores the character, scope, size, and design of a serviceable area, structure, or land use to its previously authorized and undamaged condition.

**Residential** – Buildings, structures or portions thereof that are designed and used as a place for human habitation. Included are single, duplex or multi-family dwellings, manufactured homes, and other structures that serve to house people, as well as the creation of new residential lots through land division. This definition includes accessory uses common to
normal residential use, including but not limited to, residential appurtenances, accessory dwelling units, and home occupations.

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

**Restoration** – Measures taken to restore an altered or damaged natural feature, including:

1. Active steps taken to restore damaged wetlands, streams, protected habitat, or their buffers to the functioning condition that existed prior to an unauthorized alteration; and

2. Actions performed to re-establish structural and functional characteristics of the critical area that have been lost by alteration, past management activities, or catastrophic events.

**Restoration, wetland** – The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former or degraded wetland. For the purposes of tracking net gains in wetland acres, restoration is divided into:

1. “Reestablishment” results in a gain in wetland acres (and functions). Activities could include removing fill material, plugging ditches, or breaking drain tiles.

2. “Rehabilitation” means repairing the natural or historic function of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres. Activities could involve breaching a dike to reconnect wetlands to a floodplain or return tidal influence to a wetland.

**Right-of-way, public** – Land or easements dedicated for public roads or transportation infrastructure, railways, public utilities, public levees, and public dikes.

**Riparian Habitat Area** – Areas adjacent to aquatic systems that contain elements of both aquatic and terrestrial ecosystems that mutually influence each other. The width of these areas extends to that portion of the terrestrial landscape that directly influences the aquatic ecosystem by providing shade, fine or large woody material, nutrients, organic and inorganic debris, terrestrial insects, or habitat for riparian-associated wildlife. Widths shall be measured horizontally from the ordinary high water mark, or from the top of bank if the ordinary high water mark cannot be identified. It includes the entire extent of the floodplain and the extent of vegetation adapted to wet conditions as well as adjacent upland plant communities that directly influence the aquatic ecosystem. See CCC 19.15.130.

**River** – See “watercourse.”
**Section 404 permit** – A permit issued by the U.S. Army Corps of Engineers for the placement of dredge or fill material or clearing in waters of the United States, including wetlands.

**Seeps or springs** – A location where water emanates from the earth, often forming the source of a small stream. Seeps and springs are hydrologically supported by groundwater and have a relatively constant water temperature and chemistry. Springs differ from seeps in that they tend to have a more persistent water source and have fewer dry periods than seeps.

**SEPA** – The Washington State Environmental Policy Act, Chapter 43.21C RCW.

**Serviceable** – Presently usable.

**Setback (activity, building, structure)** – The distance an activity, building, or structure must be located from the ordinary high water mark or the upland edge of a shoreline or critical area buffer.

**Shall** – A mandate; the action must be done.

**Shared or joint-use moorage** – Interchangeable terms in this Program. These terms mean moorage constructed and utilized by more than one waterfront property owner or by a homeowner’s association that owns waterfront property. Shared moorage includes moorage for pleasure craft and/or landing for water sports for use in common by shoreline residents or for use by patrons of a public park or quasi-public recreation area, including rental of non-powered craft. If a shared moorage provides moorage for more than ten slips then it is a marina. If proposed shared moorage includes a swinging boom or davit style hoist, then it shall be reviewed under the provisions as a marina.

**Shorelands or shoreland areas** – Those lands under the jurisdiction of the Shoreline Management Act extending landward for two hundred (200) feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred (200) feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters that are subject to the provisions of the Shoreline Management Act (RCW 90.58.030); the same to be designated as to location by the Washington Department of Ecology.

**Shorelines** – All of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them; except (i) shorelines of statewide significance; (ii) shorelines on segments of streams upstream of a point where the mean annual flow is twenty cubic feet per second or less and the wetlands associated with such upstream segments; and (iii) shorelines on lakes less than twenty acres in size and wetlands associated with such small lakes;

**Shoreline areas and shoreline jurisdiction** – All "shorelines of the state" and "shorelands" as defined in RCW 90.58.030.
**Shoreline master program** – The comprehensive use plan for a described area, and the use regulations together with maps, diagrams, charts, or other descriptive material and text, a statement of desired goals, and standards developed in accordance with the policies enunciated in RCW 90.58.020. As provided in RCW 36.70A.480, the goals and policies of a shoreline master program approved under RCW 90.58 shall be considered an element of the Cowlitz County Comprehensive Plan. All other portions of this Program adopted under RCW 90.58, including use regulations, shall be considered a part of the Cowlitz County development regulations.

**Shoreline modifications** – Those actions that modify the physical configuration or qualities of the shoreline area, usually through the construction of a physical element such as a dike, breakwater, pier, weir, dredged basin, fill, bulkhead, or other shoreline structure. They can include other actions, such as clearing, grading, or application of chemicals. Shoreline modifications usually are undertaken in support of or in preparation for a shoreline use; for example, fill (shoreline modification) required for a cargo terminal (industrial use) or dredging (shoreline modification) to allow for a marina (boating facility use).

**Shoreline stabilization** – Structural and non-structural methods to address erosion impacts to property and dwellings, businesses, or structures caused by natural processes, such as currents, floods, tides, wind, or wave action.

**Shoreline stabilization, hard** – Shoreline erosion control practices using hardened structures that armor and stabilize the shoreline from further erosion. Hard structural shoreline stabilization typically uses concrete, boulders, dimensional lumber or other materials to construct linear, vertical or near-vertical faces. These include bulkheads, rip-rap, and similar structures.

**Shoreline stabilization, soft** – Shoreline erosion control and restoration practices that contribute to restoration, protection or enhancement of shoreline ecological functions. Soft structural shoreline stabilization typically includes a mix of gravels, cobbles, boulders, logs and native vegetation placed to provide shore stability in a non-linear, generally sloping arrangement. Linear, vertical faces are an indicator of hard stabilization.

**Shoreline substantial development permit (SSDP)** – The permit required by this Program for uses that are substantial developments in shoreline jurisdiction.

**Shorelines of the state** – The total of all "shorelines" and "shorelines of statewide significance" within the state.

**Shorelines of statewide significance** – The following shorelines of the state in Cowlitz County:

(i) Those lakes, whether natural, artificial, or a combination thereof, with a surface acreage of one thousand acres or more measured at the ordinary high water mark;

(ii) Those natural rivers or segments thereof downstream of a point where the mean annual flow is measured at one thousand cubic feet per second or more; and
(iii) Those shorelands associated with (i) and (ii).

**Short subdivision** – The division or redivision of land into four or fewer lots, tracts, sites, parcels or divisions for the purpose of sale, lease or transfer of ownership, any of which is less than five acres in size.

**Should** – That the particular action is required unless there is a demonstrated, compelling reason, based on policy of the Shoreline Management Act and this Program, against taking the action.

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

**Site** – Any parcel or combination of contiguous parcels, or right-of-way, or combination of contiguous rights-of-way under the applicant’s ownership or control where the proposed project occurs.

**Slope** – An inclined earth surface, the inclination of which is expressed as the ratio of horizontal distance to vertical distance. In these regulations, slopes are generally expressed as a percentage; percentage of slope refers to a given rise in elevation over a given run in distance. A 40 percent slope, for example, refers to a 40-foot rise in elevation over a distance of 100 feet. A 100 percent slope equals a 45-degree angle. In most engineering and geologic reports, slopes are described in ratios (horizontal:vertical, H:V) or degrees. Table 1-A shows common slope gradients and various description methods:

<table>
<thead>
<tr>
<th>Engineering Ratio (H:V)</th>
<th>Rise:Run (V:H)</th>
<th>Percent</th>
<th>Angle (Degrees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:1</td>
<td>100:100</td>
<td>100%</td>
<td>45 deg.</td>
</tr>
<tr>
<td>1.25:1</td>
<td>80:100</td>
<td>80%</td>
<td>39 deg.</td>
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<td>50:100</td>
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<td>22 deg.</td>
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<td>3:1</td>
<td>33:100</td>
<td>33%</td>
<td>18 deg.</td>
</tr>
<tr>
<td>4:1</td>
<td>25:100</td>
<td>25%</td>
<td>14 deg.</td>
</tr>
<tr>
<td>5:1</td>
<td>20:100</td>
<td>20%</td>
<td>11 deg.</td>
</tr>
</tbody>
</table>

For example a slope that rises 40 feet over a horizontal distance (run) of 100 feet can be referred to as being a 2.5:1 (H:V) slope; having an angle of 22 degrees; or being a 40 percent slope.

**Spring** – See “seeps or springs.”
Stream – A naturally occurring body of periodic or continuously flowing water where:
   (a) The mean annual flow is greater than twenty cubic feet per second; and
   (b) The water is contained within a channel. A channel is an open conduit either naturally or artificially created. This definition does not include artificially created irrigation, return flow, or stock watering channels.

Structure – A permanent or temporary edifice or building or any piece of work artificially built or composed of parts joined together in some definite manner, whether installed on, above, or below the surface of the ground or water, except for vessels.

Subdivision – A division of land into five or more lots, tracts, parcels, sites, or divisions for the purpose of sale or lease or transfer of ownership, and shall include all resubdivision of land.

Substantial development – Any development of which the total cost or fair market value exceeds seven thousand and forty-seven dollars, or any development which materially interferes with the normal public use of the water or shorelines of the state. The dollar threshold must be adjusted for inflation by the Washington State Office of Financial Management every five years, beginning July 1, 2007, based upon changes in the consumer price index during that time period.

Substantially degrade – To cause significant ecological impact.

Surface water – Water that flows across the land surface, in channels, or is contained in depressions in the land surface, including but not limited to ponds, lakes, rivers, and streams.

Transmit – To send from one person or place to another by mail or hand delivery. The date of transmittal for mailed items is the date that the document is certified for mailing or, for hand-delivered items, is the date of receipt at the destination.

Unavoidable – Adverse impacts that remain after all appropriate and practicable avoidance and minimization have been achieved.

Upland – Generally described as the land area above and landward of the OHWM.

Urban Growth Area – That area designated by a County pursuant to RCW 36.70A.110 or otherwise mutually agreed upon by the County and a city.

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

Variance – A means to grant relief from the specific bulk, dimensional or performance standards set forth in this Program and not a means to vary a use of a shoreline. Variance permits must be approved, approved with conditions, or denied by Ecology. See RCW 90.58.140.
**Vessel** – Includes ships, boats, barges, or any other floating craft which are designed and used for navigation and do not interfere with the normal public use of the water.

**View corridor** – Portion of a viewshed, often between structures or along thoroughfares. View corridors may or may not be specifically identified and reserved through development regulations for the purpose of retaining the ability of the public to see a particular object (such as a mountain or body of water) or a landscape within a context that fosters appreciation of its aesthetic value.

**Water-dependent use** – A use or portion of a use which cannot exist in a location that is not adjacent to the water and which is dependent on the water by reason of the intrinsic nature of its operations. Examples of water-dependent uses may include, but are not limited to, the following: ship cargo terminal loading areas, ferry and passenger terminals, barge loading facilities, ship building and dry docking, marinas, boating facilities, private moorage facilities, aquaculture, float plane facilities, sewer outfalls, hydroelectric generating plants and water diversion facilities, such as agricultural pumphouses.

**Water-enjoyment use** – A recreational, commercial, or other use that facilitates public access to the shoreline as a primary characteristic of the use, or a use that provides for aesthetic enjoyment or recreational use of the shoreline for a substantial number of people as a general characteristic of the use and which through location, design, and operation ensures the public's ability to enjoy the visual and physical qualities of the shoreline. In order to qualify as a water-enjoyment use, the use must be open to the general public and the shoreline-oriented space within the project must be devoted to the specific aspects of the use that fosters shoreline enjoyment.

**Water-oriented use** – A use that is water-dependent, water-related, or water-enjoyment, or a combination of such uses.

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

**Water-related use** – A use or portion of a use which is not intrinsically dependent on a waterfront location, but its economic viability is dependent upon a waterfront location because:

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

2. The use provides a necessary service supportive of the water-dependent uses and the proximity of the use to its customers makes its services less expensive and/or more convenient, such as transmission lines and towers at a hydropower facility.
Water table – That surface in an unconfined aquifer at which the pressure is atmospheric.

Watercourse – Any portion of a channel, bed, bank, or bottom waterward of the ordinary high water line of waters of the state including areas in which fish may spawn, reside, or through which they may pass, and tributary waters with defined beds or banks, which influence the quality of fish habitat downstream. This definition includes watercourses that flow on an intermittent basis or which fluctuate in level during the year and applies to the entire bed of such watercourse whether or not the water is at peak level. This definition does not include irrigation ditches, canals, stormwater runoff devices, or other entirely artificial watercourses, except where they exist in a natural watercourse that has been altered by humans.

Waters of the state – Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Well – Any excavation that is constructed when the intended use of the well is for location, diversion, artificial recharge, observation, monitoring, dewatering, or withdrawal of groundwater for agricultural, municipal, industrial, domestic, or commercial use.

Wetlands or wetland areas – Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands. For identifying and delineating a wetland, the methodology shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplements as provided in RCW 90.58.380 and WAC 173-22-035. For specific information on wetlands see Chapter 19.15.120 of the Cowlitz County Critical Areas Code.
3. Applicability, Exemptions, and Nonconforming Development

3.1 Applicability

All new or expanded uses and development within shoreline jurisdiction (see Subsection 3.1.A, below) shall be carried out in a manner consistent with this Program and the policy of the Act as required by RCW 90.58.140(1), regardless of whether a Letter of Exemption (LOE), Shoreline Substantial Development Permit (SSDP), Shoreline Variance, or Shoreline Conditional Use Permit (SCUP) is required. Unless described otherwise, this Program does not apply to the continuance of legally established and permitted uses and developments.

A. This Program shall apply to all of the shorelands and waters within Cowlitz County that fall under the jurisdiction of RCW 90.58. Such shorelands shall include:

1. Those lands extending two hundred (200) feet in all directions as measured on a horizontal plane from the ordinary high water mark (OHWM);

2. Floodways and contiguous floodplain areas landward two hundred (200) feet from such floodways; and

3. Associated wetlands, river deltas associated with the streams, and lakes and tidal waters that are subject to the provisions of this program, as may be amended.

Within Cowlitz County, all or a portion of the waters listed in Table 3-1 are considered “shorelines” and are subject to the provisions of this Program. A list of the upstream extent of shoreline jurisdiction, including section, township, and range, for these waters is shown in Appendix A along with maps depicting each location.

<table>
<thead>
<tr>
<th>Table 3-1. Waterbodies in Cowlitz County shoreline jurisdiction.</th>
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<tbody>
<tr>
<td>Shoreline Rivers and Streams</td>
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<tr>
<td>Abernethy Creek</td>
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<td>Alder Creek</td>
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<td>Arkansas Creek</td>
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<td>Arnold Creek</td>
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<td>Baird Creek</td>
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<td>Bear Creek #1</td>
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<td>Bear Creek #2</td>
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<td>Bear Creek #3</td>
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<td>Brooks Creek</td>
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<td>Cameron Creek</td>
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<tr>
<td>Campbell Creek</td>
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<td>Fossil Creek</td>
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<td>Fossil Creek, UT #67</td>
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<tr>
<td>Germany Creek</td>
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<tr>
<td>Gobar Creek</td>
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<tr>
<td>Goble Creek</td>
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<tr>
<td>Goble Creek, North Fork</td>
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<tr>
<td>Green Creek</td>
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<tr>
<td>Green River, UT #56</td>
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<tr>
<td>Harrington Creek</td>
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<tr>
<td>Hemlock Creek</td>
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<td>Hoffstadt Creek</td>
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<td>Owl Creek</td>
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<tr>
<td>Panamaker Creek</td>
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<tr>
<td>Rock Creek</td>
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<tr>
<td>Salmon Creek #1</td>
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<tr>
<td>Salmon Creek #2</td>
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<tr>
<td>Shultz Creek</td>
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<tr>
<td>South Coldwater Creek</td>
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<tr>
<td>Speelyai Creek</td>
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<tr>
<td>Speelyai Creek Diversion Ditch</td>
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<tr>
<td>Speelyai Creek, West Fork</td>
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<tr>
<td>Speelyai Creek, UT #57</td>
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# Shoreline Master Program
## Cowlitz County

**Shoreline Rivers and Streams**

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<thead>
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<th>Shoreline Rivers and Streams</th>
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<tr>
<td>Cape Horn Creek</td>
<td>Jacks Creek</td>
<td>Spruce Creek</td>
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<tr>
<td>Castle Creek</td>
<td>Jim Creek</td>
<td>Stillwater Creek</td>
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<tr>
<td>Chehalis River, South Fork</td>
<td>Johnson Creek</td>
<td>Studebaker Creek #1</td>
</tr>
<tr>
<td>Coal Creek</td>
<td>Kalamia River*</td>
<td>Studebaker Creek #2</td>
</tr>
<tr>
<td>Coal Creek Slough</td>
<td>Kalamia River, UT #62</td>
<td>Sucker Creek</td>
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<tr>
<td>Coldspring Creek</td>
<td>Kalamia River, North Fork</td>
<td>Swift Creek #2 Power Canal</td>
</tr>
<tr>
<td>Coldwater Creek</td>
<td>Kalamia River, UT</td>
<td>Tulee River*</td>
</tr>
<tr>
<td>Columbia River*</td>
<td>Langdon Creek</td>
<td>Tulee River, North Fork</td>
</tr>
<tr>
<td>Cougar Creek</td>
<td>Lewis River*</td>
<td>Tulee River, South Fork</td>
</tr>
<tr>
<td>Coweeman River</td>
<td>Little Kalamia River</td>
<td>Tulee River, South Fork, UT #54</td>
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<tr>
<td>Coweeman River, UT #61</td>
<td>Maratta Creek</td>
<td>Tulee River, South Fork, UT #58</td>
</tr>
<tr>
<td>Cowlitz River*</td>
<td>Mill Creek</td>
<td>Tulee River, South Fork, UT #60</td>
</tr>
<tr>
<td>Deer Creek</td>
<td>Mill Creek, South Fork</td>
<td>Tulee River, South Fork, UT #65</td>
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<tr>
<td>Delameter Creek</td>
<td>Monahan Creek</td>
<td>Tulee River, South Fork, UT #66</td>
</tr>
<tr>
<td>Devils Creek</td>
<td>Mulholland Creek</td>
<td>Trouble Creek</td>
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<tr>
<td>Dog Creek</td>
<td>Olequa Creek</td>
<td>Wild Horse Creek</td>
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<tr>
<td>Dry Creek</td>
<td>Ordway Creek</td>
<td>Wolf Creek</td>
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<tr>
<td>Dryer Glacier</td>
<td>Ostrander Creek</td>
<td>Wyant Creek</td>
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<tr>
<td>Elk Creek</td>
<td>Ostrander Creek, South Fork</td>
<td>Wyant Creek, UT</td>
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<tr>
<td>Elochoman River, East Fork</td>
<td>Outlet Creek</td>
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</table>

**Shoreline Lakes**

<table>
<thead>
<tr>
<th>Shoreline Lakes</th>
<th>Shoreline Lakes</th>
<th>Shoreline Lakes</th>
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</thead>
<tbody>
<tr>
<td>Castle Lake</td>
<td>Horseshoe Lake</td>
<td>Silver Lake*</td>
</tr>
<tr>
<td>Coldwater Lake</td>
<td>Merrill Lake</td>
<td>Yale Lake*</td>
</tr>
<tr>
<td>Fawn Lake</td>
<td>Merwin Lake*</td>
<td></td>
</tr>
</tbody>
</table>

* Shorelines of Statewide Significance

UT = Unnamed Tributary

A copy of the Cowlitz County Shoreline Environment Designations Map is shown in Appendix A.

B. Maps indicating the extent of shoreline jurisdiction and shoreline environment designations are for guidance only. They are to be used in conjunction with the most current, accurate, and complete scientific and technical information available; field investigations; and on-site surveys to accurately establish the location and extent of shoreline jurisdiction when a project is proposed. All areas meeting the definition of a shoreline or a shoreline of statewide significance, whether mapped or not, are subject to the provisions of this Program.

C. This Program shall apply to every person, individual, firm, partnership, association, organization, corporation, local or state governmental agency, public or municipal corporation, or other non-federal entity that develops, owns, leases, or administers lands, wetlands, or waters that fall under the jurisdiction of the Act; and within the external boundaries of federally owned lands.
D. Non-federal agency actions undertaken on federal lands must comply with this Program and the Act.

E. Native American Tribes’ actions on tribal lands and federal agencies’ actions on federal lands are not required, but are encouraged, to comply with the provisions of this Program and the Act. Nothing in this chapter shall affect any rights established by treaty to which the United States is a party.

F. Hazardous substance remedial actions pursuant to a consent decree, order, or agreed order issued under RCW 70.105(D) are exempt from all procedural requirements of this Program.

G. Upon issuance of a drought order by the Department of Ecology pursuant to RCW 43.83B.405, applicants that are responding to an emergency that requires a water withdrawal or facility shall be provided an expedited permit decision from the Director, no longer than fifteen (15) calendar days after the date of application in accordance with RCW 90.58.370.

H. Certain forest practices that are not regulated by the Act and are regulated under RCW Chapter 76.09 are not subject to additional requirements of this Program.

I. The administrative regulations of this Program are superseded in authority by the terms and provisions of an environmental excellence program or agreement, entered into under RCW 43.21(K), Environmental Excellence Program. The environmental excellence agreement must meet the substantive requirements of this Program. An environmental excellence program agreement must achieve more effective or efficient environmental results than the results that would be otherwise achieved.

J. Unless specifically exempted by statute, all proposed uses and development occurring within shoreline jurisdiction must conform to chapter 90.58 RCW, the Shoreline Management Act and this Program whether or not a permit is required. All prior approved shoreline substantial development permits, and local and state approved conditional use permits or variances are recognized as being valid, unless overturned by a court decision. Major changes or new phases of projects that were not included in the originally approved plan will be subject to the policies and regulations of this Program.

K. Certain developments are not required to obtain shoreline permits or local reviews as described in WAC 173-27-044.

L. Certain developments are not subject to the Shoreline Management Act as described in WAC 173-27-045.
3.2 Exemptions from a Shoreline Substantial Development Permit

A. A Shoreline Substantial Development Permit (SSDP) (see Section 8.7.C, Shoreline Substantial Development Permit) shall be required for projects occurring within the County’s shoreline jurisdiction pursuant to the requirements and procedures contained in WAC 173-27, Shoreline Management Permit and Enforcement Procedures; except that:

1. A SSDP is not required for projects that are below the threshold levels established in WAC 173-27-040(2), Developments exempt from substantial development permit requirement.

3.3 Nonconforming Uses and Development

A. Existing uses, structures, and lots legally established prior to the effective date of this Program are allowed to continue. Where lawful uses, structures, and lots exist that could not be established under the terms of this Program, such uses, structures, and lots are deemed nonconforming and are subject to the provisions of this Section, unless specific exceptions are provided for in this Section.

B. Structures that were legally established and are used for a conforming use, but which are nonconforming to this Program with regard to setbacks, buffers; area; bulk; height or density may be maintained and repaired and may be enlarged or expanded provided that said enlargement does not increase the extent of nonconformity by further encroaching upon or extending horizontally into areas where construction or use would not be allowed for new development or uses. Vertical expansion within setbacks or buffers may be permitted provided that such expansion is consistent with the maximum height allowed by this SMP and underlying zoning, and that the increased height does not significantly impair public view of the shoreline.

C. Uses and developments that were legally established and are nonconforming with regard to the use regulations of this Program may continue as legal nonconforming uses. Such uses shall not be enlarged or expanded.

D. A use which is listed as a conditional use, but which existed prior to adoption or applicability of this Program or any relevant amendment and for which a Shoreline Conditional Use Permit has not been obtained, shall be considered a nonconforming use.

E. A structure for which a Shoreline Variance Permit has been issued shall be considered a legal nonconforming structure and the requirements of this Section shall apply as they apply to preexisting nonconformities.
F. A structure which is being or has been used for a nonconforming use may be used for a different nonconforming use only upon the approval of a Shoreline Conditional Use Permit and when the Director finds the proposal complies with the following criteria:

1. No reasonable alternative conforming use is practical; and

2. The proposed use will be at least as consistent with the policies and provisions of the Act and this Program and is as compatible with the uses in the area as the preexisting use.

In addition, such conditions may be attached to the permit as are deemed necessary to assure compliance with the above findings, the requirements of this Program and the Shoreline Management Act, and to assure that the use will not become a nuisance or a hazard.

G. A nonconforming structure which is moved any distance must be brought into conformance with this Program and the Act.

H. If a nonconforming use or structure is destroyed by any natural or accidental cause, it may be reconstructed to those configurations existing immediately prior to the time the development was damaged, provided that a complete application is received to restore the development within one (1) year of the date the damage occurred, all permits are obtained and the restoration is completed within two (2) years of permit issuance or the conclusion of any appeal on the permit. The development must be devoted only to that pre-existing nonconforming use or a conforming use. If court action rules at any time that the owner of the destroyed pre-existing nonconforming structure was responsible for said destruction, then any existing or future structure shall conform to the provisions of this chapter.

I. If a nonconforming use is discontinued for twelve consecutive months or for twelve months during any two-year period, the nonconforming rights shall expire and any subsequent use shall be conforming.

J. An undeveloped lot, tract, parcel, site, or division of land located landward of the OHWM which was established in accordance with County and state subdivision requirements prior to the effective date of the Act or this Program, but which does not conform to the present lot size standards, may be developed if permitted by other land use regulations of the County and so long as such development conforms to all other requirements of this Program and the Act.

K. Vegetation conservation standards of this Program shall not apply retroactively in a way which requires lawfully existing uses and developments, including residential landscaping and gardens, to be removed except as required as mitigation for new and expanded development.
L. Notwithstanding Sections 3.3.A through 3.3.K, the following shall apply only to pre-existing legally established residential structures, including floating homes, constructed prior to the effective date of this Program:

1. Residential structures and appurtenant structures that were legally established and are used for a conforming use, but that do not meet standards for the following, shall be considered a conforming structure: Setback, buffers, or yards; area; bulk; height; or density.

2. The County shall allow redevelopment, expansion, or a change of classification of occupancy for the residential structure if it is consistent with the SMP, including requirements for no net loss of shoreline ecological functions. For example, vertical, lateral or anterior expansions that do not intrude farther horizontally into a required buffer and which are consistent with the maximum height allowed by this SMP or underlying zoning may be allowed.

   a. Pre-existing legally established floating homes may be relocated so long as consistency with the SMP is achieved.

3. Pre-existing legally established residential structures that are damaged or destroyed may be replaced to their prior size and location provided:

   a. All other requirements of the Cowlitz County Code and the Cowlitz County Health Department are satisfied; and

   b. A complete application is received to restore the development within one (1) year of the act causing damage or destruction to the dwelling unit.

4. For purposes of this Section, “appurtenant structures” means garages, sheds, and other legally established structures. “Appurtenant structures” does not include bulkheads and other shoreline modifications or over-water structures.

5. Nothing in this Section shall:

   a. Restrict the ability of this Program to limit development, expansion, or replacement of over-water structures located in hazardous areas, such as floodplains and geologically hazardous areas; or

   b. Affect the application of other federal, state, or County requirements to residential structures.
4. Shoreline Master Program Goals and Policies

4.1 Introduction

The policy goals of the Shoreline Management Act are derived from the policy statement of RCW 90.58.020 and the description of the elements to be included in master programs under RCW 90.58.100.

The policy goals for the management of shorelines harbor potential for conflict. The Act recognizes that the shorelines and the waters they encompass are "among the most valuable and fragile" of the state's natural resources.

- They are valuable for economically productive industrial and commercial uses, recreation, navigation, residential amenity, scientific research and education.
- They are fragile because they depend upon balanced physical, biological, and chemical systems that may be adversely altered by natural forces (earthquakes, volcanic eruptions, landslides, storms, droughts, floods) and human conduct (industrial, commercial, residential, recreation, navigational).

Unbridled use of shorelines ultimately could destroy their utility and value. The prohibition of all use of shorelines also could eliminate their human utility and value. Thus, the policy goals of the Act relate both to utilization and protection of the extremely valuable and vulnerable shoreline resources of the state.

The Act calls for the accommodation of "all reasonable and appropriate uses" consistent with "protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life" and consistent with "public rights of navigation." The Act's policy of achieving both shoreline utilization and protection is reflected in the provision that "permitted uses in the shorelines of the state shall be designed and conducted in a manner to minimize, in so far as practical, any resultant damage to the ecology and environment of the shoreline area and the public's use of the water" (RCW 90.58.020).

The Act's policy of protecting ecological functions, fostering reasonable utilization, and maintaining the public right of navigation and corollary uses encompasses the following general policy goals for shorelines of the state.¹

A. The utilization of shorelines for economically productive uses that are particularly dependent on shoreline location or use. This includes water-dependent, water-related and water-enjoyment uses.

B. The utilization of shorelines and the waters they encompass for public access and recreation.

¹ WAC 173-26-176(3)
C. Protection and restoration of the ecological functions of shoreline natural resources.

D. Protection of the public right of navigation and corollary uses of waters of the state.

E. The protection and restoration of buildings and sites having historic, cultural and educational value.

F. Planning for public facilities and utilities correlated with other shorelines uses.

G. Prevention and minimization of flood damages.

H. Recognizing and protecting private property rights.

I. Preferential accommodation of single-family uses.

J. Coordination of shoreline management with other relevant local, state, and federal programs.

### 4.2 General Shoreline Goals

#### 4.2.1 Goal

To implement the mandate of the Shoreline Management Act of 1971 in a manner that reflects the aspirations of the citizens of Cowlitz County.

#### 4.2.2 Policies

A. Preserve the rights of private ownership and property uses of the shorelines of Cowlitz County.

B. Assure healthy, orderly, economic growth in the shorelines of Cowlitz County.

C. Maintain a high quality environment along the shorelines of Cowlitz County.

D. Establish criteria for safe, orderly residential growth within the shorelines of Cowlitz County.

E. Give preference to uses that are unique to or dependent upon a shoreline location. Water-dependent and associated water-related uses are the highest priority for shorelines unless protection of the existing natural resource values of such areas precludes such uses. Water-related and water-enjoyment uses that are compatible with ecological protection and restoration objectives are the second highest priority.

F. Preserve and protect those fragile and natural resources, and culturally significant features, along the shorelines of Cowlitz County.
G. Provide safe and reasonable access for the public to the shorelines of Cowlitz County.

4.3 Historic, Cultural, Archaeological and Educational Resources

4.3.1 Goal

Protect, preserve, and restore those historical, cultural, educational, and scientific sites in the shorelines of Cowlitz County for the general public. In addition, see CCC 18.80 Historic Preservation.

4.3.2 Policies

A. Recognize the rich history of Cowlitz County including the Native American use of rivers streams and other areas, the role in early European American settlement as a route between fur trading centers and the modern history of lumbering, fishing agriculture and industry and the unique heritage of community activities.

1. Provide for identification displays and other interpretive information on historic sites, especially those related to past use of the shorelines.

2. Encourage public agencies and non-profit organizations to acquire sites and buildings to preserve them for appreciation of the historic heritage of the community, including archaeological areas, ancient villages, military forts, old settler’s homes, ghost towns, and trails, particularly those located on the shorelines because of the proximity of food resources and because water provided an important means of transportation. These sites are non-renewable resources and many are in danger of being lost through present day changes in land use and urbanization.

B. To ensure that new development preserves cultural resources to the extent feasible, project review should provide for the exchange of information between those with expertise and developers and regulators to establish the most effective process for identifying cultural resources and the means to protect them.

1. The County should recognize that the National Historic Preservation Act of 1966 and RCW 43.51 provide for the protection, rehabilitation, restoration, and reconstruction of districts, sites, buildings, structures, and objects significant in American and Washington history, architecture, archaeology, or culture. Development or uses that may impact archaeological sites are subject to RCW 27.44, Indian Graves and Records; RCW 27.53, Archaeological Sites and Resources; and archaeological excavation and removal rules found in WAC 25-48.
2. The County should consult with the Department of Archeology and Historic Preservation, professional archaeologists, local historic societies, and tribes to maintain an inventory of areas containing potentially valuable archaeological data, while adhering to applicable state and federal laws protecting such information from public disclosure. This information should be shared with owners or developers of property as early in the development process as possible to encourage coordination well in advance of application for development to ensure that appropriate agencies, affected tribes, and historic preservation groups have ample time to assess the site and identify the potential for cultural resources.

3. In areas known to contain archaeological data, the County should require coordination with appropriate agencies and require professional assessment of resources to identify resources in advance of construction, or if no cultural resources are identified initially, provide for monitoring of specific construction phases by an archaeologist to ensure accurate identification.

4. Shoreline permits, in general, should contain special provisions which require developers to stop work and notify the County and appropriate state and tribal authorities if any possible archaeological data are uncovered during excavations.

5. Development which might destroy an archaeological or historic site may be delayed to allow the appropriate agency or organization to investigate options to purchase the site, design a proposal to avoid areas of concern, or conserve artifacts.

### 4.4 Conservation and Restoration

#### 4.4.1 Goal

Preserve, protect, and restore natural resources including areas that support ecological processes and functions and aesthetic resources.

#### 4.4.2 Policies

A. In order to conserve shoreline natural resources, this Master Program should incorporate relevant critical area regulations, and provide for vegetation conservation, as well as support stormwater management and on-site septic system regulations and other regulations to ensure no net loss of shoreline ecological functions necessary to sustain shoreline natural resources. See Cowlitz County Code Chapter 19.15 Critical Areas.

1. Uses and developments should be located and designed to preserve native shoreline vegetation to maintain shoreline ecological functions and prevent direct, indirect and cumulative impacts of shoreline development.
2. Shoreline vegetation should be maintained and enhanced to protect human safety and property, maintain the stability of riverbanks and lake shorelines, reduce the need for structural shoreline stabilization measures, protect plant and animal species and their habitats, and improve the visual and aesthetic qualities of the shoreline.

3. Provide for mitigation of impacts on habitat and recreational access of all in-water facilities including docks and piers. Mitigation needs should be coordinated with state and federal agency mitigation requirements.

4. Project review actions should include understanding of existing affected environmental conditions; consideration of the total upstream and downstream effect of proposed developments; mitigation which involves first avoiding the impact altogether, then minimizing impacts where possible, and then replacing or compensating for unavoidable loss of functions and resources; consideration of cumulative effects of development; and fair allocation of the burden of avoiding or mitigating cumulative impacts among development opportunities.

5. Shoreline restoration and enhancement activities should be designed to create or improve dynamic and sustainable ecosystems.

6. All shoreline restoration and enhancement projects should protect the integrity of adjacent natural resources including aquatic habitats and water quality.

7. The removal of dredge materials disposed of within an historic channel migration zone, frequently flooded area or associated wetland should be encouraged for the purpose of conservation and restoration. Upon removal of the materials, sites should be reclassified with the appropriate shoreline environment designation to protect ecological functions provided.

B. Restore damaged features or ecosystems to a higher quality than may currently exist to improve the overall condition of habitat and resources.

1. Facilitate publicly and privately initiated restoration projects through the adopted Shoreline Restoration Plan (Appendix B). The plan identifies degraded areas, sets overall goals and priorities for restoring these areas, identifies existing and proposed restoration projects and programs, and provides implementation strategies.

2. Encourage programs for recovery of threatened and endangered species to provide restoration and enhancement of critical habitat. Where possible, restoration and enhancement activities should be integrated and coordinated with other parallel natural resource management efforts.
3. Allow for improvements to stormwater management and treatment on sites that are developed or redeveloped in accordance with adopted stormwater, and alternative stormwater, best management practices and applications.

4. At such time that the County implements an In-Lieu Fee Program as provided for by the State, priority should be given to mitigation projects that provide for the removal of dredge materials disposed of within an historic channel migration zone, frequently flooded area or associated wetland.

C. Preserve the scenic and aesthetic qualities of shorelines and vistas.

1. Identify shoreline scenic and aesthetic qualities visible both from the land and the water that are derived from natural or cultural features, such as bluffs, beaches, vegetative cover and historic sites/structures, and ensure that shoreline use and development should not significantly impinge on the integrity of those views.

2. Ensure that the public’s visual access to the water and shoreline from publicly accessible areas, and a substantial number of residences, is not blocked or substantially constrained by new development.

3. Existing shoreline vegetation should be maintained in preference to creation or maintenance of views from property on the shoreline to protect shoreline ecological functions and aesthetics, with limited view corridors maintained by thinning and/or limbing only where it does not adversely impact ecological and aesthetic values or slope stability.

4.5 Economic Development

4.5.1 Goal

To encourage the economic development of Cowlitz County through development of resource, industrial, and commercial activities that support economic growth, with a preference for uses that are particularly dependent on their location relative to the shoreline.

4.5.2 Policies

A. Goals for economic development on the shorelines must be balanced with preserving the environmental quality of the adjacent shoreline area, surrounding areas, and the quality of life of county residents. All development must demonstrate that it results in no net loss of ecological functions through design and on-site and off-site mitigation. Mitigation needs should be coordinated with state and federal agency mitigation requirements.
B. Ports and water-related industry should be developed to utilize the national, state and local investment in the Columbia River Navigation Channel and preserve the Lower Columbia River as a destination for international commerce that serves the region and the nation.

1. Prior to allocating shorelines for non-water-oriented uses, the County should consider statewide needs and coordinate planning with other jurisdictions to ensure that adequate land is reserved for ports and water-dependent industrial uses.

2. Dredging of the Columbia River, lakes within Cowlitz County, and areas for vessel access to moorage and docks is essential to waterborne commerce and should be accommodated with appropriate provisions for protection of other resources.

3. Land transportation and utility facilities should be planned to meet long term needs of ports and water-related industry in the shoreline area. Where feasible, transportation and primary utility corridors should be located upland to reduce pressures for the use of waterfront sites.

4. Cooperative use of extensive in-water facilities should be encouraged in waterfront industrial areas.

5. Ports and water-related industries are encouraged to locate in areas with existing transportation, utility and other services. Preference will be given to development and redevelopment of existing port areas, but additional areas may be developed as the need arises.

6. Port and industrial facilities should avoid sensitive fish and wildlife habitat areas, wetlands and similar resources where possible.

7. Careful planning should be undertaken to reduce the adverse impact of docks and piers and associated industrial facilities on other water-dependent uses, aesthetics, and shoreline resources, particularly since such facilities are often longer and greater in bulk than recreational or residential piers.

8. Industrial/manufacturing firms that have a special need for a waterside location for receiving or shipping products by water should be encouraged to locate on the shoreline.

9. Port facilities should be designed to accommodate appropriate public access that would not interfere with port operations or endanger public health and safety. Facilities that permit viewpoints, waterfront restaurants, and similar public facilities should be considered as options.

10. New industrial development that is not water-oriented should be discouraged in shoreline jurisdiction unless such development provides a significant public
benefit, such as public access or ecological restoration, or if the site is physically separated from the shoreline by another property or public right-of-way.

C. Priority should be given to those commercial developments which are particularly dependent on their location and/or use of the shorelines of the state and other developments that will provide an opportunity for substantial numbers of the people to enjoy the shorelines of the state.

1. New commercial developments on shorelines should be encouraged to locate in those areas designated for commercial use in the Comprehensive Plan and where access and utilities are adequate.

2. Commercial developments should be designed to be compatible with their surroundings and, where appropriate, be buffered from adjacent residential areas and avoid encroaching on scenic views enjoyed by a significant number of people.

3. New commercial development that is not water-oriented should be discouraged in shoreline jurisdiction unless such development provides a significant public benefit, such as public access and/or ecological restoration, or if the site is physically separated from the shoreline by another property or public right-of-way.

D. Agriculture should be encouraged and maintained as part of the economic base of Cowlitz County.

1. Ensure new agricultural activities are consistent with the shoreline environment designation, and located and designed to avoid adverse impacts on other shoreline resources and values.

2. Encourage erosion control measures in accordance with the United States Department of Agriculture Natural Resources Conservation Service agency guidelines.

3. Limit livestock access to shoreline areas.

4. Control irrigation runoff to minimize discharge of chemicals, fertilizer, sediment, and organic materials in aquatic areas in accordance with federal and state water quality standards.

5. Allow diversion of water for agricultural purposes consistent with water rights laws and rules.

6. Encourage maintenance of vegetative zones between tilled areas and aquatic areas to reduce stormwater runoff, reduce sedimentation, and promote fish and wildlife habitat.
7. Confined animal feeding operations, retention and storage ponds for feedlot wastes, and stockpiles of manure solids should not be located in shorelines of the state, and discharges from such facilities should be controlled to avoid adverse water quality impacts.

E. Forestry should be encouraged and maintained as part of the economic base of Cowlitz County.

1. Ensure compliance with the State’s Forest Practices Act for commercial forest management.

2. Ensure forest practice conversions and other Class IV-General forest practices are conducted in a manner that assures no significant adverse impacts to other shoreline uses, resources and values such as navigation, recreation and public access.

F. Mining is a unique use as a result of its inherent linkage to geology. Mining is often an irreversible alteration of natural features and should not be located on shorelines unless resources are not available in upland areas.

1. Mining and associated activities should be designed and conducted to result in no net loss of shoreline ecological processes and function after final reclamation of the site. Preference should be given to mining proposals that result in the creation, restoration, or enhancement of habitat for priority species or provide long term public recreation resources.

2. Since mining developments may have lasting effect on the visual quality of the shorelines by leaving permanent scars, the visual quality and the views of residences and the public should be considered in any proposal. Proposals may be prohibited where the scenic and aesthetic qualities of the shorelines will be degraded and in areas having historical, geological, cultural, educational, and/or scientific values. Restoration requirements should include revegetation to restore a mined area to a character similar to that existing prior to mining.

3. Mining activities should be prohibited in Residential and Urban Conservancy environment designations.

G. Tourism should be encouraged as part of the economic base of the county and as a means of attracting talent and business to the county.

1. Shorelines should be recognized as a resource that attracts tourists for outdoor activities, including but not limited to hiking, biking, and fishing.

2. Water-oriented uses should be encouraged on shorelines to improve public access to public shorelines as a means of strengthening the tourist economy. Public information should highlight appropriate points for such access.
3. Water-related and water-enjoyment uses serving visitors, such as resorts and campgrounds, should be provided for in proximity to shorelines.

H. Signs are an important element of identification of businesses and services; they provide directions to destinations and they can be an important element of encouraging tourism. Employment of signs, however, must be balanced to preserve shoreline values.

1. Signs should be visually compatible with local shoreline visual quality as seen from both land and water, particularly on Shorelines of State-wide Significance, and should not impair scenic vistas and viewpoints available to the public.

2. In order to minimize negative visual impacts and obstructions to shoreline access and use, low profile, on-premise wall signs are strongly preferred over free-standing signs or off-premises wall signs.

3. Off-premise signs, including billboards, are not shoreline dependent and potentially can reduce public enjoyment of or access to the natural visual elements of the shorelines. Such signs should not generally be located on shorelines except for approved community gateway or directional signs.

4.6 Flood Prevention and Flood Damage Minimization

4.6.1 Goal

Protect existing development from flood damage while minimizing adverse impacts on natural functions of floodplains.

4.6.2 Policies

A. Recognize that flood control works, such as levees, are an existing and important feature to protect life and property in Cowlitz County. Maintenance and expansion of existing flood control works should be allowed provided that no net loss of ecological functions results.

B. Where feasible, non-structural methods or integrated bioengineering/soft engineering approaches to protect, enhance, and restore shoreline ecological functions and processes and other shoreline resources should be encouraged as an alternative to structural flood control works.

C. Protect existing development from flood damage:

1. Maintain existing levee and pump systems to effectively reduce flood hazards in areas currently protected by such facilities.
2. Provide for maintenance dredging of the Cowlitz River and other streams affected by continuing deposition of Mt. St. Helens volcanic deposits to maintain flow capacity and control risk of flooding.

3. New structural flood hazard reduction measures should be avoided whenever possible in order to avoid reducing floodplain functions crucial to fish and wildlife species, bank stability, and water quality. When necessary, they shall be consistent with an adopted comprehensive flood hazard management plan and accomplished in a manner that assures no net loss of ecological functions and ecosystem-wide processes.

4. Long-term programs for flood hazard reduction should include measures to prevent or remove development in flood-prone areas, to manage storm water within the floodplain, and to maintain or restore river and stream systems’ natural hydrological and geomorphological processes in addition to structural flood control measures such as levees.

5. Removal of gravel, as opposed to volcanic deposits, for flood management purposes should be avoided unless identified as a necessary part of an adopted flood hazard reduction plan or when part of ongoing maintenance to remove gravel and other sediments on the storage side of dams, and allowed only after a biological and hydraulic study shows that extraction has a long-term benefit to flood hazard reduction, and does not result in a net loss of ecological functions.

D. Reduce potential hazard to new development by reducing exposure to flood hazards to the extent feasible, while recognizing the need for water-oriented uses to locate near the water.

1. New development should be located outside of floodways and should avoid location in floodplains to the maximum extent feasible.

2. New development should be designed and located to preclude the need for flood control structures. New or expanded development or uses in the shoreline, including subdivision of land, that would likely require flood control structures within a stream, channel migration zone, or floodway should be prohibited.

3. Development should be discouraged in the channel migration zone if it would result in interference with the process of channel migration which may cause significant adverse impacts to property or public improvements and/or result in a net loss of ecological functions associated with the rivers and streams.

E. Support measures to restore floodplain and channel migration zone functions, including flood storage, off-channel habitat, associated wetlands, and buffers of native vegetation, through levee setbacks and similar programs.
4.7 Public Access

4.7.1 Goal

Assure safe and reasonable public access to public property along the shorelines in Cowlitz County.

4.7.2 Policies

A. Retain existing public access and develop additional access where such will not endanger life or property nor interfere with the rights inherent with private property.

1. Develop an integrated shoreline area public access system that identifies specific public needs and opportunities to provide public access and is integrated with other relevant Comprehensive Plan elements, especially transportation and recreation.

2. Establish policies and regulations that protect and enhance both physical and visual public access and increase the amount and diversity of public access to the state’s shorelines consistent with the natural shoreline character, property rights, public rights, and public safety.

3. Provide standards for the dedication and improvement of public access in developments for water-enjoyment, water-related, and non-water-dependent uses and for the subdivision of land into more than four parcels, unless such access is shown to be incompatible due to reasons of safety, security, or impact to the shoreline environment, in which case alternate methods of providing public access should be explored, such as offsite improvements.

4. Where public access can be safely provided, it should be considered as potential mitigation of impacts to shoreline resources and values for all water-related or water-dependent commercial and industrial development unless such improvements are demonstrated to be infeasible or inappropriate.

5. Commercial and industrial waterfront development should be encouraged to provide a means for visual and pedestrian access to the shoreline area wherever feasible, except in those cases where the development has security requirements that are not feasible to address through the application of alternative design features or other measures.

6. Where commercial or industrial use is proposed for location on land in public ownership, public access should be required.

7. Where facilities are located on state-owned aquatic lands, or other public lands, direct public use and access should be provided, particularly in marinas, unless
such access is shown to be incompatible due to reasons of safety, security, or impact to the shoreline environment.

B. Provide maximum height limits, setbacks, and provisions for view corridors to minimize the impacts to existing views from public property or substantial numbers of residences. Where there is an irreconcilable conflict between water-dependent shoreline uses or physical public access and maintenance of views from adjacent properties, the water-dependent uses and physical public access shall have priority, unless there is a compelling reason to the contrary.

C. Encourage port districts, public utility districts, local governments, and state agencies to incorporate public access planning into plans and capital programs, and require public entities to include public access measures as part of each development project, unless such access is shown to be incompatible due to reasons of safety, security, or impact to the shoreline environment.

D. Where the port district has incorporated public access planning through an open public process, that plan may serve as a portion of the County’s public access planning and may also justify more flexible off-site or special area public access provisions. The County may develop their own public access plan in association with other long-range planning efforts in the future.

E. Innovative approaches and facilities for public access should be considered, including offsite improvements, viewing platforms, separation of uses through site planning and design, and restricting hours of public access, subject to consideration of safety, environmental impacts, and constitutional limitations.

F. Future roads, when built paralleling shorelines, should provide multiple access/view points to the shoreline wherever possible to ease congestion.

4.8 Recreation

4.8.1 Goal

Assure that recreational opportunities, adequate to satisfy the diversity of demands from the region’s population, are provided. Water-oriented recreational facilities should be encouraged within the County shoreline jurisdiction.

4.8.2 Policies

A. Recreation facilities and programs should be designed to serve the amount and diversity of demands, including those requirements of the elderly and the physically challenged, resulting from existing and projected population and the regional and tourist demand for shoreline and water-related recreation.
1. Recreational development and programs should be coordinated with county and regional parks, recreation and trail plans, and policies. Federal, state and local government cooperation/coordination in the acquisition of additional shoreline property for public recreation uses should be encouraged.

2. Priority should be given to developments that provide recreational uses and other improvements facilitating public access to shorelines and should primarily relate to providing access to, enjoyment and use of the water and shorelines without displacing water-dependent economic uses.

3. In providing space for public recreation along the shorelines, give primary emphasis to providing for water-dependent recreational needs such as boating, kayaking, canoeing, swimming, fishing and other activities benefiting from shoreline access as well as retaining and expanding regional trail systems.

B. Recreation facilities within shorelines should be oriented to the specific resources and recreational opportunities available in land and water areas of the county.

1. Shoreline parks and public access points should be linked through the use of linear features. Many types of connections can be used, such as hiking paths, bicycle trails, and/or scenic drives.

2. Hunting and fishing are major recreational activities for residents of the County and the larger region, as well as those who enjoy observing and photographing wildlife. A variety of means of public access to public lands supporting these activities should be provided.

3. State-owned shorelines should be recognized as particularly adapted to providing wilderness beaches, ecological study areas, and other recreational uses for the public.

C. Recreational development and pursuits should be encouraged such that the balance of the natural system is not adversely affected and no net loss of shoreline ecological functions or ecosystem-wide processes results.

1. Access to recreational locations, such as fishing streams and hunting areas, should be a combination of areas and linear access (parking areas and easements, for example) to prevent concentrations of use and alleviate undue pressure on ecological resources at only a few points.

2. Attention should be directed toward the effect the development of a recreational site will have on the environmental quality and natural resources of an area.
3. The intensity of recreational use and the design of facilities should take into consideration the environmental quality and sensitivity of resources on the site and in the vicinity.

4. More intensive recreational facilities and activities should be provided in locations where shoreline resources are less sensitive and where access and utilities are sufficient to serve the level of activity.

5. Recreation facilities, such as ball fields and golf courses, which use large quantities of fertilizers and pesticides in their turf maintenance programs should be located in less environmentally sensitive areas and management plans prepared to prevent chemical and other materials from entering the water.

D. Recreational uses should be located and designed to be compatible with adjacent uses and avoid infringing on the privacy and property rights of adjacent properties.

E. Prioritize recreational development in coordination with the Cowlitz County Comprehensive Plan goals and policies for recreation.

F. Continue to work with neighboring jurisdictions and other governments to support local and regional opportunities for public recreation, shoreline access and use.

4.9 Transportation and Utilities

4.9.1 Goal

Develop a safe, convenient, multi-modal circulation system to serve movement of information, goods, and people for shoreline and other uses important to the economic development of the county and region with minimum disruption to the shoreline environment. Provide utility services necessary to protect the public and safety in a cost effective and efficient manner.

4.9.2 Policies

A. Utilities are recognized as an essential facility to accommodate economic development of Cowlitz County, and as facilities that must be carefully located and designed to be compatible with the natural landscape, and minimize conflicts with present and planned land and shoreline uses as well as the visual quality of the shoreline.

B. Plan, locate, and design proposed transportation facilities where routes will have the least possible adverse effect on unique or fragile shoreline features, and will not result in a net loss of shoreline ecological functions or adversely impact existing or planned water-dependent uses.
1. Where other options are available and feasible, new or expanded transportation facilities should not be built within shoreline jurisdiction except to serve public needs.

2. Where roads and other transportation facilities are allowed in the shoreline, they should be located and designed to minimize alteration of topography and other natural features of the shoreline.

C. Where feasible, existing shoreline roads should be reserved for slow-moving recreational traffic, pedestrians, and non-motorized modes of transportation, with provision for public access through trails, viewpoints, rest areas, and picnic areas, and should be coordinated with pedestrian, bicycle, and ATV trail plans.

D. Railroad corridors in the county often are a barrier to access to the shoreline; pedestrian crossings should be planned and implementation coordinated with the railroad.

E. Parking facilities in shorelines are not a preferred use and should be allowed only as necessary to support an authorized use.

F. All new and expanded utility facilities should be designed and located to assure no net loss of shoreline ecological functions; preserve the natural landscape, including avoiding impacts to critical areas and minimizing clearing of vegetation; and minimize conflicts with present and planned land and shoreline uses while meeting the needs of future populations in areas planned to accommodate growth.

G. New utility processing and production facilities should not be located in shoreline areas unless it can be demonstrated that no other feasible option exists.

H. Existing utilities that are located landward of a levee or other public right-of-way may be improved in accordance with the mitigation sequencing provisions contained in this Program.

I. Sewage treatment, water reclamation, desalination, power plants and similar facilities should be located outside of the shoreline where feasible and located where they do not interfere with, and are compatible with, recreational, residential, or other public uses of the water and shorelands. Waste treatment ponds for water-related industry should occupy as little shoreline area as possible.

J. Utilities should be located and designed to avoid public recreation and public access areas which are not already associated with hydropower facilities as well as avoid significant natural, historic or archaeological or cultural sites.

K. Utilities should be located in existing rights of way and corridors whenever feasible.

L. Transmission facilities for the conveyance of services, such as power lines, cables, and pipelines, not including hydropower transmission facilities, which do not serve
uses within the shoreline should be located outside of the shoreline area where feasible.

4.10 Other Shoreline Uses and Modifications

4.10.1 Other Shoreline Use Policies

A. Aquaculture

1. Aquaculture is a water-dependent use that should be given a priority for location on the shoreline and aquatic areas, provided that it is located and operated to achieve no net loss of ecological functions and minimize nuisance odors and noise.

2. Aquaculture should be located in areas where it will not interfere with the Columbia River Navigation Channel or navigational access of other water-dependent uses and residences.

3. Aquaculture facilities should be designed and operated to minimize adverse impact on the views enjoyed by upland owners and on the general aesthetic quality of the shoreline area. Emphasis should be placed on underwater and low profile structures which do not interfere with navigation or impair the aesthetic quality of shorelines.

B. Boating Facilities

1. New or expanded boating facilities should be located at sites with suitable environmental conditions, shoreline configuration, access, and neighboring upland and aquatic uses.

2. Boating facilities should be located and designed to ensure no net loss of ecological functions or other significant adverse impacts, and should, where feasible, enhance degraded and/or scarce shoreline features.

3. Boating facilities that minimize the amount of shoreline modification, in-water structures, and overwater cover are preferred.

4. Joint use of boating facilities is encouraged.

C. Institutional Uses

1. Priority should be given to water-oriented institutional uses within shoreline jurisdiction.

2. New or expanded institutional development that is not water-oriented should be discouraged in shoreline jurisdiction unless such development provides a
significant public benefit, such as public access or ecological restoration, or if the site is physically separated from the shoreline by another property, on the landward side of a levee, or public right-of-way, or water-oriented development is infeasible due to lot size, topography, critical areas, or some other similar circumstances.

3. Institutional uses that foster appreciation of shoreline historic, cultural, scientific, and educational resources are encouraged.

4. The location, design, construction and operation of institutional uses should not cause a net loss of shoreline ecological functions.

D. In-stream Structural Uses

1. Ensure the location, design, construction and maintenance of in-stream structures give due consideration to the full range of public interests, ecological functions and processes, and environmental concerns.

2. Priority consideration should be given to non-structural and non-regulatory approaches as an alternative to the construction of new in-stream structures.

E. Residential Development

1. Recognize single-family uses as a preferred use when developed in a manner that does not result in a net loss of ecological functions.

2. The design of residential uses should minimize the need for shoreline stabilization.

3. New multi-family and single-family residential development in shoreline jurisdiction, comprising more than four (4) lots or dwelling units, should provide for public access to the shoreline consistent with this Program.

4.10.2 Shoreline Modification Policies

A. General Policies

1. Allow shoreline modifications if the use or activity is permitted under this Program or where it can be demonstrated that the proposed activities are necessary to support or protect an allowed primary structure or a legally existing shoreline use that is in danger of loss or substantial damage or are necessary for reconfiguration of the shoreline for mitigation or enhancement purposes.

2. Allow shoreline modifications only when adverse impacts are avoided, minimized, and mitigated resulting in no net loss of shoreline ecological functions. The amount of mitigation required by this Program cannot exceed
that necessary to assure that development will result in no net loss of shoreline ecological functions and not have a significant adverse impact on other shoreline functions fostered by the policy of the Act. Mitigation needs should be coordinated with state and federal agency mitigation requirements.

3. The individual and cumulative effects of shoreline modification should not result in a net loss of ecological functions. Ecological impacts should be avoided and mitigated in accordance with the mitigation sequence of this Program.

4. As much as possible, the number and extent of shoreline modifications should be limited.

5. The removal of dredge materials, particularly volcanic ash, disposed of within frequently flooded areas should be encouraged for the purpose of conservation and restoration.

B. Shoreline Stabilization

1. New structural shoreline stabilization should be allowed only where demonstrated to be necessary to support or protect an allowed primary structure or legally existing shoreline use that is in danger of loss or substantial damage or where structural modifications are necessary for mitigation or enhancement purposes.

2. Types of shoreline stabilization that have a lesser impact on ecological functions are preferred.

3. Where adverse impacts are unavoidable from stabilization measures, mitigation should be required to assure no net loss of ecological function.

4. Where feasible, plan for enhancement of impaired ecological functions while accommodating permitted uses.

C. Breakwaters, Jetties, Rock Weirs, and Groins

1. May be permitted waterward of the OHWM only when necessary to support water-dependent uses, public access, shoreline stabilization, or other specific public purposes.

D. Residential Moorage Facilities: Docks, Buoys, and Marine Railways

1. Moorage buoys are preferred over docks where appropriate to minimize shallow water impacts.

2. Residential boating structures, including docks, buoys and marine railways, should be designed and constructed to avoid or, if that is not possible, to
minimize and mitigate the impacts to ecological functions, critical areas and aquatic habitats, and ecosystem wide processes.

E. Fill and Excavation

1. Fills and excavation should be located, designed, and constructed to protect shoreline ecological functions and ecosystem-wide processes including channel migration.

F. Dredging and Dredge Material Disposal

1. Dredging and dredge material disposal may be allowed provided they are done in a manner which avoids or minimizes significant ecological impacts; impacts which cannot be avoided should be mitigated in a manner that assures no net loss of shoreline ecological functions.

2. Dredging operations should conform to the operating standards specified on any federal and state permits required for such operations.

3. New development should be sited and designed to avoid or, if that is not possible, to minimize the need for new and maintenance dredging.

4. The necessary and ongoing maintenance dredging of Cowlitz County river systems, including the Columbia River, for flood control purposes, including actions by the U.S. Army Corps of Engineers, should be supported.
5. Shoreline Designations and Shorelines of Statewide Significance

5.1 Introduction

The intent of assigning shoreline designations to specific geographies is to encourage development that will maintain or enhance the present or desired character of the shoreline. To accomplish this, segments of shoreline are given a shoreline designation based on existing development patterns, natural capabilities and limitations, and the vision of Cowlitz County. The shoreline designations are intended to work in conjunction with the Cowlitz County Comprehensive Plan and zoning.

Management policies are an integral part of the shoreline designations and are used for determining uses and activities that can be permitted in each shoreline designation.

Chapters 6 and 7 contain development regulations to specify how and where permitted development can take place within each shoreline designation, and govern heights and setbacks.

5.2 Authority

Local governments are required under the Guidelines to develop and assign a land use categorization system known as “shoreline environment designations” (SEDs) for shoreline areas as a basis for effective shoreline master programs.

The County has accounted for different shoreline conditions by assigning an SED to each distinct shoreline section in County jurisdiction. The SEDs provide the framework for implementing shoreline policies and regulatory measures for environmental protection, use provisions, and other regulatory measures specific to each shoreline designation.

5.3 Shoreline Designation Interpretation

A. Shoreline jurisdiction maps are approximate. The OHWM and resultant upland, lateral extent of shoreline jurisdiction will need to be determined on a site-specific basis at the time of application. Any areas within shoreline jurisdiction that are not mapped and/or designated due to minor mapping inaccuracies in the upland extent of shoreline jurisdiction are automatically assigned the category of the contiguous upland shoreline environment designation.

B. All other areas that were not mapped in the shoreline jurisdiction, but which do meet the applicability criteria in Section 3.1, Applicability, shall be assigned a Rural Conservancy designation outside of Urban Growth Areas or Urban Conservancy designation inside of Urban Growth Areas until the shoreline can be designated through a Program amendment.
C. Property shown in shoreline jurisdiction that does not meet the definitions of shoreline or shoreland found in RCW 90.58.030 or the applicability criteria in Section 3.1, Applicability, shall not be subject to the requirements of this Program. The actual location of the OHWM must be determined at the time a development or use is proposed.

D. Associated wetlands, shown on the Shoreline Environment Designation Maps (Appendix A) as Potentially Associated Wetlands, are approximate and not necessarily confirmed. Such potentially associated wetlands must be confirmed and delineated at the time of application. Those portions of delineated associated wetlands would receive the adjoining SED designation. In the case that there is more than one adjoining SED, the most restrictive designation would be assigned.

E. Boundaries indicated as approximately following lot, tract, or section lines shall be so construed. Boundaries indicated as approximately following roads or railways shall be respectively construed to follow the nearest right-of-way edge.

5.4 Shoreline Environment Designations

The County classification system consists of SEDs that are consistent with and implement the Act, the Program, and the Cowlitz County Comprehensive Plan.

These designations have been assigned consistent with the corresponding criteria provided for each shoreline designation. In delineating shoreline designations, the County aims to ensure that existing shoreline ecological functions are protected with the proposed pattern and intensity of development. Such designations should be consistent with the policies for restoration of degraded shorelines. The SEDs are:

- High-Intensity
- Residential
- Urban Conservancy
- Rural Conservancy
- Natural
- Aquatic
- Recreation

5.4.1 High-Intensity Environment

Purpose

The purpose of the High-Intensity SED is to provide for high-intensity, water-oriented commercial, transportation, and industrial uses while protecting existing ecological functions and restoring ecological functions in areas that have been previously degraded.
**Management Policies**

A. Priority should be given to water-dependent, water-related, and water-enjoyment uses in that order of preference. Non-water-oriented uses should be allowed in limited instances when they do not interfere with or limit water oriented development or where there is no direct access to the shoreline because of another property or public right-of-way separating it from the shoreline.

B. Full utilization of existing urban and extensively altered areas should be achieved before further expansion of intensive development is allowed.

C. Non-water-oriented uses on sites adjacent to the water should provide public benefit in the form of ecological enhancement and/or public access in compliance with the provisions of this Program.

D. Where unavoidable impacts to ecological functions occur, appropriate mitigation should be provided in accordance with this Program to assure no net loss of ecological function. Where applicable, development should include environmental cleanup and restoration of the shoreline in accordance with relevant state and federal law.

E. Where feasible as described by this Program, visual and/or physical public access should be provided.

F. Aesthetic objectives of this Program should be considered consistent with the primary purpose of accommodating high-intensity development. Implementation of these objectives may include means such as sign regulations, maintenance of natural vegetative buffers, screening and architectural standards, and other standards.

**Designation Criteria**

The High-Intensity SED is given to shoreline areas within urban areas and industrial or commercial limited areas of more intensive rural development if they currently support or are planned for high-intensity uses related to commerce or transportation.

**5.4.2 Residential Environment**

**Purpose**

The purpose of the Residential SED is to accommodate residential development and appurtenant structures that are consistent with this Program.

**Management Policies**

A. Development should assure no net loss of shoreline ecological functions. New residential development should take into account the environmental limitations and
sensitivity of the shoreline area, the level of infrastructure and services available, and other comprehensive planning considerations.

B. Multi-family and multi-lot residential (greater than four [4] lots) and recreational developments should provide public access and joint use for community facilities in compliance with this Program.

C. Access, utilities, and public services should be available and adequate to serve existing needs and/or planned future development.

D. New commercial development should be limited to water-oriented uses.

**Designation Criteria**

The Residential SED is assigned to shoreline areas inside urban areas, rural areas of more intense development, or master planned resorts, if they are predominantly single-family or multi-family residential development or are planned and platted for residential development.

**5.4.3 Urban Conservancy Environment**

**Purpose**

The purpose of the Urban Conservancy SED is to protect and restore ecological functions of open space, floodplain, and other sensitive lands where they exist in urban and developed settings while allowing a variety of compatible uses including recreational areas, facilities, and utilities. Activities permitted in these areas are intended to have minimal adverse impacts upon the shoreline.

**Management Policies**

A. Primary allowed uses within this designation should preserve the natural character of the area or promote preservation of open space, floodplain, or other sensitive lands where they exist in urban and developed settings either directly or over the long term.

B. Standards for shoreline stabilization measures, vegetation conservation, water quality, and shoreline modifications within the Urban Conservancy environment designation should ensure that new development does not result in a net loss of shoreline ecological functions, and that significant ecological impacts can be mitigated.

C. Public access and public recreation objectives should be implemented whenever feasible, but only when any resulting significant ecological impacts can be mitigated.
D. Water-oriented uses should be given priority over non-water-oriented uses. For shoreline areas adjacent to commercially navigable waters, water-dependent uses should be given highest priority.

**Designation Criteria**

The Urban Conservancy SED is assigned to shoreline areas where development could occur while having the ability to maintain or restore ecological functions. These are shoreline areas that are not generally suitable for water-dependent uses within urban areas, or commercial or industrial limited areas of more intensive rural development that display any of the following characteristics:

A. Suitability for water-related or water-enjoyment uses;

B. Open space, floodplain, or other sensitive areas that should not be more intensively developed;

C. Potential for ecological restoration;

D. Retention of ecological functions, even though partially developed; or

E. Potential for development that is compatible with ecological restoration.

**5.4.4 Rural Conservancy Environment**

**Purpose**

The purpose of the Rural Conservancy SED is to protect ecological functions, conserve existing natural resources and valuable historic and cultural areas in order to provide for sustained resource use, achieve natural floodplain processes, and provide recreational opportunities. Examples of uses that are appropriate in a Rural Conservancy SED include low-impact outdoor recreation uses, timber harvesting on a sustained-yield basis, agricultural uses, aquaculture, low-intensity residential development, utilities, and other natural resource-based low-intensity uses.

**Management Policies**

A. Uses in the Rural Conservancy SED should be limited to those which sustain the shoreline area’s physical and biological resources.

B. Low-intensity, water-oriented commercial and industrial uses may be permitted in limited instances where those uses have been located in the past or at unique sites in rural communities that possess shoreline conditions and services to support the use. Agriculture, commercial forestry, and aquaculture, when consistent with provisions of this chapter, may be allowed.
C. Water-dependent and water-enjoyment recreation facilities that do not deplete the resource over time, such as boating facilities, angling, hunting, wildlife viewing trails, and swimming beaches, are preferred uses provided significant adverse impacts to the shoreline can be mitigated.

D. Mining and related activities may be an appropriate use within the Rural Conservancy SED when located and conducted in a manner consistent with this Program and with the mineral lands designation criteria pursuant to RCW 36.70A.170 and WAC 360-190-070.

E. Developments and uses that would degrade or permanently deplete the biological resources of the area should not be allowed.

F. New structural shoreline stabilization and flood control works should only be allowed where there is a documented need to protect an existing structure or ecological function. New development should be designed and located to preclude the need for such work.

G. Residential development standards should ensure no net loss of shoreline ecological functions and preserve the existing character of the shoreline. New residential development or expansion of existing residences should comply with all dimensional standards in this Program.

H. Shoreline modifications should be designed and managed to ensure that shoreline ecological functions are protected. Such shoreline modifications should not be inconsistent with provisions for restoration of shoreline ecological functions.

**Designation Criteria**

The Rural Conservancy SED is given to shoreline areas outside incorporated municipalities and other urban areas, if any of the following characteristics apply:

A. The shoreline is currently supporting lesser-intensity, resource-based uses, such as agriculture, forestry, or recreational uses, or is designated as agricultural or forest lands of long-term commercial significance;

B. The shoreline is currently accommodating residential uses outside incorporated cities or towns and other urban areas;

C. The shoreline is supporting human uses, but is subject to environmental limitations, such as properties that include or are adjacent to steep banks, floodplains, or other flood-prone areas;

D. The shoreline is of high recreational value or with unique historic or cultural resources; or

E. The shoreline has low-intensity, water-dependent uses.
5.4.5 Natural Environment

Purpose

The purpose of the Natural SED is to protect those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline functions. These systems require that only very low-intensity uses be allowed in order to maintain the ecological functions and ecosystem wide processes.

Management Policies

A. Any use that would substantially degrade the ecological functions or natural character of the shoreline area should not be allowed. These include, but are not limited to the following:

1. Commercial uses.
2. Industrial uses.
3. Non-water-oriented recreation.
4. Roads, utility corridors, and parking areas that can feasibly be located outside of shorelines with the Natural SED.

B. Single-family residential development may be allowed as a conditional use within this designation if the density and intensity of such use is limited as necessary to protect ecological functions.

C. Ongoing commercial timber production should be encouraged. Forest practice conversions and other Class IV-General forest practices should be conducted in a manner that assures no net loss of shoreline ecological functions or significant adverse impacts to other shoreline uses, resources, and values such as navigation, recreation, and public access. Commercial forestry may be allowed as a conditional use provided it meets the conditions of the State Forest Practices Act and its implementing rules.

D. Agricultural uses of a very low-intensity nature may be allowed when limited to assure that the use does not expand or alter practices in a manner inconsistent with the purpose of the designation.

E. Dredge disposal uses may be allowed as a conditional use provided they meet all of the conditions of this Program.

F. Scientific, historical, cultural, educational research uses, and low-intensity, water-oriented recreational uses may be allowed provided that no significant ecological impact on the area will result.
G. Significant vegetation removal that would reduce the capability of vegetation to perform normal ecological functions should not be allowed.

H. Subdivision of property should ensure that each new parcel can support its intended development without significant ecological impacts to the shoreline ecological functions.

**Designation Criteria**

The Natural SED is applied to shorelines that are ecologically intact and performing important ecological functions or are considered to represent ecosystems and geologic types that are of particular scientific and educational interest. Additionally, the Natural SED is applied to shorelines that are unable to support development or uses without significant adverse impacts to ecological functions or risk to human safety.

**5.4.6 Aquatic Environment**

**Purpose**

The purpose of the Aquatic SED is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary OHWM.

**Management Policies**

A. Allow new overwater and in-water structures only for water-dependent uses, public access, or ecological restoration. In order to reduce the impacts, multiple use of overwater facilities should be encouraged, and the size of new overwater structures should be limited to the minimum necessary to support the structure’s intended use.

B. All developments and uses on navigable waters or their beds should be located and designed to minimize interference with surface navigation, to consider impacts to public views, and to allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration.

C. Uses that adversely impact the ecological functions of critical freshwater habitats should not be allowed, except where necessary to achieve the objectives of RCW 90.58.020, and then only when their impacts are mitigated according to the preferred mitigation sequence of this Program, Section 6.1, No Net Loss of Ecological Function, to assure no net loss of ecological functions.

D. New and maintenance dredging should be permitted in accordance with applicable local, state, and federal standards and the provisions of this Program.

E. Shoreline uses and modifications should be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.
Designation Criteria

The Aquatic SED is applied to lands waterward of the OHWM.

5.4.7 Recreation Environment

Purpose

The Recreation SED is intended to provide areas for new and continued recreational and public access opportunities along shorelines, including public and private parks and recreational facilities. An additional purpose is to maintain ecological functions and open space.

Management Policies

A. New recreation development should result in no net loss of ecological function.

B. Water-dependent and water-enjoyment recreation facilities that do not deplete the resource over time, such as boating facilities, angling, hunting support structures, wildlife viewing trails, camping and picnic facilities, and swimming beaches, are preferred uses provided significant adverse impacts to the shoreline can be mitigated.

C. To the extent possible, recreational opportunities should be accessible by all populations.

D. New recreation design should encourage ecological stewardship by locating non-water-dependent activity areas away from the water’s edge and planting and maintaining native vegetation buffers along the water, where feasible.

Designation Criteria

The Recreation SED is applied to shoreline areas where public and private lands are devoted to or designated for recreation use, including parks and open space and water-dependent uses such as marinas which provide recreational moorage, as well as where lands are not yet developed but are planned for water-oriented recreation.

5.5 Shorelines of Statewide Significance

The Act designated certain shoreline areas as Shorelines of Statewide Significance (SSWS). SSWS rivers in Cowlitz County include the Columbia River, Cowlitz River, Lewis River, mainstem Toutle River and the Kalama River downstream from the National Forest boundary. SSWS lakes in Cowlitz County include Merwin Lake, Yale Reservoir and Silver Lake. Shorelines thus designated are important to the entire state. Because these shorelines are major resources from which all people in the state derive benefit, the County gives preference to uses which favor long-range goals and support the overall public interest. In accordance with RCW 90.58.020, SSWS will be managed as follows:
A. Every project located on a SSWS shall demonstrate consistency with the following priorities, in order of preference, in all permit review, in addition to compliance with other criteria provided by this Program:

1. Recognize and protect the statewide interest over local interest.
   a. Solicit comments and opinions from groups and individuals representing state-wide interests by circulating amendments to the Program, and any proposed amendments affecting SSWS, to state agencies, affected tribes, adjacent jurisdictions, citizen's advisory committees and local officials, and statewide interest groups.
   b. Recognize and take into account state agencies' policies, programs, and recommendations in developing and administering use regulations and in approving shoreline permits.
   c. Solicit comments, opinions, and advice from individuals with expertise in ecology and other scientific fields pertinent to shoreline management.

2. Preserve the natural character of the shoreline.
   a. Designate and administer shoreline environment designations and use regulations to minimize damage to the ecology and environment of the shoreline as a result of man-made intrusions on shorelines.
   b. Restore, enhance, and/or redevelop those areas where intensive development or uses already exist in order to reduce adverse impact on the environment and to accommodate future growth rather than allowing high-intensity uses to extend into low-intensity use or underdeveloped areas.
   c. Protect and preserve existing diversity of vegetation and habitat values, wetlands, and riparian corridors associated with shoreline areas.

3. Support actions that result in long-term over short-term benefit.
   a. Evaluate the short-term economic gain or convenience of developments relative to the long-term and potentially costly impairments to the natural shoreline.
   b. Protect resources and values of SSWS for future generations by modifying or prohibiting development that would irretrievably damage shoreline resources.
   c. Actively promote aesthetic considerations when contemplating new development, redevelopment of existing facilities, or general enhancement of shoreline areas.
4. Protect the resources and ecological function of the shoreline.
   a. Minimize development activity that will interfere with the natural functioning of the shoreline ecosystem, including, but not limited to, stability, drainage, aesthetic values, and water quality.
   b. All shoreline development should be located, designed, constructed, and managed to avoid disturbance of and minimize adverse impacts to wildlife resources, including spawning, nesting, rearing, and habitat areas and migratory routes.
   c. Balance public access demands with the need to preserve shoreline ecology. Public access shall be discouraged where it has the potential to impact sensitive shoreline resources.
   d. Shoreline materials including, but not limited to, bank substrate, soils, beach sands, and gravel bars should be left undisturbed by shoreline development. Gravel mining should be severely limited in SSWS shoreline areas.
   e. Preserve environmentally sensitive wetlands for use as open space or buffers and encourage restoration of currently degraded wetland areas.

5. Increase public access to publicly owned areas of the shoreline.
   a. Retain and enhance public access to the shoreline including passive enjoyment, recreation, fishing, and other enjoyment of the shoreline and public waters consistent with the enjoyment of property rights of adjacent lands.
   b. Give priority to developing a system of linear access consisting of paths and trails along the shoreline areas, providing connections across current barriers wherever feasible.
   c. Provide multipurpose non-motorized trail facilities in accordance with the provisions of the American’s with Disabilities Act, wherever feasible.

6. Increase recreational opportunities for the public on the shoreline.
   a. Plan for and encourage development of public facilities for water-oriented recreational use of the shoreline.
6. General Shoreline Regulations

This chapter contains general regulations which apply to all shorelines of the state that are located in Cowlitz County. The general regulations Chapter is used in conjunction with specific use and modification regulations found in Chapter 7.

6.1 No Net Loss of Ecological Function

A. All shoreline use and development, including preferred uses and uses that are exempt from permit requirements, shall be located, designed, constructed, conducted, and maintained in a manner that maintains shoreline ecological functions (RCW 90.58.020).

B. Shoreline ecological functions that shall be protected include, but are not limited to, fish and wildlife habitat, food web support, and water quality maintenance.

C. Shoreline processes that shall be protected include, but are not limited to, water flow; erosion and accretion; infiltration; groundwater recharge and discharge; sediment delivery, transport, and storage; large woody debris recruitment; organic matter input; nutrient and pathogen removal; and stream channel formation/maintenance.

D. Mitigation requirement. If a proposed shoreline use or modification is entirely addressed by specific, objective standards (such as setback distances, pier dimensions, or materials requirements) contained in this SMP, then the mitigation sequencing analysis described in subsection E, below, is not required. In the following circumstances, the applicant must provide a mitigation sequencing analysis as described in subsection E:

1. If a proposed shoreline use or modification is addressed in any part by discretionary standards (such as standards requiring a particular action if feasible, requiring a demonstration of need, or requiring the minimization of development size) contained in this Chapter, then the mitigation sequencing analysis is required for the discretionary standard(s); or

2. When an action requires a Shoreline Conditional Use Permit or Shoreline Variance Permit; or

3. When specifically required by this SMP.

E. Mitigation sequence. An application for any permit or approval shall demonstrate all reasonable efforts have been taken to provide sufficient mitigation such that the activity does not result in net loss of ecological functions. Mitigation shall occur in the following prioritized order:
1. Avoid the adverse impact altogether by not taking a certain action or parts of an action or by moving the action.

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

3. Rectify the adverse impact by repairing, rehabilitating, or restoring the affected environment.

4. Reduce or eliminate the adverse impact over time by preservation and maintenance operations during the life of the action.

5. Compensate for the adverse impact by replacing, enhancing, or providing similar substitute resources or environments. Preference shall be given to measures that replace the impacted functions on-site or in the immediate vicinity of the impact. However, alternative compensatory mitigation within the watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or comprehensive resource management plans may be authorized.

6. Monitor the adverse impact and compensation projects, and take appropriate corrective measures.

F. The amount of mitigation required by this Program shall not exceed the amount necessary to ensure that the proposed shoreline use or modification will result in no net loss of shoreline ecological functions and will not have a significant adverse impact on other shoreline functions fostered by the policy of the Act.

G. Adverse Impacts. Example of common actions that may result in adverse ecological impacts include, but are not limited to, the following:

1. Removal of native plant communities in shoreline jurisdiction;

2. Removal of trees or shrubs that overhang the water;

3. Removal of vegetation on slopes if that vegetation supports maintenance of slope stability and prevents surface erosion;

4. Removal or alteration of priority habitats or habitat for priority species;

5. Construction of new or expanded in- and over-water structures;

6. Construction of new or expanded shoreline stabilizations;

7. New discharges of water into shoreline waterbodies that may introduce pollutants;
8. Construction of new impervious surfaces whose discharges are not infiltrated and thus may alter hydrologic conditions of shoreline waterbodies; and/or

9. Changes in grading or fill that reduce floodplain capacity.

H. Applicants for permits have the burden of proving that the proposed development is consistent with the criteria set forth in this Program and the Act, including demonstrating all reasonable efforts have been taken to provide sufficient mitigation such that the activity does not result in net loss of ecological functions.

I. The County may coordinate with state and federal agencies regarding mitigation requirements.

6.2 Archaeological, Cultural, and Historic Resources

A. If historic, cultural, or archaeological sites or artifacts are discovered in the process of development, work shall be stopped immediately in accordance with the provisions of federal, state, and local laws, the site secured, and the find reported as soon as possible to the Director. The property owner also shall notify the Washington Department of Archaeology and Historic Preservation (DAHP) and affected tribes. Tribal contacts will be provided by the Director. The Director may provide for a site investigation by a qualified professional and may provide for avoidance or conservation of the resources in coordination with appropriate agencies. All shoreline permits shall contain a special provision notifying permittees of this requirement. Failure to comply with this requirement shall be considered a violation of the shoreline permit and shall subject the permittee to legal action as specified in Section 8.10, Enforcement.

B. Prior to approval of development in an area of known or probable cultural resources, the County shall require a site assessment by a qualified professional archaeologist in coordination with affected tribes. Conditions of approval may require preservation or conservation of cultural resources as provided by applicable federal, state, and local statutes. All permits issued for development in areas known to be archaeologically significant shall provide for monitoring of any development activity for previously unidentified cultural resources.

6.3 Critical Areas Protection

6.3.1 Applicable Critical Areas

For purposes of this Program, the following critical areas will be protected under this Program: Wetlands, Critical Aquifer Recharge Areas, Frequently Flooded Areas, Geologically Hazardous Areas, and Fish and Wildlife Habitat Conservation Areas.
6.3.2 General Provisions

A. Critical Areas and Buffers. Critical areas and critical areas buffers that are within shoreline jurisdiction are regulated by the Critical Areas Regulations [Chapter 19.15 CCC, approved December 20, 2016], which are herein incorporated into this Program, with the following clarifications and modifications.

1. The following provisions in the Critical Areas Regulations do not apply:
   a. Section 19.15.065 CCC, Non-conforming Uses.
   b. Section 19.15.070.E CCC, Exemption for utility lines in an existing right-of-way.
   c. Section 19.15.070.M CCC, Exemption for isolated and small wetlands.
   d. Section 19.15.190 CCC, Reasonable Use.
   e. Section 19.15.200 CCC, Appeals.

2. Wetlands.
   a. Standard Wetland Buffer Widths. As stated in 19.15.120.C.7.a CCC, the standard wetland buffer widths defined in Tables 19.15.120-B and 19.15.120-C of the Critical Areas Regulations presume the existence of a relatively intact native vegetation community in the buffer zone adequate to protect the wetland functions and values at the time of the proposed activity. For wetlands in shoreline jurisdiction, if the existing wetland buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.
   b. Wetland Buffer Width Flexibility. For wetlands in shoreline jurisdiction, reduction of the standard wetland buffer width as permitted through wetland buffer width averaging (19.15.120.C.7.d.i CCC) or wetland buffer width reduction (19.15.120.C.7.d.ii CCC) shall not exceed 25 percent of the standard wetland buffer width.

3. Fish and Wildlife Habitat Areas.
   a. Riparian Habitat Area (RHA) widths for shorelines of the state are defined in Section 7.1, Table 7-2 of this Program. With respect to shorelines of the state, the term “shoreline buffer” is interchangeable with the term “RHA” used in the Critical Areas Regulations.
b. Use of RHAs. Where uses and developments are proposed within the shoreline buffer, 19.15.130.E.3.f CCC, Use of Riparian Habitat Areas, shall apply, with the following modifications and clarifications (see Figure 6-1):

**Figure 6-1 Riparian Habitat Area for shorelines of the state**

![Riparian Habitat Area Diagram](image)

i. For shorelines of the state, the Outer Zone of the RHA is the outer one-quarter, or 25 percent of the standard RHA width. Where proposed use and development activities would occur within the Outer Zone only, a level one critical areas habitat assessment is required, and no development activities shall occur within the inner 75 percent of the standard RHA width.

ii. For shorelines of the state, the Inner Zone of the RHA is the inner three-quarters, or 75 percent of the standard RHA width. Where proposed use and development activities would occur partially or entirely within the Inner Zone, a level two critical areas habitat assessment is required, and the applicant shall demonstrate compliance with all applicable provisions of 19.15.130.E.5 CCC.

iii. All proposed use and development activities occurring partially or entirely within the RHA shall demonstrate mitigation sequencing in order to ensure no net loss of shoreline ecological functions, consistent with Section 6.1 of this Program.

4. Geologically Hazardous Areas. In addition to compliance with CCC 19.15.150.C Development Standards – General Requirements for All Geologically Hazardous Areas, all new or expanded uses or developments subject to the SMP within all geologically hazardous areas must also comply with the following:

a. New development or the creation of new lots that would cause foreseeable risk from geological conditions to people or improvements during the life of the development are prohibited.
b. New development that would require structural shoreline stabilization over the life of the development is prohibited, except when stabilization is necessary to protect allowed uses where no alternative locations are available and all other provisions of the Program are met.

B. Shoreline uses, activities, developments, and their associated structures and equipment shall be located, designed, and operated to protect the ecological processes and functions of critical areas. Where significant adverse impacts to critical areas are unavoidable, impacts shall be mitigated to ensure no net loss of ecological functions pursuant to Section 6.1 of this Program.

C. New and expanded development proposals shall integrate protection of wetlands, fish and wildlife habitat, and flood hazard reduction with other stream management provisions, such as retention of channel migration zones, to ensure no net loss of ecological functions.

D. Critical areas within the shoreline jurisdiction shall be regulated for any use, development, or activity as provided in accordance with this Program and the Critical Areas Regulations incorporated herein.

E. If provisions of the Critical Areas Regulations incorporated herein and other parts of this Program conflict, the provisions most protective of ecological resources shall apply.

F. Unless otherwise stated, critical area buffers shall be protected consistent with principles of no net loss, and in accordance with this Program and the Critical Areas Regulations incorporated herein.

G. These provisions do not extend the shoreline jurisdiction beyond the limits specified in this Program as defined in Section 3.1, Applicability. All critical areas and critical area buffers located in areas outside of the jurisdiction of the Shoreline Management Act shall be subject to the provisions of the Cowlitz County Municipal Code and the Washington State Growth Management Act.

6.4 Flood Prevention and Flood Damage Minimization

This Program addresses flooding in two different ways. This Section includes flood hazard reduction measures, including flood control works, intended to avoid increasing hazards and minimize damage. Section 6.3 includes flood hazard protections through the Critical Areas Regulations incorporated herein.

A. Development or uses in floodplains shall avoid significantly or cumulatively increasing flood hazards, and shall be consistent with applicable flood hazard regulations or management plans adopted pursuant to RCW 86.12, provided the plan has been adopted after 1994 and approved by Ecology.
B. New residential, commercial, or industrial development and uses, including subdivision of land, within shoreline jurisdiction are prohibited if it would be reasonably foreseeable that the development or use would require structural flood hazard reduction measures in the channel migration zone or floodway over the life of the development.

C. The following uses and activities may be authorized in floodways or channel migration zones when otherwise permitted by this Program:

1. Actions and development with a primary purpose of protecting or restoring ecological functions and ecosystem-wide processes.


3. Existing and ongoing agricultural practices, provided that no new restrictions to channel movement occur.

4. Bridges, utility lines, public stormwater and wastewater facilities and their outfalls, and other public utility and transportation structures, such as dams and hydroelectric facilities and associated recreational activities, where the alternative would result in unreasonable and disproportionate costs. Where such structures are allowed, mitigation shall address impacted functions and processes in the affected shoreline.

5. Repair and maintenance of an existing legally established use, including hydropower facilities and their accessory uses approved under a Federal Energy Regulatory Commission license, provided flood hazards to other uses are not increased and that the activity does not cause significant ecological impacts that cannot be mitigated.

6. Development in urban areas, where structures exist that prevent active channel movement and flooding.

7. Modifications or additions to an existing nonagricultural legal use provided that channel migration is not further limited and that the new development includes appropriate protection of ecological functions.

8. Measures to reduce shoreline erosion, provided that it is demonstrated that the erosion rate exceeds that which would normally occur in a natural condition, that the measures do not interfere with fluvial hydrological and geomorphological processes normally acting in natural conditions, and that the measures include appropriate mitigation of impacts to ecological functions associated with the river or stream.

D. Removal of materials for flood management purposes shall be consistent with an adopted flood hazard reduction plan and 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.

E. Channel Migration Zones: The Channel Migration Zone Maps are available for review in the Planning Department as either hard copy or computer-generated images of the County's Geographic Information System. Applicants may submit a site-specific CMZ study if they believe these conditions do not exist on the subject property and the map is in error. The CMZ study must be prepared consistent with WAC 173-26-221(3)(b), and may include, but is not limited to, historic aerial photographs, topographic mapping, flooding records, and field verification. The CMZ study must be prepared by a licensed geologist or engineer with at least five years of applied experience in assessing fluvial geomorphic processes and channel response.

F. Information Required. In addition to any information required as part of a critical areas assessment per the Critical Areas Regulations incorporated herein, the County shall require the applicant to provide the following information as part of an application for development within a flood hazard area.

1. Flood hazard area characteristics up and downstream or up-and-downcurrent from the project area;

2. Existing shoreline stabilization and flood protection works within the area;

3. Physical, geological, and soil characteristics of the area;

4. Biological resources and predicted impact to fish, vegetation, and animal habitat associated with shoreline ecological systems;

5. Predicted impact upon adjacent area shore and hydraulic processes, adjacent properties, and shoreline and water uses; and

6. Analysis of alternative flood protection measures, both structural and nonstructural.

6.5 Public Access

Public access provisions apply to all shorelines of the state unless stated otherwise and are intended to protect the ability of the general public to reach, touch, and enjoy the water’s edge, to travel on the waters of the state, and to view the water and the shoreline from adjacent locations.

A. Applicability (also see Figure 6-2):
1. Public access shall be required in the following circumstances:

   a. The use or development is a public project; or
   
   b. The project is a water-enjoyment or non-water-oriented use or development; or
   
   c. The project is a residential development of more than four (4) dwelling units; or
   
   d. The project is a subdivision of land into more than four (4) lots; or
   
   e. The project is a private water-dependent or water-related use or development and one of the following conditions exists:

      i. The project increases or creates demand for public access;
      
      ii. The project impacts or interferes with existing access by blocking access or discouraging use of existing access; or
      
      iii. The project impacts or interferes with public use of waters subject to the Public Trust Doctrine.

2. Public access to the shoreline shall not be required for the following:

   a. Activities qualifying for an exemption from the shoreline substantial development permit process;
   
   b. New single-family residential development of four (4) or fewer units;
   
   c. Minor modifications or expansion activities associated with existing uses licensed by the Federal Energy Regulatory Committee;
   
   d. If reasonable, safe, and convenient public access to the shoreline exists in the general vicinity, and/or the County or agencies’ plans show adequate public access at the property; or
   
   e. If the applicant can demonstrate with substantial evidence that at least one of the following conditions exist:

      i. Unavoidable health or safety hazards to the public exist which cannot be prevented by any reasonable means;
      
      ii. Inherent security requirements of the use cannot be satisfied through the application of alternative design features or other solutions;
iii. The cost of providing the access, easement, or an alternative amenity is unreasonably disproportionate to the total long term cost of the proposed development;

iv. Environmental impacts that cannot be mitigated, such as damage to spawning areas or nesting areas, would result from public access on-site;

v. Significant undue and unavoidable conflict between access provisions and the proposed use and/or adjacent uses would occur and cannot be mitigated; and/or

vi. It is demonstrated to be unconstitutional or otherwise illegal.
Figure 6-2: Public Access Applicability

Shoreline Permit Application

PUBLIC PROJECT

• Is the project a residential development or subdivision of more than four (4) dwelling units or lots?
• Is the project water-enjoyment or non-water oriented?
• Is the project water-dependent or water-related, and does the project:
  A. Increase or create demand for public access?
  B. Impact or interfere with existing access?
  C. Impact or interfere with public use of waters? (SMP 6.5.A.1)

PRIVATE PROJECT

 YES

Public Access is required

 NO

Public Access is not required

 YES

Public Access is not required

 NO

Public Access is required

• Are there unavoidable health or safety hazards to the public?
• Are there unavoidable security issues?
• Is the cost of providing the access unreasonably disproportionate to the total long term cost of the development?
• Would access cause environmental impacts that cannot be mitigated?
• Would access cause significant undue and unavoidable conflict with the proposed use and/or adjacent uses that could not be mitigated?
• Would access be unconstitutional or otherwise illegal? (SMP 6.5.A.2.e)
3. Off-site public access. Where public access is required, off-site public access may be approved if the applicant demonstrates that at least one of the following conditions exist:

   a. More effective public access can be provided off-site by focusing public access improvements at sites identified in a public access planning process conducted per WAC 173-26-221(4)(c), including the port district’s approved public access plan, where applicable; and/or

   b. All feasible on-site public access alternatives have been considered, including, but not limited to, regulating access through allowed hours of use, maintaining access gates, and/or separating uses and activities with fences, terracing, hedges, etc.

B. Public Access Standards:

1. When public access is required and provided on site, it shall be:

   a. Located and designed to be compatible with the natural shoreline character, to avoid adverse impacts to shoreline ecological functions, and to ensure public safety.

   b. Allowed to encroach into the shoreline buffer when necessary to provide physical and or visual access to the water’s edge when otherwise consistent with this Program and the Critical Areas Regulations incorporated herein.

   c. Connected to the nearest public street, where feasible, and shall include improvements that conform to the requirements of the (ADA) when feasible or required by law.

   d. Fully developed and available for public use prior to final occupancy when required for public land, commercial, port or industrial use/development.

   e. Clearly identified by signage installed and maintained in easily visible locations indicating the public’s right of access, hours of access, and other information as needed to control or limit access according to conditions of approval.

   f. Recorded by easement and permit conditions on the deed of title and/or the face of a short or long plat. Recordation shall occur at the time of final plat approval or prior to final occupancy.

   g. Consistent with all relevant constitutional and other legal limitations on regulation of private property.
2. Off-site or Alternative Public Access:
   a. When public access is provided off-site via Subsection 6.5.A.3, its location, design, and access type shall be consistent with standards provided above in Subsection 6.5.B.1.
   b. When public access is allowed off-site via Subsection 6.5.A.3, and if the County’s Shoreline Public Access Fund in lieu program has been formally developed, an applicant may elect to make a payment into the County’s Shoreline Public Access Fund in lieu of developing the access directly. Payment amounts, fund usage, and fund management information shall be found in the County’s adopted Shoreline Public Access Plan, to be developed, and as amended.

3. Public access requirements for a single-family residential development of greater than four (4) lots but less than ten (10) lots can be met by providing community access to the shoreline or to a common waterfront lot/tract for non-commercial recreation use by the property owners and guests within the subdivision.

6.6 Vegetation Conservation

A. All development shall minimize vegetation removal in areas of shoreline jurisdiction to the amount necessary to accommodate the permitted use. Mitigation sequencing per Section 6.1(E) of this Program shall be applied unless specifically excluded by this Program, so that the design and location of the development minimizes short- and long-term vegetation removal.

B. Vegetation within shoreline buffers, other stream buffers, wetlands or wetland buffers, or other critical areas shall be managed consistent with Table 7-2 of this Program and the Critical Areas Regulations incorporated herein. Buffers are defined for all shoreline waterbodies in Table 7-2 of this Program.

C. Other vegetation within shoreline jurisdiction, but outside of shoreline buffers, other stream buffers, wetlands and wetland buffers, and other critical areas shall be managed according to Section 6.1, No Net Loss of Ecological Function, of this Program, and any other regulations specific to vegetation management contained in this Program and Cowlitz County Code.

D. Vegetation conservation standards of this Program shall not apply retroactively in a way which requires lawfully existing uses and developments, including residential landscaping and gardens, to be removed, except as required as mitigation for new and expanded development. Routine maintenance of existing landscaping and gardens is allowed.

E. When restoring or enhancing shoreline vegetation, proponents shall use native species that are of a similar diversity, density, and type to that occurring in the
general vicinity of the site prior to any shoreline alteration. The vegetation shall be nurtured and maintained to ensure establishment of a healthy and sustainable native plant community over time.

F. Mitigation plans shall be approved before initiation of other permitted activities unless a phased schedule that ensures completion prior to occupancy has been approved.

G. Aquatic weed control shall only occur to protect native plant communities and associated habitats or where an existing water-dependent use is restricted by the presence of weeds. Aquatic weed control shall occur in compliance with all other applicable laws and standards and shall be done by a qualified professional.

H. Limbing or crown thinning shall comply with the Tree Care Industry Association pruning standards, unless the tree poses a safety hazard that cannot be eliminated by pruning, crown thinning, or other technique that maintains some habitat function. If a safety hazard cannot be easily determined by the Director, a written report by a certified arborist or other qualified professional is required to evaluate potential safety hazards. No more than 25 percent of the limbs of any single tree may be removed and no more than 20 percent of the canopy cover in any single stand of trees may be removed for view preservation.

I. Vegetation may be removed from levees, dikes, docks, airports, roads, and railways in accordance with the provisions of this Program, including the requirement to result in no net loss of ecological functions; as well as applicable federal, state, and local standards, including but not limited to the requirements of the U.S. Army Corps of Engineers, the Federal Aviation Administration, the Washington State Department of Transportation Aviation Division, and Cowlitz County.

6.7 Water Quality and Quantity

A. All shoreline development shall comply with the applicable requirements of the County’s Stormwater Manual and best management practices to prevent impacts to water quality and stormwater quantity that would result in a net loss of shoreline ecological functions and/or a significant impact to aesthetic qualities or recreational opportunities.

B. Stormwater management structures including ponds, basins, and vaults shall be located outside of shoreline jurisdiction where feasible, as far from the water’s edge as feasible, and shall minimize disturbance of buffers. Low-impact development facilities (which do not substantially change the character of the shoreline) such as vegetation filter strips, grass-lined swales, and vegetated bioretention and infiltration facilities, are encouraged in association with development allowed in shoreline jurisdiction.
C. Aerial application of pesticides, herbicides and fertilizers within shoreline jurisdiction is prohibited unless as part of a public agency program for control of noxious species or specific pests, or for quarantine or public health purposes.

D. Sewage management. To avoid water quality degradation, sewer service is subject to the requirements outlined below.

1. Sewage disposal facilities for any proposed use shall meet all applicable Department of Health standards, as set forth in WAC 173-272A, On-Site Sewage Systems.

2. Any existing septic system or other on-site system that fails or malfunctions will be required to connect to an existing municipal sewer service system if feasible, or make system corrections approved by the Cowlitz County Environmental Health Unit.

3. Any new development, which consists of an occupied use such as a business, park or recreation facility, single-family or multi-family unit, in an urban area will be required to connect to an existing municipal sewer service system, if service is available, or install an on-site septic system approved by Cowlitz County Environmental Health Unit.
7. Shoreline Use and Modification Regulations

The regulations in this chapter apply to specific uses and modifications within shoreline jurisdiction. In many circumstances, more than one section of use regulations will apply to a specific proposal. Guiding policies for uses and modifications are located in Chapter 4, Shoreline Master Program Goals and Policies.

7.1 Shoreline Use, Modification, and Standards Table

A. Table 7-1 Permit Requirements for Shoreline Uses and Modifications shall be used to determine which uses or modifications may be permitted, approved with conditions, or prohibited in each shoreline environment as applicable. These permit requirements apply only to new or expanded uses or modifications; legally established existing uses and modifications may continue to exist, be used, and be maintained and repaired. For those uses and modifications that meet the exemption criteria mentioned in Section 3.2, a shoreline substantial development permit is not required if Table 7-1 indicates “P.” However, if “CU” is listed for a use or modification that is exempt from the shoreline substantial development permit requirement, that use or modification must obtain a Conditional Use Permit. In the event conflicts exist between Table 7.1 and the text in this chapter, the text shall apply.

B. Table 7-2 Dimensional Standards shall be used to determine shoreline buffer widths, building setbacks, building height restrictions, and maximum lot coverage in each shoreline environment as applicable.

1. Shoreline buffers.
   a. Buffer widths for shorelines of the State are defined in Table 7-2 Dimensional Standards. With respect to shorelines of the State, the term “shoreline buffer” is interchangeable with the term “Riparian Habitat Area,” or “RHA,” used in the County’s Critical Areas Regulations. For non-shoreline streams and other critical areas in shoreline jurisdiction, see the Critical Areas Regulations, incorporated herein, for applicable buffers.
   b. Water-dependent uses and developments do not require shoreline buffers. Mitigation sequencing shall be applied to ensure no net loss of shoreline ecological functions, consistent with Section 6.1 of this Program.

2. Building setbacks.
   a. Building setback widths for shorelines of the State are defined in Table 7-2 Dimensional Standards. Setbacks are required in addition to the shoreline
buffer in order to ensure the integrity of the full buffer width, and shall be measured from the landward edge of the shoreline buffer.

b. Building setbacks do not apply to water-dependent uses and developments. Mitigation sequencing shall be applied to ensure no net loss of shoreline ecological functions, consistent with Section 6.1 of this Program.


a. There shall be a 35-foot maximum building height for all structures, except that the following are not subject to this restriction: bridges and, in the High-Intensity shoreline environment, water-oriented industrial structures and facilities meeting the requirements of Section 7.2.6(H) of this Program, and in-stream structures meeting the requirements of Section 7.2.8(B) of this Program.

b. Outside of the allowances of Subsection a. above, to exceed the 35-foot maximum building height an applicant must obtain a Shoreline Variance and comply with the following criteria in addition to standard Shoreline Variance criteria:

i. Demonstrate that the public interest will be served by accommodating the increased height;

ii. Demonstrate that the view of a substantial number of residences in areas adjoining such shorelines will not be obstructed; and

iii. Demonstrate that the increased height will not substantially interfere with views from a designated public place, vista, or feature specifically identified in an adopted local, state, or federal plan or policy.

4. Maximum lot coverage. Maximum lot coverage shall be consistent with the County’s Land Use Ordinance (CCC 18.10) and the standards in Table 7-2.

C. All uses and development activities proposed for jurisdictional shoreline areas must comply with all provisions of the Cowlitz County Code, as determined by the County.

D. Any uses not explicitly listed or substantially comparable to those included in the following table, as determined by the Director, shall be reviewed through a Shoreline Conditional Use Permit.
### Table 7-1. Permit Requirements for Shoreline Uses and Modifications

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<th>Shoreline Use or Modification</th>
<th>Shoreline Environment Designations</th>
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## Residential

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## Modifications (See Section 7.3, Shoreline Modification Regulations for specific modification regulations)

## Flood Control Works (see Section 7.2.8.D)
<table>
<thead>
<tr>
<th>Shoreline Use or Modification</th>
<th>Shoreline Environment Designations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Table Key:</strong></td>
<td><strong>High-Intensity</strong></td>
</tr>
<tr>
<td>P = May be permitted</td>
<td>P</td>
</tr>
<tr>
<td>through an SSDP or LOE</td>
<td></td>
</tr>
<tr>
<td>CU = May be permitted</td>
<td>P</td>
</tr>
<tr>
<td>through an SCUP review</td>
<td></td>
</tr>
<tr>
<td>X = Prohibited</td>
<td>P</td>
</tr>
<tr>
<td>Upland = Regulated consistent</td>
<td>P</td>
</tr>
<tr>
<td>with the adjacent upland environment designation</td>
<td></td>
</tr>
<tr>
<td>NA = Not Applicable</td>
<td>P</td>
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<table>
<thead>
<tr>
<th>Modification of Existing Flood Control Works (including relocation farther landward)</th>
<th>P</th>
<th>P</th>
<th>P</th>
<th>P</th>
<th>P</th>
<th>P</th>
<th>CU</th>
<th>Upland</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>New or Expanded Flood Control Works</th>
<th>P</th>
<th>CU</th>
<th>CU</th>
<th>CU</th>
<th>CU</th>
<th>CU</th>
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<th></th>
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**Residential Moorage and Launch Facilities**

<table>
<thead>
<tr>
<th>Private boat launches</th>
<th>X</th>
<th>X</th>
<th>X</th>
<th>X</th>
<th>X</th>
<th>X</th>
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<th>X</th>
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</thead>
<tbody>
<tr>
<td>Buoys</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>P</td>
</tr>
<tr>
<td>Docks</td>
<td>X</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Upland</td>
</tr>
<tr>
<td>Marine Railways</td>
<td>X</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Shoreline Stabilization**

<table>
<thead>
<tr>
<th>New soft structural stabilization</th>
<th>P</th>
<th>P</th>
<th>P</th>
<th>CU</th>
<th>P</th>
<th>CU</th>
<th>P</th>
<th></th>
<th>Upland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement soft structural stabilization</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New hard structural stabilization</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replacement hard structural</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>CU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breakwaters, Jetties, Weirs, and Groins</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td></td>
</tr>
<tr>
<td>Fill / Excavation</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>CU</td>
<td>P</td>
<td>CU</td>
<td>CU</td>
<td></td>
</tr>
<tr>
<td>Dredge and Dredge Material Disposal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Dredging</td>
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<td>NA</td>
<td>NA</td>
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<td>P</td>
<td></td>
</tr>
<tr>
<td>Dredge disposal</td>
<td>P</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU&lt;sup&gt;6&lt;/sup&gt;</td>
<td>CU&lt;sup&gt;9&lt;/sup&gt;</td>
<td>P</td>
<td></td>
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<tr>
<td>Shoreline Habitat and Ecological Enhancement</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td></td>
</tr>
</tbody>
</table>

**Table Notes**

1. Industrial and commercial developments and uses in the Rural Conservancy SED must comply with the Policy B in Section 5.4.4 of this Program.
2. Nonwater-dependent commercial uses are prohibited over water except in existing structures or where auxiliary to and necessary in support of water-dependent uses.
3. See the definition of Mixed-use in Chapter 2.
4. Caretaker residence only.
5. Transportation facilities, except non-motorized facilities consistent with 7.2.13(B), are only allowed in the Natural designation when no alternative location is feasible.
6. In the Natural Environment, expansion of a bridge by 50% or more of the existing width shall be reviewed through a SCUP, rather than an SSDP.
7. Parking must support an allowed primary use. Parking as a primary use is prohibited.
8. In the Residential, Urban Conservancy, Rural Conservancy, and Recreation environments, gas or oil transmission lines greater than 6 inches in diameter, electrical transmission lines greater than 50kv, and structural utility buildings, such as pump stations, electrical substations, dams or other facilities require an SCUP.
9. Primary utilities may be allowed provided there is no other feasible route or location in compliance with Section 7.2.14 of this program.
Structures installed to protect or restore ecological functions may be allowed in all environments through an SSDP.

Dredge disposal allowed through a SSDP on lands already covered by legally deposited dredge materials.

Dredge disposal allowed through a CU on lands already covered by legally deposited dredge materials. All other dredge disposal is prohibited.
## Table 7-2. Dimensional Standards

<table>
<thead>
<tr>
<th>Shoreline Environment Designation</th>
<th>Dimensional Standard</th>
<th>High-Intensity</th>
<th>Residential</th>
<th>Urban Conservancy</th>
<th>Rural Conservancy</th>
<th>Recreation</th>
<th>Natural</th>
<th>Aquatic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Shoreline Buffer²</td>
<td>Water-dependent: 0'</td>
<td>Water-dependent: 0'</td>
<td>Water-dependent: 0'</td>
<td>Water-dependent: 0'</td>
<td>Water-dependent: 0'</td>
<td>Water-dependent: 0'</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water-related: 50'</td>
<td>Other: 100'</td>
<td>Other: 50'</td>
<td>Other: 150'</td>
<td>Other: 150'</td>
<td>Other: 100'</td>
<td>Other: 150'</td>
</tr>
<tr>
<td></td>
<td>Building Setback³</td>
<td>10'</td>
<td>10'</td>
<td>10'</td>
<td>10'</td>
<td>10'</td>
<td>10'</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Maximum Height⁴</td>
<td>35'</td>
<td>35'</td>
<td>35'</td>
<td>35'</td>
<td>35'</td>
<td>35'</td>
<td>35'</td>
</tr>
<tr>
<td></td>
<td>Maximum Lot Coverage</td>
<td>N/A</td>
<td>See CCC 18.10.501</td>
<td>N/A</td>
<td>Residential: 10%</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

1. Water-oriented industrial structures and facilities meeting the requirements of Section 7.2.6(H) of this Program, and in-stream structures meeting the requirements of Section 7.2.8(B) of this Program, are not subject to these height restrictions.

2. Uses and developments may be allowed within the buffer and setback, subject to Section 6.1 No Net Loss, of this Program and Section 19.15.130.3.E.3 in the Critical Areas Regulations incorporated herein. In addition to the provisions of this Program, all structures and activities in shoreline buffers are subject to the County’s Critical Areas Regulations.

3. Building setbacks do not apply to water-dependent uses.

4. Bridges are not subject to the height standards.
7.2 Shoreline Use Regulations

7.2.1 Agriculture

A. For the purposes of this Program, the definitions in Chapter 2, Definitions, and WAC 173-26-020 apply for the terms agricultural activities, agricultural products, agricultural equipment and facilities, and agricultural land.

B. In accordance with RCW 90.58.065, this Program shall not restrict existing or ongoing agricultural activities occurring on agricultural lands. The regulations in this Program apply to:

1. New agricultural activities on land not meeting the definition of agricultural land,
2. Conversion of agricultural lands to other uses, and
3. Other development on agricultural land that does not meet the definition of agricultural activities.

C. New or expanded agricultural uses and developments shall conform to the requirements of this Program.

1. The use of tanks and troughs for animal watering is encouraged; allowing animals direct, unrestricted access to surface water is not permitted. If stream crossings are necessary, bridges, culverts, or ramps shall be used to enable animals crossing without damaging the streambed or banks and must conform to requirements of this Program.

2. Surface water drainage and runoff shall be diverted away from animal confinement and waste storage sites.

3. Animal confinement areas shall be graded to slope away from surface water.

4. Gutters and downspouts shall be installed on roofs to prevent excess water from entering animal confinement areas. The roof water shall be managed consistent with current stormwater standards.

5. Wetlands and Fish and Wildlife Habitat Conservation Areas and their buffers (see the Critical Areas Regulations incorporated herein) shall not be used as animal containment sites.

6. Confinement lots, feeding operations, lot wastes, stockpiles of manure solids, manure lagoons, and storage of noxious chemicals are prohibited in shoreline jurisdiction.
D. Fish hatcheries are considered aquaculture uses and shall be regulated under Section 7.2.2., with the exception of upland finfish rearing facilities, which are considered agricultural uses and shall be regulated under this section.

### 7.2.2 Aquaculture

A. Aquaculture undertaken for conservation or habitat restoration purposes is a preferred use within Cowlitz County’s shorelines. Allowed fisheries enhancement uses shall include hatcheries, rearing ponds, spawning channels, water diversion structures, and groundwater wells, provided that their construction does not result in a net loss of ecological function.

B. No aquatic species shall be introduced into Cowlitz County’s waters without prior written approval of the appropriate state agency for the species proposed for introduction. Such approval(s) shall be submitted in writing to the County as part of the shoreline permit application.

C. Aquaculture activities shall meet all applicable federal and state standards and regulations.

D. Consistent with mitigation sequencing, aquaculture uses and developments shall not interfere with surface water uses, including navigation, and must meet the no net loss criteria found in Section 6.1, No Net Loss of Ecological Function. Mitigation may be required where necessary to offset adverse impacts to normal public use of surface waters.

E. Site preparation and construction in the vicinity of aquaculture operations shall not result in off-site erosion, siltation, or other reductions in water quality.

F. Ongoing maintenance, replanting, restocking, or changing the culture technique or species cultivated in any existing or permitted aquaculture operation shall not require a new permit, unless or until:

1. The operation changes the scope and intent of the original permit, as determined by the Director; or

2. The facility proposes to cultivate species not previously cultivated in the state of Washington.

G. Aquaculture structures and activities that do not require a waterside location must be located landward of the shoreline buffers required by this Program.

### 7.2.3 Boating Facilities

A. Applicability. This section applies to all in-water and over-water structures and uses that facilitate the launching or mooring of vessels in water, including all docks,
marinas, mooring buoys, launch ramps, and recreational floats, with the following exceptions:

1. This section does not apply to docks, buoys, boat launches, and marine railways that are accessory to and serve four (4) or fewer single-family residences. Such facilities are regulated under Section 7.3.4 of this Program, Residential Moorage and Launch Facilities: Docks, Buoys, and Marine Railways.

2. This section does not apply to overwater homes and floating homes, which are regulated under Section 7.2.12 of this Program, Residential. This section does apply to live-aboard boats in marinas.

B. General Requirements:

1. New boating facilities.
   a. New boating facilities shall be sited and designed to ensure no net loss of shoreline ecological functions and shall meet Washington Department of Natural Resources requirements and other state guidance if located in or over state-owned aquatic lands;
   b. New boating facilities shall locate in areas where:
      i. There is adequate water mixing and flushing;
      ii. The structure would not block or obstruct lawfully existing or planned public shoreline access;
      iii. Such facilities will not adversely affect flood channel capacity or otherwise create a flood hazard;
      iv. Water depths are adequate to minimize new or maintenance dredging and other channel maintenance activities;
      v. The structure would minimize the obstruction of currents, alteration of sediment transport, and the accumulation of drift logs and debris;
      vi. New shoreline stabilization would not be needed. Where the need for stabilization is unavoidable, only the minimum necessary shoreline stabilization to adequately protect facilities, users, and watercraft may be allowed; and
      vii. Water depths are adequate to prevent floating structures from grounding out at the lowest low water or else stoppers are installed to prevent grounding out;
   c. New boating facilities shall not be located:
i. Along braided or meandering river channels where the channel is subject to change in alignment;

ii. On point bars or other accretion beaches;

iii. Where existing in-water navigation uses would be impaired or obstructed;

d. New boating facilities shall locate where access roads are adequate to handle the traffic generated by the facility and shall be designed so that lawfully existing or planned public shoreline access is not obstructed.

e. New boating facilities shall be constructed of materials that will not adversely affect water quality or aquatic plants and animals over the long term. Materials used for submerged portions, decking, and other components that may come into contact with water shall be approved by applicable state agencies for use in water.

f. New boating facilities shall be located far enough from public swimming beaches and fishing and aquaculture areas to avoid adverse impacts, safety concerns, and potential use conflicts.

g. Parking and storage areas shall be landscaped or screened to provide visual and noise buffering between adjacent dissimilar uses or scenic areas.

h. Lighting associated with overwater structures shall be beamed, hooded or directed to avoid causing glare on adjacent properties or waterbodies. Illumination levels shall be the minimum necessary for safety.

2. Accessory uses. New uses, developments, and activities accessory to boating facilities that are not water-dependent shall be:

a. Limited to water-oriented uses, including uses that provide physical or visual shoreline access for the general public;

b. Located as far landward as possible while still serving their intended purposes; and

c. Located outside any applicable shoreline buffer unless at least one of the following is met, in which case they shall be designed and located to minimize intrusion into the buffer. Any adverse impacts to ecological functions shall be mitigated:

i. Proximity to the water-dependent project elements is critical to the successful implementation of the facility’s purpose, and the elements are
supportive of the water-dependent use and have no other utility (e.g., a road to a boat launch facility); or

ii. The applicant’s lot/site has topographical or other constraints where no other location of the development is feasible (e.g., the water-dependent use or activity supported by the proposed accessory is located on a parcel entirely or substantially encumbered by the required buffer).

3. Replacement of existing boating facilities. If any of the following are proposed during a five-year period, the project is considered a new facility and must comply with applicable standards for new facilities.

   a. Replacement of the entire facility.
   
   b. Replacement of 75 percent or more of support piles.
   
   c. Replacement of 75 percent or more of a boat launch, by area.

4. Modification or enlargement of existing boating facilities.

   a. Applicants must demonstrate that there is a need for modification or enlargement due to increased or changed use or demand, safety concerns, or inadequate depth of water.
   
   b. Enlarged portions of existing boating facilities must comply with applicable standards for new facilities.

5. Repair of existing boating facilities.

   a. Repairs to existing legally established boating facilities are permitted consistent with all other applicable codes and regulations.
   
   b. All repairs must utilize any material standards specified for new facilities.

6. Extended moorage outside of marinas and over State-owned aquatic lands shall require a lease or permission from DNR. All impacts to navigation and access shall be mitigated.

C. Boat Launches

1. Launch ramps shall be designed and constructed using methods/technology that have been recognized and approved by state and federal resource agencies as the best currently available with consideration for site-specific conditions and the particular needs of that use.
2. There is no maximum length or width for boat launches; however, the proponent must demonstrate that the size proposed is the minimum necessary to allow the use proposed.

3. Non-motorized boat launches shall use clean gravel or other permeable material.

4. Additional standards for public boat launches are as follows:
   a. Public boat launches shall include adequate restroom and sewage and solid waste disposal facilities in compliance with applicable health regulations.
   b. When overwater development is proposed in association with a public boat launch facility, it may be permitted only where such use requires direct water access and/or where such facilities will substantially increase public opportunities for water access.
   c. Public boat launches shall be located and designed to prevent traffic hazards and to minimize traffic impacts on nearby access streets.
   d. Public boat launch sites shall include parking spaces for boat trailers commensurate with projected demand, but such parking facilities shall be located outside of applicable shoreline buffers and, when feasible, outside of shoreline jurisdiction unless one of the criteria in Subsection B.2.c above is met.

D. Docks

1. New dock construction, excluding docks accessory to single-family residences (regulated under Section 7.3.4), shall be permitted only when the applicant has demonstrated that a specific need exists to support the intended primary water-dependent use. For industrial, commercial, or public entities with water-dependent uses, a needs analysis or master plan that projects future needs for pier or dock space and that is consistent with this Program may be used to satisfy this requirement.

E. Covered moorage

1. Commercial covered moorage facilities may be permitted only where vessel construction or repair work is to be the primary activity and covered work areas are demonstrated to be the minimum necessary over water, including a demonstration that adequate upland sites are not feasible. Covered moorage facilities associated with any residential development shall be prohibited.

2. Covered moorage is not allowed on State-owned aquatic lands unless specifically authorized by Department of Natural Resources.
3. Covered moorage shall be designed and located to minimize adverse impacts caused by shading the water and blocking views, and shall be the minimum size necessary to support the water-dependent use.

F. Marinas

1. Marinas shall be located, designed, constructed and operated to:

   a. Avoid interference with the rights of adjacent property owners and water uses.

   b. Meet the criteria of no-net-loss of ecological function and the preferred mitigation sequence of this Program, set forth in Section 6.1.

2. New marinas or expansion of existing marinas shall be equipped with vessel pump-out facilities and shall provide on-shore sewage and waste disposal facilities. Marinas shall display visible signs stating that discharge of wastes into the water is prohibited.

3. Illumination shall be required for safety.

4. Restroom facilities shall be provided.

5. Where a marina includes gas and oil handling facilities, such facilities shall be separate from main centers of activity in order to minimize fire and water pollution hazards. These marinas shall have adequate facilities and procedures for fuel handling and storage and the containment, recovery, and mitigation of spilled petroleum, sewage, and other potentially harmful or hazardous materials.

6. New marinas must provide physical and/or visual public access for as many water-oriented recreational uses as possible, commensurate with the scale of the proposal.

7. Boaters living aboard vessels are restricted to marinas, may occupy up to twenty percent (20 percent) of the slips at a marina and shall be connected to utilities that provide potable water and wastewater conveyance to an approved disposal facility. Living aboard is not allowed at joint-use moorages.

7.2.4 Commercial

A. Water-dependent commercial uses are preferred over non-water-dependent commercial uses. Water-related and Water enjoyment use are preferred over non-water-oriented uses.
B. Non-water-dependent commercial uses shall not be allowed if they displace existing viable water-dependent uses or if they are proposed to occupy space designated for water-dependent uses identified in a previously approved SSDP or other approval.

C. New or expanded non-water-oriented commercial development may be allowed only when:

1. It is part of a mixed-use project including water-dependent uses and provides public access and/or ecological restoration;

2. Navigability is severely limited at the site and the development provides public access and/or ecological restoration; or

3. The site is physically separated from the shoreline by another property or public right-of-way and public access and/or ecological protection is provided.

D. An applicant for a new commercial use or development shall demonstrate that:

1. There will not be a net loss of shoreline ecological function due to the use or development; and

2. The use or development will have no significant adverse impacts or conflict with other existing preferred or priority shoreline uses.

E. Accessory development or uses that do not require a shoreline location, such as parking, service buildings or areas, utilities, signs, and storage of materials, shall be located outside of the shoreline jurisdiction, where feasible.

F. Overwater structures, or other structures waterward of the OHWM, are allowed only for those portions of water-dependent commercial uses that require overwater facilities as an essential feature of their function or for public access facilities and when allowed within the adjacent upland SED. Design of overwater structures or structures beyond the OHWM shall demonstrate that they will not interfere with normal stream geomorphic processes, require additional future shoreline stabilization, or interfere with navigation or normal public use of the water.

G. Where commercial developments are proposed in locations that would interrupt existing shoreline views, primary structures shall provide for reasonable view corridors. The Director may adjust project dimensions, such as building footprint(s) or side yard setbacks, and/or prescribe development operation and screening standards as deemed appropriate. Need and special considerations for landscaping and buffer areas shall also be subject to review.

H. New or expanded commercial development shall meet the criteria of no net loss of ecological functions and the preferred mitigation sequence of this Program, Section 6.1.
I. Only water-dependent elements of a proposal for commercial use may encroach on required buffers defined in Table 7-2 of this Program.

7.2.5 Forest Practices

A. Commercial harvest of timber undertaken on shorelines shall comply with the applicable policies and provisions of the Forests and Fish Report (U.S. Fish and Wildlife Service, et al., 1999) and the Forest Practices Act, RCW 76.09 as amended, and any regulations adopted pursuant thereto (WAC 222) as administered by the Washington Department of Natural Resources.

B. When timberland is to be converted to another use, such conversion shall be clearly indicated on the forest practices application. Failure to indicate the intent to convert the timberland to another use on the application shall result in denial of subsequent conversion proposals for a period of six (6) years from the date of the forest practices application approval per RCW 76.09.060(3)(d), (e), and (f); RCW 76.09.460; and RCW 76.09.470 subject to the provisions of Sections 40.260.080(A)(4)(a)(2) and (C). Subsequent development may be considered upon compliance with Chapter 17.20 CCC.

C. On shorelands adjacent to Shorelines of Statewide Significance, selective cutting shall be used and only thirty (30) percent of the merchantable trees may be harvested in any ten (10)-year period, provided that:
   
   1. Other timber harvesting methods may be permitted as a conditional use in those limited instances where the topography, soil conditions, or silviculture practices necessary for regeneration render selective logging ecologically detrimental; and

   2. Clear cutting of timber which is solely incidental to the preparation of land for other uses authorized by this chapter may be permitted as a conditional use.

D. Preparatory work associated with the conversion of land to non-forestry uses and/or developments shall be reviewed in accordance with the provisions for the proposed non-forestry use and the general provisions of this Program, including vegetation conservation.

7.2.6 Industrial

A. Water-dependent industrial uses are preferred over non-water-dependent industrial uses.

B. Water-related and non-water-oriented industrial uses shall not be allowed if they displace existing viable water-dependent uses or if they are proposed to occupy space designated for water-dependent uses identified in a previously approved SSDP or other approval.
C. Where industrial use is proposed for location on land in public ownership, public access shall be required consistent with Section 6.5, Public Access. Industrial development and redevelopment shall be encouraged to locate where environmental cleanup and restoration of the shoreline area can be incorporated.

D. New nonwater-oriented industrial development may be allowed in shoreline jurisdiction if:

1. The use is part of a mixed-use project that includes water-dependent uses and provides a significant public benefit with respect to the Shoreline Management Act's objectives such as providing public access and/or ecological restoration; or

2. Navigability is severely limited at the proposed site, and the industrial use provides a significant public benefit with respect to the Shoreline Management Act's objectives such as providing public access and/or ecological restoration; or

3. The site is physically separated from the shoreline by another property or public right of way, and public access and/or ecological protection is provided.

E. Waterward expansion of existing non-water-oriented industrial development shall conform to the buffer and setback provisions of this chapter. If the existing non-water-oriented industrial use does not conform to the setback and buffer provisions, the structure can still be expanded but only on the landward sides of the structure.

F. Proposed developments shall maximize the use of existing industrial facilities and avoid duplication of dock or pier facilities. Proposals for new industrial and port developments shall demonstrate the need for expansion into an unimproved natural area. Only water-dependent elements of a proposal for industrial use may encroach on required vegetated buffers of this Program.

G. Siting of accessory development or use within shoreline jurisdiction shall be limited to facilities required to serve approved water-oriented uses.

H. In the High-Intensity Shoreline Environment Designation, water-oriented structures and facilities which meet the following criteria are not subject to the height restrictions defined in Table 7-2 of this Program:

1. The applicant demonstrates a need for the proposed height of the structure or facility; and

2. The view of a substantial number of residences in areas adjoining such shorelines will not be obstructed.

I. Overwater structures, or other structures waterward of the OHWM, are allowed only for those portions of water-dependent industrial uses that require overwater facilities as an essential feature of their function and when allowed within the
adjacent upland SED. Design of overwater structures or structures beyond the OHWM shall demonstrate that they will not interfere with normal stream geomorphic processes, require additional future shoreline stabilization, or interfere with navigation or normal public use of the water.

7.2.7 Institutional

A. Water-oriented institutional uses and developments are preferred.

B. New or expanded non-water-oriented institutional uses may be permitted:

1. If navigability is severely limited at the proposed site, and the institutional use provides a significant public benefit with respect to the Shoreline Management Act’s objectives, such as providing public access and/or ecological restoration; or

2. If the site is physically separated from the shoreline by another property or public right-of-way, or water-oriented development is infeasible due to lot size, topography, critical areas, or some other similar circumstances; or

3. As part of a mixed-use development provided that a significant public benefit, such as public access and/or ecological restoration, is provided.

C. Loading, service areas, and other accessory uses shall be located landward of a primary structure or underground whenever possible but shall in no case be waterward of the structure.

D. New or expanded institutional development shall meet the criteria of no net loss of ecological function, set forth in Section 6.1, and the preferred mitigation sequence of this Program.

7.2.8 In-Stream Structures

A. In-stream structures include, but are not limited to, structures for hydroelectric projects (along with ancillary facilities and structures), irrigation, water supply and utility service transmission, and fish habitat enhancement. Operation, maintenance, and repair of in-stream structures may be permitted when:

1. The proposed activity will not increase the permanent footprint of the structure.

2. Areas impacted by temporary construction or stockpiling of materials are limited to the minimum area feasible, and all disturbed areas will be returned to their pre-project or improved ecological condition.

B. In the High-Intensity Shoreline Environment Designation, in-stream structures which meet the following criteria are not subject to the height restrictions defined in Table 7-2 of this Program:
1. The applicant demonstrates a need for the proposed height of the structure; and

2. The view of a substantial number of residences in areas adjoining such shorelines will not be obstructed.

C. Applications for new or expanded in-stream structural uses shall include the following information prior to final approval, unless the County determines that the issues are adequately addressed via another regulatory review process, such as Federal Regulatory Commission (FERC) provisions for hydroelectric dams:

1. A hydraulic analysis prepared by a licensed professional engineer that describes anticipated effects of the project on stream hydraulics, including potential increases in base flood elevation, changes in stream velocity, and the potential for redirection of the normal flow of the affected stream.

2. A management plan prepared by a qualified professional that describes the anticipated effects of the project on fish and wildlife resources, shoreline critical areas, and cultural resources, provisions for protecting in-stream resources during construction and operation, and measures to compensate for impacts to resources that cannot be avoided.

3. A description of sites proposed for the depositing of debris, overburden, and other waste materials generated during construction.

4. The proposed location and design of powerhouses, penstocks, accessory structures, and access and service roads for hydropower facilities.

5. Proposed provisions for accommodating public access to and along the affected shoreline, as well as any proposed on-site recreational features, provided that none of the following conditions exist:

   a. Unavoidable health or safety hazards to the public;

   b. Inherent and unavoidable security problems;

   c. Unacceptable and unmitigable significant ecological impacts;

   d. Unavoidable conflict with the proposed use; or

   e. A cost that is disproportionate and unreasonable to the total long-term cost of the development.

D. Flood Control Works. In addition to the other provisions of this section, flood control works shall comply with the following standards.

1. New or expanded structural flood hazard reduction measures, such as dikes, levees, berms, and similar flood control structures, shall be consistent with flood
hazard regulations or management plans adopted pursuant to RCW 86.12, provided the plan has been adopted after 1994 and approved by Ecology.

2. New or expanded structural flood hazard reduction measures shall be permitted only when it can be demonstrated by a scientific and engineering analysis that all of the following measures can be met:

   a. They are necessary to protect existing development.

   b. Non-structural flood hazard reduction measures are infeasible.

   c. Impacts to ecological processes and functions, including disruption to downstream ecological processes such as flooding, natural drainage flows, and storm water runoff, and priority fish and wildlife species and habitats can be successfully mitigated to ensure no net loss of functions, as set forth in Section 6.1, No Net Loss of Ecological Function.

   d. Appropriate vegetation conservation actions are undertaken consistent with Section 6.6, Vegetation Conservation.

3. New structural public flood hazard reduction measures, such as dikes and levees, shall dedicate and improve public access pathways unless public access improvements would cause:

   a. Unavoidable health or safety hazards to the public;

   b. Inherent and unavoidable security problems;

   c. Unacceptable and unmitigable significant ecological impacts;

   d. Unavoidable conflict with the proposed use; or

   e. A cost that is disproportionate and unreasonable to the total long-term cost of the development.

4. To the maximum extent feasible, new or altered dikes and levees shall be designed to be:

   a. No greater than the minimum height required to protect adjacent lands from the predicted flood stage as identified in the applicable comprehensive flood control management plan or as required by the U.S. Army Corps of Engineers for dike certification.

   b. Placed landward of associated wetlands and designated vegetation conservation areas, except for actions that increase ecological functions, unless there is no other feasible alternative to reduce flood hazard to existing development as determined by a geotechnical analysis.
c. Located and designed so as to protect and restore the natural character of the stream, avoid the disruption of channel integrity, and provide the maximum opportunity for natural floodway functions to take place including levee setbacks to allow for more natural functions of floodplains, channel migration zones, off-channel habitat, and associated wetlands directly interrelated and interdependent with the stream.

d. Planted with appropriate vegetation meeting any permit or certification requirements while providing the greatest amount of ecological function possible.

7.2.9 Log Storage

A. Log storage in the Aquatic environment designation shall be permitted only when:

1. Water quality standards can be met;
2. Grounding will not occur;
3. Associated activities will not hinder other beneficial uses of the water, such as small craft navigation; and
4. Fish and wildlife habitat conservation areas can be avoided.

B. No log raft shall remain in place for more than one (1) year, unless specifically authorized by the Director in writing.

C. Log storage facilities upland and waterward of the OHWM shall be sited to avoid and minimize the need for dredging in order to accommodate new barging and shall be located in existing developed areas to the greatest extent feasible. If a new log storage facility is proposed along an undeveloped shoreline, an alternatives analysis shall be required that demonstrates that it is not feasible to locate the facility within an existing developed area.

D. A debris management plan describing the removal and disposal of wood waste must be approved by the County. Debris monitoring reports shall be provided, where stipulated. Positive control, collection, treatment, and disposal methods for keeping leachate, bark, and wood debris (both floating and sinking particles) out of surface water and groundwater shall be employed at log storage areas, log dumps, raft building areas, and mill-side handling zones. In the event that bark or wood debris accidentally enters the water, it shall be immediately removed. Surface runoff from log storage areas shall be collected and discharged at only one point, if feasible.

E. Upland log storage areas shall meet the following requirements:
1. The ground surface of any unpaved log storage area underlain by permeable soils shall be separated from the highest seasonal water table by at least four (4) feet in order to reduce waste buildup and impacts on groundwater and surface water.

2. Stormwater shall be managed according to the latest version of the County’s Stormwater Manual.

3. Best management practices are utilized to prevent loss of wood debris into the water.

F. New or expanded log storage development shall meet the criteria of no net loss of ecological functions and the preferred mitigation sequence of this Program, set forth in Section 6.1, No Net Loss of Ecological Function.

7.2.10 Mining

A. Compliance with Other Applicable Regulations.

1. Mining in Washington is controlled by the Surface Mining Act of 1970 (RCW 78.44) and is administered by the Washington Department of Natural Resources. The provisions of this legislation shall be followed in all cases.

2. In addition to the provisions in this Program, all mining activities shall comply with the County’s mining regulations, held in Chapter 18.20 CCC.

B. An applicant for mining and associated activities within the shoreline jurisdiction shall demonstrate that the proposed activities are dependent on a shoreline location consistent the applicable SED, this Program and WAC 173-26-201(2)(a). Non-water-dependent mining activities are prohibited within shoreline jurisdiction.

C. Mining and associated activities shall be designed and operated to result in no net loss of shoreline ecological functions and processes as set forth in Section 6.1, No Net Loss of Ecological Function. To be approved, the applicant must demonstrate that there will be no:

1. Adverse impact on the structural integrity of the shoreline that would change existing aquatic habitat or aquatic flow characteristics; and

2. Changes in hydraulic processes to or from adjacent waterbodies that would damage aquatic habitat, shoreline habitat, or groundwater.

D. Mining waterward of the OHWM may be permitted only when the applicant demonstrates that:
1. Removal of specified quantities of sand and gravel or other materials at specific locations will not adversely affect natural gravel transport or other stream processes for the system as a whole.

2. The proposed mining and associated activities will not have significant adverse impacts on habitat for priority species and will not cause a net loss of shoreline ecological functions.

3. Determinations required by the above requirements must be made consistent with RCW 90.58.100(1) and WAC 173-26-201(2)(a).

4. In considering renewal, extension, or reauthorization of other mining operations waterward of the OHWM in locations where they have previously been conducted, the County must require compliance with this Subsection to the extent that no such review has previously been conducted. Where there has been prior review, the County must review previous determinations comparable to the requirements of this Section to assure compliance with this Subsection under current site conditions.

E. Disposal of overburden or other mining spoils or non-organic solid wastes shall comply with fill policies and regulations of this Program.

F. To ensure future use and aesthetics of the shoreline areas after completion of mining activities, the following provisions for land reclamation shall be met and shall be demonstrated in a reclamation plan approved by the Washington Department of Natural Resources that complies with the format and standards of RCW 78.44 and WAC 332-18:

1. All proposed subsequent use of mined property shall be consistent with the applicable SED and reclamation of disturbed areas shall provide for ecological functions consistent with the surroundings.

2. All reclamation shall be completed within two (2) years after discontinuance of mining operations.

3. All equipment, machinery, buildings, and structures shall be removed from the site upon discontinuance or abandonment of mining operations.

4. Backfill material used in site reclamation shall be natural materials. Combustible, flammable, noxious, toxic, or solid waste materials are not permitted as backfill or for on-site disposal.

5. Reclamation shall prevent future erosion and sedimentation. Topography of the site shall be restored to contours compatible with the surrounding land and shoreline area.
6. Final topography of the site shall not cause standing water to collect and remain on the site except as part of a sedimentation collection and removal system.

7. All exposed areas shall be revegetated utilizing native, self-sustaining plants suitable to the immediate shoreline environment.

G. The provisions of this Section do not apply to dredging of authorized navigation channels or management, placement, or beneficial reuse of dredged materials when conducted in accordance with WAC 173-26-231 and the provisions of this Program. Removal of previously deposited dredge materials above the OHWM is considered excavation and shall be regulated under Section 7.3.5.

H. Mining upland of the OHWM but within a Channel Migration Zone shall only be permitted through a shoreline conditional use permit.

7.2.11 Recreational

A. Recreation areas or facilities on the shoreline shall provide physical or visual access to the shoreline.

B. Recreation facilities and activities are permitted when they do not displace water-dependent uses and are consistent with existing water-related and water-enjoyment uses.

C. Only water-oriented elements of a recreational proposal may encroach on required vegetated buffers of this Program, except as outlined in the Critical Areas Regulations incorporated herein, Section 6.3.

D. Recreational development shall be located, designed, and operated in a manner consistent with the purpose of the environment designation in which it is located and shall meet the criterion of no net loss of ecological functions and the preferred mitigation sequence of this Program, set forth in Section 6.1, No Net Loss of Ecological Function.

E. Parking areas shall be located outside of shoreline jurisdiction, unless infeasible. When permitted within shoreline jurisdiction, parking areas shall be sited as far from the immediate shoreline as feasible. Applicants shall demonstrate the need for the proposed location.

F. Provisions shall be made for adequate vehicular parking and safe pedestrian crossings. Design of parking areas shall comply with all applicable County and State stormwater regulations.

G. All permanent, substantial recreational structures and facilities shall be located outside officially mapped floodways. Minor accessory uses (including, but not limited to, picnic tables and playground equipment) may be allowed in the floodway.
when it can be demonstrated by the applicant that there will be no net loss of ecological functions as set forth in Section 6.1, and all flood hazard criteria of this Program and the County’s flood protection code (Chapter 16.25 CCC, Floodplain Management) are met.

H. New non-motorized trails and paths for recreational use shall comply with the provisions of subsection 7.2.13.B, Non-Motorized Facilities.

I. New overwater structures for recreation use shall be allowed only when:

1. They accommodate water-dependent recreation use or facilities; or
2. They provide access for the public to enjoy the shorelines of the state; and
3. No net loss of ecological functions will be achieved as set forth in Section 6.1, No Net Loss of Ecological Function.

J. Recreational facilities shall provide adequate facilities for potable water supply, sewage disposal, and/or garbage collection where feasible.

7.2.12 Residential

A. Single-family residential development is a priority use on the shoreline when designed and developed to create no net loss of ecological functions, and in compliance with this Program as set forth in Section 6.1, No Net Loss of Ecological Function.

B. New residential development shall comply with the shoreline buffer provisions established in the Critical Areas Regulations incorporated herein, Section 6.3. Redevelopment or expansion of nonconforming residential structures shall also conform to the provisions in Chapter 3.3 of this SMP.

C. All new residential development:

1. Shall be designed such that no shoreline stabilization measures are necessary.
2. On steep slopes or bluffs shall be set back sufficiently to ensure that shoreline stabilization is unlikely to be necessary during the life of the structure, as demonstrated by a geotechnical analysis.
3. Shall be located and designed to minimize view obstructions to and from the shoreline.
4. Shall be prohibited in, over, or floating on the water.
5. Shall be prohibited in floodways and channel migration zones including associated sewage disposal systems.
D. Residential structures and associated appurtenances, accessory uses, and facilities serving a residential structure shall be located outside setbacks, critical areas, and buffers unless otherwise allowed by this Program to promote community access and recreational opportunities.

E. New residential lots shall be configured such that structural flood hazard reduction and shoreline stabilization measures will not be required in order for reasonable development to occur using geotechnical analysis of the site and shoreline characteristics.

F. New residential lots shall be configured such that siting and construction are feasible while achieving no net loss of ecological functions as set forth in Section 6.1.

G. Existing communities of floating and/or overwater residences shall be allowed to make improvements associated with life safety matters and property rights provided that any expansion of existing floating and/or overwater residences or communities does not increase the footprint of the use and is the minimum necessary to assure consistency with constitutional and other legal limitations that protect private property.

H. Where multi-family developments are proposed in locations that would interrupt existing shoreline views, primary structures shall provide for reasonable view corridors. The Director may adjust the project dimensions, such as building footprint(s) or side yard setbacks, and/or prescribe development operation and screening standards as deemed appropriate. Need and special considerations for landscaping and buffer areas shall also be subject to review.

I. No fence or landscape wall shall be placed waterward of the OHWM or closer to the water than the landward edge of the required setback line identified in Table 7-2, or in the Critical Areas Regulations incorporated herein, Section 6.3.

J. Sewage disposal facilities shall be provided in accordance with Section 6.7, Water Quality and Quantity.

### 7.2.13 Transportation and Parking

A. Roads, Railroads and Bridges

1. New or expanded surface transportation facilities not related to and necessary for the support of existing or planned authorized uses in shoreline jurisdiction shall be located outside of the shoreline jurisdiction unless infeasible. Where location outside of the shoreline jurisdiction is not possible, facilities (except for bridge components) shall comply with the buffers identified in Table 7-2, be set back from the OHWM a distance sufficient to make shoreline stabilization unnecessary, and shall demonstrate the need for the facility within the shoreline.
2. The applicant shall demonstrate that new or expanded facilities are designed to:
   
a. Minimize impacts to critical areas and associated buffers and to minimize alterations to the natural or existing topography to the extent feasible;

b. Avoid or minimize the need for shoreline stabilization; and

c. Follow the mitigation sequence of this Program to achieve no net loss of ecological functions as set forth in Section 6.1, No Net Loss of Ecological Functions.

3. New transportation crossings over streams shall be avoided, but where necessary shall utilize bridges rather than culverts to the extent feasible.

4. Requirements for bridge and culvert installation crossing all streams shall be consistent with flow-, debris- and/or fish-passage requirements in Washington Department of Fish and Wildlife’s site-specific Hydraulic Project Approval.

5. All excavation materials and soils exposed to erosion by all phases of road, railroad, bridge, and culvert work shall be stabilized and protected by seeding, mulching, or other effective means, both during and after construction.

6. Private access roads or driveways providing ingress and egress for individual single-family residences or lots shall be limited to the minimum width allowed by the fire code.

7. Bridges shall provide the maximum length of clear spans feasible with pier supports to produce the minimum amount of deflection feasible.

B. Non-Motorized Facilities

1. Non-motorized facilities, such as trails, shall comply with provisions for public access that are part of this Program.

2. New or expanded non-motorized transportation facilities shall be located outside of critical areas and their associated buffers. With demonstration that the trail cannot be located outside of the buffer, the trail may be located in the outer 25 percent of the critical area buffer. The following trail types are exceptions and may be located closer to the ordinary high water mark:

   a. Trails constructed for water access.

   b. Soft-surface trail (mulch, or dirt), not wider than three (3) feet, given the following:

      i. This exception does not apply to critical area buffers for Category I, II, or III wetlands;
ii. Trail construction and maintenance shall minimize removal of vegetation (trees, shrubs, etc.), avoid important wildlife habitat, and shall not result in a net loss of ecological functions;

iii. This exception does not apply to trail parking, shelters, bathrooms, and any similar related structures; and

iv. All provisions of the Critical Areas Regulations incorporated herein, are met.

3. Elevated walkways shall be utilized where feasible to cross wetlands and streams if a trail is not feasible outside of the critical area and associated buffer.

4. Non-motorized facilities constructed for water enjoyment and water access are encouraged; any impacts to ecological functions shall be avoided, minimized, and mitigated.

C. Parking. Parking facilities are not a preferred use and shall be allowed only where necessary to support an authorized use. Parking facilities accessory to a permitted use shall be:

1. Set back as far as possible from the OHWM and outside shoreline jurisdiction unless limited by lot size, topography, critical areas, or some other similar circumstances;

2. Parking facilities shall be located on the landward side of the primary structure unless demonstrated to be infeasible.

D. Facility lighting shall be designed and operated to avoid illuminating nearby properties or public areas; prevent glare on adjacent properties, public areas, or roadways to avoid infringing on the use and enjoyment of such areas; and to prevent hazards. Methods of controlling spillover light include, but are not limited to, limits on height of structure, limits on light levels of fixtures, light shields, setbacks, buffer areas, and screening. Lighting must be directed away from critical areas and adjacent waterbodies, unless necessary for public health and safety.

7.2.14 Utilities

These provisions apply to primary utilities, such as services and facilities that produce, convey, store, or process power, gas, wastewater, communications, oil, waste, and similar services and functions. On-site utility features serving a primary use, such as a water, sewer, or gas line to a residence or other approved use, are accessory utilities and shall be considered a part of the primary use.
A. New or expanded non-water dependent utilities or parts of utilities that are not water-dependent may be located within shoreline jurisdiction only when the applicant demonstrates:

1. No alternative location outside of shoreline jurisdiction is feasible based on analysis of alternative locations and technologies;

2. If a new corridor is proposed, utilization of existing corridors is not feasible, including expansion or replacement of existing facilities; and

3. The proposal minimizes changes to the visual character of the shoreline environment as viewed from the water and surrounding views to the water.

4. The above requirements do not apply to hydropower transmission lines that extend directly from the hydropower facility, which are considered water-dependent.

B. Construction and operation of the facility shall result in no net loss of ecological functions as set forth in Section 6.1, No Net Loss of Ecological Function.

C. Where overhead electrical transmission lines must parallel the shoreline, they shall be outside of shoreline jurisdiction unless infeasible due to site constraints, including but not limited to topography or safety, or must be located within an existing utility corridor.

D. Transmission, distribution, and conveyance facilities shall be located in existing rights-of-way and corridors. When an existing right-of-way or corridor is demonstrated to not be feasible, the new corridor shall cross shoreline jurisdictional areas by the shortest, most direct route, which avoids significant environmental damage.

E. Utility crossings of waterbodies shall be attached to bridges where feasible. Where attachment to a bridge is not feasible, underground construction methods that avoid surface disturbance are preferred, unless such utilities are proposed within an existing corridor.

F. All underwater pipelines transporting liquids intrinsically harmful to aquatic life or potentially harmful to water quality shall be equipped with automatic shut-off valves.

G. Structural utility buildings, such as pump stations, electrical substations, or other facilities, shall be located outside of shoreline jurisdiction unless infeasible. When permitted, these facilities shall be landscaped to provide compatibility with natural features and adjacent uses.
H. Stormwater outfalls may be placed below the OHWM to reduce scouring. New outfalls and modifications to existing outfalls shall be designed and constructed to avoid impacts to existing native aquatic vegetation attached to or rooted in substrate to the extent feasible.

I. The presence of existing utilities shall not justify more intense development. Rather, the development shall be consistent with the County Comprehensive Plan, zoning code, the SMA, and this SMP, and shall be supported by adequate utilities.

### 7.3 Shoreline Modification Regulations

#### 7.3.1 General Regulations

The following provisions shall apply to all shoreline modifications:

A. Structural modifications may be permitted only where they are demonstrated to be necessary to support or protect an allowed primary structure or a legally existing shoreline use that is in danger of loss or substantial damage, or for reconfiguration of the shoreline for mitigation or enhancement purposes.

B. Preference shall be given to shoreline modifications that have a lesser impact on ecological functions.

C. Modifications shall be designed to incorporate all feasible measures to protect ecological shoreline functions and ecosystem-wide processes.

D. Shoreline modifications shall be limited in number and extent and only allowed when appropriate to the specific type of shoreline and environmental conditions for which they are proposed.

#### 7.3.2 Shoreline Stabilization

A. For the purposes of this section, additions to or increases in size of existing shoreline stabilization measures shall be considered new structures.

B. Compliance with the following criteria shall be documented through geotechnical analysis by a qualified professional. Geotechnical assessments or reports pursuant to this Section shall address the necessity for shoreline stabilization by estimating timeframes and rates of erosion and shall report on the urgency associated with the specific situation.

1. Proposals for new shoreline stabilization shall demonstrate that proposed structures are the minimum size necessary, and comply with mitigation sequencing requirements in Section 6.1, No Net Loss of Ecological Function.
2. New development, including lots created by subdivision, shall demonstrate that new shoreline stabilization will not be necessary in order for reasonable development to occur.

3. Development on steep slopes (see Chapter 5 in the Critical Areas Regulations incorporated herein) shall be set back sufficiently to ensure that shoreline stabilization is unlikely to be necessary during the life of the structure.

4. Development that would require new shoreline stabilization that would cause significant impacts to adjacent or down-current properties and shoreline areas, shall not be allowed.

5. Hard armoring solutions shall be authorized only:
   a. When a report finds that a primary structure will be damaged within three (3) years from shoreline erosion without hard armoring measures; or
   b. If waiting to provide erosion protection until the need is immediate would foreclose the opportunity to use measures that avoid impacts on ecological functions.
   c. When hard armoring is not justified based on the above criteria, a geotechnical report may be used to justify protection against erosion using soft shoreline stabilization measures.

C. Shoreline stabilization shall be designed and constructed to avoid or minimize stream channel direction modification, realignment, and straightening; increased channelization of normal stream flows; or impacts to sediment transport.

D. New shoreline stabilization shall follow this hierarchy of preference:
   1. No action (allow the shoreline to retreat naturally).
   2. Non-structural methods such as increased building setbacks, relocating structures, and/or other methods to avoid the need for stabilization.
   3. Stabilization constructed of soft structural protection and bioengineering, including, but not limited to, beach nourishment, protective berms, or vegetative stabilization.
   4. Soft structural stabilization, as described above, in combination with hard structure stabilization, as described below, constructed as a protective measure.
   5. Hard structure stabilization constructed of artificial materials such as, but not limited to, riprap or concrete.
Applicants should consult applicable shoreline stabilization guidance documents, such as the Integrated Streambank Protection Guidelines, promulgated by state or federal agencies.

E. New structural shoreline stabilization measures to protect an existing primary structure or legally existing use, including residences, are only allowed when there is conclusive evidence, documented by a geotechnical analysis, that the structure or use is in danger from shoreline erosion caused by currents or waves rather than from upland conditions. Normal sloughing, erosion of steep bluffs, or shoreline erosion itself, without a scientific or geotechnical analysis, is not demonstration of need. The geotechnical analysis should evaluate on-site drainage issues and address drainage problems away from the shoreline edge before considering structural shoreline stabilization. Any new or expanded erosion control structures shall not result in a net loss of shoreline ecological functions.

F. New shoreline structural stabilization may be permitted in support of a water-dependent development when all of the conditions below are met as demonstrated in a geotechnical report by a qualified professional:

1. The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage.

2. There is a need to protect primary structures from damage due to erosion.

3. Non-structural measures, such as planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.

4. The stabilization structure will not result in a net loss of shoreline ecological functions.

G. New shoreline structural stabilization may be permitted in support of a new non-water-dependent development (including single-family residences) when all of the conditions below are met as demonstrated in a geotechnical assessment or report by a qualified professional:

1. The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage.

2. There is a need to protect primary structures from damage due to erosion caused by natural processes, such as currents or waves.

3. Non-structural measures, such as placing the development farther from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.
4. The stabilization structure will not result in a net loss of shoreline ecological functions.

H. New shoreline structural stabilization may be permitted to protect ecological restoration or hazardous substance remediation projects when the conditions below are met as demonstrated in a geotechnical report by a qualified professional:

1. Non-structural measures, such as planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.

2. The stabilization structure will not result in a net loss of shoreline ecological functions.

I. The construction of a shoreline stabilization structure, either “soft” or “hard,” for the primary purpose of creating dry land is prohibited.

J. Major Repair of Hard Structural Shoreline Stabilization

1. For the purposes of this Section, major repair of a hard shoreline stabilization measure shall include the following activities:

   a. Repair to an existing stabilization structure that has collapsed, eroded away or otherwise demonstrated a loss of structural integrity, in which the repair work involves modification of the toe rock or footings, and the repair is needed along 50 percent or greater of the linear length of the shoreline stabilization measure; or

   b. A repair to more than 75 percent of the linear length of the existing hard structural shoreline stabilization measure in which the repair work involves replacement of top or middle course rocks or other similar repair activities.

2. Major repair of hard structural shoreline stabilization shall be regulated as replacement in accordance with this Section.

K. Replacement of Hard Structural Shoreline Stabilization.

1. Replacement means the construction of a new structure to perform a shoreline stabilization function of an existing structure that can no longer adequately serve its purpose.

2. Additions to or increases in the size of existing shoreline stabilization measures shall be considered new structures.

3. Replacement of an existing shoreline stabilization structure with a similar structure is permitted if there is a demonstrated need to protect existing primary uses or structures from erosion caused by current or wave action. Replacement walls or bulkheads shall not encroach waterward of the OHWM or existing
structure unless the residence was occupied prior to January 1, 1992, and there are overriding safety or environmental concerns. In such cases, the replacement structure shall abut the existing shoreline stabilization structure. Soft shoreline stabilization measures that provide restoration of shoreline ecological functions may be permitted waterward of the OHWM. Replacement must result in no net loss of ecological functions.

L. Minor Repairs of Hard Shoreline Stabilization. Minor repairs of hard shoreline stabilization include those maintenance and repair activities not otherwise addressed in the Subsection above.

M. A publicly financed or subsidized shoreline stabilization project shall not restrict appropriate public access, except where such access is determined to be infeasible due to incompatible uses, safety or security concerns, or harm to ecological functions. Where feasible, such structural stabilization shall incorporate ecological restoration and public access. See Section 6.5, Public Access, for additional information.

N. Bioengineered projects shall be designed by a qualified professional in accordance with the most current, accurate, and complete scientific and technical information available, and shall incorporate a variety of native plants, unless demonstrated infeasible for the particular site.

7.3.3 Breakwaters, Jetties, Weirs, and Groins

A. Breakwaters, jetties, groins and weirs located waterward of the OHWM shall be allowed only where necessary to support water-dependent uses, public access, shoreline stabilization, or other specific public purpose.

B. Breakwaters, jetties, groins, weirs, and similar structures require an SCUP, except for those structures installed to protect or restore ecological functions, such as woody debris installed in streams.

C. Breakwaters, jetties, groins, and weirs shall be designed to protect critical areas and shall provide for mitigation according to the sequence defined in Section 6.1, No Net Loss of Ecological Function, of this Program.

D. Open pile or floating breakwater designs shall be used unless it can be demonstrated that riprap or other solid construction would not result in any greater net impacts to shoreline ecological functions, processes, fish passage, or shore features.
7.3.4 Residential Moorage and Launch Facilities: Docks, Buoys, and Marine Railways

This Section applies to docks, buoys, boat launches and marine railways that are accessory to and serve four (4) or fewer single-family residences. A dock associated with a single-family residence is considered a water-dependent use if it is designed and intended for access to watercraft and complies with the requirements of this Program. Other standards may be required by regulatory agencies with jurisdiction. All other docks, marinas, or other boating facilities are addressed as a use in Subsection 7.2.3.

A. A new moorage structure (dock or buoy) to serve a single-family residence may be allowed only when the lot does not have access to a shared structure and there is no homeowners association or other corporate entity capable of developing a shared structure.

B. Prior to approval of a new residential dock, an applicant shall demonstrate that a mooring buoy is not feasible to provide moorage.

C. When feasible, new residential development of two or more dwellings with new accessory docks shall provide joint use or community dock facilities to reduce ecological impacts of new overwater facilities. When the development serves five (5) or more dwellings, the structure is permitted as a Boating Facility under Subsection 7.2.3.

D. All new or expanded private moorage and launch structures shall meet the general requirements for boating facilities found in Subsection 7.2.3.A.

E. Private boat ramps are prohibited. Marine railways are allowed, provided they are designed and constructed using methods/technology that have been recognized and approved by state and federal resource agencies as the best currently available.

F. Docks shall meet the following standards:

1. Docks shall be restricted to the minimum size necessary to meet the needs of the proposed water-dependent use. The length of docks accessory to residential use/development shall be no greater than that required for safety and practicality for the residential use. The maximum length for residential docks shall be limited to either sixty (60) feet as measured perpendicular from the OHWM or the length necessary to provide a minimum of six (6) feet of water depth. The maximum width for residential docks shall be limited to six (6) feet. The dimensional standards may be adjusted as required by conditions of state and federal agency permits or authorizations, if the Director finds that such adjustment will better preserve ecological functions.

2. New or expanded covered moorage is prohibited.
3. Floats shall be constructed and attached so that they do not ground out on the substrate. Float stops, tubs, or similar structures may be used. A minimum of one (1) foot of elevation above the substrate is required.

4. Pile spacing shall be the maximum feasible to minimize shading and avoid a "wall" effect that would block or baffle wave patterns, currents, littoral drift, or movement of aquatic life forms, or result in structure damage from driftwood impact or entrapment.

5. Piling diameter shall be sized to use the minimum possible while meeting the structural requirements of expected loads.

6. Grating, or clear translucent material, shall cover the entire surface area of the pier and ramp and all portions of float(s) not underlain by float tubs or other material that provides buoyancy. The open area of grating shall have a minimum of sixty (60) percent open space, or as otherwise required by state or federal agencies with jurisdiction during permit review, unless determined to be infeasible due to specific site or project considerations. Clear translucent material shall have greater than ninety (90) percent light transmittance as rated by the manufacturer.

7. Docks shall be set back a minimum of ten (10) feet from side property lines, except that joint-use facilities may be located closer to, or upon, a side property line when agreed to by contract or covenant with the owners of the affected properties. This agreement shall be recorded with the county auditor and a copy filed with the shoreline permit application.

G. Unavoidable impacts from new or expanded private boat moorage or launch construction pursuant to this Section shall be minimized and mitigated consistent with the requirements of this Program.

H. Moorage or launch structures shall not be allowed in critical freshwater aquatic habitats unless it can be established that the structure, including auxiliary impacts and established mitigation measures, will not be detrimental to the natural habitat or species of concern and will not result in loss of ecological function.

**7.3.5 Fill and Excavation**

A. Fill may be placed in flood hazard areas only when otherwise allowed by the frequently flooded areas regulations in this Program (the Critical Areas Regulations incorporated herein, Chapter 4), and where it is demonstrated in a hydraulics analysis prepared by a qualified professional that adverse impacts to hydrogeologic processes will be avoided.
B. Fill below or waterward of the OHWM for any use except ecological restoration requires a Shoreline Conditional Use Permit. Fill may be placed below the OHWM only when it is demonstrated that the fill is necessary to:

1. Accomplish an aquatic habitat restoration plan;
2. Support a mitigation action, environmental restoration, beach nourishment or other enhancement project;
3. Correct the adverse results of past shoreline modification that have disrupted natural stream geomorphic conditions and adversely affected aquatic or terrestrial habitat;
4. Support a water-dependent use;
5. Serve as part of a public access proposal;
6. Support cleanup of contaminated sediments as part of an interagency environmental clean-up plan, or permitted under MTCA or CERCLA; or
7. Expand or alter transportation facilities of statewide significance currently located on the shoreline only when demonstrated that alternatives to fill are not feasible.

C. Consultation with DNR is required for any filling and excavation projects on State-owned aquatic lands.

D. Fill is restricted in wetlands or fish and wildlife habitat conservation areas in accordance with the critical areas standards in this Program, the Critical Areas Regulations incorporated herein, Chapters 2 and 3.

E. Disposal of dredge materials is not considered fill and shall be regulated under Subsection 7.3.6, Dredging and Dredge Material Disposal.

F. Excavation of previously deposited dredge materials above the OHWM may be permitted if the spoils site is part of a dredge materials management plan and the spoils were not originally placed as part of a beach nourishment or other shoreline restoration project.

G. Excavation below the OHWM is considered dredging and is subject to provisions in Subsection 7.3.6.

7.3.6 Dredging and Dredge Material Disposal

A. Consistent with mitigation sequencing principles outlined in Section 6.1, No Net Loss of Ecological Function, dredging and dredge material disposal shall be done in a manner which avoids or minimizes significant ecological impacts, and impacts which
cannot be avoided shall be mitigated in a manner that assures no net loss of shoreline ecological functions.

B. Dredging and in-water dredge disposal must be approved by state and federal agencies with jurisdiction, with documentation provided to the County as a condition of any shoreline permit.

C. New dredging shall be permitted only:

1. When establishing, expanding, maintaining or reconfiguring navigation channels, anchorage areas, and basins in support of existing navigational uses;
2. When implementing an approved regional dredge management plan for flood control purposes;
3. As part of an ecological restoration and enhancement project benefiting water quality and/or fish and wildlife habitat;
4. As part of a Model Toxics Control Act or Comprehensive Environmental Response, Compensation, and Liability Act project;
5. As part of an approved underground utility installation requiring trenches when boring, directional drilling, and other installation methods are not feasible;
6. In conjunction with a port, marina, bridge, navigational structure, wastewater treatment facility, hydroelectric facility, fish hatchery, or other water-dependent use for which there is a documented need and where other sites or methods are not feasible; or
7. When otherwise allowed by state and federal agencies including a Federal Energy Regulatory Commission license.

D. New development shall be sited and designed to avoid or, if that is not possible, to minimize the need for new and maintenance dredging.

E. Maintenance dredging shall be restricted to previously authorized locations, depths, and widths.

F. Dredging waterward of the OHWM for the primary purpose of obtaining fill material is allowed only when the material is necessary for the restoration of ecological functions. When allowed, the site where the fill is to be placed must be located waterward of the OHWM. The project must be either associated with a Model Toxics Control Act or Comprehensive Environmental Response, Compensation, and Liability Act habitat restoration project or, if approved through a Shoreline Conditional Use Permit, any other significant habitat enhancement project.
G. Dredge materials exceeding the Ecology criteria for toxic sediments shall be disposed of according to state and federal law. Proof of proper disposal at an upland permitted facility may be required.

H. Disposal of dredge material on shorelands or wetlands within a river’s channel migration zone shall be discouraged. In the limited instances where it is allowed, such disposal shall require a Shoreline Conditional Use Permit. Disposal of dredge material within wetlands or within a river’s channel migration zone shall be allowed only when proposed as part of an ecological restoration project demonstrated by a qualified professional to:

1. Improve wildlife habitat;

2. Correct the adverse results of past shoreline modification that have disrupted natural stream geomorphic conditions and adversely affected aquatic or terrestrial habitat; or

3. Create, expand, rehabilitate, or enhance a beach when permitted under this Program and any required state or federal permit including a Federal Energy Regulatory Commission license.

4. This provision is not intended to address discharge of dredge material into the flowing current of the river or in deep water within the channel where it does not substantially affect the geohydrologic character of the channel migration zone.

I. When allowed, dredge material disposal must meet the following standards:

1. Dredge disposal in shoreline jurisdiction shall be permitted only where it is demonstrated by a qualified professional that the disposal will not result in significant or ongoing adverse impacts to water quality, fish and wildlife habitat conservation areas and other critical areas, flood holding capacity, natural drainage and water circulation patterns, significant plant communities, prime agricultural land, and public access to shorelines. When such impacts are unavoidable, they shall be minimized and mitigated such that they result in no net loss of functions.

2. Where allowed in Table 7-1, dredge disposal both above and below the OHWM may be authorized if it is demonstrated that it complies with the provisions of Subsection I.1 above and one or more of the following:

   a. It benefits shoreline resources; or

   b. If applicable, it utilizes the guidance from the 2007, or as amended, U.S. Army Corps of Engineers and Environmental Protection Agency publication
EPA842-B-07-001, Identifying, Planning, and Financing Beneficial Use Projects Using Dredged Material – Beneficial Use Planning Manual; or

c. For dredging projects under U.S. Army Corps of Engineers jurisdiction, the disposal has been identified and evaluated through an approved Corps Dredge Management Material Program.

d. Is allowed under a previously approved Federal Energy Regulatory Commission license.

J. Dredging and dredge disposal shall be scheduled to minimize impacts to biological productivity (including, but not limited to, fish runs, spawning, and benthic productivity) and to minimize interference with fishing activities and other water-dependent uses.

7.3.7 Shoreline Habitat and Ecological Enhancement Projects

Shoreline habitat and ecological enhancement projects are those in which public and/or private parties engage to establish, restore, or enhance valued ecological sites.

A. Long-term maintenance and monitoring shall be included in restoration or enhancement projects.

B. Shoreline restoration and enhancement projects shall be designed using scientific and technical information and implemented using best management practices. Applicants should consult applicable guidance documents, such as the most current version of the Washington Department of Fish and Wildlife’s Stream Habitat Restoration Guidelines, promulgated by state or federal agencies.

C. Habitat creation, expansion, restoration, and enhancement projects may be permitted in all shoreline designations subject to required state or federal permits when the applicant has demonstrated that:

1. Spawning, nesting, or breeding fish and wildlife habitat conservation areas will not be adversely affected;

2. Water quality will not be degraded;

3. Flood storage capacity will not be degraded;

4. Streamflow will not be reduced;

5. Impacts to critical areas and buffers will be avoided and where unavoidable, minimized and mitigated; and

6. The project will not interfere with the normal public use of the navigable waters of the state.
D. Restoration and enhancement projects that include shoreline modification actions or activities such as vegetation removal, shoreline stabilization, dredging or filling may be authorized provided:

1. The applicant demonstrates that the primary purpose of such modification activity is clearly restoration of the natural character and ecological functions of the shorelines; and

2. The project addresses legitimate restoration needs and priorities.

3. The project is consistent with the goals of the Cowlitz County Shoreline Restoration Plan.
8. Shoreline Administration and Permits

8.1 Purpose

The purpose of this chapter is to provide provisions for the administration and enforcement of a permit system that shall implement the State Shoreline Management Act of 1971, Chapter 90.58 RCW; Ecology regulations and guidelines adopted as Chapters 173-26 and 173-27 WAC; and the Cowlitz County Shoreline Master Program, together with amendments and/or additions thereto.

Issuance of any shoreline permit or exemption by the County does not obviate requirements for other federal, state, or county permits, procedures, or regulations.

8.2 Shoreline Overlay

Shoreline regulations shall apply as an overlay and in addition to development regulations, including but not limited to land use and development codes, environmental regulations, development standards, subdivision regulations, and other regulations established by the County.

A. Allowed uses shall be governed by both the land use and development code regulations in the Cowlitz County Code and this Program. The most restrictive provisions of the applicable land use and development code district and shoreline environment designation shall apply.

B. Allowed uses shall be limited by the general policies and specific regulations regarding use preferences for water-dependent and water-oriented uses. Allowed uses may be specified and limited in specific shoreline permits. In the case of non-conforming development, the use provisions of this code shall be applied to any change of use, including occupancy permits (see Section 3.3, Nonconforming Development).

C. In the event of any conflict between shoreline policies and regulations and any other regulations of the County, shoreline policies and regulations shall prevail unless other regulations provide greater protection of the shoreline environment and aquatic habitat.

D. All regulations applied within the shoreline jurisdiction shall be liberally construed to give full effect to the objectives and purposes for which they have been enacted. Shoreline Master Program policies, found in the County’s Comprehensive Plan, establish intent for the shoreline regulations in addition to RCW 90.58 and Chapters 173-26 and 173-27 WAC.
8.3 Coordination with Other Agencies
The County will coordinate on issues relating to ecological conditions, functions, and processes and on wetland and OHWM delineations with Ecology, the Washington Department of Natural Resources, and the Washington Department of Fish and Wildlife, as well as other agencies with permit authority over a project to the extent that agencies are timely in their response, and coordination does not unduly extend review times.

8.4 Development Compliance
A. All uses and developments within the jurisdiction of the Shoreline Management Act shall be planned and carried out in a manner that is consistent with this Program and the policies of the Act as required by RCW 90.58.140(1), regardless of whether a Shoreline Substantial Development Permit, Letter of Exemption, Shoreline Variance, or Shoreline Conditional Use Permit is required. The County shall ensure compliance with the provisions of this Program for all permits and approvals processed by the County.

B. Regulation of private property to implement any Program goals such as public access and protection of ecological functions must be consistent with all relevant constitutional and other legal limitations. These include, but are not limited to, property rights guaranteed by the United States Constitution and the Washington State Constitution, applicable federal and state case law, and state statutes, such as RCW 34.05.328 and 43.21C.060.

C. Compliance with the provisions of this chapter does not constitute compliance with other federal, state, and local regulations and permit requirements that may be required (for example, Washington Department of Fish and Wildlife Hydraulic Project Approvals (HPAs), U.S. Army Corps of Engineers Section 404 permits, Ecology Water Quality Certification (Section 401) and National Pollution Discharge Elimination System permits). The applicant is responsible for complying with these requirements, apart from the process established in this chapter.

8.5 Administration
The County’s program for the administration of permits under the Shoreline Management Act shall be as set forth in this chapter.

8.5.1 Responsible Official
A. The provisions of this Chapter shall be administered by the Director of the Department of Building and Planning or his or her duly authorized designee.

B. The Director is vested with the authority to:
   1. Administer this SMP.
2. Review and consider applications for Shoreline Substantial Development Permits (SSDP).

3. Grant, condition, or deny exemptions from Shoreline Substantial Development Permit requirements of this SMP.

4. Grant, conditionally grant, or deny Level I Shoreline Substantial Development Permits.

5. Submit Level II Shoreline Substantial Development permit applications or Shoreline Conditional Use permit (SCUP) and Shoreline Variance applications to, and make written recommendations and findings on such permits to, the Hearing Examiner for their review and decision or recommendation. The Director shall assure that all relevant information and testimony regarding the application is available to the Hearing Examiner during their review.

6. Make field inspections as needed, and prepare or require reports on shoreline permit applications.

7. Make written recommendations to the Hearing Examiner as appropriate.

8. Advise interested persons and prospective applicants as to the administrative procedures and related components of this SMP.

9. Determine and collect fees for all necessary permits as provided in County ordinances or resolutions. The determination of which fees are required shall be established by resolution of the Board of County Commissioners.

10. Make administrative decisions and interpretations of the policies and regulations of this SMP and the SMA. The Director shall consult with the Department of Ecology to ensure that any formal written interpretations are consistent with the purpose and intent of chapter 90.58 RCW and the applicable guidelines.

8.5.2 County Compliance with SEPA

The Director shall ensure that any official action will comply with the State Environmental Policy Act, the SEPA Rules and the Cowlitz County SEPA Ordinance.

8.5.3 Fees and Charges

The fees and charges for processing applications for shoreline permits, and for other administrative actions under this chapter, shall be as established from time to time by resolution by the Board.
8.5.4 Violation Reports

The Director shall transmit Shoreline Management Act violation reports to the Cowlitz County Prosecuting Attorney’s office and/or the Department of Ecology for prompt appropriate legal action. See Section 8.10 for possible County actions that may be taken in response to non-compliance or other violations.

8.6 Shoreline Permit Application Procedures

8.6.1 Application for Permit

A. All applications for a permit required under the Shoreline Management Act, Chapter 90.58 RCW, and information related thereto, shall be submitted to the Department of Building and Planning. Upon receipt of the permit application, the Director shall determine whether the information submitted meets the requirements of WAC 173-27-180, Application requirements for Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, or Shoreline Variance; RCW 90.58.140, Development permits; and any additional information required by the Director.

B. Planning Clearance for Critical Areas. Prior to the County’s consideration of any proposed shoreline development not found to be exempt from the critical areas review process under Section 19.15.070 CCC, Exemptions, of the County’s critical areas regulations, incorporated herein, the applicant shall first obtain Planning Clearance pursuant to Section 19.15.090 CCC, Planning clearance and permitting.

C. The Director may refer the permit application for a review by interested departments for knowledgeable comments from departmental staff. All pertinent county departments shall participate. Whenever public notice is required during the environmental review process, it shall be provided per Chapter 19.11 CCC.

8.6.2 Hearing Examiner Action

A. The Hearing Examiner is vested with the authority to hear appeals of Level I SSDP decisions or, exemption decisions, made by the Director, and to hear, grant, condition, or deny Level II SSDPs, SCUPs, or Shoreline Variances after considering the findings, public testimony, and the advice of the Director.

B. For applications involving Level II SSDPs, SCUPs, and Shoreline Variances, the Hearing Examiner shall hold a public hearing prior to taking action. The mailing and legal advertisement for such public hearing shall be made not less than 30 days prior to the open record public hearing.

The Hearing Examiner has discretion to hold a public hearing on other types of regulatory appeals (e.g., SEPA) transmitted by the Director prior to taking action on the appeal.
C. There shall be no more than one open record hearing on any application regulated by this Section, except for those applications which are associated with a determination of significance under SEPA and this Chapter.

8.6.3 Public Notice Requirement

A. The following notice shall be provided for each application for an SSDP, SCUP, or Shoreline Variance at least 30 days prior to a decision.

1. Within fourteen (14) days after the County has made a determination of completeness on the project permit application, the County shall issue public notice including:

a. The date of application, the date of the notice of completion for the application, and the date of the notice of application;

b. A description of the proposed project action and a list of the project permits included in the application and, if applicable, a list of any studies requested by the Director;

c. The identification of other permits not included in the application to the extent known by the County;

d. The identification of existing environmental documents that evaluate the proposed project, and the location where the application and any studies can be reviewed;

e. A statement of the public comment period, which shall be not less than thirty (30) days following the date of notice of application;

f. A statement of the right of any person to comment on the application, receive notice of and participate in any hearings, request a copy of the decision once made, and any appeal rights. Public comments shall be accepted at any time prior to the closing of the record of an open record hearing, provided that the public record may be kept open for written statement after closing of the hearing, or, if no open record hearing is provided, prior to the decision on the project permit;

g. The date, time, place, and type of hearing, if applicable and scheduled at the date of notice of the application;

h. A statement of the preliminary determination, if one has been made at the time of notice, of those development regulations that will be used for project mitigation and of consistency; and

i. Any other information determined appropriate by the Director.
B. Public notice shall include:

1. Mailing of the notice to the latest recorded real property owners as shown by the records of the county assessor within at least three hundred (300) feet of the boundary of the property upon which the development is proposed.

2. Posting of the project site.

3. Publication in a newspaper of general circulation in the general area of the proposal. If an open record public hearing is required, notice shall include the time and place of the hearing, or an additional notice shall be provided at least fifteen (15) days prior to the hearing.

4. Notice to all agencies with jurisdiction per chapter 43.21C RCW and to all other agencies that request in writing any such notice.

8.6.4 Approval Criteria for All Development

A. In order to approve any development within SMP jurisdiction, the County must find that a proposal is consistent with the following criteria:

1. All policies and provisions of the Shoreline Management Act appropriate to the shoreline environment and the type of use or development proposed shall be met.

2. All use regulations of this Program appropriate to the shoreline environment and the type of use or development proposed shall be met, particularly the preference for water-oriented uses. If a non-water-oriented use is approved, the Director shall enter specific findings documenting why water-oriented uses are not feasible.

3. All bulk and dimensional regulations of this Program appropriate to the shoreline environment designation and the type of use or development proposed shall be met, except those bulk and dimensional standards that have been modified by approval of a Shoreline Variance Permit.

4. All policies of this Program appropriate to the shoreline environment designation and the type of use or development activity proposed shall be considered and compliance demonstrated, subject to liberal construction to give full effect to the objectives and purposes for which they have been enacted.

8.6.5 Written Findings Required

All permits or Letters of Exemption issued for development or use within shoreline jurisdiction shall include written findings prepared by the Director addressing compliance with policies and regulations of this Program. The Director may attach conditions to the
approval of exempt developments and/or uses as necessary to ensure consistency of the project with the Act and this Program.

8.6.6 Time Requirements for Shoreline Permits

A. The time requirements of this Section shall apply to all SSDPs and to any development authorized pursuant to a Shoreline Variance or SCUP authorized under this Program.

B. No construction pursuant to an SSDP shall begin or be authorized and no building, grading, or other construction permits or use permits shall be issued by the County until 21 days from the date an SSDP was filed with Ecology and the Attorney General, or until all review proceedings are completed as were initiated within twenty-one (21) days of the date of filing. Filing shall occur in accordance with RCW 90.58.140(6) and WAC 173-27-130.

C. No permits and construction pursuant to an SCUP or Shoreline Variance shall begin or be authorized until 21 days from the date of notification of Ecology’s final decision, or until all review proceedings are completed, as were initiated within the twenty-one (21) days of the date of filing. Filing shall occur in accordance with RCW 90.58.140(6) and WAC 173-27-130.

D. Unless a different time period is specified in the shoreline permit as authorized by RCW 90.58.143, construction activities, or a use or activity for which a permit has been granted pursuant to this Program, must be commenced within two (2) years of the effective date of a shoreline permit, or the shoreline permit shall terminate and a new permit shall be necessary. However, the Director may authorize a single extension for a period not to exceed one year based on reasonable factors if a request for extension has been filed with the County before the expiration date and notice of the proposed extension is given to parties of record and Ecology. Construction activities or commencement of construction means that construction applications must be submitted, permits must be issued, and foundation inspections must be approved and completed.

E. A permit authorizing construction shall extend for a term of no more than five (5) years after the effective date of a shoreline permit, unless a longer period has been specified pursuant to RCW 90.58.143. If an applicant files a request for an extension prior to expiration of the shoreline permit, the Director shall review the permit, and upon a showing of good cause, may authorize a single extension of the shoreline permit for a period of up to one year; otherwise, said permit shall terminate. Notice of the proposed permit extension shall be given to parties of record and Ecology. To maintain the validity of a shoreline permit, it is the applicant’s responsibility to maintain valid construction permits in accordance with adopted building codes.
F. If it is determined that standard time requirements of Subsections D and E should not be applied, the Director, upon a finding of good cause, may establish shorter time limits, provided that as a part of action on a Shoreline Conditional Use Permit or Shoreline Variance, the approval of Ecology shall be required. “Good cause” means that the time limits established are reasonably related to the time actually necessary to perform the development on the ground and complete the project that is being permitted.

G. For purposes of determining the life of a shoreline permit, the effective date of an SSDP, SCUP, or Shoreline Variance shall be the date of filing as provided in RCW 90.58.140(6). The permit time periods do not include the time during which a use or activity was not actually pursued due to the pendency of appeals or legal actions, or due to the need to obtain any other government permits and approvals for the development that authorize the development to proceed.

H. It is the responsibility of the applicant to inform the Director of the pendency of other permit applications filed with agencies other than the County, and of any related administrative or legal actions on any permit or approval. If no notice of the pendency of other permits or approvals is given to the County prior to the expiration date established by the shoreline permit or the provisions of this Section, the expiration of a permit shall be based on the effective date of the shoreline permit.

I. If the granting of a shoreline permit by the County is appealed to the Shoreline Hearings Board, and the Shoreline Hearings Board has approved the granting of the permit, and an appeal for judicial review of the Shoreline Hearings Board decision is filed, construction authorization may occur subject to the conditions, time periods, and other provisions of RCW 90.58.140(5)(c).

8.6.7 Surety Devices

The Director may require the applicant to post a surety device in favor of the County to ensure full compliance with any terms and conditions imposed on any shoreline permit. Said surety device shall be in an amount to reasonably assure the County that any deferred improvement will be carried out within the time stipulated and in accordance with approved plans.

8.6.8 Construction Permit Compliance

For all development within shoreline jurisdiction, the Building Official shall not issue a construction permit for such development until compliance with this Program has been documented. If a shoreline permit is required, no construction permit shall be issued until all comment and appeal periods have expired. Any permit issued by the Building Official for such development shall be subject to the same terms and conditions that apply to the shoreline permit.
8.6.9 Filing Permits with the State

Any final decision on an application for a shoreline permit under authority of this Program, whether it is an approval or denial, shall, with the transmittal of the decision to the applicant, be filed concurrently with Ecology and the Attorney General by the County. Filing shall occur in accordance with RCW 90.58.140(6) and WAC 173-27-130.

8.6.10 Appeals

A. Level I SSDP decisions or exemption decisions may be appealed, by applicants or parties of record, to the Hearing Examiner. Any such appeal shall be filed in writing within 20 calendar days of the issuance of the decision. The Director shall provide the Hearing Examiner with findings and documentation relating to the decision being appealed. The appellant carries the burden of proof on appeal.

B. Any person aggrieved by the granting, denying, or rescinding of a permit on shorelines of the state pursuant to RCW 90.58.140 may seek a review from the Shorelines Hearings Board by filing a petition for review within twenty-one (21) days of the “date of filing” of the decision as provided for in RCW 90.58.140(6).

8.7 Permit Review and Processing Requirements

A. Permit Required. Development as defined by this Program and RCW 90.58.030 shall be allowed only upon issuance of a Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, or Shoreline Variance, unless specifically exempted from obtaining such a permit under Section 8.8, Letters of Exemption.

B. Application Types and Processing. All permit applications shall be processed as either a Level I or Level II application in accordance with the provisions set forth in this chapter. Level I and Level II applications shall require approvals according to the following procedures:

1. Level I applications shall require approval from the Director.

2. Level II applications shall require approval from the Cowlitz County Hearing Examiner.

C. Shoreline Substantial Development Permits.

1. When a Shoreline Substantial Development permit is required, applications shall be processed as either a Level I or Level II application in accordance with Subsection B of this Section and Table 8-1 below. Any use or modification not included in Table 8-1 shall be processed as determined by the Director.
## Table 8-1. Level I and Level II Shoreline Substantial Development Permits

<table>
<thead>
<tr>
<th>Use or Modification</th>
<th>Level I</th>
<th>Level II</th>
</tr>
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<tbody>
<tr>
<td>Agriculture</td>
<td>X</td>
<td>X: Fish Hatcheries</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>X: Fish or Shellfish Farming</td>
<td>X: All others</td>
</tr>
<tr>
<td>Boating Facilities</td>
<td>X: Private moorage in association with any other Level I SSDP</td>
<td>X: All others</td>
</tr>
<tr>
<td>Commercial Development</td>
<td>X: Less than 4,000 square feet</td>
<td>X: 4,000 square feet and greater</td>
</tr>
<tr>
<td>Forest Practices</td>
<td>X: Class IV forest practices</td>
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<tr>
<td>Industrial Development</td>
<td>X: Less than 4,000 square feet</td>
<td>X: 4,000 square feet and greater</td>
</tr>
<tr>
<td>Institutional Development</td>
<td>X: Less than 4,000 square feet</td>
<td>X: 4,000 square feet and greater</td>
</tr>
<tr>
<td>In-Stream Structures</td>
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<tr>
<td>Logging</td>
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<td>Mining</td>
<td>X</td>
<td></td>
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<tr>
<td>Recreational Development</td>
<td>X</td>
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<tr>
<td>Residential Development</td>
<td>X: Four (4) or fewer units</td>
<td>X: All others</td>
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<tr>
<td>Transportation</td>
<td>X: In association with any other Level I SSDP</td>
<td>X: All others</td>
</tr>
<tr>
<td>Utilities¹</td>
<td>X: Small</td>
<td>X: Large</td>
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<tr>
<td>Shoreline Stabilization</td>
<td>X: In association with any other Level I SSDP</td>
<td>X: All others</td>
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<tr>
<td>Residential Moorage Facilities: Docks, Buoys, and Marine Railways</td>
<td>X: In association with any other Level I SSDP</td>
<td>X: All others</td>
</tr>
<tr>
<td>Fill and Excavation</td>
<td>X: In association with any other Level I SSDP</td>
<td>X: All others</td>
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<tr>
<td>Dredging and Dredge Material Disposal</td>
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<td></td>
</tr>
<tr>
<td>Shoreline Habitat and Ecological Enhancement Projects</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

¹ “Large Utilities” serve more than one community (e.g. more than one neighborhood, town, city or other defined place) or major attractions. Examples include, but are not limited to, 230 kv power transmission lines, natural gas transmission lines, and regional water storage tanks and reservoirs, regional water transmission lines or regional sewer collectors and interceptors. Large facilities may also include facilities serving an entire community, such as subregional switching stations (one hundred fifteen (115) kv and smaller), and municipal sewer, water, and storm water facilities.

“Small Utilities” serve adjacent properties and include, but are not limited to, power lines not specified under “large facilities,” water, sanitary sewer, and storm water facilities, fiber optic cable, pump stations and hydrants, switching boxes, and other structures normally found in a street right-of-way. On-site utility features serving primary use such as a water, sewer, or gas line to a residence are accessory utilities and shall be considered part of the primary use.

2. Review Criteria. An SSDP may be issued only when the development proposed is consistent with:

a. The policies and procedures of RCW 90.58;
b. The provisions of WAC 173-27; and

c. This Program.

D. Shoreline Conditional Use Permits. The objective of a conditional use permit is to provide more control and flexibility for implementing the regulations of this Program. With provisions to control undesirable effects, the scope of allowed uses can be expanded. In authorizing a conditional use, special conditions may be attached to the permit by the County or Ecology to prevent undesirable effects of the proposed use and/or to ensure consistency of the project with the Act and this Program.

1. Shoreline conditional use permit applications shall be processed as Level II applications in accordance with the procedures for such permits as set forth in Subsection B.2 of this Section.

2. Review Criteria. Uses which are classified or set forth in this Program as conditional uses may be authorized provided that the applicant demonstrates all of the following:

a. That the proposed use is consistent with the policies, regulations, and standards of RCW 90.58.020 and this Program;

b. That the proposed use will not interfere with the normal public use of public shorelines;

c. That the proposed use of the site and design of the project is compatible with other authorized uses within the area and with uses planned for the area under the Comprehensive Plan and this Program;

d. That the proposed use will achieve no net loss of ecological functions in accordance with Section 6.1, No Net Loss of Ecological Function, of this Program; and

e. That the public interest suffers no substantial detrimental effect.

3. Consideration of Cumulative Impacts. In the granting of all SCUPs, consideration shall be given to the cumulative impact of additional requests for like actions in the area on shoreline ecological functions and other shoreline functions fostered by the policy goals of the Act, and ensure no net loss of ecological functions and protection of other shoreline functions and/or uses. For example, if SCUPs were granted for other developments in the area where similar circumstances exist, the total of the conditional uses shall also remain consistent with the policies of RCW 90.58.020 and shall not produce substantial adverse effects to the shoreline environment.
4. Unclassified Uses. Other uses which are not classified or set forth in this Program may be authorized as conditional uses provided the applicant can demonstrate consistency with the requirements of this Section and the requirements for conditional uses contained in this Program.

5. Prohibited Uses. Uses which are specifically prohibited by this Program may not be authorized pursuant to either Subsections D.2 or D.4 of this Section.

E. Shoreline variances. The purpose of a Shoreline Variance is strictly limited to granting relief from specific bulk, dimensional, or performance standards set forth in this Program where there are extraordinary circumstances relating to the physical character or configuration of property such that the strict implementation of this Program will impose unnecessary hardships on the applicant or thwart the policies set forth in RCW 90.58.020.

1. Shoreline Variance applications shall be processed as Level II applications in accordance with Subsection B.2 of this Section.

2. Shoreline Variances should be granted in circumstances where denial of the permit would result in a thwarting of the policy enumerated in RCW 90.58.020. In all instances, the applicant must demonstrate that extraordinary circumstances shall be shown and the public interest shall suffer no substantial detrimental effect.


a. Shoreline Variances for development and/or uses that will be located landward of the OHWM, as defined in Chapter 2, Definitions, and RCW 90.58.030(2)(b), and/or landward of any wetland as defined in Chapter 2, Definitions, and RCW 90.58.030(2)(h), may be authorized provided the applicant can demonstrate all of the following:

   i. That the strict application of the bulk, dimensional, or performance standards set forth in this Program precludes, or significantly interferes with, reasonable use of the property;

   ii. That the hardship described in Subsection E.3.a.i of this Section is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features and the application of this Program, and not, for example, from deed restrictions or the applicant’s own actions;

   iii. That the design of the project is compatible with other authorized uses within the area and with uses planned for the area under the Cowlitz County Comprehensive Plan and this Program, and will not cause adverse impacts to the shoreline environment and will achieve no net loss of
ecological functions in accordance with Section 6.1, No Net Loss of Ecological Function, of this Program;

iv. That the Shoreline Variance will not constitute a grant of special privilege not enjoyed by the other properties in the area;

v. That the Shoreline Variance requested is the minimum necessary to afford relief; and

vi. That the public interest will suffer no substantial detrimental effect.

b. Shoreline Variances for development and/or uses that will be located waterward of the OHWM, as defined in Chapter 2, Definitions, and RCW 90.58.030(2)(b), or within any wetland as defined in Chapter 2, Definitions, and RCW 90.58.030(2)(h), may be authorized provided that the applicant can demonstrate all of the following:

i. That the strict application of the bulk, dimensional, or performance standards set forth in this Program precludes all reasonable use of the property;

ii. That the proposal is consistent with the criteria established under Subsections E.3.a.ii through E.3.a.vi of this Section, and

iii. That the public rights of navigation and use of the shorelines will not be adversely affected.

c. Consideration of Cumulative Impacts. In the granting of all Shoreline Variances, consideration shall be given to the cumulative impact of additional requests for like actions in the area on shoreline ecological functions and other shoreline functions fostered by the policy goals of the Act, and ensure no net loss of ecological functions and protection of other shoreline functions and/or uses. For example, if Shoreline Variances were granted to other developments and/or uses in the area where similar circumstances exist, the total of the Shoreline Variances shall also remain consistent with the policies of RCW 90.58.020 and shall not cause substantial adverse effects to the shoreline environment.

d. Variances from the use regulations of this Program are prohibited.

F. Shoreline Exemptions. Shoreline Exemption requests shall be processed as Level I applications in accordance with Subsection B.1 of this Section and Section 8.8, Letters of Exemption.
8.8 Letters of Exemption

A. Any person claiming exemption from the SSDP requirements shall make an application to the Director for such an exemption.

B. Any development which occurs within the regulated shorelines of the state, whether it requires a permit or not, must be consistent with the intent of the Act and this Program.

C. If any part of a proposed development is not eligible for exemption, then an SSDP is required for the entire proposed development project.

D. If the exemption is approved, the Director shall prepare and transmit a Letter of Exemption (LOE), addressed to the applicant and Ecology, indicating the specific applicable exemption provisions from WAC 173-27-040 and providing a summary of the project’s consistency with this Program and the Act, as amended. A copy of the LOE shall be maintained on file in the office of the Director.

E. The Director may attach conditions and/or mitigating measures to LOEs to achieve consistency and compliance with the provisions of this Program and the Act.

F. A denial of an exemption application shall be in writing and shall identify the reason(s) for the denial. The Director’s decision on an LOE application may be reconsidered by submittal of an appeal to the Hearing Examiner.

8.9 Revisions to Permits

A. When an applicant seeks to revise a LOE, SSDP, SCUP, or shoreline variance, whether such permit or variance was granted under this Program or under the Program in effect prior to adoption of this Program, the County shall request from the applicant detailed plans and text describing the proposed changes to the project. If the staff determines that the proposed changes are within the general scope and intent of the original LOE, SSDP, SCUP, or shoreline variance, as the case may be, the revision may be approved by the County without the need for the applicant to file a new permit application provided the development is consistent with the Act, and WAC 173-27-100.

B. All shoreline permit revisions shall be transmitted to Ecology upon the County’s final decision. If the revision is to a LOE or SSDP, it becomes effective immediately upon final decision by the County. If the permit revision is concerning a shoreline conditional use or shoreline variance permit, the proposed revision is subject to Ecology review. Ecology shall respond with its final decision on the permit revision request within fifteen (15) days of the date of receipt by Ecology per WAC 173-27-100(6). The County shall notify parties of record of the final decision.
C. Shoreline permit revisions to a SSDP, SCUP, or Shoreline Variance may be appealed to the Shoreline Hearings Board within twenty-one (21) days of the final decision to the permit revision in accordance with the provisions of WAC 173-27-100(8).

8.10 Enforcement

All provisions of this Program shall be enforced by the Director.

8.10.1 Rescission of Permits

A. Any shoreline permit issued under the terms of this Program may be rescinded upon a finding that a permittee has not complied with conditions of the permit.

B. Such rescission of an issued permit shall be initiated by serving a written notice of non-compliance on the permittee, which shall be sent by registered or certified mail, return receipt requested, to the address listed on the application or to such other address as the applicant or permittee may have advised the County, or such notice may be served to the applicant or permittee in person or his agent in the same manner as service of summons as provided by law.

C. Before any such permit can be rescinded, a public hearing shall be held by the Hearing Examiner. Notice of the public hearing shall be made in accordance with CCC 19.20.030. The decision of the Hearing Examiner shall be the final decision of the County on all rescinded applications. A written decision shall be transmitted to Ecology, the Attorney General’s office, the applicant, and such other departments or boards of the County as are affected thereby, and the legislative body of the County.

D. Ecology may petition the Shoreline Hearings Board for a rescission of the permit if Ecology is of the opinion that non-compliance exists, and provides written notice to the County and to the permittee. If Ecology is of the opinion that non-compliance continues to exist thirty (30) days after the date of the notice, and the County has taken no action to rescind the permit, as provided by RCW 90.58.140(8).

8.10.2 Violation and Penalties

A. Every person violating any of the provisions of this Program or the Shoreline Management Act of 1971 shall be punishable under conviction by a fine not exceeding one thousand dollars ($1,000.00), or by imprisonment not exceeding ninety (90) days, or by both fine and imprisonment, and each day's violation shall constitute a separate punishable offense.

B. The County Attorney may bring such injunctive, declaratory, or other actions as are necessary to ensure that no uses are made of the Shorelines of the State within the County’s jurisdiction, which are in conflict with the provisions and programs of this Program or the Act, and to otherwise enforce provisions of this Section and the Act.
C. Any person subject to the regulatory program of this Program who violates any provision of this Program or the provisions of a permit issued pursuant thereto shall be liable for all damages to public or private property arising from such violation, including the cost of restoring the affected area to its condition prior to such violation. The County Attorney shall bring suit for damages under this Subsection on behalf of the County. Private persons shall have the right to bring suit for damages under this Subsection on their own behalf and on behalf of all persons similarly situated. If liability has been established for the cost of restoring an area affected by violation, the Court shall make provision to ensure that restoration will be accomplished within a reasonable time at the expense of the violator. In addition to such relief, including monetary damages, the Court in its discretion may award attorney’s fees and costs of the suit to the prevailing party.

8.11 Shoreline Moratorium

A. The Board of County Commissioners may adopt moratoria or other interim official controls as necessary and appropriate to implement the provisions of the Act.

B. Prior to adopting such moratorium or other interim official controls, the Board of County Commissioners shall:

1. Hold a public hearing on the moratorium or control within sixty (60) days of adoption;

2. Adopt detailed findings of fact that include, but are not limited to, justifications for the proposed or adopted actions and explanations of the desired and likely outcomes; and

3. Notify Ecology of the moratorium or control immediately after its adoption. The notification must specify the time, place, and date of any public hearing held.

C. Said moratorium or other official control shall provide that all lawfully existing uses, structures, or other development shall continue to be deemed lawful conforming uses and may continue to be maintained, repaired, and redeveloped, as long as the use is not expanded under the terms of the land use and shoreline rules and regulations in place at the time of the moratorium.

D. Said moratorium or control adopted under this Section may be effective for up to six (6) months if a detailed work plan for remedying the issues and circumstances necessitating the moratorium or control is developed and made available for public review. A moratorium or control may be renewed for two (2) six (6)-month periods if the Board of County Commissioners complies with Subsection B before each renewal.

E. If a moratorium or control is in effect on the date a proposed master program or amendment is submitted to Ecology, the moratorium or control must remain in
effect until Ecology’s final action under RCW 90.58.090; however, the moratorium expires six (6) months after the date of submittal if Ecology has not taken final action.

8.12 Restoration Project Relocation of OHWM

A. The County may grant relief from this Program’s development standards and use regulations within urban growth areas when the following apply:

1. A shoreline restoration project causes, or would cause, a landward shift in the OHWM, resulting in the following:

   a. Land that had not been regulated under this chapter prior to construction of the restoration project is brought under shoreline jurisdiction; or

   b. Additional regulatory requirements apply due to a landward shift in required shoreline buffers or other regulations of this Program; and

   c. Application of this Program’s regulations would preclude or interfere with use of the property permitted by local development regulations, thus presenting a hardship to the project proponent.

2. The proposed relief meets all of the following criteria:

   a. The proposed relief is the minimum necessary to relieve the hardship.

   b. After granting the proposed relief, there is net environmental benefit from the restoration project.

   c. Granting the proposed relief is consistent with the objectives of the shoreline restoration project and consistent with this Program.

   d. Where a shoreline restoration project is created as mitigation to obtain a development permit, the project proponent required to perform the mitigation is not eligible for relief under this Section.

B. The application for relief must be submitted to Ecology for written approval or disapproval. This review must occur during Ecology’s normal review of an SSDP, SCUP, or Shoreline Variance. If no such permit is required, then Ecology shall conduct its review when the County provides a copy of a complete application and all supporting information necessary to conduct the review.

1. Except as otherwise provided in Subsection B of this Section, Ecology shall provide at least twenty (20) days’ notice to parties that have indicated interest to Ecology in reviewing applications for relief under this Section, and post the notice on their website.
2. Ecology shall act within thirty (30) calendar days of the close of the public notice period, or within thirty (30) days of receipt of the proposal from the County if additional public notice is not required.

C. The public notice requirements of Subsection B of this Section do not apply if the relevant shoreline restoration project is included in the Cowlitz County Shoreline Restoration Plan (Appendix B of this Program), as follows:

1. The Cowlitz County Shoreline Restoration Plan has been approved by Ecology under applicable Shoreline Master Program guidelines; and

2. The shoreline restoration project is specifically identified in the Restoration Plan or is located along a shoreline reach identified in the Restoration Plan as appropriate for granting relief from shoreline regulations; and

3. The Shoreline Master Program or Restoration Plan includes policies addressing the nature of the relief and why, when, and how it would be applied.

8.13 Land Division

Prior to approval of any land division, such as short subdivisions, large lot subdivisions, preliminary long plats, and boundary line adjustments within shoreline jurisdiction, the County shall document compliance with bulk and dimensional standards as well as policies and regulations of this Program and attach appropriate conditions and/or mitigating measures to such approvals to ensure the design, development activities, and future use associated with such lands are consistent with this Program.

8.14 Amendments Authorized

8.14.1 Procedures

A. Amendments to the Shoreline Master Program or Map may be initiated by:

1. The adoption of a motion by the Board of County Commissioners requesting the Planning Commission to set a matter for hearing and recommendation.

2. The adoption of a motion by the Planning Commission.

3. Application of one or more owners of property affected by the proposal.

4. A department or agency of the County or another governmental entity.

B. Proponents for Shoreline Environment Designation Map redesignations (i.e., amendments to the Shoreline Environment Designation Map) shall bear the burden of proof for demonstrating consistency with the shoreline environment designation
criteria of this Program, Chapter 173-26 WAC, and the goals and policies of the Cowlitz County Comprehensive Plan.

C. The provisions of the Shoreline Master Program or the Shoreline Environment Designation Map (Appendix A) may be amended as provided for in RCW 90.58.090 and Chapter 173-26-201 WAC and shall follow the procedures of CCC 18.10.410 through .490.

D. An amendment to the Shoreline Master Program or the Shoreline Environment Designation map shall be adopted by the Board of County Commissioners by ordinance after a public hearing and report by the Planning Commission in accordance with the procedural requirements of CCC 18.10.410 through .490.

8.14.2 Transmittal to the Department of Ecology

Subsequent to final action by the County adopting or amending the Shoreline Master Program, said Program, or amendment thereto shall be submitted to Ecology for approval. No such Program, official control, or amendment thereto shall become effective until approval by Ecology is obtained pursuant to RCW 90.58.090.

8.15 Shoreline Activity Tracking

A. The County will track all shoreline permits and exemption activities to evaluate whether this SMP is achieving no net loss of shoreline ecological functions. Activities to be tracked using the County’s permit system include development, conservation, restoration and mitigation, such as but not limited to:

1. New shoreline development;
2. Shoreline Variances and the nature of the variance;
3. Compliance issues;
4. Net changes in impervious surface areas, including associated stormwater management;
5. Net changes in fill or armoring;
6. Net change in linear feet of flood hazard structures; and
7. Net changes in vegetation (area, character).

Using the information collected in Subsection A, the County should evaluate the effectiveness of meeting the no net loss standard as part of the County’s SMP or Comprehensive Plan Amendment process. Should a net loss of functions from the baseline condition be documented, the County may propose amendments to further implementation of the SMP and/or Shoreline Restoration Plan.
We hereby certify that this map constitutes the Official Shoreline Map as approved by Resolution 16-175 of the Board of Cowlitz County Commissioners and signed by its chair dated December 20, 2016.
Boundary co-located with edge of forest that extends north approximately 300 ft from southern parcel line R011229.

We hereby certify that this map constitutes the Official Shoreline Map as approved by Resolution 16-175 of the Board of Cowlitz County Commissioners and signed by its chair dated December 20, 2016.
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Boundary ends 500 ft. South of private bridge on parcel number WE3101003.

Rural conservancy extends from CRWM to landward side of West Side Highway.

We hereby certify that this map constitutes the Official Shoreline Map as approved by Resolution 16-175 of the Board of Cowlitz County Commissioners and signed by its chair dated December 20, 2016.
We hereby certify that this map constitutes the Official Shoreline Map as approved by Resolution 16-175 of the Board of Cowlitz County Commissioners and signed by its chair dated December 20, 2016.
Natural SED boundaries co-located with wetland boundaries as determined by a wetland delineation.

We hereby certify that this map constitutes the Official Shoreline Map as approved by Resolution 16-175 of the Board of Cowlitz County Commissioners and signed by its chair dated December 20, 2016.
We hereby certify that this map constitutes the Official Shoreline Map as approved by Resolution 16-175 of the Board of Cowlitz County Commissioners and signed by its chair dated December 20, 2016.

Legend:
- City Limits
- UGB
- County Boundary
- Parcel Boundary
- Potential Wetland

Shoreline SEDs:
- High Intensity
- Rural Conservancy
- Urban Conservancy
- Residential
- Natural
- Aquatic

Map details:
- High-Intensity ends at southernmost point of Cottonwood Island.
- High-Intensity extends from OHWM to waterward side of unnamed road.
- Residential ends at southernmost point of Cottonwood Island.
- Boundary aligns with landward side of Kalama River Road.
- Residential extends from OHWM to waterward parcel line.
- Urban Conservancy extends from OHWM to waterward side of unnamed road.
- Urban Conservancy extends (approximately 320 ft. north of parcel line R48292).

Locator:
Tile 9

Maps and data used in this product include copyrighted works, which are reproduced with permission of the respective copyright holders. The source and authorization to reproduce each work are indicated in the metadata. This product contains Cartography by GIS Analyst, GIS Technicians, and Map Technicians at the Cowlitz County Planning and Development Services Department.
We hereby certify that this map constitutes the Official Shoreline Map as approved by Resolution 16-175 of the Board of Cowlitz County Commissioners and signed by its chair dated December 20, 2016.
Cowlitz County Shoreline Environment Designations Map

City Limits
UGB
County Boundary
Parcel Boundary
Potential Wetland
Shoreline SEDs
- High Intensity
- Rural Conservancy
- Urban Conservancy
- Residential
- Recreation
- Natural
- Aquatic

Boundary extends south from Lewis River Road.

Boundary 25 ft. west and parallel with the utility corridor, 125 ft south of Sherman Rd. and 500 ft from western parcel line R504035.

We hereby certify that this map constitutes the Official Shoreline Map as approved by Resolution 16-175 of the Board of Cowlitz County Commissioners and signed by its chair dated December 20, 2016.
We hereby certify that this map constitutes the Official Shoreline Map as approved by Resolution 16-175 of the Board of Cowlitz County Commissioners and signed by its chair dated December 20, 2016.

**Adjacent County Map: Cowlitz County Shoreline Environment Designations Map**

- **City Limits**
- **UGB**
- **County Boundary**
- **Parcel Boundary**
- **Potential Wetland**
- **Shoreline SEDs**
  - High Intensity
  - Rural Conservancy
  - Urban Conservancy
  - Residential
  - Recreation
  - Natural
  - Aquatic

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**Map Details**

- **High-Intensity co-located with boundary of industrial land and forest edge.**
- **Boundary is approximately 250 ft north of southern parcel line R004396.**

- **Rural Conservancy co-located with boundary of wetland as determined by a wetland delineation.**
- **Approximately 900 ft south from northern boundary of parcel line R004397.**

- **Boundary of parcel line R004396.**
- **250 ft north of southern parcel line.**
- **Boundary is approximately 100 ft on either side of existing parking lot. Boundaries are approximately 80 ft west of eastern parcel line and 260 ft SW of west parcel line R004398. Boundary extends perpendicular from Dike Rd.**
Boundary extends south of intersection of parcel lines along the shoreline edge of marina.

Boundary is 30 ft. south of parking lot of recreation area and 150 ft. south of parcel line R003362.

Boundary extends north of floating barrier.

Recreation boundary co-located with marina. Approximately 800 ft. of the northern parcel line and 1500 ft. from western parcel line.

Boundary co-located with boundary of wetland area as determined by a wetland delineation. Approximately 250 ft. from waterward parcel line and 800 ft. from northern parcel line of R003362.

We hereby certify that this map constitutes the Official Shoreline Map as approved by Resolution 16-175 of the Board of Cowlitz County Commissioners and signed by its chair dated December 20, 2016.
Appendix B

Shoreline Restoration Plan
Shoreline Analysis Report for Shorelines in Cowlitz County and the Cities of Castle Rock, Kalama, Kelso, and Woodland

Prepared for:
Cowlitz –Wahkiakum Council of Governments
207 4th Avenue North
Kelso, WA 98626

January 2016
SHORELINE RESTORATION PLAN

for Shorelines in Cowlitz County and the Cities of Castle Rock, Kalama, Kelso, and Woodland

Prepared for:
Cowlitz – Wahkiakum Council of Governments
207 4th Avenue North
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Finalized April 2015, Edited June 2015, Project Updates January 2016

The Watershed Company
Reference Number:
110922

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The Watershed Company
Contact Person:
Dan Nickel / Sarah Sandstrom
Cite this document as:

# TABLE OF CONTENTS

1. Introduction ......................................................................................................................... 1
   
   1.1. Purpose .......................................................................................................................... 1
   
   1.2. Restoration Plan Requirements ................................................................................... 2
   
   1.3. Types of Restoration Activities .................................................................................... 3
   
   1.4. Restoration Plan Approach .......................................................................................... 4

2. Restoration Goals ................................................................................................................. 5

3. Existing Conditions ............................................................................................................. 5
   
   3.1. Unincorporated Cowlitz County ................................................................................... 6
      
      3.1.1. Columbia River Assessment Unit ......................................................................... 6
      
      3.1.2. Lewis River Assessment Unit ............................................................................... 6
      
      3.1.3. Kalama River Assessment Unit ............................................................................. 7
      
      3.1.4. Cowlitz River Assessment Unit ............................................................................. 8
      
      3.1.5. Mill, Abernathy, Germany Creek Assessment Unit ............................................. 9
      
      3.1.6. South Fork Chehalis River Assessment Unit ....................................................... 9
      
      3.2. City of Castle Rock ................................................................................................. 9
      
      3.3. City of Kalama .......................................................................................................... 10
      
      3.4. City of Kelso ............................................................................................................ 10
      
      3.5. City of Woodland ..................................................................................................... 10

4. Existing County and City Programs ..................................................................................... 11
   
   4.1. Cowlitz County ............................................................................................................ 11
      
      4.1.1. Comprehensive Plan .............................................................................................. 11
      
      4.1.2. Public Works ......................................................................................................... 11
      
   4.2. City of Castle Rock ..................................................................................................... 11
   
   4.3. City of Kalama ............................................................................................................ 12
   
   4.4. City of Kelso .............................................................................................................. 12
      
      4.4.1. Comprehensive Plan .............................................................................................. 12
      
      4.4.2. Public Works ......................................................................................................... 13
      
   4.5. City of Woodland ........................................................................................................ 13

5. Restoration Partners .......................................................................................................... 13
   
   5.1. U.S. Army Corps of Engineers .................................................................................... 13
5.2. Northwest Power and Conservation Council Fish & Wildlife Program ................................................................. 14
5.3. Lower Columbia Fish Recovery Board ........................................................................................................ 15
5.4. PacifiCorp ......................................................................................................................................................... 16
5.5. Cowlitz Public Utility District ...................................................................................................................... 17
5.6. Lower Columbia Fish Enhancement Group ................................................................................................ 17
5.7. Lower Columbia Estuary Partnership ........................................................................................................... 18
5.8. Intensively Monitored Watershed Program Partners ................................................................................ 18
5.9. Columbia Land Trust ..................................................................................................................................... 19
5.10. Cowlitz Indian Tribe .................................................................................................................................... 19
5.11. Cowlitz Conservation District .................................................................................................................. 20
5.12. Other Volunteer Organizations .................................................................................................................. 20

6. Potential Projects .............................................................................................................................................. 20
  6.1. Unincorporated Cowlitz County .................................................................................................................. 23
    6.1.1. Columbia River Assessment Unit ........................................................................................................ 23
    6.1.2. Lewis River Assessment Unit .............................................................................................................. 26
    6.1.3. Kalama River Assessment Unit ........................................................................................................... 27
    6.1.4. Cowlitz River Assessment Unit ........................................................................................................... 30
    6.1.5. Mill, Abernathy, Germany Creek Assessment Unit ........................................................................... 36
    6.1.6. South Fork Chehalis River Assessment Unit .................................................................................... 38
  6.2. City of Castle Rock ........................................................................................................................................ 39
  6.3. City of Kalama ............................................................................................................................................... 40
  6.4. City of Kelso .................................................................................................................................................. 41
  6.5. City of Woodland ........................................................................................................................................ 43

7. Implementation Strategy .................................................................................................................................. 43
  7.1. Local/Regional Planning and Coordination .............................................................................................. 43
  7.2. Funding Opportunities for Restoration .................................................................................................... 44
  7.3. Development Incentives ............................................................................................................................ 46
  7.4. Landowner Outreach and Engagement .................................................................................................... 46
  7.5. Maximizing Mitigation Outcomes ............................................................................................................. 46
  7.6. Monitoring .................................................................................................................................................... 47

8. References ......................................................................................................................................................... 48
9. List of Acronyms and Abbreviations .............................................................................................................. 50

Appendix A: Maps of Potential Restoration Project Sites
LIST OF FIGURES

Figure 1. Diagram of the role of restoration relative to achieving the SMP standard of “no net loss” of ecological functions (Ecology 2010) ........................................... 3

LIST OF TABLES

Table 6-1. Restoration opportunities applicable to all Assessment Units. ............... 21
Table 6-2. Restoration opportunities in the Lower Columbia River and Estuary ...... 24
Table 6-3. Restoration opportunities in the North Fork Lewis River .................... 26
Table 6-4. Restoration opportunities in the Kalama River ................................. 28
Table 6-5. Restoration opportunities in the Cowlitz River Assessment Unit ........... 30
Table 6-6. Restoration opportunities in Mill, Abernathy, and Germany Creeks ....... 37
Table 6-7a. Restoration opportunities in and supported by the City of Castle Rock .. 39
Table 6-7b. Restoration opportunities in the City of Castle Rock ...................... 40
Table 6-8. Restoration opportunities in the City of Kalama ............................. 41
Table 6-9. Restoration opportunities in the City of Kelso ................................. 42
Table 6-10. Restoration opportunities in the City of Woodland ...................... 43
Table 7-1. Potential funding sources for shoreline restoration in Cowlitz County..... 44
SHORELINE RESTORATION PLAN
COWLITZ COUNTY AND THE CITIES OF CASTLE ROCK, KALAMA, KELSO, AND WOODLAND

1. INTRODUCTION

The Shoreline Restoration Plan builds on the goals and policies proposed in the Shoreline Master Program (SMP). The Shoreline Restoration Plan provides an important non-regulatory component of the SMP to ensure that shoreline functions are maintained or improved despite potential incremental losses that may occur in spite of SMP regulations and mitigation actions.

The Shoreline Restoration Plan draws on multiple past planning efforts to identify possible restoration projects and reach-based priorities, key partners in implementing shoreline restoration, and existing funding opportunities. The Shoreline Restoration Plan represents a long-term vision for voluntary restoration that will be implemented over time, resulting in ongoing improvement to the functions and processes in the County and cities’ shorelines.

Many of the restoration opportunities noted in this plan affect private property. It is not the intent of this plan to require restoration on private property or to commit privately owned land for restoration purposes without the willing and voluntary cooperation and participation of the affected landowner.

1.1. Purpose

The primary purpose of the Shoreline Restoration Plan is to plan for “overall improvements in shoreline ecological function over time, when compared to the status upon adoption of the master program” (WAC 173-26-201(2)(f)). Secondarily, the Shoreline Restoration Plan may enable the County and cities to ensure that the minimum requirement of no net loss in shoreline ecological function is achieved on a county-wide basis, notwithstanding any shortcomings of individual projects or activities.

Activities that will have adverse effects on the ecological functions and values of the shoreline must be mitigated (WAC 173-26-201(2)(e)). Proponents of such activities are individually required to mitigate for impacts to the shoreline areas, or agreed-to off-site
mitigation, which as conditioned, is equal in ecological function to the baseline levels at the time each activity takes place. However, some uses and developments cannot be fully mitigated. This could occur when project impacts may not be mitigated in-kind on an individual project basis, such as a new bulkhead to protect a single-family home that can be offset, but not truly mitigated in-kind unless an equivalent area of bulkhead is removed somewhere else. Another possible loss in function could occur when impacts are sufficiently minor on an individual level, such that mitigation is not required, but are cumulatively significant. Additionally, unregulated activities (such as operation and maintenance of existing legal developments) may also degrade baseline conditions. Finally, the SMP applies only to activities in shoreline jurisdiction, yet activities upland of shoreline jurisdiction or upstream or downstream in the watershed may have offsite impacts on shoreline functions.

Together, these different project impacts may result in cumulative, incremental, and unavoidable degradation of the overall baseline condition unless additional restoration of ecological function is undertaken. Accordingly, the Shoreline Restoration Plan is intended to be a source of ecological improvements implemented voluntarily by the County, cities, and other government agencies, developers, non-profit groups, and property owners within shoreline jurisdiction to ensure no net loss of ecological function, and to result in an improvement of ecological function (Figure 1).

1.2. Restoration Plan Requirements

This Restoration Plan has been prepared to meet the purposes outlined above, as well as specific requirements of the SMP Guidelines (Guidelines). Specifically, WAC Section 173-26-201(2)(f) of the Guidelines says:

(i) Identify degraded areas, impaired ecological functions, and sites with potential for ecological restoration;

(ii) Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions;

(iii) Identify existing and ongoing projects and programs that are currently being implemented, or are reasonably assured of being implemented (based on an evaluation of funding likely in the foreseeable future), which are designed to contribute to local restoration goals;

(iv) Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies including identifying prospective funding sources for those projects and programs;
(v) Identify timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals;

(vi) Provide for mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals.

In addition to meeting the requirements of the Guidelines, this Restoration Plan is intended to identify and prioritize areas for future restoration and mitigation, support applications for grant funding, and to identify the various entities and their roles working within the County and cities to enhance the shoreline environment.

1.3. Types of Restoration Activities

Consistent with Ecology’s definition, the use of the word “restore” in this document encompasses a suite of strategies that can be approximately delineated into five categories:

- Creation: Establishment of new shoreline resource functions where none previously existed.
• Re-establishment: Restoration of a previously existing converted resource that no longer exhibits past functions.

• Rehabilitation: Restoration of functions that are significantly degraded.

• Enhancement: Improvement of functions that are somewhat degraded.

• Preservation: Protection of an existing high-functioning resource from potential degradation. Preservation is often achieved through conservation easements or the purchase of land.

Restoration can sometimes be confused with mitigation. Mitigation is defined by WAC 197-11-768 as the sequential process of avoiding, minimizing, rectifying and reducing impacts, as well as compensating for unavoidable impacts and monitoring the impact.

1.4. Restoration Plan Approach

As directed by the SMP Guidelines, the following discussions include: restoration goals and objectives; a summary of baseline shoreline conditions; existing County and local plans and programs that facilitate restoration actions; identification of the County’s partners in restoration; and ongoing and potential projects that positively impact the shoreline environment. The Restoration Plan also identifies anticipated funding and implementation of restoration elements.

This Shoreline Restoration Plan is focused on restoration projects that are reasonably likely to occur in the foreseeable future, and restoration opportunities are not limited to those identified in this plan. Potential restoration opportunities were identified based on existing restoration planning document recommendations, including the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan (LCFRB 2010a), the Salmon and Steelhead Limiting Factors Reports, the Habitat Work Schedule (hws.ukosystem.us), and other salmon recovery Lead Entity planning documents, as well as input from Cowlitz County, participating cities, and restoration partners. Many of these restoration planning documents include protection of intact functions and processes as an integral component to restoration planning. Therefore, although protection is distinct from restoration at the site level, restoration opportunities presented in this document also include opportunities to protect high functioning areas.

In many cases, recommendations apply broadly to watershed areas (for example, “Protect existing rearing habitat to ensure no further degradation”). In this case, the Integrated Watershed Assessment in the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan, as well as functional analysis in the Shoreline Analysis Report
can be used to identify high functioning areas that could benefit from protection (through regulatory or voluntary measures), as well as low to moderately functioning areas that may benefit from restoration actions.

The restoration opportunities identified in this plan are focused primarily on publicly owned open spaces and natural areas. Any restoration on private property would occur only through voluntary means or through re-development proposals.

2. RESTORATION GOALS

This plan establishes a basic framework for restoring the County’s shoreline resources over time. The following goals have been identified in the County’s existing comprehensive plan and shoreline master program. These may be updated once new document goals are available.

Comprehensive Plan Goals

- Conserve unique wildlife habitats, natural features, and recreation areas of Cowlitz County.

- Retain wherever possible, wetland and shoreland areas in their natural state, for the maintenance and production of wildlife and recreation uses.

Shoreline Master Program Goals

- Maintain a high quality environment along the shorelines of Cowlitz County.

- Preserve and protect those fragile and natural resources, and culturally significant features along the shorelines of Cowlitz County.

- Restore damaged features or ecosystems to a higher quality than may currently exist.

- Preserve unique and non-renewable resources.

3. EXISTING CONDITIONS

The Shoreline Analysis Report (TWC and Parametrix 2013) describes existing physical and biological conditions in the shoreline area within County and City limits, including identification of lower and higher functioning areas and recommendations for restoration of ecological functions where they are degraded. Degraded areas in shoreline jurisdiction are summarized below, organized by Shoreline Assessment Unit (as identified in the Shoreline Analysis Report).
3.1. **Unincorporated Cowlitz County**

3.1.1. **Columbia River Assessment Unit**

Key degraded functions include floodplain disconnection and in-stream habitat diversity. Lower scoring reaches in the Columbia River represent areas of intensive transportation (Port and railroad) infrastructure, with limited shoreline vegetation, levees, overwater structures, and extensive impervious surfaces. Because of the intensive industrial development in these reaches, there may be opportunities for enhancement; however, large scale rehabilitation of functions in these reaches is unlikely. As such, an effective restoration strategy for the Columbia River Assessment Unit should balance enhancement of highly impaired areas with rehabilitation or protection of less impacted areas.

In general, the islands and confluences of major river mouths with the Columbia River provide some of the least altered shoreline habitats in the assessment unit. Both Fisher and Cottonwood Islands are designated as Corps dredge disposal sites. Other high functioning reaches include undeveloped wetland areas south of the Cowlitz River mouth and near the mouths of the Kalama and Lewis Rivers. Protection of these high functioning areas should be a priority.

3.1.2. **Lewis River Assessment Unit**

The Salmon and Steelhead Limiting Factors report for WRIA 27 (Wade 2000b) identifies the Lewis River dam network as the primary limiting factor for salmonid habitat in this area. The three mainstem dams alter the natural hydroperiod of the lakes and downstream areas, limit longitudinal connectivity in the watershed, create fish passage barriers, and restrict downstream transport of sediment and large woody debris.

Planned and ongoing actions by PacifiCorp to mitigate for impacts to fish passage and habitat alterations will be instrumental in maintaining and improving shoreline functions in the Lewis River (see Section 3.1.2).

In addition to dam impacts, floodplain connectivity, instream habitat complexity, and riparian vegetation are also key factors limiting functions in the Lewis River Assessment Unit. Ecological functions in the reaches in the lower Lewis River downstream from the City of Woodland (Shoreline Analysis Reaches 1-5) are significantly degraded. The shorelines in these lower reaches are lined with levees, devoid of native vegetation, and lack habitat complexity. Despite significant degradation of natural shoreline functions of the lower Lewis River, the agricultural fields in the area do likely provide winter foraging habitat for migratory waterfowl. These reaches also experience tidal influence from the Columbia River estuary, and therefore have the potential to provide low
energy rearing habitats for juvenile salmon, although the lack of shoreline complexity significantly limits the realization of such potential.

There are several key reaches that provide significant habitat functions in the Lewis River Assessment Unit. These areas include off-channel habitat surrounding Eagle Island; the Lewis River mainstem reach between Cedar Creek and Merwin Dam; Cedar Creek watershed and the lower reaches of Johnson, Ross, Robinson, and Colvin creeks; wetland complexes in the lower 2 miles of the South Fork Chelatchie Creek; and backwater slough areas above the Lewis River Salmon Hatchery (Wade 2000b). These areas should be prioritized for habitat protection and enhancement, as appropriate.

3.1.3. Kalama River Assessment Unit

Functional scores identified in the Shoreline Analysis Report were consistently higher functioning throughout the Kalama River basin compared to other assessment units in the County on account of the forested nature of much of the Kalama watershed.

The lower Kalama River has the most impaired functions in the assessment unit. A study of the lower 10 miles of the Kalama River conducted in Phase II of the LCFRB Watershed Assessment Project (R2 and MBI 2004) found that natural geomorphic processes are severely limited in the lower Kalama River. These processes are impaired by armoring and levees that cover the majority of the shoreline length; much of the armoring is designed to protect Kalama River Road, which parallels the lower Kalama River. As a result of development and channelization of the river the density of large woody debris is poor in the lower River.

Approximately 96 percent of the Kalama River Watershed is managed for forest production; therefore, forestry practices have a significant effect on shoreline functions in the watershed. In smaller tributaries in particular, areas of forest harvest occur on both sides of the stream, and vegetated buffers are smaller compared to the mainstem Kalama. Fish passage barriers also present a significant impairment to shoreline functions in the Kalama River Assessment Unit.

Areas with significant habitat value for salmonids include the following: mainstem Kalama between Lower Kalama Falls (RM 10) to around Modrow Bridge (RM 2.4); upper mainstem Kalama River (RM 10 to RM 35), tributaries below Lower Kalama Falls and any remaining off-channel habitat; Gobar Creek, Wildhorse Creek, North Fork Kalama, Langdon Creek, and Lakeview Peak Creek (Wade 2000b).
3.1.4. Cowlitz River Assessment Unit

As noted in the Lower Cowlitz River and Floodplain Habitat Restoration Siting and Design Report (Tetra Tech 2007), primary limitations on restoration in the Lower Cowlitz are the high sediment load in the upper Toutle River, the regulation of flows, and existing and proposed development within the floodplain and along the riparian zone.

The North Fork Toutle River and upper South Fork Toutle River still maintain an extremely high sediment load resulting from the 1980 eruption of Mount St. Helens, particularly on the North Fork Toutle River upstream of the Corps’ Sediment Retention Structure. The high sediment load has resulted in a broadly braided and frequently migrating channel. Because these braided channels each convey a relatively small portion of the total flow and because each channel is wide relative to its depth, the sediment plain can act as a fish barrier, preventing upstream migrations during low flow conditions (AMEC 2010).

The Shoreline Analysis Report identified reaches just north of the City of Kelso (Shoreline Analysis Cowlitz reaches 9-13), as impaired compared to other reaches in the Assessment Unit. The Cowlitz River is artificially constrained by levees in these reaches and shoreline vegetation is limited. Other degraded reaches include highly developed reaches along Silver Lake (Shoreline Analysis Cowlitz Reaches 105, 111, and 112), which have a high density of overwater structures and other shoreline modifications. Several sites along the Cowlitz River were used as dredge disposal locations following the eruption of Mount Saint Helens in 1980. These sites occur in several locations on both sides of the river between the City of Kelso and Castle Rock. Today, these disposal sites remain unvegetated, and former floodplain areas are disconnected as a result of the disposal activities. The 1980 event also impacted tributaries, leaving them disconnected as a result of mud flows. Many of these tributaries are still in the process of recovering, as dredge spoil stockpiles were located directly on their banks. Ongoing erosion of these stockpiles adds to the fine sediment accumulation and poor water quality in the Cowlitz River.

In contrast to the artificially confined reaches in the lower Cowlitz River, shoreline areas near the northern County border occur on a broad floodplain with significant riparian wetland areas. Wetland areas in the vicinity of the Horseshoe Bend area, south of Castle Rock also provide high functioning, riverine wetland habitats (Shoreline Analysis Cowlitz Reaches 15 and 16). Similarly, undeveloped reaches of Silver Lake (Shoreline Analysis Cowlitz Reaches 104, 106-110, 113-116) have high hydrologic, vegetated, and
habitat functions resulting from the large areas of relatively undisturbed forested and shrub wetlands.

3.1.5. Mill, Abernathy, Germany Creek Assessment Unit

Ecological functions in Mill, Abernathy, and Germany Creeks are primarily influenced by forest harvest activities, agriculture, and rural residential development. The Shoreline Analysis Report did not identify any particularly low functioning reaches in this Assessment Unit. However, fish passage barriers in Germany and Coal Creeks block nearly one third of potential instream habitat, and correction of those barriers is a significant restoration opportunity.

3.1.6. South Fork Chehalis River Assessment Unit

Dominant land use in the upper South Fork is commercial forestry, and agricultural uses predominate in the lower river. Both agricultural and forestry uses have resulted in significant alterations to the shorelines of the South Fork Chehalis River. Degraded riparian vegetation, high sediment loads originating from the upper watershed, and a high density of fish passage barriers are the primary impairments in the upper watershed (Chehalis Basin Partnership Habitat Work Group 2008).

3.2. City of Castle Rock

As a result of sediment deposition from the 1980 Mount Saint Helens eruption, the Cowlitz River within the City of Castle Rock includes alluvial gravel bars on the inner bends of the River. Additionally, the tributaries of the Salmon, Whittle, Arkansas, and Janish Creeks were backed up with mud flow from the 1980 eruption, minimizing their effectiveness for fish habitat, wetland, and riparian functions. The continued loading of dredge spoils on stream banks as stockpile areas prolongs their ability to recover. The downtown core of the City of Castle Rock is surrounded by a ring levee, which limits hydrologic functions.

Vegetation is limited to a relatively narrow forested riparian corridor along much of the City’s shoreline. “The Rock” community park includes substantial forested vegetation extending up to 500 feet from the river. A dredge disposal site, in Shoreline Reach 19 is sparsely vegetated. Salmon Creek and Arkansas Creek within the City’s shoreline jurisdiction have narrow bands of forested riparian vegetation. Although not confined by armoring or a levee, Salmon Creek borders the railway, and is artificially confined to its present course.
3.3. City of Kalama
The shoreline along the Columbia River in the City of Kalama and its UGA is lined with levees or other shoreline armoring and shoreline vegetation is substantially limited. Over- and in-water structures are present throughout the Columbia River reaches, associated with Port properties. Wetlands north of the Kalama River in the City’s UGA have important habitat and water quality functions.

Shoreline functions are significantly better on the Kalama River in the City. A narrow wetland situated between Interstate 5 and the railway provides important water quality functions. The majority of the shoreline area on Kress Lake (Reach 29) is well vegetated, with little human disturbance of functions.

3.4. City of Kelso
The entire Cowlitz River shoreline in the City and its UGA are impaired by shoreline armoring and levees. The series of levees has channelized the lower Cowlitz has channelized the lower Cowlitz River, and ongoing levee maintenance results in limited shoreline vegetation. A railway parallels the Cowlitz River, and further limits any shoreline vegetation functions along most of the Cities reaches.

Similarly, a levee isolates the Coweeman River from its northern shoreline for its entire length within the City. Hydrologic connectivity is better on the southern (left) bank of the River and within the eastern UGA where shoreline vegetation and habitat are more diverse. In the eastern UGA, Hart Lake (Shoreline Analysis Cowlitz Reach 44) includes a large wetland area, but much of the vegetation is mowed, which limits vegetative functions. This area represents significant restoration potential.

The shoreline area at the confluence of the Cowlitz and Columbia River includes substantial area of intact wetland habitat, and this area is ecologically significant and relatively high functioning, although functions are impaired by a levee at the northern portion of the reach.

3.5. City of Woodland
Riparian vegetation is limited in the City’s core downtown area. The levee that separates Shoreline Analysis Reach 12 from the River acts to channelize the River through the City’s core area.

The City’s shoreline on Horseshoe Lake is developed with roads, parks, and residential and commercial development. At least eighteen overwater structures are present on Horseshoe Lake, associated with existing residential development.
Shoreline areas north of the City’s core (Shoreline Analysis Lewis Reaches 13 and 15) provide the most densely vegetated forested shoreline in the City. These reaches also provide some of the highest hydrologic functions in the City because they provide hydrologically connected floodway areas.

4. EXISTING COUNTY AND CITY PROGRAMS

4.1. Cowlitz County

4.1.1. Comprehensive Plan

The County Comprehensive Plan, adopted by the Board of County Commissioners on November 1, 1976, is a statement of policies and goals that guides growth and development throughout the County. All other development ordinances, including land use, subdivision, and environmental regulations must be consistent with the Comprehensive Plan. The County is currently in the final phases of the process of drafting its Comprehensive Plan Update.

The Final Vision Report (MPC and EA Blumen 2010) of the proposed Comprehensive Plan states, “We value our strengths: our historic rural and small town character and our irreplaceable natural environment – mountains, forests, agricultural and mineral lands; streams, lakes and shorelines; and plentiful clean air and water. Conservation of these features contributes to our economic well-being, sense of place and relationship to nature.”

4.1.2. Public Works

National Pollution Discharge Elimination System (NPDES)
On February 16, 2007, Cowlitz County was issued a NPDES phase II Municipal Stormwater Permit. This permit requires the County to develop and implement a program to reduce stormwater runoff and pollution in unincorporated urban areas adjacent to the cities of Longview and Kelso. The Stormwater Management Plan (SWMP) was updated in 2012. Activities associated with the stormwater permit include outreach and education, public involvement, and illicit discharge detection and elimination.

4.2. City of Castle Rock

The City updated its Comprehensive Plan in 2006. Citing the significance of lands both within the City limits and in the surrounding area of influence, the Plan extends beyond the City limits to address the area within a designated Urban Growth Boundary. The
Environment Element of the Comprehensive Plan states, “Natural amenities including the Cowlitz River, forested hillsides, riverfront property, abundant fish and wildlife and many other factors all contribute significantly to the City’s atmosphere and success. This chapter attempts to balance protection of critical areas and other natural amenities with the goals and policies found throughout the comprehensive plan.” The City of Castle Rock and Castle Rock School District Park and Recreation Plan, which outlines a standard for quality of life and environment enhancements was adopted by reference into the Comprehensive Plan. The city approved the Castle Rock Riverfront Park Master Plan as an appendix to the Park and Recreation plan. This Master plan included many opportunities to turn the negative impacts of the dredge spoils from the eruption of Mount Saint Helens into an asset for both public enjoyment and enhancement of fish and wildlife habitat. Many of the projects in this Master plan have been achieved, including three habitat improvement projects on the Whittle Creek, many bank improvements on the Cowlitz River with managed access (including an environmentally preferred boat launch).

4.3. City of Kalama

The Kalama City Council adopted a revised Kalama Comprehensive Plan on December 7, 2005. The City of Kalama is beginning to develop a growth management area similar to an official Urban Growth Boundary to help guide its growth and development. The Comprehensive Plan includes goals to balance economic growth with environmental protection. These goals include the following:

- Protect areas that are generally not suitable for intensive development such as those prone to landslides, flooding and/or containing wetlands and/or other critical areas.
- Seek to restore natural systems and environmental functions that have been lost or degraded, when feasible.
- Conserve and protect groundwater and maintain good quality surface water.
- Provide for the preservation and restoration of significant natural sites and locations.

4.4. City of Kelso

4.4.1. Comprehensive Plan

The Comprehensive Plan for the City of Kelso was adopted in 1980, with chapter updates in 1987 and 1992. Goals in the Comprehensive Plan are directed toward ensuring economic growth and security, public access, and environmental protection.
4.4.2. Public Works

The City of Kelso implements a Stormwater Management Plan to comply with its Phase II NPDES permit. Activities include education and outreach, illicit discharge detection and elimination, and stormwater management and monitoring programs. The City has also investigated the potential for application of Low Impact Development (LID) techniques within the City.

4.5. City of Woodland

A study completed in 2000 evaluated the City’s flood hazard and drainage issues and identified recommended solutions (RW Beck 2000). Study goals included the following:

- Prevent property damage from flooding;
- Maintain good water quality;
- Preserve sensitive resources and maintain varied use; and
- Develop a continuous and comprehensive program for managing surface water.

Recommendations in the plan included both non-structural and structural recommendations. Non-structural recommendations included strengthening regulations, developing public education and outreach measures, and conducting studies and monitoring. Capital improvement projects were generally focused on improving structural stormwater drainage systems.

5. RESTORATION PARTNERS

In addition to the County and cities, state, regional, and local agencies and organizations are actively involved in shoreline restoration, conservation, and protection in and around Cowlitz County. These partners and their local roles in shoreline protection and/or restoration are identified below and generally organized in order by the scope of the organization, from the larger state and watershed scale to the local scale.

5.1. U.S. Army Corps of Engineers

The Corps of Engineers owns and operates the federal dams on the Columbia River and it constructed and maintains the Toutle River Sediment Retention Structure (SRS). As a result of the Federal Columbia River Power System (FCRPS) Biological Opinion, the Corps is obligated to mitigate for its impacts to listed fish species. The Corps is proposing to raise the SRS to limit downstream sedimentation and to conduct maintenance dredging as needed to limit flood risks for cities along the Cowlitz River. The Corps will need to mitigate for impacts to upstream habitats along the Toutle River.
and for dredging effects. Specific mitigation measures have not yet been identified. The Corps has also conducted mitigation through habitat restoration projects along the Columbia River to compensate for the effects of dredging to deepen the navigation channel there.

In addition to planning for and funding restoration in the lower Columbia River and its tributaries, the Corps funds ongoing research, monitoring and evaluation studies in the Lower Columbia River as part of its mitigation responsibilities.

The Corps is also engaged in a General Investigation study to recommend approaches to restore ecosystem functions in the lower Columbia River and estuary, including “wetland/riparian habitat restoration, stream and fisheries improvement, water quality, and water-related infrastructure improvements” (Corps 2012). Congress authorized the General Investigation in 2000, and work was first initiated in 2003, and later reinitiated in 2012. Projects being evaluated include floodplain reconnections, channel habitat restoration, and riparian restoration (Corps 2013). Initial projects identified include six areas in the Columbia River Estuary, five areas in tributaries in Washington State, and three areas in tributaries in Oregon (Corps 2013). Projects on the Columbia River include an area bordering Cowlitz and Wahkiakum Counties, and an area between the Cities of Kalama and Woodland. Project areas identified in Columbia River tributaries in Cowlitz County include the entire Cowlitz River up to Mayfield Lake, as well as the lower Toutle River and lower Coweeman River, and a portion of the Lewis River just upstream from the City of Woodland (Corps 2013). An alternatives analysis will be completed to evaluate and select the preferred alternative.

5.2. **Northwest Power and Conservation Council Fish & Wildlife Program**

The Northwest Power and Conservation Council (NPCC) is a multi-state planning agency responsible for balancing the ecological impacts of energy production in the northwest. Current hydropower programs and operations are engaged in activities to minimize the ongoing impacts of flow regulation on the ecological processes of the Columbia River and its tributaries. These actions are generally the result of obligations under the Endangered Species Act (Section 7 consultations, Section 10 Habitat Conservation Plans (HCPs)) or Federal Energy Regulatory Commission (FERC) relicensing, and therefore, these actions are technically mitigation for ongoing impacts rather than voluntary restoration.

The Council guides Bonneville Power Administration’s (BPA’s) funding of projects to implement the fish and wildlife program. Projects that are conducted using these funds,
no matter how indirectly related to hydropower impacts, are also a part of mitigation for ongoing dam impacts. Nevertheless, it is expected that despite the funding source, such projects will improve ecosystem functions above the existing functional baseline, and as such, these projects would be considered as restoration within the framework of the County’s SMP.

In 2009, the NPCC updated its Columbia River Basin Fish and Wildlife Program. The program identifies impacts to fish and wildlife resulting from hydropower operations in the Columbia Basin, and it identifies strategies to study, monitor, and mitigate those impacts. The project funding agenda identified for the program includes the following:

1. Anadromous Fish, Resident Fish, and Wildlife
   - Bonneville will fulfill its commitment to “meet all of its fish and wildlife obligations.” Funding levels should take into account the level of impact caused by the federally operated hydropower system and focus efforts in areas most affected by operations.

2. Land and Water Acquisition Funds
   - Water transaction program: Bonneville established a water transactions program in response to the 2000 Columbia River Basin Fish and Wildlife Program and the 2000 FCRPS Biological Opinion. Bonneville shall fund the continuation of the water transaction program to pursue water right acquisitions in subbasins where water quantity has been identified in a subbasin plan as a primary limiting factor. The water transaction program will continue to use both temporary and permanent transactions for instream flow restoration.

   - Land acquisition fund: Bonneville shall fund a basinwide land acquisition program, which will include, but not be limited to, riparian easements and fee-simple acquisitions of land that protects watershed functions.

5.3. **Lower Columbia Fish Recovery Board**

The Lower Columbia Fish Recovery Board (LCFRB) is the Lead Entity for salmon restoration in watersheds throughout most of Cowlitz County and watersheds to the east, extending to the Little White Salmon River, and to the west to the mouth of the Columbia River.

In 2010, the LCFRB, in coordination with regional partners, produced the Washington Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan. The Plan provides an integrated approach to addressing salmon recovery, watershed planning,
and Northwest Power and Planning Fish and Wildlife Subbasin Plans. The Plan used a two-pronged approach to evaluate existing conditions and restoration potential. First, an Integrated Watershed Assessment (IWA) approach was applied at the sub-basin scale to assess the need for restoration or protection and the relative priority of the action in the watershed. In addition, the Plan identified habitat factors affecting salmonid production, and developed stream priority rankings based on prioritized salmon populations and habitat factors using an Ecosystem Diagnosis and Treatment (EDT) approach. The EDT approach assesses habitat factors to rank priority areas for achieving population targets for salmon recovery. Population targets were based on scientific, biological, social, cultural, political and economic factors. Based on the results of the EDT analysis, stream reaches were identified by their treatment priority, where Tier 1 represents the highest priority, and Tier 4 represents the lowest priority for salmon recovery. Recovery plan reach priorities are mapped in Appendix A. Reach locations differ between the Shoreline reaches and the Salmon Recovery reaches because the Shoreline Analysis Report identified reaches based on land use considerations as well as stream characteristics, whereas Salmon Recovery stream reach break locations were located at every tributary confluence. Detailed information on the results of the IWA and EDT analyses can be found in Appendix E of the Lower Columbia Recovery Plan (LCFRB 2010).

5.4. **PacifiCorp**

As a part of its Federal Energy Regulatory Commission relicensing process, PacifiCorp engages in fish passage projects, fish population supplementation programs, habitat enhancement, monitoring, and funding of restoration projects in the Lewis River Basin.

In 2012, PacifiCorp completed installation of new facilities to transfer anadromous fish upstream from the base of Merwin Dam to above Swift #2, opening 117 miles of spawning habitat. The new facilities will also transfer juvenile salmonids downstream past the dams.

In 2008, PacifiCorp developed a Shoreline Management Plan in 2008 for the three major reservoirs in the upper Lewis River. The PacifiCorp Shoreline Management Plan applies to lands extending from the Ordinary High Water Mark (OHWM) to the elevation 10 feet above the OHWM. PacifiCorp owns many of the lands within the Shoreline Management Plan boundary area, and it holds flowage easements on the other lands. The PacifiCorp Shoreline Management Plan was not developed to meet the regulatory requirements of the Shoreline Management Act, but it has many parallels that are consistent with the Shoreline Management Act standards.
5.5. **Cowlitz Public Utility District**

The Cowlitz Public Utility District (PUD) owns the Swift #2 dam on the Lewis River. As part of its 2008 relicensing agreement, Cowlitz PUD agreed to conduct the following activities, either individually or in coordination with PacifiCorp, which manages the dam operations:

- reintroduce anadromous salmon above Swift Reservoir (complete—see description above)
- fund three salmon hatcheries (ongoing)
- fund aquatic habitat improvement projects (ongoing)
- ensure minimum flows to the North Fork Lewis River between Swift No. 1 and Swift No. 2 dams (ongoing)
- monitor water quality (ongoing)
- manage 525 acres of wildlife habitat (ongoing)

5.6. **Lower Columbia Fish Enhancement Group**

The Lower Columbia Fish Enhancement Group (LCFHG) is active throughout Cowlitz County as part of its mission to create and implement restoration and salmon recovery strategies through community partnerships. The organization promotes private stewardship and volunteerism through education and outreach, and concentrates funds on salmon recovery, assessment, and habitat restoration, often in partnership with other entities.

General elements of LCFEG’s strategic plan are development of relationships with key shareholders; building financial and volunteer support through education and outreach programs; assisting the Lower Columbia Salmon Recovery Board, WDFW, and NOAA Fisheries in identifying, prioritizing, and implementing salmon restoration projects; increase program funding and hire and train staff; and expand the board to include a range of active members from a wide variety of backgrounds.

LCFEG sponsored efforts to identify limiting factors for salmon populations and restoration opportunities in the Lower Cowlitz River (Power and Tyler 2009) and the Kalama River basin (Tetra Tech 2007). The resulting documents provided lists of prioritized restoration opportunities (see Tables 5-4 and 5-5).

LCFEG is the primary sponsor of nutrient enhancement efforts that include the Kalama, Cowlitz, and Lewis watershed. This ongoing collaborative effort utilizes several funding sources (Pacific Salmon Commission, BPA, and/or PacifiCorp) and a wide range of volunteers groups to implement the collection and disperse of salmon carcasses. The
LCFEG recently completed an off-channel habitat enhancement projects on the Lower Kalama River and the North Fork Lewis River. Additional habitat enhancement projects are planned for the near future (see Tables 5-4 and 5-5).

5.7. **Lower Columbia Estuary Partnership**

The Lower Columbia Estuary Partnership (LCEP) administers a Habitat Restoration Program to protect and restore habitat functions and support salmon recovery in the lower Columbia River estuary, between Bonneville Dam and the mouth of the river. The organization’s overall strategy is to take a widespread teaming approach to implement scientifically sounds projects, as well as fund partners’ projects. LCEP takes a regional approach to habitat restoration, participates in the efforts of other restoration entities, including watershed councils, land trusts, and non-profits.

LCEP produced the Management Plan for the Lower Columbia River; actions recommended in the plan are listed in Section 6.1.1. Key habitat work led by the organization includes creating fish habitat with large woody debris, restoring riparian vegetation, and removing fish barriers. LCEP also conducts ecosystem condition monitoring, tracking toxins and habitat, as well as monitoring the success of restoration projects. They’ve produced several map sets using monitoring data, and make the spatial information available to the public, along with reports and publications. Volunteers are utilized for restoration and monitoring work. Finally, LCEP conducts education programs in school classrooms and through field trips.

Current LCEP projects in shoreline area are reference site monitoring at the mouth of the Lewis River, Dredge Spoil Island habitat monitoring, and Martin Island habitat monitoring.

5.8. **Intensively Monitored Watershed Program Partners**

The Intensively Monitored Watershed (IMW) project is a joint effort of the Washington Departments of Fish and Wildlife, Ecology, NOAA Fisheries, the Environmental Protection Agency, Lower Elwha Klallam Tribe and Weyerhaeuser Company. Funding for the IMW program is provided by the Washington Salmon Recovery Funding Board. The Mill, Abernathy, Germany watershed is one of three IMWs in the state. The IMW cooperators collected water quantity, water quality, habitat, summer juvenile fish abundance, and smolt production data and are identifying specific restoration actions for each IMW treatment watershed. An updated plan for monitoring fish and habitat responses to restoration was proposed for Lower Columbia watersheds in 2012 (Zimmerman et al. 2012).
5.9. **Columbia Land Trust**

The Land Trust, a non-profit in place since 1990, works throughout the Columbia River Region. The organization works collaboratively with private landowners, local governments, and other non-profits to develop stewardship plans that restore degraded habitat and protect natural resources. Private landowners who work with the Trust are generally conservationists, ranchers, farmers, foresters, and orchardists. Land acquisition and forest planning are major parts of the Trust’s effort; more local efforts include a backyard habitat certification program, outreach events, and volunteer work crew events.

Land Trust work within Cowlitz County shoreline jurisdiction includes a recent two-phase acquisition and restoration on Germany Creek. More than 185 acres floodplain, riparian, and upland habitat have been removed from the threat of development and placed in permanent protection. Additional onsite improvements, including log placement, off-channel habitat enhancement, and invasive weed removal, will help restore rearing, spawning, and migrating habitat for salmonids.

5.10. **Cowlitz Indian Tribe**

The Tribe focuses protection and restoration actions on culturally relevant species and landscapes. Key in their mission is to work to educate and inspire the community to promote their mission of conservation. The Tribe specifically recognizes elk, deer, mountain goat, salmon, eulachon, sturgeon and lamprey as important species to the Cowlitz people. Landscapes of significance that may occur within shoreline jurisdiction include estuaries; freshwater lakes and wetlands; the Cowlitz, Lewis, and Kalama Rivers and their tributaries; deciduous and coniferous forest; sub-alpine meadows; and mountains.

The Tribe is presently engaged in several restoration projects in Cowlitz County, including two active projects on Abernathy Creek and two active side channel restoration projects at Eagle Island on the North Fork Lewis River. An additional project is presently proposed on Abernathy Creek. Projects on Abernathy Creek consist of abandoned roadbed removal to restore floodplain and channel migration zone connectivity and restoration of two acres of riparian wetlands and a side channel to created wintering habitat and high-flow refugia for steelhead and coho. The proposed project on Abernathy Creek would install large wood for instream habitat enhancement. Projects are described further in Section 6.
5.11. Cowlitz Conservation District

The Conservation District works through two primary avenues. First, the District works with communities to implement projects on a watershed scale. Projects focus on salmon recovery, water quality, and invasive weed removal. A basin-wide effort to implement all three types of projects is presently in place in the Mill-Abernathy-Germany area. Secondly, the District provides technical and financial assistance to individual landowners throughout the County to promote sound management of natural resources, advising on restoration, salmon needs, and forestry issues. The District works directly with landowners and provides information through watershed plans, timber plans, and farm plans.

The District has been a partner in the Cowlitz/Wahkiakum watershed planning effort, which defined strategies to best collect and compile data in order to identify limiting factors. This ongoing approach has identified fish barrier improvements, riparian restoration projects, in-stream habitat enhancement, livestock exclusion, and other potential restoration projects to address limiting factors, particularly in the Kalama and Lewis Rivers and Mill Creek. Currently funded projects by the District include the installation of woody debris in several reaches of Abernathy Creek to restore habitat and reduce flow and erosion.

5.12. Other Volunteer Organizations

Many recreational groups and private organizations are active in Cowlitz County. While some of these groups may not have historically worked in the shoreline jurisdiction of Cowlitz County, this does not preclude involvement in voluntary restoration activities in the future. Probably the most important volunteer is the landowner that acts as a steward of the land following the completion of the project. Potentially active groups include:

- Columbia River Keeper
- Lower Columbia Basin Audubon Society
- Trout Unlimited
- Ducks Unlimited

6. POTENTIAL PROJECTS

The Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan (LCFRB 2010a) identified several actions applicable to shoreline areas throughout Cowlitz County.
Some of these actions apply to programs or regulations, while others relate to projects that could be implemented at many sites throughout the watershed (Table 6-1).

<table>
<thead>
<tr>
<th>Land Use Planning/Regulations</th>
<th>Action</th>
<th>Status</th>
<th>Entity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Expand standards in local government comprehensive plans to afford adequate protections of ecologically important areas (i.e. stream channels, riparian zones, floodplains, CMZs, wetlands, unstable geology)</td>
<td>Expansion of existing program</td>
<td>County, Cities</td>
</tr>
<tr>
<td></td>
<td>Manage future growth and development patterns to ensure the protection of watershed processes. This includes limiting the conversion of agriculture and timber lands to developed uses through zoning regulations and tax incentives (consistent with urban growth boundaries)</td>
<td>Expansion of existing program</td>
<td>County, Cities</td>
</tr>
<tr>
<td></td>
<td>Prevent floodplain impacts from new development through land use controls and Best Management Practices</td>
<td>New program</td>
<td>County, Cities, Ecology</td>
</tr>
<tr>
<td></td>
<td>Fully implement and enforce the Forest Practices Rules (FPRs) on private timber lands in order to afford protections to riparian areas, sediment processes, runoff processes, water quality, and access to habitats</td>
<td>Activity is currently in place</td>
<td>WDNR</td>
</tr>
<tr>
<td></td>
<td>Conduct forest practices on state lands in accordance with the Habitat Conservation Plan in order to afford protections to riparian areas, sediment processes, runoff processes, water quality, and access to habitats</td>
<td>Activity is currently in place</td>
<td>WDNR</td>
</tr>
<tr>
<td></td>
<td>Review and adjust operations to ensure compliance with the Endangered Species Act; examples include roads, parks, and weed management</td>
<td>Expansion of existing program</td>
<td>County, Cities</td>
</tr>
</tbody>
</table>

| Funding/Technical Assistance   | Increase funding available to purchase easements or property in sensitive areas in order to protect watershed function where existing programs are inadequate | Expansion of existing program | LCFRB, NGOs, WDFW, USFWS, BPA (NPCC) |
|                               | Increase technical assistance to landowners and increase landowner participation in conservation programs that protect and restore habitat and habitat-forming processes. Includes increasing the incentives (financial or otherwise) and increasing program marketing and outreach | Expansion of existing program | NRCS, C/WCD, WDNR, WDFW, LCFEG, County, Cities |
|                               | Increase technical support and funding to small forest landowners faced with implementation of Forest and Fish requirements for fixing roads and barriers to ensure full and timely compliance with regulations | Expansion of existing program | WDNR                          |

| Project/Restoration Projects   | Create and/or restore lost side-channel/off-channel habitat for chum spawning and coho overwintering                                             | New program                   | LCFRB, BPA (NPCC), NGOs, WDFW, NRCS, C/WCD |
|                               | Implement the prescriptions of the WRIA Watershed Planning Units regarding instream flows                                                             | Activity is currently in place| Ecology, WDFW, WRIAs, County, Cities |
|                               | Increase the level of implementation of voluntary habitat enhancement projects in high priority reaches and subwatersheds. This includes building partnerships, providing incentives to landowners, and increasing funding | Expansion of existing program | LCFRB, BPA (NPCC), NGOs, WDFW, NRCS, C/WCD, LCFEG |
Potential and existing restoration projects and actions within each assessment unit are presented in the following sections and summarized in tables. Each project/action has an identification (ID) code; codes comprise a unique number (not intended to imply priority) and a locator tag that identifies the assessment unit within which the project or action is located. Project/action “type” codes are listed for each item. When an entry includes more than one type of project or action, all are listed within the type code.

Project/action types and codes are as follows:

- **Habitat-related restoration action (Code H):** The project or action is intended to improve habitat in jurisdictional shorelines.
  - Subcode f = floodplain/off-channel work such as side/off-channel creation or enhancement, meandering, adding spawning gravels, and oxbow reconnection
  - Subcode w = wetland creation, restoration, or enhancement
  - Subcode i = instream work such as LWD placement, dredging, and bank armor removal
  - Subcode r = riparian work, including planting, removing invasive vegetation, and gravel bar creation

- **Water quality related actions (Code W):** Improving water quality is a primary goal of these actions. They may include a habitat component (for example, when riparian restoration is intended to impact water temperatures) or may be aimed solely at water quality, such as completion of a TMDL or restriction of contaminant use.

- **Management actions (Code M):** This category describes actions that usually require a greater degree of decision-making and research to implement than most habitat actions. It includes management or manipulation of fish or
predator populations, nutrient enhancement, and fish population monitoring. This code also includes most habitat, hydrologic, and water quality monitoring, except where monitoring is implemented as part of a particular habitat restoration project.

- **Hydrologic actions (Code Y):** This category addresses hydrologic processes and functions that affect the shoreline, and specifically fish habitat. It includes actions that impact flow levels where they affect or impede fish passage or where they affect habitat.

- **Fish passage (Code P):** Projects related to fish passage include culvert replacement, tributary access, and improvements to dams and other water control devices,

- **Habitat acquisition and/or protection (Code A):** This code applies where the acquisition of land for the primary purpose of habitat protection, or the use of easements or protective covenants for the same purpose. It includes non-regulatory land use policy changes that apply to specific areas, such as cattle exclusion.

- **Research and investigation (Code R):** Both formal research projects and less formal gathering of information and literature review are considered in this category.

- **Regulatory actions (Code G):** Actions in this category include regulatory enforcement and proposed or recommended changes to existing regulations.

- **Outreach (Code O):** Conducting educational outreach to the public and other entities, identifying potential partners in conservation efforts, pursuing collaborative relationships with other entities, and disseminating information are considered outreach.

### 6.1. Unincorporated Cowlitz County

#### 6.1.1. Columbia River Assessment Unit

Habitat restoration priorities identified in the Habitat Strategy (LCFRB 2010b) for the lower Columbia River and Estuary that are applicable to potential actions within Cowlitz County shorelines include:

1. Restoring subbasin valley floodplain function and stream habitat diversity
2. Managing forests to protect and restore watershed processes
3. Addressing immediate risks with short-term habitat fixes

The Lower Columbia Estuary Partnership (LCEP) has recently updated its Management Plan for the Lower Columbia River, which includes several programmatic and project recommendations (LCEP 2011).

Key actions identified by LCEP to address restoration, land use, and water quality improvement include the following:

- Identify and prioritize habitat types and attributes that should be protected or conserved.
- Protect, conserve, and enhance priority habitats, particularly wetlands, on the mainstem of the lower Columbia River and in the estuary.
- Monitor status and trends of ecosystem conditions.
- Establish and maintain Columbia River flows to meet ecological needs of the lower Columbia River and estuary.
- Avoid the introduction of non-native invasive species.
- Manage human-caused changes in the river morphology and sediment distribution within the Columbia River channel to protect native and desired species.
- Develop floodplain management and shoreland protection programs.
- Reduce and improve the water quality of stormwater runoff and other non-point source pollution.
- Ensure that development is ecologically sensitive and reduces carbon emissions.
- Expand and sustain regional monitoring of toxic and conventional pollutants.
- Reduce conventional pollutants.
- Clean up, reduce or eliminate toxic contaminants, particularly contaminants of regional concern.
- Provide information about the lower Columbia River and estuary that focuses on water quality, endangered species, habitat loss and restoration, biological diversity, and climate change to a range of users.
- Create and implement education and volunteer opportunities for citizens of all ages to engage in activities that promote stewardship of the lower Columbia River and estuary.

Action objectives from the LCFRB (2010a) are identified in Table 6-2 below.

<p>| Table 6-2. Restoration opportunities in the Lower Columbia River and Estuary (Assessment Unit LC). |</p>
<table>
<thead>
<tr>
<th>ID</th>
<th>Type*</th>
<th>Restoration Opportunity</th>
<th>Limiting Factor Addressed</th>
<th>Source Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>LC Hwi</td>
<td>Protect existing rearing habitat to ensure no further degradation.</td>
<td>Availability of preferred habitat</td>
<td>LCFRB 2010a</td>
</tr>
<tr>
<td>02</td>
<td>LC Hf</td>
<td>Increase shallow water peripheral and side channel habitats toward historic levels.</td>
<td>Availability of preferred habitat; Loss of habitat connectivity</td>
<td>LCFRB 2010a</td>
</tr>
<tr>
<td>03</td>
<td>LC Hfi</td>
<td>Restore connectivity between river and floodplain, tidally influenced reaches of tributaries, as well as in-river habitats.</td>
<td>Loss of habitat connectivity; Microdetritus-based food web; Availability of preferred habitat</td>
<td>LCFRB 2010a</td>
</tr>
<tr>
<td>04</td>
<td>LC M</td>
<td>Reduce predation mortality on emigrating juveniles.</td>
<td>Predation mortality</td>
<td>LCFRB 2010a</td>
</tr>
<tr>
<td>05</td>
<td>LC W</td>
<td>Reduce contaminant exposure of emigrating juveniles.</td>
<td>Contaminant exposure</td>
<td>LCFRB 2010a</td>
</tr>
<tr>
<td>06</td>
<td>LC RM</td>
<td>Document the interaction between emigrating juvenile salmonids and introduced species; minimize negative interactions.</td>
<td>Interaction with introduced species</td>
<td>LCFRB 2010a</td>
</tr>
<tr>
<td>07</td>
<td>LC R</td>
<td>Develop an understanding of emigrating juvenile salmonid life history diversity and habitat use in the lower mainstem, estuary, and plume.</td>
<td>Availability of preferred habitat; Loss of habitat connectivity; Density dependence</td>
<td>LCFRB 2010a</td>
</tr>
<tr>
<td>08</td>
<td>LC YW</td>
<td>Maintain favorable water flow and temperature throughout migration period.</td>
<td>Fitness and timing of juvenile salmonids entering the subbasin</td>
<td>LCFRB 2010a</td>
</tr>
<tr>
<td>09</td>
<td>LC M</td>
<td>Reduce predation mortality on migrating adults.</td>
<td>Predation losses (Adults)</td>
<td>LCFRB 2010a</td>
</tr>
<tr>
<td>10</td>
<td>LC AG</td>
<td>Protect existing spawning habitat to ensure no further net degradation.</td>
<td>Availability losses of spawning habitat</td>
<td>LCFRB 2010a</td>
</tr>
<tr>
<td>11</td>
<td>LC YW</td>
<td>Maintain favorable water flow and temperature throughout mainstem spawning and incubation period.</td>
<td>Decreased flows during spawning and incubation; Dewatering of redds</td>
<td>LCFRB 2010a</td>
</tr>
</tbody>
</table>

*TYPE = project type: H=habitat (f=floodplain, w=wetland, i-instream, r=riparian), M=management, W=water quality, Y=hydrology, P=fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

In addition to shoreline restoration opportunities focused primarily on aquatic ecosystem restoration, restoration of shoreline habitats for terrestrial species should also be pursued. The U.S. Fish and Wildlife Service is proposing to list the streaked horned lark (*Eremophila alpestris strigata*) as threatened, and to designate 12,159 acres of critical habitat in Washington and Oregon. Proposed critical habitat units include several mid-channel islands in the Columbia River, including three islands in Wahkiakum County, as well as one island immediately across from the City of Kalama on the Oregon side of the Columbia River. There are no breeding records of the species in Cowlitz County.
Monitoring in Washington State indicates steep declines in abundance of the species in recent years.

Streaked horned larks inhabit flat, sparsely vegetated areas, including prairie, grasslands, wetlands, mudflats, and open spaces of anthropomorphic origin such as airports, dredge spoils islands, and agricultural fields. Vegetation is typically low and primarily herbaceous. Breeding and wintering habitat are similar. On the Columbia River, the species inhabits sandy islands.

Effective conservation measures for recovery have been identified through research and monitoring and include creating bare or sparsely vegetated areas within or adjacent to suitable, if not occupied, habitat; creation of suitable habitat and protected nest sites in areas protected from human disturbance, predators, and flood events; creation of seasonal mudflats; and the planned timing and placement of dredge materials to create nesting habitat. Elements of proposed or potential restoration projects described in this restoration plan may benefit streaked horned lark; conversely, some salmon-focused restoration actions could negatively impact the species if not planned appropriately to avoid impact.

6.1.2. Lewis River Assessment Unit

As noted in Section 2.1.2, management of dam impacts are among the most significant potential restoration opportunities in the Lewis River Assessment Unit. In addition to addressing dam management, other key strategies for restoring the Lewis River subbasin include restoring floodplain connections and instream habitat complexity and improving riparian habitat. In the upper basin, protection of higher functioning areas is a priority, and restoration should address agricultural and forestry impacts to stream corridors (LCFRB 2010a).

A summary of priority restoration opportunities is provided in Table 6-3.

Table 6-3. Restoration opportunities in the North Fork Lewis River (Assessment Unit NL).

<table>
<thead>
<tr>
<th>ID</th>
<th>Type*</th>
<th>Action</th>
<th>Status</th>
<th>Entity</th>
<th>Source Plan/ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 NL</td>
<td>YG</td>
<td>Manage regulated stream flows to provide for critical components of the natural flow regime</td>
<td>Expansion of existing program or activity</td>
<td>PacifiCorp, Cowlitz County PUD, FERC, WDFW, NMFS, USFWS</td>
<td>LCFRB 2010a/ L-Lew 1</td>
</tr>
<tr>
<td>13 NL</td>
<td>HfO</td>
<td>Conduct floodplain restoration where feasible along the mainstem and in major tributaries that have experienced channel confinement.</td>
<td>New</td>
<td>NRCS, C/WCD, CCD, NGOs, WDFW, LCFRB</td>
<td>LCFRB 2010a/ L-Lew 4</td>
</tr>
<tr>
<td>ID</td>
<td>Type*</td>
<td>Action</td>
<td>Status</td>
<td>Entity</td>
<td>Source Plan/ID</td>
</tr>
<tr>
<td>----</td>
<td>-------</td>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>-------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>14</td>
<td>NL</td>
<td>Build partnerships with landowners and agencies and provide financial incentives</td>
<td>Expansion of existing program or activity</td>
<td>USACE, LCFEG</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>NL</td>
<td>Address water quality issues through the development and implementation of water quality clean-up plans (TMDLs)</td>
<td>Expansion of existing program or activity</td>
<td>Ecology, Cowlitz County</td>
<td>LCFRB 2010a/ L-Lew 17</td>
</tr>
<tr>
<td>16</td>
<td>NL</td>
<td>Limit intensive recreational use of the mainstem Lewis during critical periods</td>
<td>Expansion of existing program or activity</td>
<td>Cowlitz County, WDFW</td>
<td>LCFRB 2010a/ L-Lew 18</td>
</tr>
<tr>
<td>18</td>
<td>NL</td>
<td>Off Channel habitat enhancement at RM 13</td>
<td>Design Complete</td>
<td>LCFRB</td>
<td>Unknown</td>
</tr>
<tr>
<td>19</td>
<td>NL</td>
<td>Anadromous fish passage at Merwin and Swift dams.</td>
<td>Facilities complete, Beginning Operations</td>
<td>PacifiCorp</td>
<td>PacifiCorp and PUD #1 2004</td>
</tr>
<tr>
<td>20</td>
<td>NL</td>
<td>Continue to install large woody debris below Merwin Dam.</td>
<td>Ongoing</td>
<td>PacifiCorp</td>
<td>PacifiCorp and PUD #1 2004</td>
</tr>
<tr>
<td>21</td>
<td>NL</td>
<td>Monitor and maintain gravel conditions below Merwin Dam for spawning habitat.</td>
<td>Ongoing</td>
<td>PacifiCorp</td>
<td>PacifiCorp and PUD #1 2004</td>
</tr>
<tr>
<td>22</td>
<td>NL</td>
<td>Monitor predator relationships in Lake Merwin and manage as necessary.</td>
<td>Ongoing</td>
<td>PacifiCorp</td>
<td>PacifiCorp and PUD #1 2004</td>
</tr>
<tr>
<td>23</td>
<td>NL</td>
<td>Continue to manage wildlife habitat and forest resources per the integrated Wildlife Habitat Management Plans</td>
<td>Ongoing</td>
<td>PacifiCorp, Cowlitz PUD</td>
<td>PacifiCorp and PUD #1 2004</td>
</tr>
<tr>
<td>24</td>
<td>NL</td>
<td>WRIA 27/28 Nutrient Enhancement. Disperse surplus hatchery salmon carcasses in high-priority mainstem and tributary habitat.</td>
<td>Ongoing</td>
<td>LCFEG</td>
<td>PRISM</td>
</tr>
</tbody>
</table>

*TYPE = project type: H=habitat (f=floodplain, w=wetland, i=stream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

### 6.1.3. Kalama River Assessment Unit

The following actions were proposed to restore and enhance shoreline functions in the Kalama River (Table 6-4). This table includes specific actions prioritized for salmon recovery identified in a 2009 study to restore habitat conditions in the most developed
lower 2.5 miles of the Kalama River (Powers and Tyler 2009). In the upper watershed, recommended actions are primarily related to forest management to protect high functioning habitats.

Table 6-4. Restoration opportunities in the Kalama River (Assessment Unit KR).

<table>
<thead>
<tr>
<th>ID</th>
<th>Type*</th>
<th>Action</th>
<th>Status</th>
<th>Entity</th>
<th>Source Plan/ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>G</td>
<td>Fully implement and enforce the Forest Practices Rules (FPRs) on private timber lands in order to afford protections to riparian areas, sediment processes, runoff processes, water quality, and access to habitats</td>
<td>Currently in place</td>
<td>WDNR</td>
<td>LCFRB 2010a/KAL 1</td>
</tr>
<tr>
<td>25</td>
<td>GHfO</td>
<td>Conduct floodplain restoration where feasible along the lower mainstem that has experienced channel confinement. Build partnerships with the Port of Kalama and other landowners and provide financial incentives</td>
<td>New</td>
<td>NRCS, C/W CD, NGOs, WDFW, LCFRB, USACE, Port of Kalama</td>
<td>LCFRB 2010a/Kal 5</td>
</tr>
<tr>
<td>26</td>
<td>W</td>
<td>Assess, upgrade, and replace on-site sewage systems that may be contributing to water quality impairment</td>
<td>Expansion of existing program</td>
<td>Cowlitz County, C/W CD</td>
<td>LCFRB 2010a/Kal 15</td>
</tr>
<tr>
<td>27/</td>
<td>YWP</td>
<td>Address potential low-flow and thermal passage problems on the bar at the mouth of the Kalama</td>
<td>New</td>
<td>Port of Kalama, LCFEG</td>
<td>Wade 2000b, Powers and Tyler 2009</td>
</tr>
<tr>
<td>28</td>
<td>RP</td>
<td>Assess and look for solutions to gravel and debris buildup near the mouths of tributaries in the upper river</td>
<td>New</td>
<td>Cowlitz County</td>
<td>Wade 2000b</td>
</tr>
<tr>
<td>29</td>
<td>Hfw</td>
<td>Look for opportunities to increase and enhance off-channel and rearing habitat within the lower Kalama River</td>
<td>New</td>
<td>Cowlitz County/City of Kalama</td>
<td>Wade 2000b</td>
</tr>
<tr>
<td>30</td>
<td>Hf</td>
<td>Ledgett Groundwater Channel, Left bank at RM 2.5. Create 10,400 square meters of year round rearing habitat with a potential for some spawning habitat.</td>
<td>New</td>
<td>TBD</td>
<td>Powers and Tyler 2009</td>
</tr>
<tr>
<td>31</td>
<td>Hir</td>
<td>Pipeline Removal and LWD, Left bank at RM 2.2</td>
<td>New</td>
<td>TBD</td>
<td>Powers and Tyler 2009</td>
</tr>
<tr>
<td>33</td>
<td>Hi</td>
<td>Lower Kalama Reach 1A Tidal Design: Install large wood structures to increase salmonid rearing and holding cover at the mouth of the Kalama River.</td>
<td>Design</td>
<td>LCFEG</td>
<td>PRISM</td>
</tr>
<tr>
<td>34</td>
<td>Hf</td>
<td>Port Tidal and Backwater Channels, Left bank at RM 0.1</td>
<td>New</td>
<td>Port of Kalama</td>
<td>Powers and Tyler 2009</td>
</tr>
<tr>
<td>35</td>
<td>Hfri</td>
<td>Lower Kalama Habitat Enhancement. Install approximately 12 wood structures to improve and expand pool and riffle habitat; restore 5 acres of riparian</td>
<td>Proposed</td>
<td>LCFEG</td>
<td>PRISM</td>
</tr>
<tr>
<td>ID</td>
<td>Type*</td>
<td>Action</td>
<td>Status</td>
<td>Entity</td>
<td>Source Plan/ ID</td>
</tr>
<tr>
<td>----</td>
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<td>----------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>habitat; enhance 500 feet of existing side channel with woody debris.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>KR Hfi</td>
<td>Spencer Creek Riparian and LWD at RM 0.5. Restore riparian, spawning, and rearing habitat. The mouth of Spencer Creek is at Kalama RM 1.8</td>
<td>New</td>
<td>TBD</td>
<td>Powers and Tyler 2009</td>
</tr>
<tr>
<td>37</td>
<td>KR P</td>
<td>Fish Passage Culvert, Spencer Creek at RM 1.8</td>
<td>New</td>
<td>TBD</td>
<td>Powers and Tyler 2009</td>
</tr>
<tr>
<td>38</td>
<td>KR RHi</td>
<td>Pursue opportunities to reduce the effects of existing hardened shoreline armoring or replace or modify existing armoring with softer alternatives (e.g., large woody debris)</td>
<td>New</td>
<td>TBD</td>
<td>T. Rymer, NMFS, personal comm.</td>
</tr>
</tbody>
</table>

The following projects are identified in the unincorporated UGA of the City of Kalama

<table>
<thead>
<tr>
<th>ID</th>
<th>Type*</th>
<th>Action</th>
<th>Status</th>
<th>Entity</th>
<th>Source Plan/ ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>39</td>
<td>KR Hf</td>
<td>Port of Kalama Groundwater Channel, Right bank at RM 2.2. Create off-channel rearing habitat.</td>
<td>New</td>
<td>Port of Kalama</td>
<td>Powers and Tyler 2009</td>
</tr>
<tr>
<td>40</td>
<td>KR Hfi</td>
<td>GW Channel System (private), Excavate existing side channel to groundwater source and connect to mainstem, Right bank at RM 2.1</td>
<td>New</td>
<td>TBD</td>
<td>Powers and Tyler 2009</td>
</tr>
<tr>
<td>41</td>
<td>KR Hf</td>
<td>Riprap Removal/Floodplain Reconnection, Right bank at RM 2.4</td>
<td>New</td>
<td>TBD</td>
<td>Powers and Tyler 2009</td>
</tr>
<tr>
<td>42</td>
<td>KR Hf</td>
<td>Evaluate potential to enhance existing active side channel, Right bank at RM 1.8</td>
<td>New</td>
<td>TBD</td>
<td>Powers and Tyler 2009</td>
</tr>
<tr>
<td>43</td>
<td>KR HfwY</td>
<td>Improve hydrologic and habitat connectivity from the Columbia River to wetlands just east of Interstate-5.</td>
<td>New</td>
<td>TBD</td>
<td>T. Rymer, NMFS, personal comm.</td>
</tr>
</tbody>
</table>

*TYPE = project type: H=habitat (f=floodplain/off-channel, w=wetland, i=instream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

**2016 Project(s) Update**

- Permitting is in process for the installation of large wood structures in the Lower Kalama River for creation of a pool habitat for salmon. Lead agencies include the LCFEG, the Port of Kalama and the WDFW. (Source: PRISM)
6.1.4. Cowlitz River Assessment Unit

Prioritized restoration measures for the Lower Cowlitz basin are identified below as excerpted from the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan (LCFRB 2010a):

1. Protect stream corridor structure and function in high priority reaches at risk of degradation;
2. Protect hillslope processes in functional subbasins contributing to Tier 1 reaches;
3. Restore degraded hillslope processes in the Lower Cowlitz subbasin;
4. Create/Restore off-channel and side channel habitat in the mainstem Cowlitz and lower reaches of major tributaries;
5. Restore floodplain function and channel migration processes;
6. Restore access to habitat blocked by artificial barriers (priority locations at Mill Creek, Leckler Creek, Salmon Creek, Foster Creek, Skook Creek, and Blue Creek);
7. Provide for adequate instream flows during critical periods in tributaries;
8. Restore degraded hillslope processes on forest, agricultural and developed lands;
9. Restore riparian conditions throughout the basin (Priority locations in Tier 1 reaches);
10. Restore degraded water quality with an emphasis on temperature; and
11. Restore channel structure and stability.

The same set of general priorities apply to the Coweeman and Toutle Rivers, except that in the Coweeman River, restoring channel structure and stability is a higher priority than in the lower Coweeman. In the Toutle River, an additional high priority action is to address fish passage and sediment issues at the Sediment Retention Structure on the NF Toutle (LCFRB 2010a).

A summary of restoration opportunities throughout the assessment unit is presented in Table 6-5 below.

<table>
<thead>
<tr>
<th>ID</th>
<th>Type*</th>
<th>Action</th>
<th>Status</th>
<th>Entity</th>
<th>Source Plan/ ID</th>
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<tbody>
<tr>
<td>45</td>
<td>CR YG</td>
<td>Manage regulated stream flows to provide for critical components of the natural flow regime</td>
<td>Expansion of existing program or activity</td>
<td>Tacoma Power, Lewis County PUD, FERC, WDFW</td>
<td>LCFRB 2010a/ L Cow 1, Wade 2000a</td>
</tr>
<tr>
<td>46</td>
<td>CR R</td>
<td>Monitor and notify FERC of significant license violations, enforce terms and conditions of section 7 consultations on FERC relicensing agreements, and encourage</td>
<td>Expansion of existing program or activity</td>
<td>NMFS, USFWS</td>
<td>LCFRB 2010a/ L Cow 4</td>
</tr>
<tr>
<td>ID</td>
<td>Type*</td>
<td>Action</td>
<td>Status</td>
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</tr>
<tr>
<td>47</td>
<td>CR HfRO</td>
<td>Conduct floodplain restoration where feasible along the mainstem and in major tributaries that have experienced channel confinement, and especially in areas affected by dredging and floodplain filling following the 1980 Mt. St. Helens eruption. Survey landowners, build partnerships, and provide financial incentives.</td>
<td>New</td>
<td>NRCS, Cowlitz CD, NGOs, WDFW, LCFRB, USACE, LCFEG</td>
<td>LCFRB 2010a/L Cow 6; Toutle 2; Coweeman 6, Wade 2000a</td>
</tr>
<tr>
<td>48</td>
<td>CR G</td>
<td>Expand local government Comprehensive Planning to ensure consistent protections are in place to initiate review of development and real estate transactions that may affect natural resources.</td>
<td>Expansion of existing program or activity</td>
<td>Cowlitz County, Kelso, Longview, Castle Rock</td>
<td>LCFRB 2010a/L Cow 15</td>
</tr>
<tr>
<td>49</td>
<td>CR W</td>
<td>Assess, upgrade, and replace on-site sewage systems that may be contributing to water quality impairment.</td>
<td>Expansion of existing program or activity</td>
<td>Cowlitz County, Cowlitz CD</td>
<td>LCFRB 2010a/L Cow 19; Toutle 18</td>
</tr>
<tr>
<td>50</td>
<td>CR PW</td>
<td>Address fish passage and sediment issues at the Sediment Retention Structure on the NF Toutle.</td>
<td>Expansion of existing program or activity</td>
<td>WDFW, USACE, LCFEG</td>
<td>LCFRB 2010a/Toutle 1, Wade 2000a</td>
</tr>
<tr>
<td>51</td>
<td>CR YP</td>
<td>Assess and, if possible, alter the Silver Lake Dam to increase flows in Outlet Creek to assure fish passage into the Silver Lake watershed.</td>
<td>New</td>
<td>TBD</td>
<td>Wade 2000a</td>
</tr>
<tr>
<td>52</td>
<td>CR G</td>
<td>Continue to manage federal forest lands according to the Northwest Forest Plan.</td>
<td>Activity is in place</td>
<td>USFS</td>
<td>LCFRB 2010a/Toutle 4</td>
</tr>
<tr>
<td>53</td>
<td>CR W</td>
<td>Address temperature impairments through development of water quality clean-up plans (TMDLs)</td>
<td>Expansion of existing program or activity</td>
<td>Ecology</td>
<td>LCFRB 2010a/Coweeman 15</td>
</tr>
<tr>
<td>54</td>
<td>CR W</td>
<td>Assess, repair, and where possible, decommission roads that are contributing chronic sediment to stream systems or that may fail and lead to landslides, especially within areas with road</td>
<td>Expansion of existing program or activity</td>
<td>USFS, Cowlitz County</td>
<td>Wade 2000a</td>
</tr>
<tr>
<td>ID</td>
<td>Type*</td>
<td>Action</td>
<td>Status</td>
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<tr>
<td></td>
<td></td>
<td>densities above 3.0 miles/square mile.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55 CR</td>
<td>RHi</td>
<td>Look for opportunities, both short- and long-term, to increase Large Woody Debris (LWD) supplies within stream systems.</td>
<td>Projects underway on Toutle and Coweeman</td>
<td>Cowlitz County, LCFEG</td>
<td>Wade 2000a</td>
</tr>
<tr>
<td>56 CR</td>
<td>Hr</td>
<td>Replant degraded riparian areas with native conifers. To begin with, focus riparian restoration efforts along the more productive tributaries including Baird, Mulholland, and Goble creeks.</td>
<td>Expansion of existing program or activity</td>
<td>Cowlitz County and partners</td>
<td>Wade 2000a</td>
</tr>
<tr>
<td>57 CR</td>
<td>PR</td>
<td>Address fish passage barriers in the Toutle River and tributaries to the lower Cowlitz River and prioritize for repair and replacement.</td>
<td>Expansion of existing program or activity</td>
<td>USFS, Cowlitz County, and partners</td>
<td>Wade 2000a</td>
</tr>
<tr>
<td>58 CR</td>
<td>Hrwi</td>
<td>Cowlitz RM 0.5 right bank remove some dredged materials and create riparian and wetland bench</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>59 CR</td>
<td>Hrwif</td>
<td>Cowlitz RM 7.3 right bank remove some dredged materials and create riparian/floodplain bench; construct setback levee if necessary.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>60 CR</td>
<td>Hrif</td>
<td>Cowlitz RM 8.5 right bank set back levee and plant riparian/floodplain vegetation on bench</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>61 CR</td>
<td>Hrif</td>
<td>Cowlitz RM 9.0 left bank dredged materials removal to create riparian/floodplain bench.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>62 CR</td>
<td>Hr</td>
<td>Place LWD and vegetate with willows (mouth of Ostrander Creek)</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>63 CR</td>
<td>Hr</td>
<td>Remove noxious weeds and restore riparian zone along length of Ostrander Creek.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>64 CR</td>
<td>Hf</td>
<td>Cowlitz RM 9.7 right bank bar and island enhancement.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>65 CR</td>
<td>P</td>
<td>Culvert replacement on Leckler Creek at Hazel Dell Road.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>ID</td>
<td>Type*</td>
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</tr>
<tr>
<td>66</td>
<td>CR</td>
<td>Cowlitz RM 9.8 left bank riparian restoration: Remove revetment and some dredged material and create riparian and floodplain bench.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>67</td>
<td>CR</td>
<td>Cowlitz RM 10.5 left bank riparian restoration: Remove some dredged materials and create riparian/floodplain bench.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>68</td>
<td>CR</td>
<td>Cowlitz RM 11.2 left bank bar and island enhancement: Place wood to promote side channel scour and provide cover.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>69</td>
<td>CR</td>
<td>Cowlitz RM 12.5 left bank side channel restoration and enhancement: Enhance low bar with remnant side channel by placing wood and minor excavation.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>70</td>
<td>CR</td>
<td>Cowlitz RM 12.5 right bank riparian restoration: Remove riprap and bioengineer as feasible, remove dredged materials to create riparian/floodplain bench</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>71</td>
<td>CR</td>
<td>Cowlitz RM 13.5 left bank riparian restoration: Remove some dredged materials and bioengineer recent riprap placement to create riparian/floodplain bench.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>72</td>
<td>CR</td>
<td>Cowlitz RM 14.0 left bank side channel restoration and enhancement: Excavate remnant side channel, place LWD.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>73</td>
<td>CR</td>
<td>Cowlitz RM 14.5 right bank side channel restoration and enhancement: Excavate remnant side channel, place LWD, plant riparian vegetation.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>113</td>
<td>CR</td>
<td>Cowlitz RM 15.0 left bank bar enhancement: Enhance low bar and Sandy Creek and backwater by placing wood and minor excavation.</td>
<td>New</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
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<tr>
<td>ID</td>
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</tr>
<tr>
<td>74</td>
<td>CR</td>
<td>Cowlitz RM 16.0 right bank side channel restoration and enhancement: Create defined boat launch area and restore historic side channel and improve floodplain with plantings and wood.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>75</td>
<td>P</td>
<td>Delameter Creek Culvert replacement at Delameter Road.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>76</td>
<td>CR</td>
<td>Fence off Delameter Creek from livestock and restore riparian at RM 4.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>77</td>
<td>CR</td>
<td>Monahan Creek Culvert replacement at Delameter Road.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
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<tr>
<td>79</td>
<td>CR</td>
<td>Cowlitz RM 18.5 left bank dredged materials removal to create riparian/floodplain bench.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
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<tr>
<td>80</td>
<td>CR</td>
<td>Cowlitz RM 18.8 right bank bar and island enhancement: segregate boat launching from riparian zone and bars; cut chute overflow channels and restore floodplain/riparian habitat.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>81</td>
<td>CR</td>
<td>Cowlitz RM 19.8 left bank dredged materials removal to create riparian/floodplain bench.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>82</td>
<td>CR</td>
<td>Toutle River RM 0.2 right bank dredged materials removal to create riparian/floodplain bench.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>83</td>
<td>CR</td>
<td>Toutle River RM 3.2 right bank Off-channel restoration and enhancement: Reconnect off-channel ponds behind dredged material, enhance with LWD and riparian restoration.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>84</td>
<td>CR</td>
<td>Cowlitz RM 20.2 left bank dredged materials removal to</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
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<tr>
<td>85 CR Hrfi</td>
<td>Cowlitz RM 22.2 left bank dredged materials removal to create riparian/floodplain bench.</td>
<td>Conceptual plan</td>
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<td>Tetra Tech 2007</td>
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<tr>
<td>86 CR Hf</td>
<td>Cowlitz RM 23.0 left bank off-channel and floodplain restoration.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
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<tr>
<td>87 CR Hr</td>
<td>Cowlitz RM 23.2 right bank bar and island enhancement: Place LWD alongside channel and revegetate where appropriate on Hog Island.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
<td></td>
</tr>
<tr>
<td>88 CR P</td>
<td>Rock Creek Culvert replacement at West Side Highway.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
<td></td>
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<tr>
<td>89 CR PHr</td>
<td>Remove water control structure and reconnect Hill Creek; riparian revegetation along lower 1000-2000 feet of creek.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
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<tr>
<td>90 CR Hrfi</td>
<td>Cowlitz RM 23.2 right bank bar and island enhancement: Place LWD alongside channel and revegetate where appropriate on Hog Island.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
<td></td>
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<tr>
<td>91 CR Hrfi</td>
<td>Lower Olequa Creek enhancement: Restore side channel and riparian zone, remove invasive species, place LWD.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
<td></td>
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<tr>
<td>92 CR A</td>
<td>Cowlitz RM 25.0 Acquire easements in active channel migration area.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
<td></td>
</tr>
<tr>
<td>93 CR Hrfi</td>
<td>Cowlitz RM 25.0 side channel restoration and enhancement: Remove car bodies, place LWD and riparian restoration.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
<td></td>
</tr>
<tr>
<td>94 CR Hrfi</td>
<td>Cowlitz RM 26.0 left bank riparian restoration: Slope back banks to create riparian bench; remove riprap; may need to move road in one area.</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
<td></td>
</tr>
<tr>
<td>95 CR Hr</td>
<td>Cowlitz River habitat enhancements upstream of Cowlitz County (RM 27-43)</td>
<td>Conceptual plan</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
<td></td>
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<tr>
<td>ID</td>
<td>Type*</td>
<td>Action</td>
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</tr>
<tr>
<td>96</td>
<td>Hf</td>
<td>Connect gravel ponds and other off-channel areas near RM 7 on the Coweeman River to provide rearing and overwintering habitat for juvenile salmonids.</td>
<td>New</td>
<td>TBD</td>
<td>Wade 2000a</td>
</tr>
<tr>
<td>97</td>
<td>Hi</td>
<td>Coweeman Bedrock Channel Restoration. Install large diameter logs in various configurations on the Coweeman River in order to restore 2,700 feet of low gradient stream channel scoured to bedrock by historical log drives and other anthropological disturbances.</td>
<td>Underway</td>
<td>LCFEG</td>
<td>PRISM</td>
</tr>
<tr>
<td>98</td>
<td>Hr</td>
<td>Coweeman riparian vegetation enhancement and knotweed control.</td>
<td>Underway</td>
<td>C/WCD</td>
<td>PRISM</td>
</tr>
<tr>
<td>99</td>
<td>Hri</td>
<td>Explore opportunities to enhance shoreline habitat where bank armoring exists. This could be accomplished through bioengineering or by incorporation large wood into bank protection.</td>
<td>New</td>
<td>TBD</td>
<td>TWC</td>
</tr>
</tbody>
</table>

*TYPE = project type: H=habitat (f=floodplain/off-channel, w=wetland, i-instream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

6.1.5. Mill, Abernathy, Germany Creek Assessment Unit

Prioritized restoration measures for the Lower Cowlitz basin are identified below as excerpted from the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan (LCFRB 2010a):

1. Protect stream corridor structure and function;
2. Protect hillslope processes;
3. Restore degraded hillslope processes on forest, agricultural, and developed lands;
4. Restore floodplain function and channel migration processes along the lower mainstems and major tributaries;
5. Restore riparian conditions throughout the basin;
6. Restore degraded water quality with an emphasis on temperature;
7. Create/restore off-channel and side-channel habitat;
8. Restore channel structure and stability;
9. Provide for adequate instream flows during critical periods;
10. Restore access to habitat blocked by artificial barriers (priority locations in Tributaries to Mill Creek and Coal Creek).

A summary of restoration opportunities throughout the assessment unit is presented in Table 6-6 below.

Table 6-6. Restoration opportunities in Mill, Abernathy, and Germany Creeks (Assessment Units MC, AC and GC, respectively).

<table>
<thead>
<tr>
<th>ID</th>
<th>Type*</th>
<th>Action</th>
<th>Status</th>
<th>Entity</th>
<th>Source Plan/ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>All</td>
<td>O Seize opportunities to conduct voluntary floodplain restoration on lands being phased out of agricultural production. Survey landowners, build partnerships, and provide financial incentives.</td>
<td>New</td>
<td>NRCS/WCD, NGOs, WDFW, LCFRB, USACE, LCFEG</td>
<td>LCFRB 2010a/ M-A-G 4</td>
</tr>
<tr>
<td>101</td>
<td>All</td>
<td>W Assess, upgrade, and replace on-site sewage systems that may be contributing to water quality impairment</td>
<td>Expansion of existing program or activity</td>
<td>Cowlitz County, Cowlitz CD</td>
<td>LCFRB 2010a/ M-A-G 15</td>
</tr>
<tr>
<td>102</td>
<td>GC</td>
<td>P Address fish passage barriers, particularly in Germany and Coal Creeks where 30-34% of the habitat is blocked</td>
<td>Expansion of existing program or activity</td>
<td>LCFRB, Cowlitz County</td>
<td>Wade 2002</td>
</tr>
<tr>
<td>103</td>
<td>AC</td>
<td>Hf Enhance off channel habitat in Abernathy Creek near Sarah Creek, Two Bridges and Abernathy hatchery sites.</td>
<td>Underway</td>
<td>Cowlitz Tribe</td>
<td>HDR and Cramer Fish Sciences 2009; Inter-Fluve 2011</td>
</tr>
<tr>
<td>104</td>
<td>GC</td>
<td>Hf Enhance off channel habitat in Germany Creek.</td>
<td>New</td>
<td>LCFRB, Cowlitz County</td>
<td>HDR and Cramer Fish Sciences 2009</td>
</tr>
<tr>
<td>105</td>
<td>AC</td>
<td>Hri Construct engineered log jams and enhance riparian areas to produce future large woody debris in Abernathy and Germany Creeks.</td>
<td>Project underway on Abernathy Creek</td>
<td>LCFRB, Cowlitz County, Cowlitz Tribe</td>
<td>HDR and Cramer Fish Sciences 2009</td>
</tr>
<tr>
<td>106</td>
<td>All</td>
<td>RHfi Identify areas where channel modifications (LWD or large rocks) could help slow flows, capture scarce spawning gravels, reconnect floodplain habitat, and enhance instream channel diversity.</td>
<td>New</td>
<td>LCFRB, Cowlitz County</td>
<td>Wade 2002</td>
</tr>
<tr>
<td>107</td>
<td>All</td>
<td>Hr Target riparian restoration efforts along the most productive and/or degraded streams including the agricultural areas (generally lower and middle reaches) of Germany and Abernathy Creeks,</td>
<td>Project underway on Abernathy Creek</td>
<td>LCFRB, Cowlitz County, Cowlitz Tribe</td>
<td>Wade 2002, HDR and Cramer Fish Sciences 2009</td>
</tr>
<tr>
<td>ID</td>
<td>Type*</td>
<td>Action</td>
<td>Status</td>
<td>Entity</td>
<td>Source Plan/ID</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>and the residential areas of Mill Creek.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>108</td>
<td>M</td>
<td>Germany Creek Nutrient Enhancement. Placement of salmon carcass analogs and monitoring of salmon population response.</td>
<td>Underway</td>
<td>LCFEG</td>
<td>PRISM</td>
</tr>
</tbody>
</table>

*TYPE = project type: H=habitat (f=floodplain/off-channel, w=wetland, i=instream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

2016 Project(s) Update

- An application is processing for a salmon recovery project in the Germany Creek watershed that would install wood-based instream structures, develop/maintain side channel and off channel habitats, and restore riparian function along 2785 feet of Germany Creek, 665 feet of tributary and 775 feet of side channel habitat in order to increase habitat diversity and quality of fall Chinook, Winter Steelhead and Coho. The lead entity includes the LCFEG and Cowlitz CD. (Source: PRISM)
- An application was submitted to place channel spanning log jams, smaller wood accumulations and pre-excavate side channels to increase the quality and quantity of spawning and juvenile rearing habitat for Washington Coast steelhead and Lower Columbia coho in Abernathy Creek. The lead entity includes the LCFRB and Cowlitz Tribe. (Source: PRISM)
- An application was submitted proposing the installation of additional LWD structures to improve habitats and riparian restoration associated with project construction impacts. The lead entity includes the LCFEG and Cowlitz CD. (Source: PRISM)

6.1.6. South Fork Chehalis River Assessment Unit

The Chehalis Basin Salmon Habitat Restoration and Preservation Work Plan for WRIA 22 and 23 (Chehalis Basin Partnership Habitat Work Group 2008) identified several restoration recommendations for the Chehalis watershed, including several recommendations applicable to the upper South Fork Chehalis River. These recommendations include:

- Riparian restoration
  - Conifer underplanting
  - Control of invasive species
- Control excess sedimentation
Implement alternative methods of bank stabilization (bioengineering) in locations with excessive erosion (sediment input)
- Abandon roads on steep geologically sensitive areas
- Upgrade existing roads to comply with Forest Practices Act rules and regulations
- Revegetate streaming and riverbanks for added protection from erosion
  - Correct fish passage barriers
  - Remove hard armoring or implement bioengineering techniques
  - Enhance or restore potential off-channel, floodplain, and wetland habitat

6.2. **City of Castle Rock**
The most significant opportunities for restoration in the City of Castle Rock and its UGA include riparian and floodplain restoration. A summary of restoration opportunities identified within and supported by the City is presented in Table 6-7a.

Table 6-7a. Restoration opportunities in and supported by the City of Castle Rock (Assessment Unit CR).

<table>
<thead>
<tr>
<th>ID</th>
<th>Type*</th>
<th>Action</th>
<th>Status</th>
<th>Entity</th>
<th>Source Plan/ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>CR Hri</td>
<td>Cowlitz RM 16.8 right bank tributary enhancement: Create riparian bench, place LWD and riparian restoration along lower end of Arkansas Creek</td>
<td>New</td>
<td>TBD</td>
<td>Tetra Tech 2007; TJ Kieran, City of Castle Rock, personal communication</td>
</tr>
<tr>
<td>114</td>
<td>CR Hrf</td>
<td>Channel and riparian restoration at lower Whittle Creek: Remove invasive species, revegetate, re-meander channel.</td>
<td>On-going</td>
<td>City of Castle Rock; Cowlitz Conservation District; Castle Rock School District; WDFW</td>
<td>Tetra Tech 2007; TJ Kieran, City of Castle Rock, personal communication</td>
</tr>
<tr>
<td>115</td>
<td>CR Hfi</td>
<td>Reconnect backwater channel and place LWD at Janisch Creek, just north of the City limits. Consider re-meandering the creek away from railroad tracks.</td>
<td>On-going</td>
<td>City of Castle Rock; Cowlitz Conservation District; Castle Rock School District; WDFW</td>
<td>Tetra Tech 2007; TJ Kieran, City of Castle Rock, personal communication</td>
</tr>
<tr>
<td>116</td>
<td>CR Hr</td>
<td>Restore and enhance riparian vegetation along the Cowlitz River, including School District site.</td>
<td>On-going</td>
<td>North County Recreation Assoc; Castle Rock School</td>
<td>TJ Kieran, City of Castle Rock, personal communication</td>
</tr>
</tbody>
</table>
### City of Kalama

Several potential restoration opportunities are present with the City of Kalama and its Urban Growth Area.

Two areas within the City are proposed as mitigation, meaning that they would be restored to compensate for an action (or actions) that negatively affect(s) ecological functions. As such, mitigation projects are not truly restoration projects, and they may or may not result in a net gain in ecological functions. These potential mitigation sites include a portion of the land around Kress Lake, which is primarily forested, and the land along the north and south banks of the Kalama River, west of I-5.

In addition to these areas, a summary of additional restoration opportunities is presented in Table 6-8 below.
### Table 6-8. Restoration opportunities in the City of Kalama (Assessment Unit KA).

<table>
<thead>
<tr>
<th>ID</th>
<th>Type*</th>
<th>Action</th>
<th>Status</th>
<th>Entity</th>
<th>Source Plan/ ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>117</td>
<td>HfO</td>
<td>Conduct floodplain restoration where feasible along the lower mainstem that has experienced channel confinement. Build partnerships with the Port of Kalama and other landowners and provide financial incentives</td>
<td>New</td>
<td>NRCS, C/W CD, NGOs, WDFW, LCFRB, USACE, Port of Kalama</td>
<td>LCFRB 2010a/Kal 5</td>
</tr>
<tr>
<td>118</td>
<td>YHw</td>
<td>Improve hydrologic and habitat connectivity from the Columbia River to wetlands just east of Interstate-5.</td>
<td>New</td>
<td>TBD</td>
<td>T. Rymer, NMFS, personal communication</td>
</tr>
<tr>
<td>119</td>
<td>RHf</td>
<td>Look for opportunities to increase and enhance off-channel and rearing habitat within the lower Kalama River</td>
<td>New</td>
<td>Cowlitz County/City of Kalama</td>
<td>Wade 2000b</td>
</tr>
<tr>
<td>120</td>
<td>Hf</td>
<td>Groundwater Channel, Left bank at RM 1.4</td>
<td>New</td>
<td>TBD</td>
<td>Powers and Tyler, 2009</td>
</tr>
<tr>
<td>121</td>
<td>RHi</td>
<td>Pursue opportunities to reduce the effects of existing hardened shoreline armoring or replace or modify existing armoring with softer alternatives (e.g., large woody debris)</td>
<td>New</td>
<td>TBD</td>
<td>TWC</td>
</tr>
</tbody>
</table>

*TYPE = project type: H=habitat (f=floodplain/off-channel, w=wetland, i=instream, r=riparian), M=management, W=water quality, Y=hydrology, P=fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

### 6.4. City of Kelso

Several sites on the Cowlitz River in the City of Kelso have been used to deposit dredge spoils associated with the dredging following the eruption of Mount Saint Helens. These sites are predominantly under private ownership. Restoration of hydrologic connectivity and riparian vegetation at these sites could potentially significantly improve floodplain functions in the lower Cowlitz River.

A wetland, known as Hart’s Lake, in the City of Kelso UGA is noted as an area for potential restoration. The City Parks Department owns a portion of the wetland and the abutting Coweeman shoreline. This area is identified in the City’s Parks Plan as undeveloped open space. The area is within the floodplain of the Coweeman River, and has the potential to function as a backwater habitat during floods. As noted in Section 3.4, the portion of the parcel along the Coweeman shoreline is presently mowed. The shoreline would benefit from planting riparian shrubs and trees to provide shade to the Coweeman River and to improve fish and wildlife habitat. There may also be opportunities to improve hydrologic connectivity to the wetland from the west. Discussions are underway for potential wetland mitigation at Hart’s Lake for impacts.
that may occur within shoreline jurisdiction at the Southwest Washington Regional Airport. As noted above, if used as mitigation, the project may or may not result in a net improvement of functions on a City-wide basis.

A summary of restoration opportunities is presented in Table 6-9 below.

Table 6-9. Restoration opportunities in the City of Kelso (Assessment Unit KE).

<table>
<thead>
<tr>
<th>ID</th>
<th>Type*</th>
<th>Action</th>
<th>Status</th>
<th>Entity</th>
<th>Source/ Plan/ ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>122</td>
<td>KE Hrfi</td>
<td>Cowlitz RM 1.0 Left Bank Side channel restoration and enhancement: Remove some dredged materials and reconnect side channel, create riparian bench.</td>
<td>Conceptual Design</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>123</td>
<td>KE Hrf</td>
<td>Coweeman RM 3.5 Right Bank Tributary enhancement: Reconnect remnant oxbow and restore riparian zone.</td>
<td>Conceptual Design</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>124</td>
<td>KE Hi</td>
<td>Coweeman RM 4.0 Tributary enhancement: Place LWD for sediment trapping, cover, and in-stream enhancement upstream of levees.</td>
<td>Conceptual Design</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>125</td>
<td>KE Hri</td>
<td>Cowlitz RM 3.0 Left Bank Riparian restoration: Slope back banks to create riparian bench; remove riprap; revegetate with riparian species.</td>
<td>Conceptual Design</td>
<td>TBD</td>
<td>Tetra Tech 2007</td>
</tr>
<tr>
<td>126</td>
<td>KE Hrf</td>
<td>Conduct floodplain restoration where feasible along the Cowlitz River. In particular, consider restoration of floodplain and riparian functions at former dredge disposal sites.</td>
<td>New</td>
<td>TBD</td>
<td>T. Rymer, NMFS, personal communication</td>
</tr>
<tr>
<td>127</td>
<td>KE HrAR</td>
<td>Discontinue mowing and plant riparian vegetation along the shoreline in the Hart Lake Recreation Area. Evaluate potential to increase hydrologic connections to the wetland from the west.</td>
<td>New</td>
<td>City of Kalama Parks Department</td>
<td>TWC</td>
</tr>
<tr>
<td>128</td>
<td>KE HrO</td>
<td>Plant native trees and shrubs along the shoreline at Tam O’Shanter Park. Consider opportunities for interpretive signage.</td>
<td>New</td>
<td>City of Kalama Parks Department</td>
<td>TWC</td>
</tr>
<tr>
<td>129</td>
<td>KE RHfw</td>
<td>Explore opportunities to improve hydrologic and habitat connectivity from the Columbia River to Owl Creek and associated wetlands just east of Interstate-5.</td>
<td>New</td>
<td>TBD</td>
<td>T. Rymer, NMFS, personal communication</td>
</tr>
<tr>
<td>130</td>
<td>KE RHi</td>
<td>Pursue opportunities to reduce the effects of existing hardened shoreline</td>
<td>New</td>
<td>TBD</td>
<td>T. Rymer, NMFS,</td>
</tr>
</tbody>
</table>
6.5. City of Woodland

There are several restoration sites available within the City of Woodland. The areas zoned for floodway are the most obvious areas for restoration and are generally found in the Lewis 13, 14 and 15 reaches. There are also restoration opportunities to found south of the CC Street Bridge within the floodway. This location has significant invasive species coverage and impacts from informal camping.

A summary of restoration opportunities is presented in Table 6-10 below.

Table 6-10. Restoration opportunities in the City of Woodland (Assessment Unit WO).

<table>
<thead>
<tr>
<th>ID</th>
<th>Type*</th>
<th>Action</th>
<th>Status</th>
<th>Entity</th>
<th>Source Plan/ ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>131</td>
<td>Wo Hrf</td>
<td>Maintain and restore riparian vegetation within the designated floodway.</td>
<td>New</td>
<td>TBD</td>
<td>TWC</td>
</tr>
<tr>
<td>132</td>
<td>Wo Hr</td>
<td>Plant shoreline vegetation at Horseshoe Lake Park.</td>
<td>New</td>
<td>City of Woodland Parks Department</td>
<td>TWC</td>
</tr>
<tr>
<td>133</td>
<td>Wo Hr</td>
<td>Remove invasive vegetation and replant with native vegetation south of the CC Street Bridge.</td>
<td>New</td>
<td>TBD</td>
<td>City of Woodland</td>
</tr>
</tbody>
</table>

7. IMPLEMENTATION STRATEGY

7.1. Local/Regional Planning and Coordination

Cowlitz County and the cities of Castle Rock, Kalama, Kelso, and Woodland participate in the Cowlitz Wahkiakum Council of Governments (CWCOG). The Council of Governments provides a regional forum to address issues of mutual interest and concern, develop recommendations and provide technical services. Because the CWCOG focuses on regional and local planning, transportation planning, community and economic development planning, and technical assistance, it provides an opportunity for coordinated restoration planning and implementation. One potential
mechanism to encourage implementation of shoreline restoration actions would be to incorporate shoreline restoration goals and projects into Capital Improvement Programs (CIP), Parks Master Plans, and Six-Year Transportation Improvement Plans.

The County and Cities will continue their association and involvement with their restoration partners. The County and Cities may also look for other time sensitive opportunities for involvement in regional restoration planning and implementation.

### 7.2. Funding Opportunities for Restoration

Some restoration projects and programs within the County could be funded by County general funds, utilities funds, or parks funding; however, many of the proposed habitat restoration projects will require outside funding through federal or state grants, as well as local, private, or non-profit matching funds. Projects may be funded in multiple phases, with different funding sources appropriate for each phase. It should be noted that potential funding sources are not limited to those identified below. Potential grant sources and a description of their applications are provided in Table 7-1.

<table>
<thead>
<tr>
<th>Funding Program</th>
<th>Description</th>
<th>Source/ Grant Administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salmon Recovery Funding Board</td>
<td>Funding to improve important habitat conditions or watershed processes to benefit salmon and bull trout. Projects must go through selection by local lead entities and must address goals and actions defined in regional recovery plans or lead entity strategies.</td>
<td>Washington Recreation and Conservation Office</td>
</tr>
<tr>
<td>Aquatic Lands Enhancement Account</td>
<td>Funds the acquisition, improvement, or protection of aquatic lands for public purposes.</td>
<td></td>
</tr>
<tr>
<td>Washington Wildlife Recreation Program</td>
<td>Funds a range of land protection and outdoor recreation, including park acquisition and development, habitat conservation, farmland preservation, and construction of outdoor recreation facilities. Provides funds to restore riparian vegetation.</td>
<td></td>
</tr>
<tr>
<td>Family Forest Fish Passage Program</td>
<td>Provides funding to small forest landowners to repair or remove fish passage barriers. The state typically provides 75% – 100% of removal and replacement costs.</td>
<td></td>
</tr>
<tr>
<td>Funding Program</td>
<td>Description</td>
<td>Source/ Grant Administrator</td>
</tr>
<tr>
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<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Whole Watershed Restoration Initiative</td>
<td>Funds habitat restoration in Priority Basins. The lower Columbia River is one of the Priority Basins, including WRIA 25, 26, and 27. Funding for individual projects ranges from $20,000 to $100,000.</td>
<td>Ecotrust</td>
</tr>
<tr>
<td>Bonneville Power Administration</td>
<td>Funding for habitat projects to mitigate impacts of dam operations on the Columbia River.</td>
<td>Bonneville Power Administration</td>
</tr>
<tr>
<td>PacifiCorp</td>
<td>PacifiCorp provides annual funding to implement restoration that will benefit fish recovery and enhance fish habitat in the North Fork Lewis Basin.</td>
<td>PacifiCorp</td>
</tr>
<tr>
<td>Watershed Planning Act</td>
<td>Funding for local development of watershed plans for managing water resources and for protecting existing water rights.</td>
<td>Washington Department of Ecology</td>
</tr>
<tr>
<td>Centennial Clean Water Fund</td>
<td>Funds water quality infrastructure and projects to control non-point source pollution.</td>
<td>Washington Department of Ecology</td>
</tr>
<tr>
<td>Section 319</td>
<td>Funds non-point source pollution control projects.</td>
<td>Washington Department of Ecology</td>
</tr>
<tr>
<td>Clean Water State Revolving Fund</td>
<td>Provides low interest and forgivable principal loan funding for wastewater treatment construction projects, eligible nonpoint source pollution control projects, and eligible Green projects.</td>
<td>Washington Department of Ecology</td>
</tr>
<tr>
<td>Conservation Reserves Enhancement Program</td>
<td>This program provides funds to farmers who maintain riparian buffers on on-site waterbodies. The funds cover technical assistance, plant costs, and land “rental” fees.</td>
<td>Cowlitz Conservation District</td>
</tr>
<tr>
<td>Conservation Partners</td>
<td>Provides technical assistance to farmers, ranchers, foresters and other private landowners to optimize wildlife habitat conservation on private lands.</td>
<td>National Fish and Wildlife Foundation</td>
</tr>
<tr>
<td>Five Star and Urban Waters Restoration Fund</td>
<td>Funds community stewardship and restoration of coastal, wetland and riparian ecosystems.</td>
<td></td>
</tr>
<tr>
<td>NOAA Open Rivers Initiative</td>
<td>Funds the removal of obsolete dams and other stream barriers to improve fisheries, enhance public safety and boost local economies through benefits resulting from removal. Awards range from $100,000 to $3,000,000.</td>
<td>NOAA’s Restoration Center</td>
</tr>
<tr>
<td>American Sportfishing Association’s FishAmerica Foundation Grants</td>
<td>Fund marine and anadromous fish habitat restoration projects that benefit recreationally fished species. Typical awards range from $10,000 to $75,000.</td>
<td></td>
</tr>
<tr>
<td>Funding Program</td>
<td>Description</td>
<td>Source/ Grant Administrator</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Stream Barrier Removal Grants</td>
<td>Funds stream barrier removal projects that benefit anadromous fish. Grant program is administered through American Rivers, in partnership with NOAA’s Restoration Center.</td>
<td></td>
</tr>
<tr>
<td>Partners for Fish and Wildlife</td>
<td>Provides technical and financial assistance to landowners to improve their property for targeted fish and wildlife species without a long-term easement contract.</td>
<td>U.S. Fish and Wildlife Service</td>
</tr>
<tr>
<td>National Fish Passage Program</td>
<td>Funds priority projects to improve fish passage.</td>
<td></td>
</tr>
<tr>
<td>North American Wetlands Conservation Act Grants Program</td>
<td>Provides matching funds for acquisition, enhancement, and restoration of wetlands that benefit waterfowl habitat.</td>
<td></td>
</tr>
</tbody>
</table>

7.3. **Development Incentives**

The County and cities may provide development incentives for restoration, including development code incentives (e.g., height, density, impervious area or lot coverage). This may serve to encourage developers to try to be more imaginative or innovative in their development designs to include conservation efforts. Examples include the installation of rain gardens or LID features above and beyond DOE requirements, shared parking, exceeding landscape or open space requirements, or other innovative measures that benefit the environment and the citizenry.

7.4. **Landowner Outreach and Engagement**

The County and cities could emphasize and accomplish restoration projects by engaging community volunteers and coordinating with non-profit organizations. Volunteer engagement can have the added benefit of encouraging or guiding local residents to become more effective stewards of the land. Programs that provide ongoing assistance and resources to landowners through plantings, equipment use or technical support can also have a far reaching impact on shoreline functions.

7.5. **Maximizing Mitigation Outcomes**

Although projects identified in this plan are identified as restoration opportunities, this document may serve as a source to identify large-scale opportunities that could be used to optimize mitigation outcomes where on-site mitigation opportunities are limited due to building site constraints, limited potential ecological gains, or other site-specific factors.
These large-scale mitigation projects could be implemented through concurrent, permissive responsible mitigation, or through mitigation banking or an in-lieu fee program. It should be noted that the application of mitigation banking and in-lieu fee programs is not limited to wetlands and could be applied to mitigation for impacts to shorelines and endangered species. Whereas mitigation banking requires capital investment and ecological enhancement prior to the exchange of debits and credits, an in-lieu-fee program establishes a program in which funds are collected from permittees for unavoidable impacts, and these funds are pooled and used to implement mitigation projects within three growing seasons of the impact.

7.6. Monitoring

Monitoring of the effectiveness of restoration actions enables opportunities to adaptively manage future restoration efforts to maximize project outcomes. The Lower Columbia Fish Recovery Board developed a research, monitoring, and evaluation (RM&E) program plan in 2010 (LCFRB 2010c). LCFRB’s RM&E Program includes recommendations for habitat status and trends monitoring, fish status and trends monitoring, project implementation and effectiveness monitoring. The program also identified key research needs. LCFRB is coordinating with regional, state, and federal partners to develop an integrated status and trends monitoring (ISTM) design for the Lower Columbia. The LCFRB is presently working to bridge efforts of the ISTM program with municipal stormwater monitoring and reporting requirements. This sort of coordinated effort is expected to maximize monitoring resources to track changes in ambient watershed conditions over time and provide necessary information and understanding to guide future watershed management decisions.
8. REFERENCES


PacifiCorp and PUD #1 of Cowlitz County. 2004. Joint Explanatory Statement for the Lewis River Hydroelectric Project Settlement Agreement. Merwin (P-935), Yale (P- 2071), Swift No. 1 (P-2111), Swift No. 2 (P-2213).


9. LIST OF ACRONYMS AND ABBREVIATIONS

BPA ..................... Bonneville Power Administration
CIP ........................ Capital Improvement Projects
Corps ..................... U.S. Army Corps of Engineers
CMZ ..................... Channel migration zone
C/WCD .................. Cowlitz/Wahkiakum Conservation District
CWCOG .................. Cowlitz Wahkiakum Council of Governments
Ecology .................. Washington Department of Ecology
FCRPS .................. Federal Columbia River Power System
FPR ........................ Forest Practices Rules
Ft ................................ Feet
IMW ..................... Intensively Monitored Watershed
ISTM ..................... Integrated Status and Trends Monitoring
LCEP ..................... Lower Columbia Estuary Partnership
LCFEG .................. Lower Columbia Fish Enhancement Group
LCFRB .................. Lower Columbia Fish Recovery Board
LID ........................ Low Impact Development
LWD ........................ Large Woody Debris
OHWM .................. Ordinary High Water Mark
MOA ..................... Memorandum of Agreement
NF ........................ North Fork
NGOs ..................... Non-governmental organizations
NOAA ..................... National Oceanographic and Atmospheric Administration
NPDES .................. National Pollutant Discharge Elimination System
NRCS ..................... Natural Resource Conservation Service
PUD ..................... Public Utility District
RM ........................ River Mile
RM&E ..................... Research, Monitoring, and Evaluation
SMP ........................ Shoreline Master Program
SRS ........................ Sediment Retention Structure
TWC ..................... The Watershed Company
UGA ..................... Urban Growth Area
USFS ..................... United States Forest Service
USFWS .................. U.S. Fish and Wildlife Service
WAC ..................... Washington Administrative Code
WDFW ....................... Washington Department of Fish and Wildlife
WDNR ....................... Washington Department of Natural Resources
WRIA ......................... Water Resource Inventory Area
APPENDIX A

Map of Potential Restoration Project Sites
FIGURE 9.
POTENTIAL RESTORATION PROJECTS
IN THE LOWER COWLITZ RIVER,
RM 0-10

LEGEND

- River mile

Restoration Sites
- Preliminary Sites
- High Ranking Sites

Interstate
Highways
Secondary Roads
Other
Highway Ramp
Levees
rail
FEMA 100 YR

0.5R - Riparian Restoration

3.0L - Riparian Restoration

4.5R - Riparian Restoration

7.3R - Riparian Restoration

8.5R - Riparian Restoration

9.0L - Dredged Materials Removal

9.7R - Bar & Island Enhancement

9.8L - Riparian Restoration

9.0L-A - Tributary Enhancement

0.5R - Riparian Restoration

9.0L - Tributary Enhancement

C3.5R - Tributary Enhancement/Side-channel Restoration

C4.0B - Tributary Enhancement/In-stream Enhancement

T1 - Tributary Enhancement/Riparian Restoration

STATE HWY 4
STATE HWY 411
STATE HWY 432
STATE HWY 433
US HWY 30
30TH AVE
3RD AVE
PACIFIC WAY
INDUSTRIAL WAY
32ND AVE
15TH AVE
STATE HWY 432
STATE HWY 433
STATE HWY 4
N PACIFIC AVE
ALLEN ST
TALLEY WAY
26TH AVE
GRADE ST
BEECH ST
OLD PACIFIC HW
ALABAMA ST
HUDSON ST
7TH AVE SW
30TH AVE
WASHINGTON WAY
KELSO DR
3
2
1
0
9
8
7
6
5
4
3
2
1
0
Miles

FIGURE 9.
POTENTIAL RESTORATION PROJECTS
IN THE LOWER COWLITZ RIVER,
RM 0-10
FIGURE 10.
POTENTIAL RESTORATION PROJECTS IN THE LOWER COWLITZ RIVER, RM 10-20

LEGEND
- River mile
Restoration Sites
- Preliminary Sites
- High Ranking Sites
- Interstate
- Highways
- Secondary Roads
- Other
- Highway Ramp
- Levees
- rail
- FEMA 100 YR
FIGURE 11.
POTENTIAL RESTORATION PROJECTS
IN THE LOWER COWLITZ RIVER,
RM 20-30