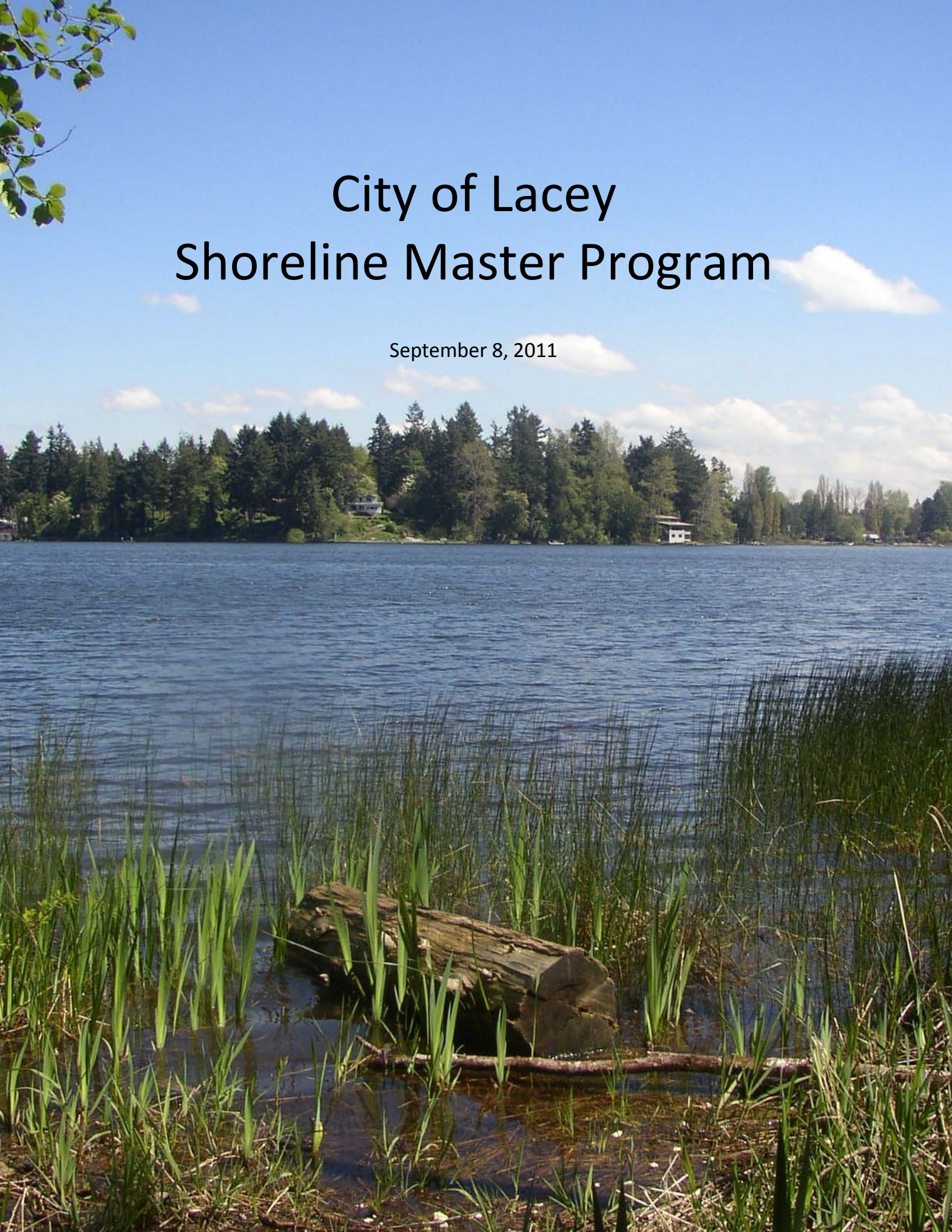
City of Lacey
Shoreline Master Program

September 8, 2011



CITY OF LACEY MISSION

Our mission is to enrich the quality of life in Lacey for all our citizens. To build an attractive, inviting, and secure community; We pledge to work in partnership with our residents to foster community pride, to develop a vibrant, diversified economy, to plan for the future, and to preserve and enhance the natural beauty of our environment.

Picture of the open house held January 2010 at Lacey City Hall to review the draft Lacey Shoreline Master Program developed by the Lacey Planning Commission and to kick off an effort to update the City's Comprehensive Plan for Outdoor Recreation. Over 100 citizens participated in the event.

Picture by Lori Flemm

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Bruce Freeland
Kenneth Mitchell
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Richard Sovde
Gail Madden
Lenny Greenstein

LACEY CITY MANAGER

Scott Spence

LACEY COMMUNITY DEVELOPMENT DEPARTMENT

Rick Walk, AICP, Community Development Director
David R. Burns, AICP, Principal Planner, lead staff on update
Ryan Andrews, Associate Planner
Sarah Schelling, Associate Planner
Samra Seymour, Associate Planner
Jolene Hempel, Permit Technician
Leah Bender, Permit Technician

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Veena Tabbutt, Senior Planner
Andrew Deffobis, Assistant Planner
Sarah Morley, Administrative Assistant
Toni Tringolo, Office Specialist II

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Jan Weydemeyer, Senior Planner for Olympia
Cindy Wilson, Senior Planner for Thurston County
Molly Levitt, Associate Planner Thurston County

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Photographs taken by David R. Burns, AICP, Principal Planner, unless noted otherwise.

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PART ONE

GENERAL PROVISIONS, FRAMEWORK, DEFINITIONS, JURISDICTION AND ENVIRONMENTAL DESIGNATIONS, TABLES FOR USE, STANDARDS AND MODIFICATIONS, NONCONFORMING USES, PERMITS, RELATIONSHIP TO OTHER LAND USE REGULATIONS

View of wetland system south of Hicks Lake. This wetland was dedicated to the City of Lacey by Boston Harbor Land Company when the Southlake plat was developed. The dedication puts the wetland and its associated 200 foot buffer under City ownership for long term preservation. The dedication also provided the opportunity to establish a section of trail around the outside of the wetland buffer for limited public access to this resource.

17.10.000 General Provisions

1. All development and use of shorelines of the state shall be carried out in a manner that is consistent with this SMP and the policy of the Act as required by RCW 90.58.140(1), whether or not a shoreline permit or statement of exemption is required.

2. No use, land or water alteration, or development shall be undertaken within jurisdiction of the Shoreline Management Act by any person without first obtaining a permit, except the Administrator may issue a letter of exemption from a substantial development permit under Section 17.30.030.

3. Permit processes and fees related to implementation of this Shoreline Master Program (SMP) are contained within the City's Development Guidelines and Public Works Standards (DGPWS). The processes outlined in the City DGPWS follow the requirements of state law and provide a local process for implementation of Lacey's Shoreline Master Program.

17.10.005 Authority

Authority for enactment and administration of this Shoreline Master Program (SMP) is the Shoreline Management Act of 1971, Chapter 90.58, Revised Code of Washington (RCW), also referred to herein as the "SMA". All SMPs must satisfy the requirements of Chapter 173-26, Washington Administrative Code (WAC), State master program approval/amendment procedures and master program guidelines, and Chapter 173-27 WAC, Shoreline permitting and enforcement procedures.

17.10.010 Title

This document shall be known and may be cited as the "City of Lacey Shoreline Master Program."

17.10.015 Short Title

This document may be referred to herein as the "SMP," or the "master program."

17.10.017 Intent and Framework

1. Three pillars provide the framework:

The state Shoreline Management Act was adopted by the voters in 1972. It demonstrated a broad public support for the wise management of the state's shoreline resources. There are three pillars of the Act that provide the fundamental concepts implemented in this Shoreline Master Program (SMP). These are:

A. Protection of environmental functions and values of our shoreline resources;

B. Prioritizing the use of shorelines dependent upon the need to be located on shorelines (water dependant use);

C. Public access and public use and enjoyment of shoreline resources.

2. Fundamental Goals of the Shoreline Management Act:

The Shoreline Act's policy of protecting ecological functions, fostering reasonable use and maintaining the public's right of navigation, access and corollary uses encompasses the following general goals:

A. Goal: The use of shorelines for economically productive uses that are particularly dependant on shoreline location or use (RCW 90.58.020);

B. Goal: The use of shorelines and waters they encompass for public access and recreation (RCW 90.58.020);

C. Goal: Protection and restoration of the ecological functions of shoreline natural resources (RCW 90.58.020);

D. Goal: Protection of the public right of navigation and corollary uses of waters of the state (RCW 58.020);

E. Goal: The protection and restoration of buildings and sites having historic, cultural and educational value (RVW 90.58.100);

F. Goal: Planning for public facilities and utilities correlated with other shoreline uses (RCW 90.58.100);

G. Goal: Prevention and minimization of flood damage (RCW 90.58.100);

H. Goal: Recognizing and protecting private property rights (RCW 90.58.020);

I. Goal: Preferential accommodation of single family uses (RCW 90.58.020);

J. Goal: Coordination of shoreline management with other relevant, local, state and federal programs (RCW 90.58.020).

3. Shorelines of Statewide Significance and Fundamental Policies:

A. Shorelines of Statewide Significance: The Shoreline Management Act identifies certain shorelines as "shorelines of statewide significance" and raises their status by setting use priorities and requiring "optimum implementation" of the Act's policy.

B. Preference for Use: In accordance with RCW 90.58.020 Shorelines of the State which are defined as Shorelines of Statewide Significance shall be given preference to uses, in the following order of priority:

1) Recognize and protect the state-wide interest over local interest;

2) Preserve the natural character of the shoreline;

3) Result in long-term over short-term benefit;

4) Protect the resources and ecology of the shoreline;

5) Increase public access to publicly-owned areas of the shorelines;

6) Increase recreational opportunities for the public on the shoreline;

7) Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.

4. Summary of Fundamental Goals and Policies for Lacey's Shoreline Master Program:

These goals and policies provide the framework for development of Lacey's Shoreline Program and compliance with state requirements.

A. Goal: Provide an opportunity for public participation in the update of the Shoreline Master Program to help identify key issues for Lacey, develop a program meeting state and local objectives and achieve community support for the wise management, protection, restoration and use of Lacey's shoreline resources.

1) Policy: Ensure the public has opportunity to provide early, continuous and meaningful input into development of Lacey's shoreline program and periodic updates and amendments.

2) Policy: Look for and utilize a full range of approaches for educating and informing the public about shoreline management concepts that promote healthy shorelines, water quality, more productive habitat and other public interests.

B. Goal: Identify functions and values specific to Lacey's shoreline resources to develop a program tailored to Lacey's needs that will provide protection, restoration and utilization of these resources.

1) Policy: Identify and designate each distinct shoreline reach with a classification based upon its function, values and public benefit.

2) Policy: Use the shoreline inventory to achieve the best utilization and management of Lacey's shoreline resources:

3) Policy: Base land use decisions on the shoreline designation and what is necessary to maintain shoreline functions and values and provide priority shoreline use to the public.

4) Policy: Designate and preserve those shorelines of this region which are notable for their aesthetic, scenic, historic or ecological qualities.

5) Policy: Preserve large, intact ecological systems such as floodplains, wetlands or tidelands.

6) Policy: Designate an adequate supply of land for future water-dependent or water-related uses.

C. Goal: Develop a Shoreline Master Program that will achieve:

1) Integration with the state Growth Management Act (GMA) to provide a long range community vision for the wise management and use of Lacey's shoreline resources over the long term;

2) **Provide development standards designed to regulate and protect areas within shoreline jurisdiction as Lacey faces urbanization under GMA;**

3) **No net loss of ecological functions and restoration of impacted areas to protect and improve the public's long term interest in shoreline resources.**

   a) **Policy:** To provide consistent treatment of critical areas in shoreline jurisdiction, reference and apply critical area ordinance standards as part of the SMP.

   b) **Policy:** Provide opportunities for land use form that will achieve GMA goals for urbanization, while providing superior opportunities for protection of shoreline processes and public access opportunities.

   c) **Policy:** Design, locate and construct residential development in a manner that will:
      i. Maintain existing public access to the publicly-owned shorelines,
      ii. Not interfere with the public use of water areas fronting such shorelines, and
      iii. Not adversely affect aquatic habitat.

   d) **Policy:** Adopt a full range of development standards and incentive opportunities to protect and achieve no net loss of existing shoreline ecological functions and processes.

D. Goal: Achieve public access opportunities necessary to serve the needs of the Lacey community.

1) **Policy:** Develop a public access plan that will use a full range of strategies and incentive program(s) approved by the Lacey Council to gain public access and acquire ownership of shoreline resources for the Lacey community.

17.10.020 References to Plans, Regulations or Information Sources

1. Where this Program makes reference to any RCW, or WAC, as amended and the current edition of other state, or federal regulations, shall apply.

2. Local Lacey plans and codes being referenced in this Shoreline Master Program include the following:

   A. Title 14 of the Lacey Municipal Code (LMC): The Lacey Title on Buildings and Construction that includes Lacey's critical area ordinances and design review chapters, specific sections referenced include:
      - LMC Chapter 14.04, International Building and International Residential Code;
      - LMC Chapter 14.23, Design Review;
      - LMC Chapter 14.24, Environmental Policy;
      - LMC Chapter 14.28, Wetlands Protection* (Ordinance 1295, 10/25/07);
      - LMC Chapter 14.31, Zero Effect Drainage Discharge;
      - LMC Chapter 14.32, Tree and Vegetation Protection and Preservation* (Ordinance 1269, 07/27/06);
      - LMC Chapter 14.33, Habitat Protection* (Ordinance 1215, 11/06/03);
      - LMC Chapter 14.34, Flood Hazard* (Ordinance 1265, 06/08/06);

- LMC Chapter 14.37, Geologically Sensitive Areas* (Ordinance 1208, 08/18/03);

B. Title 15 of the LMC: The Lacey Land Division Ordinance;

C. Title 16 of the LMC: The Lacey Zoning Code;

D. Development Guidelines and Public Works Standards (DGPWS)*;

E. The Lacey Comprehensive Land Use Plan developed under the State Growth Management Act (GMA) and all of its elements. Elements specifically referenced include:
   - City of Lacey and Thurston County Land Use Plan for the Urban Growth Area;
   - City of Lacey Housing Element
   - Environmental Protection and Resource Conservation Plan and its Urban Forest Management Plan;
   - Lacey Comprehensive Plan for Outdoor Recreation;
   - City of Lacey 2030 Transportation Plan;
   - Appendix 1 City of Lacey Public Access Plan
   - Appendix 2 Vegetation/Landscaping Examples and Guidelines
   - Appendix 3 Shoreline Environmental Designations
   - Appendix 4 Portions of the original Inventory and Characterization Report and Environmental Designations that apply to Lacey. For informational purposes the full report is provided in CD format in the slipcover of this appendix.
   - Appendix 5 Cumulative Impacts Report
   - Appendix 6 Shoreline Environmental Designations
   - Appendix 7 Referenced City of Lacey Ordinances Used in this Document

NOTES REGARDING REFERENCED DOCUMENTS:

* denotes a reference considered by the Department of Ecology to be mandatory fulfilling an identified requirement of local SMPs and required to be identified by date of adoption and adopted version and attached as an appendix to the SMP.

References **not** identified by an * are considered "loose" reference by the Department of Ecology and are not required to be adopted in an appendix.

Portions of the LMC referenced as a requirement of the SMP and designated with an * will be the version in effect at the time of adoption of the Shoreline Master Program and will not include amendments made to those Plans or sections of the LMC after the date of adoption.

Pursuant to a determination made by the Department of Ecology, later amendment to ordinances designated with an * will not be considered applicable to and will not change content of the Shoreline Master Program and therefore will not require amendment of the Shoreline Master Program. If the City wants to update the Shoreline Master Program to include such amendments in those areas under Shoreline Jurisdiction, Lacey may file for amendment of the Shoreline Master Program to include the amendments. Otherwise, the Shoreline Master Program will continue to use the version of the * referenced document in effect at the time the Shoreline Master Program was adopted, as shown in the applicable appendix.

Pursuant to a determination made by the Department of Ecology those ordinances "loosely" referenced will apply to shoreline areas when updated, but will not require amendment of the SMP.

17.10.025 Liberal Construction

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

17.10.030 Severability

If any provision of this Program or its application to any person or legal entity or circumstances is held invalid, the remainder of the Program, or the application of the provision to other persons or legal entities or circumstances, shall not be affected.

The SMA and this SMP adopted pursuant thereto comprise the basic state and City regulations for the use of shorelines in the City. In the event provisions of this SMP conflict with other applicable City policies or regulations, the more restrictive shall prevail. Should any section or provision of this SMP be declared invalid, such decision shall not affect the validity of this SMP as a whole.

17.10.035 Amendments

Amendments to this SMP including changes to the mapped shoreline environment designations shall be processed per WAC 173-26.

17.10.040 Effective Date

This SMP and all amendments thereto shall become effective immediately upon final approval and adoption by the Washington State Department of Ecology (Department).

17.15.000 Definitions

17.15.005 Shoreline Definitions - General

The terms used throughout this Program shall be defined and interpreted as indicated below. When consistent with the context, words used in the present tense shall include the future; the singular shall include the plural, and the plural the singular.

17.15.011 Act or SMA. The Shoreline Management Act of 1971 (Chapter 90.58 RCW, as amended).

17.15.012 Accessory Building, Structure or Use. A building, structure, part of a building or structure, or use which is subordinate to, and the use of which is customarily incidental to that of the main building, structure or use on the same lot.

17.15.013 Administrator. That person as appointed by the City to administer the provisions of these regulations within the boundaries of the City of Lacey.

17.15.014 Adoption By Rule. An official action by the Washington Department of Ecology to make a local government shoreline master program effective through rule consistent with the requirements of the Administrative Procedure Act, Chapter 34.05 RCW, thereby incorporating the adopted shoreline master program or amendment into the state master program.

17.15.015 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 in which it is plowed and tilled but left unseeded; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing agricultural equipment; maintaining, repairing, and replacing agricultural 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. This definition of agricultural activities excludes “urban agriculture” as defined in LMC 16.06.747 and as outlined in City of Lacey Ordinance Number 1368, dated June 9, 2011.

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

17.15.017 Applicable Master Program. The master program approved or adopted by the Department pursuant to RCW 90.58.090(6) or 90.58.190(4) prior to acceptance of a complete application by local government.

17.15.018 Approval. An official action by a local government legislative body agreeing to submit a proposed shoreline master program or amendments to the department for review and official action pursuant to WAC 173-26; or an official action by the department to make a local government shoreline master program effective, thereby incorporating the approved shoreline master program or amendment into the state master program.

17.15.019 Aquacultural Practices. Include the hatching, cultivating, planting, feeding, raising, harvesting and processing of aquatic plants and animals, and the maintenance and construction of necessary equipment, buildings and growing areas. Methods of aquaculture include but are not limited to fish hatcheries, fish pens, shellfish rafts, racks and longlines, seaweed floats and the culture of clams and oysters on tidelands and subtidal areas. For the purposes of this SMP, this term does not

include associated peripheral activities such as staging areas, warehousing, processing, or packaging of products. These peripheral activities shall take place out of shoreline jurisdiction in appropriate commercial or light industrial zoning designation designed for these types of activities.

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

17.15.021 Backshore Marina. Refer to "Marina, Backshore".

17.15.022 Beach. The zone along the shoreline where there is continuous movement of sediment both laterally and vertically. This zone extends from the daily low tide mark to where the permanent line of vegetation begins, or where the topography abruptly changes.

17.15.023 Beach Enhancement. The alteration of terrestrial and tidal shorelines along with submerged shorelines for the purpose of stabilization, recreational enhancement or aquatic habitat creation, or restoration using native or similar material.

17.15.024 Beach Feeding. The introduction of sand or gravel to beaches to enhance recreation, wildlife or to preserve natural physical character of the shoreline.

17.15.025 Bedlands. Those submerged lands below the line of extreme low tide in marine waters and below the line of navigability of navigable lakes and rivers.

17.15.026 Berm. One or several linear deposits of sand and gravel generally paralleling the shore at or landward of OHWM; berms are naturally stable because of material size or vegetation.

17.15.027 Bioengineering. The practice of using natural vegetative materials (and often structural components) to stabilize shorelines and prevent erosion.

17.15.028 Boardwalk. A structure made of planks parallel to the waterfront or beach for non-motorized public access. A promenade with construction similar to a dock.

17.15.029 Boathouse. A structure designed for storage of vessels located over water or in upland areas.

17.15.030 Boat Ramp. See "Launch ramp".

17.15.031 Boating Facilities. Marinas located both landward and waterward of the OHWM (dry storage and wet-moorage types); launch ramps; covered moorage; and marine travel lifts.

17.15.032 Bog. A unique type of wetland dominated by mosses at the surface and that form peat soils. Bogs form in areas where the climate allows the accumulation of peat to exceed its decomposition. The water regime in bogs is dominated by precipitation rather than surface inflow. The plant community is specialized to survive in the nutrient-poor and highly acidic conditions typical of bog systems.

17.15.034 Breakwater. Protective structure usually built off-shore to protect harbor areas, moorage, navigation, beaches and bluffs from wave action. A breakwater may be fixed (e.g., a rubble mound or rigid wall), open-pile or floating.

17.15.035 Buffer. An area measured landward perpendicularly from the ordinary high water mark, or associated critical area, that is intended to reduce the adverse impacts of adjacent land uses on shoreline or critical area ecological functions and provide important habitat for wildlife. For the

purposes of this Shoreline Master Program, the term buffer is often used in association with the term setback, as setbacks often have the same purpose and function as a buffer. One distinction between the two terms, is buffers generally restrict a range of activity and use in a designated area, while setbacks generally only apply to location of a structure within a designated area; see also definition of setback, 17.15.222.

17.15.036 Building. Any structure designed for or used for the support, shelter or enclosure of persons, animals or personal property, and which is used in a fixed location on land, shorelands or tidelands.

17.15.037 Bulkhead. Either public or private wall usually constructed parallel to the shore. Their primary purpose is to contain and prevent the loss of soil caused by erosion or wave action. A bulkhead may also be termed as a "seawall" for more massive public works structures along the open coast. Under the jurisdiction of this SMP, bulkheads may only be utilized if other more naturalized approaches are determined to not be practical to accomplish the objectives. If utilized, bulkheads will be located landward of the OHWM. Because of the function bulkheads are designed for, bulkheads are not subject to the same setbacks as other structures.

17.15.040 Certified Local Government. Those Local governments that establish a historic preservation program meeting federal and state standards are eligible to apply to the State Historic Preservation Officer (SHPO) and the National Park Service for certification.

17.15.041 Channelization. The straightening, deepening or lining of stream channels, and/or prevention of natural meander progression of stream ways, through artificial means such as relocation of channels, dredging, and/or placement of continuous levees or bank revetments along significant portions of the stream. Dredging of sediment or debris alone is excluded from this definition.

17.15.042 Clearing. The direct and indirect removal of trees and/or ground cover from any public or private undeveloped, partially developed, or developed lot, public lands or public right-of-way. This shall also include any destructive or inappropriate activity applied to a tree that will result in its death or effectively destroy the trees appearance and/or functionality, such as topping.

17.15.043 Cluster Development. A residential development which reserves substantial portions of land as open space or recreational areas for the joint use of the occupants of the development. This land may be provided by allowing dwelling units to be placed on lots smaller than the legal minimum site for regular subdivisions, as long as the density does not exceed prescribed standards.

17.15.044 Commercial Development. Those uses involved in wholesale, retail, service and business trade. Examples include hotels, motels, grocery markets, shopping centers, restaurants, shops, offices and private or public indoor recreation facilities. For purposes of this SMP, this definition does not include Home Occupations as defined and described in LMC 16.69.

17.15.045 Comprehensive Land Use Plan, Lacey. Means the Comprehensive Land Use Plan for Lacey and the Lacey urban growth area, including its many elements, as adopted under the State Growth Management Act, and as amended from time to time.

17.15.046 Conditional Use. A use, development, or substantial development which is classified as a conditional use or is not classified within this Master Program.

17.15.047 Covered Moorage. A roofed structure for the wet or dry storage of one or more boats. Boathouses are a type of covered moorage.

17.15.048 Critical Areas. Those areas with especially fragile biophysical characteristics and/or with significant environmental resources as identified in a scientifically documented inventory. RCW 36.70A.030 defines "critical areas" as: wetlands; areas with a critical recharging effect on aquifers

used for potable waters; fish and wildlife habitat conservation areas; frequently flooded areas; and geologically hazardous areas. In addition to standards within this SMP, critical areas are protected under ordinances Lacey has adopted in Chapter 14 of the Lacey Municipal Code (LMC). These ordinances are adopted by reference as part of the SMP. The ordinance referenced is the version in effect on the day of adoption of the SMP and shown in the applicable appendix attached to this SMP.

17.15.049 Critical Freshwater Habitats. River and stream corridors from the headwaters to the mouth and including the channel, associated channel migration zone, wetlands and the floodplain to the extent such areas fall in shoreline jurisdiction, including hydrologic connections between water bodies, water courses, lake basins and associated wetlands.

17.15.050 Critical Salt Water Habitats. All kelp beds; eelgrass beds; spawning and holding areas for forage fish such as herring, smelt and sandlance; subsistence, commercial and recreational shellfish beds; mudflats; intertidal habitats with vascular plants; and areas with which priority species have a primary association.

A. Kelp beds are found in marine and estuarine intertidal and subtidal areas with a depth of up to 15 meters below mean lower low water (MLLW). The beds can be found on various bottom materials.

B. Eelgrass beds are found in marine and estuarine intertidal and subtidal areas.

C. Surf smelt spawning beds are located in the upper portions of sand or gravel beaches (intertidal areas) in salt water.

D. Pacific herring spawning beds include the lower portions of salt water beaches (intertidal areas), eelgrass beds, kelp beds, other types of salt water vegetation such as algae and other bed materials such as subtidal worm tubes.

E. Pacific sand lance spawning beds are located in the upper portions of sand or gravel beaches (intertidal areas) in salt water.

F. Rock sole spawning beds are located in the upper and middle portions of sand or gravel beaches (intertidal areas) on salt water.

G. Rockfish settlement and nursery areas are located in kelp beds, in eelgrass beds, on other types of salt water vegetation and on other bed materials.

H. Lingcod settlement and nursery areas are located on beaches (intertidal areas) and subtidal areas with beds of sand, eelgrass, subtidal worm tubes or other bed materials.

I. Shellfish beds. The following shellfish beds are included: the Pacific oyster (Crassostrea gigas), the Olympia oyster (Ostrea lurida), the razor clam (Silqua patula), the native little neck clam (Protothaca staminea), the Manila clam (Venerupis japonica), the butter clam (Saxidomus giganteus), the Geoduck (Panope generosa), the horse clam (Schizothaerus nuttalli and Schizothaerus capax), the cockle (Clinocardium nuttalli), the macoma (Macoma spp.) and the eastern soft shell clam (Mya arenaria).

J. Salmon and steelhead habitats include gravel bottomed streams, creeks and rivers used for spawning; streams, creeks, rivers, side channels, ponds, lakes and wetlands used for rearing, feeding and cover and refuge from predators and high water; streams, creeks, rivers, estuaries and shallow areas of salt water bodies used as migration corridors; and salt water bodies used for rearing, feeding and refuge from predators and currents.

17.15.055 Density. A ratio expressing the number of dwelling units which may be established on a specific land area. In Lacey's zoning code this is expressed as dwelling units per gross acre. Density calculation is based on the entire project area above the ordinary high water mark (i.e., Dry Land Area) minus any wetland area.

17.15.056 Department. The Washington State Department of Ecology.

17.15.057 Development. A use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to this chapter at any state of water level.

17.15.058 Development Regulations. The controls placed on development or land uses by the City of Lacey, including, but not limited to, the zoning ordinances, critical areas ordinances, all portions of the Shoreline Master Program other than goals and policies approved or adopted under Chapter 90.58 RCW, the land division ordinances, the Development Guidelines and Public Works Standards, development standards contained in the Stormwater Manual, together with any amendments thereto.

17.15.059 Dike. An embankment to prevent flooding by a stream or other water body, often referred to as a levee.

17.15.060 Director. The Director of the Department of Ecology.

17.15.061 Dock. Refer to “Pier”.

17.15.062 Document of Record. The most current shoreline master program officially approved or adopted by rule by the department for a given local government jurisdiction, including any changes resulting from appeals filed pursuant to RCW 90.58.190.

17.15.064 Dredging. The removal or displacement of earth or sediments such as gravel, sand, mud or silt and/or other materials or debris from any stream, river, lake or marine water body and associated shorelines and wetlands.

17.15.065 Drift Cell, Drift Sector, or Littoral Cell. A particular reach of marine shore in which littoral drift may occur without significant interruption and which contains any natural sources of such drift and also accretion shore forms created by such drift.

17.15.066 Drilling. The process of cutting a hole into the earth for the purpose of obtaining natural resources.

17.15.067 Dry Land. All areas above the elevation of the Ordinary High-Water Mark (OHWM).

17.15.068 Dwelling. A building or portion thereof, designed or used for residential occupancy. The term dwelling shall not be construed to mean a motel, rooming house, hospital or other accommodation used for more or less transient occupancy.

17.15.070 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.

17.15.071 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.

17.15.072 Education. Any use or development undertaken for the support of public or private research or education.

17.15.073 Emergency. An unanticipated and imminent threat to public health, safety or the environment which requires immediate action with a time too short to allow full compliance with this master program. Emergency construction does not include development of new permanent protective structures where none previously existed. Where new protective structures are deemed by the administrator to be the appropriate means to address the emergency situation, upon abatement of the emergency situation the new structure shall be removed and any permits which would have been required by this SMP or the SMA, absent an emergency, must be obtained. Generally, flooding or other seasonal events that can be anticipated and may occur but are not imminent is not an emergency.

17.15.074 Environment. See "Shoreline Environment Designations".

17.15.075 Exempt. Developments 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 90.58.515 which are not required to obtain a substantial development permit but which must otherwise comply with applicable provisions of the act and the local master program.

17.15.076 Extreme High Tide. The highest tide level line water will reach in any one year.

17.15.077 Extreme Low Tide. The lowest line on the land reached by a receding tide.

17.15.080 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.

17.15.081 Feasible. An action, such as a development project, mitigation, or preservation requirement, which meets all of the following conditions:

A. 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;

B. The action provides a reasonable likelihood of achieving its intended purpose; and

C. The action does not physically preclude achieving the project's primary intended legal use.

D. In cases where these guidelines require certain actions unless they are infeasible, the burden of proving infeasibility is on the applicant.

E. In determining an action's infeasibility, the reviewing agency may weigh the action's relative public costs and public benefits, considered in the short- and long-term time frames.

17.15.082 Feeder Bluff. A reach of shoreline which contains both an eroding beach and a feeding upland as identified on the Coastal Drift maps of the Coastal Zone Atlas of Washington, Volume 8, or similar source from the Washington Department of Ecology.

17.15.083 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.

17.15.084 Floats, Recreational. Those platform structures anchored in fresh or marine waters for water recreational purposes such as swimming, diving or water skiing to include jump ramps. They may serve as temporary moorage facilities but for the purposes of this SMP are not intended to be used as boat storage.

17.15.085 Flood Plain. Synonymous with one hundred-year flood plain 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.

17.15.086 Flood Plain Management. A long-term local government program to reduce flood damages to life and property and to minimize public expenses due to floods through a comprehensive system of planning, development regulations, building standards, structural works and monitoring and warning systems.

17.15.087 Floodway. The area, as identified in a master program, that either: (i) has been established in Federal Emergency Management Agency (FEMA) flood insurance rate maps or floodway maps; or (ii) consists of those portions of a river valley lying streamward from the outer limits of a watercourse upon which flood waters are carried during periods of flooding that occur with reasonable regularity, although not necessarily annually, said floodway being identified, under normal condition, by changes in surface soil conditions or changes in types or quality of vegetative ground cover condition, topography, or other indicators of flooding that occurs with reasonable regularity, although not necessarily annually. Regardless of the method used to identify the floodway, 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.

17.15.088 Foreshore Marina. Refer to “Marina, Foreshore”.

17.15.089 Forestry or Forest Practices. The raising and harvesting of trees as a crop as defined by WAC 222-16, as amended. Within the City or its urban growth area all class 1, 2 or 3 forest practices shall be administered as class 4 conversions, and shall be subject to local land use regulations.

17.15.090 Functions and Values. When referred to in the text of the SMP, this term includes the full range of physical characteristics, processes and resources attributed to a shoreline reach if allowed to function in its natural capacity. Each reach of shoreline has identified processes and particular ecological components that make up the character of the reach and its potential as a resource with identified values. Generally, this might include such things as associated wetlands that would act as storm water storage and help water quality, habitat for a range of species that might include salmon, trout and other fish. It might also include significant natural physical processes like long shore drift and feeder bluffs that are important for the maintenance of stretches of beach that if modified could potentially change the character of an entire beach shoreline.

17.15.0891 Gabions. Cages, cylinders, or boxes filled with soil, sand, or rock that are used in civil engineering, for erosion control, dams or foundation construction. They may be used to stabilize shorelines or slopes against erosion. Other uses include retaining walls, temporary floodwalls, to filter silt from runoff, for small or temporary/permanent dams, river training, or channel lining. They may be used to direct the force of a flow of flood water around a vulnerable structure. Gabions have also been used as fish barriers on small streams.

17.15.092 Geologically Hazardous Areas. Areas susceptible to severe erosion or slide activity, such as unstable bluffs, and including areas with high potential for earthquake activity. They may be identified in critical areas inventories or the Coastal Zone Atlas. In general, they are not suitable for placing structures or locating intense activities or uses due to the inherent threat to public health and safety.

17.15.093 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 licensed engineer(s) or geologist(s) who have sufficient professional expertise about the regional and local shoreline geology and processes.

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

17.15.095 Grandfathered Status. Is a status given to a legal nonconforming structure or use that recognizes it as an existing use and provides the use with limited rights. Limited rights include the ability to continue the use and to accomplish normal repair and maintenance activities necessary for the use to continue operation. A grandfathered use is subject to all requirements of a nonconforming use.

17.15.096 Groin. Structure built seaward perpendicular to the shore for the purpose of building or preserving an accretion beach by trapping littoral sand drift. Generally narrow and of varying lengths, a groin may be built in a series along the shore.

17.15.097 Guidelines or SMP Guidelines. Those standards adopted to implement the SMA policy for regulation of use of the shorelines of the state prior to adoption of master programs, and to provide criteria to local governments and Ecology for developing shoreline master programs (SMP). Chapter 173-26 WAC or as amended.

17.15.100 Hazard Tree. Any tree that is dead, dying, damaged, diseased, or structurally defective, recently exposed by adjacent clearing, or some other factor that will subject the tree to failure and the tree could reasonably reach a target, as determined by the City's tree protection professional. Pursuant to Chapter 14.32.050 B. of the Lacey Municipal Code, the City of Lacey "tree protection professional" makes the determination of what tree(s) are designated hazard tree(s).

17.15.101 Hearings Board. The State Shorelines Hearings Board established by the Act in RCW 90.58.170.

17.15.102 Height. Is measured from average grade level to the highest point of a structure. Provided that television antennas, chimneys, and similar appurtenances shall not be used in calculating height, except where it obstructs the view of a substantial number of residences on areas adjoining such shorelines, or the applicable master program provides otherwise. Provided further that temporary construction equipment is excluded in this calculation.

17.15.103 Historic Building or Historic Site. A building, structure, or site on the local, State or National Register of Historic Places.

17.15.104 Houseboat. A vessel, principally used as an over-water residence. Houseboats are licensed and designed for use as a mobile structure with detachable utilities or facilities, anchoring, and the presence of adequate self-propulsion and steering equipment to operate as a vessel. A registered water-going vessel where the owner lives aboard shall not be construed as a "houseboat."

17.15.106 Instream Structure. Is a structure that is waterward of the ordinary high water mark and either causes or has the potential to cause water impoundment or diversion, obstruction or modification of water flow.

17.15.110 Impervious Surface. Those surfaces that either prevent or obstruct the downward passage of water.

17.15.111 Industrial Developments. Facilities for processing, manufacturing and storage of finished or semi-finished goods.

17.15.115 Jetties. Structures generally built singly or in pairs perpendicular to the shore at harbor entrances or river mouths to prevent the shoaling or accretion of littoral sand drift. Jetties also protect channels and inlets from storm waves and cross-currents.

17.15.116 Junk. Old iron, steel, brass, cooper, tin, lead or other base metals; old cordage, ropes, rags, fibers or fabrics; old rubber; old bottles or other glass, bones; wastepaper, plastic and other waste or discarded material which might be prepared to be used again in some form; any or all of the foregoing; and motor vehicles, no longer used as such, to be used for scrap metal or stripping of parts; however, "junk" shall not include materials or objects accumulated by a person as by-products, waste or scraps from the operation of his own business or materials or objects held and used by a manufacturer as an integral part of his own manufacturing process.

17.15.120 Landfilling. Refer to “Fill”.

17.15.121 Land Division. Land division is a general term that refers to the division of land by means described in Chapter 15 of the Lacey Municipal Code, including land divided through a plat, short plat, binding site plan or condominium.

17.15.122 Launch Ramp. An inclined slab, set of pads, planks, or graded slope used for launching boats with trailers. Parking and turn-around areas are usually accessory to such a site.

17.15.123 Legislative Body. The City Council of the City of Lacey.

17.15.124 Levee. A natural or man-made embankment on the bank of a stream for the purpose of keeping flood waters from inundating adjacent land. Some levees have revetments on their sides.

17.15.125 Local Government. Any county, incorporated city or town which contains within its boundaries shorelines of the state subject to Chapter 90.58 RCW.

17.15.126 Lot. “Lot” means a platted or unplatted parcel of land unoccupied, occupied or intended to be occupied by a principal use or building and accessory buildings, together with all yards, open spaces and setbacks required by the Lacey zoning code (LMC Chapter 16).

17.15.127 Lot Area. “Lot area” means the total land space or area contained within the boundary lines of any lot, tract or parcel of land and may be expressed in square feet or acres.

17.15.128 Lot, Front. “Lot Front” means that portion of a lot which is located along an existing or dedicated public street, or, where no public street exists, along a public right of way or private way.

17.15.129 Lot Length. The maximum lineal dimension of a lot, not including an access road(s) less than twenty five (25) feet in width.

17.15.130 Lot Width. “Lot width” means the horizontal distance between side lot lines measured at right angles to the lines comprising the depth of the lot at a point midway between the front lot line and the rear lot line.

17.15.131 Low Intensity Recreation. See “Recreation, Low Intensity”.

17.15.140 Marina. A facility with water-dependent components that consists of boat launch facilities and piers, buoys or floats to provide moorage for five (5) or more boats.

17.15.141 Marina, Backshore. Marina located landward of the OHWM. There are two types of backshore marinas, one with wet-moorage that is dredged out of the land to artificially create a basin; and the other, dry moorage with upland storage that uses a hoist, marine travel lift or ramp for water access.

17.15.142 Marina, Foreshore. Marina located in the intertidal or offshore zone waterward of the ordinary high water mark and may require breakwaters of open type construction (floating breakwater and/or open pile work) and/or solid type construction (bulkhead and landfill), depending on the location.

17.15.143 Marine. Pertaining to tidally influenced waters, including oceans, sounds, straits, marine channels, and estuaries, including the Pacific Ocean, Puget Sound, Straits of Georgia and Juan de Fuca, and the bays, estuaries and inlets associated therewith.

17.15.144 Marsh. A low, flat area on which the vegetation consists mainly of herbaceous plants such as cattails, bulrushes, tules, sedges, skunk cabbage, and other aquatic or semi-aquatic plant. Shallow water usually stands on a marsh, at least during a considerable part of the year. The surface is commonly soft mud or muck.

17.15.145 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.

17.15.146 Maximum Density. The largest number of dwelling units per acre allowed by the SMP or local development regulations.

17.15.147 Maximum Impervious Surface. The largest amount of hard surfaces allowed with a parcel, which could include roof area, pavement, patios, walkways, driveways and gravel parking areas. Provided hard surfaces designed to be pervious may be exempt from impervious surface calculations pursuant to guidance in the City of Lacey Drainage Manual.

17.15.148 May. "May" implies discretionary authority exercised by the City, based upon complexity of issues that are not necessarily routine or predictable and need to be considered in the bigger picture of the public's best interest and community vision. This term will often apply to a situation, use or action that might be acceptable, provided it conforms to the provisions of this chapter, meets the intent of provisions of the Lacey Comprehensive Land Use Plan and is approved by the administrator after consideration of issues that could adversely impact the public’s best interest or compromise the long range vision of the community.

17.15.149 Mixed Use Development. A single structure with two (2) or more different land uses, or a group of physically integrated and easily accessible structures with two (2) or more different land uses. Combinations of land uses might include residential, office, retail, public, or entertainment. The uses need not be mixed within the same structure, but can include separate uses within different buildings.

17.15.150 Mooring Buoy. Floating object anchored to the bottom of a water body to provide tie-up capabilities for vessels.

17.15.151 Multi-Use Path. Refer to “Shared Use Path”.

17.15.152 Must. Denotes a mandate; the action is required.

17.15.160 Native Vegetation. Refer to “Vegetation, Native”.

17.15.161 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.

17.15.162 Nonconforming Building or Structure. A building or structure or portion thereof which was lawfully erected, altered or maintained, but no longer conforms to the present regulations or standards of the Master Program.

17.15.163 Nonconforming Lot. A parcel of land legally established prior to May 21, 1976 (the effective date of the City’s first Shoreline Master Program) which does not conform to the lot size or area requirements of this Master Program.

17.15.164 Nonconforming Use. “Nonconforming use” means an activity in a structure or on a tract of land that was legally in existence prior to the effective date of the ordinance codified in this title, which does not conform to the use regulations of the use district in which it is located.

17.15.165 Nonwater-Oriented Uses. Those uses that are not water-dependent, water-related, or water-enjoyment.

17.15.166 Normal Maintenance. This includes those usual acts to prevent a decline, lapse or cessation from a lawfully established condition.

17.15.167 Normal Repair. To restore a development to a state "comparable" to its original condition within a "reasonable period" after decay or partial destruction, except where repair involves "significant replacement" which is not common practice or causes substantial adverse effects to the shoreline resource or environment. For the purposes of this definition "comparable" shall include but not be limited to its size, shape, configuration, location and external appearance; "significant replacement" shall be defined as repair or replacement valued at 50% or more of the value of the structure being replaced; and "reasonable period" shall be less than 2 years.

17.15.170 On-Premise Sign. Refer to “Sign, On Premise”.

17.15.171 Off-Premise Sign. Refer to “Sign, Off Premise”.

17.15.172 Open Space. Land and natural wetlands which retain their natural or semi-natural character because they have not been developed with structures, paving or other development or modification and, for the purposes of this program, are normally required of residential and/or recreation developments. In the context of urban land divisions, open space refers to land within specific tracts required for recreational purposes and for tree tract requirements under Lacey's Land Division regulations, Urban Forest Management Plan and tree protection ordinance. Open Space does not refer to submerged lands or tidelands waterward of the OHWM that are sometimes shown platted in waterfront parcels.

17.15.173 Ordinary High Water Mark (OHWM). The mark on all lakes, streams and tidal water which 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 a local government or the department: 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 fresh water shall be the line of mean high water.

17.15.174 Over Water. Location of a structure or development above the surface of the water, or waterward of the OHWM including placement of buildings on pilings, floats, or perimeter rock foundations.

17.15.180 Parcel. A lot or contiguous lots owned by an individual, related individuals, an organization or organizations having similar membership.

17.15.181 Parking. Any space or area specifically allotted for the purpose of temporary, daily or overnight off-street storage of motor vehicles as an accessory use.

17.15.182 Party of Record. Includes all persons, agencies or organizations who have submitted written comments in response to a notice of application; made oral comments in a formal public hearing conducted on the application; or notified local government of their desire to receive a copy of the final decision on a permit and who have provided an address for delivery of such notice by mail.

17.15.183 Pedestrian path or trail. A path or trail designed and intended to serve only pedestrians. A pedestrian path will typically be less than seven feet wide and may be either soft or hard surfaced. Surface may use wood chips, a boardwalk, or other surface type if appropriate to the setting and use. Pedestrian paths and trails are environmental friendly and material and width will consider location, use and design for protection of shoreline functions and values.

17.15.184 Permit. Any substantial development, variance, conditional use permit, or revision authorized under Chapter 90.58 RCW.

17.15.185 Person. An individual, partnership, corporation, association, organization, cooperative, public or municipal corporation, or agency of the state or local governmental unit however designated.

17.15.186 Pier and Dock. Structure generally built from the shore extending out over the water to provide moorage for commercial or private recreation. “Piers” are those structures built on fixed platforms above the water, whereas “docks” are those structures which float upon the water. When a pier or dock is to serve five (5) or more boats, it is considered a marina.

17.15.187 Planned Residential Development. A residential development which permits departures from the conventional siting, setback and density requirements of other sections of the Lacey zoning code in the interest of achieving superior site development, creating open space, and encouraging imaginative design by permitting design flexibility.

17.15.188 Planning Department. A part of the City of Lacey's Community Development Department responsible for land use planning and authorized to administer the provisions of the Act, WACs and this master program.

17.15.189 Ports. Centers for waterborne traffic that have become gravitational points for industrial/manufacturing firms.

17.15.190 Pre-Existing Approved Use. A status only given to a specific use at a specific site called out in the policy of the Shoreline Master Program that is based upon unique land use and environmental circumstances of a particular site and use. The designation provides the one specific site and use with all rights and privileges normally granted of a permitted use but with special requirements that must be satisfied for expansion.

17.15.191 Priority Habitat. A habitat type with unique or significant value to one or more species. An area classified and mapped as priority habitat must have one or more of the following attributes:

A. Comparatively high fish or wildlife density;
B. Comparatively high fish or wildlife species diversity;

C. Fish spawning habitat;
D. Important wildlife habitat;
E. Important fish or wildlife seasonal range;
F. Important fish or wildlife movement corridor;
G. Rearing and foraging habitat;
H. Important marine mammal haul-out;
I. Refugia habitat;
J. Limited availability;
K. High vulnerability to habitat alteration;
L. Unique or dependent species; or
M. Shellfish bed.

A priority habitat may be described by a unique vegetation type or by a dominant plant species that is of primary importance to fish and wildlife (such as oak woodlands or eelgrass meadows). A priority habitat may also be described by a successional stage (such as, old growth and mature forests). Alternatively, a priority habitat may consist of a specific habitat element (such as a consolidated marine/estuarine shoreline, talus slopes, caves, snags) of key value to fish and wildlife. A priority habitat may contain priority and/or nonpriority fish and wildlife.

17.15.192 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:

A. 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.
B. 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.
C. 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.
D. Species listed under the federal Endangered Species Act as proposed, threatened or endangered.

17.15.193 Property Lines. The exterior boundaries of a lot or parcel.

17.15.194 Provisions. Policies, regulations, standards, guideline criteria or environment designations.

17.15.195 Public Access. A trail, path, road, easement, park, parcel of land, launching ramp, view corridor, or other mechanism/feature by which the general public is provided an opportunity to reach, public waters. This term can also be applied to an opportunity to view public water, such as a designated view corridor where no physical access is available.

17.15.196 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.

17.15.203 Recreational Development. Provides opportunities for the refreshment of body and mind through forms of play, sports, relaxation, amusement or contemplation. It includes facilities for passive recreational activities such as hiking, photography, viewing and fishing. It also includes facilities for active or more intensive uses such as parks, campgrounds, golf courses and their support buildings, and other outdoor recreation areas.

17.15.204 Recreational Floats. See "Floats, Recreational".

17.15.205 Residence, Multifamily "Multifamily" means two or more living units under the same ownership where land has not been divided, i.e., duplex, triplex, quadraplex and apartment units.

17.15.206 Residence, Single-Family detached. A building designed for occupancy by one (1) family and containing one (1) dwelling unit and may include an accessory dwelling. With the exception of an accessory dwelling, the residence will be detached from other dwelling units and will normally be the only dwelling unit on the lot that it occupies.

17.15.207 Residence, Single-Family Attached. A building containing a number of dwelling units for individual families under individual ownership. This housing form can include condominiums, townhomes and other concepts that have multiple attached dwelling units in individual ownership.

17.15.208 Residential Development. One or more buildings, structures, lots, parcels or portions thereof that are designed for and used or intended to be used to provide a place of abode for human beings. Residential development includes single-family dwellings; duplexes; other detached dwellings; floating homes; multi-family development (apartments, townhouses, mobile home parks, other similar group housing); condominiums; subdivisions; and short subdivisions, together with accessory and appurtenant uses and structures normally applicable to residential uses including but not limited to garages, sheds, tennis courts, swimming pools, parking areas, fences, cabanas, saunas and guest cottages.

17.15209 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.

17.15.210 Revetment. A sloped shoreline structure (constructed of riprap or other substantial material) built to protect an existing eroding shoreline or newly placed fill against waves, wakes, currents, or weather.

17.15.211 Riprap. Broken stone placed on shoulders, slopes or other such places to protect them from erosion.

17.15.212 Roads and Railroads. Those passageways, and associated facilities and activities used by or associated with pedestrians, vehicles and trains, including but not limited to: all public and private roads; major highways; freeways; railways; the corridors in which they are placed; bridges; culverts; riprapping; landfills; cuts; turnouts; rest stations; viewpoints; picnic areas; landscaping; and soil erosion safeguards.

17.15.220 Scientific Education. Any activity undertaken for the support of public or private science education, such as scientific studies, classroom field trips and observation, interpretive trails and similar generally low impact activities. This category also includes sites and areas having scientific and educational values. For the purposes of this SMP this term does not include development of structures for habitation or institutional education such as schools or museums.

17.15.221 Seawalls. Structures normally more massive than bulkheads and revetments, built for the purpose of protecting the shore and uplands from heavy wave action and incidentally, retaining uplands and fills. Seawalls are not common to the Puget Sound region.

17.15.222 Setback. An area in which development of structures is restricted. Setbacks apply to structures and in general are intended to maintain a certain distance from some designated point to accomplish certain objectives. Objectives include such things as:

A. To maintain a minimum distance on a side yard to provide adequate light, circulation and air between adjacent structures (side yard setback);

B. To maintain a minimum distance in a front yard between a structure and the right of way to maintain a desired streetscape, provide area for future right of way expansion, to provide area for utility (front yard area setback);

C. To keep a structure located a safe distance from an unstable bluff (critical area setback from unstable slopes with a buffer function);

D. To keep enough space between a structure and natural shoreline processes (e.g. wave action and erosion) to avoid the need for bulkheading or other shoreline stabilization measures (shoreline setback from ordinary high water mark with a buffer function);

E. To maintain distance from critical/sensitive areas to protect the critical/sensitive area from disturbance (critical area setback with a buffer function);

F. To leave area for retention of natural vegetation or establishing naturalized landscaping to provide buffering and protective functions for designated areas (Shoreline setback from ordinary high water mark with buffering function);

G. To improve shoreline aesthetics and protect shoreline views by the restriction of structures (shoreline setback from ordinary high water mark).

For the purposes of this Shoreline Master Program, the term setback will often be used in association with the term buffer, as the purpose(s) and function(s) of the setback will often overlap with the purpose(s) and functions of a buffer as described above. One distinction between the two terms, is buffers generally restrict a range of activity and use in a designated area, while setbacks generally only apply to location of a structure within a designated area or more specifically location of the structure a certain distance from a particular point. See also definition of buffer, 17.15.035.

17.15.223 Shall. Denotes a mandate; the action must be done.

17.15.224 Shared Use Path. A facility physically separated from motorized vehicular traffic within the highway right-of-way or on an exclusive right-of-way with minimal crossflow by motor vehicles. It is designed and built primarily for use by bicycles, but is also used by pedestrians, joggers, skaters, wheelchair users (both non-motorized and motorized), equestrians, and other non-motorized users.

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

17.15.226 Shoreline Access Incentive Dedication Agreement Program. The Shoreline Access Incentive Dedication Agreement Program is a program designed to achieve dedication of public access objectives of shoreline areas for public use and protection. In return for dedication of shoreline areas to the public, density bonuses and transfers are provided for development to upland

areas on the subject site, outside of shoreline jurisdiction, or other areas throughout the city that are determined to be consistent with the intent of the Comprehensive Land Use Plan.

To promote innovative developments with superior quality and functionality, the program combines economic incentives for the development community (through significant density credit) goals of the Comprehensive Land Use Plan (for quality urban neighborhoods) and flexible application of normal zoning code standards (to permit flexibility and encourage innovation).

17.15.227 Shoreline Areas and Shoreline Jurisdiction. Means all shorelines of the state and shorelands as defined in RCW 90.58.030.

17.15.228 Shoreline Environment Designation. Means the categories of shorelines of the state established by the master program to differentiate between areas whose features imply differing objectives regarding their use and future development.

17.15.229 Shoreline Jurisdiction. All "shorelands" as defined in RCW 90.58.030. Refer to “Shorelands or Shoreland Areas”. For the purposes of this SMP, this term refers to all lands and aquatic area falling under the jurisdiction of this SMP; generally including all land within 200 feet landward of the OHWM, all designated associated wetland areas, and area waterward of the OHWM under the jurisdiction of the City of Lacey.

17.15.230 Shoreline Management Act. The Shoreline Management Act of 1971 (Chapter 90.58 RCW, as amended).

17.15.231 Shoreline Master Program or Master Program. Means the comprehensive use plan element for a described area, and the use regulations together with maps, diagrams, charts, or other descriptive material and text, a statement of desired goals, policies 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 for a city approved under Chapter 90.58 RCW shall be considered an element of the city's comprehensive land use plan. All other portions of the shoreline master program for a county or city adopted under Chapter 90.58 RCW, including use regulations, shall be considered a part of the city's development regulations.

17.15.232 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.

17.15233 Shoreline Permit. Refer to “Permit”.

17.15.234 Shoreline Stabilization/Protection. Action taken to reduce adverse impacts caused by current, flood, wake or wave action. This action includes all structural and nonstructural means to reduce these impacts due to flooding, erosion and accretion. Specific structural and nonstructural means included in this use activity are bulkheads, dikes, levees, riprap, sea walls, shoreline berms, beach feeding and breakwaters.

17.15.235 Shorelines. All of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them; except

A. Shorelines of statewide significance;
B. 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
C. Shorelines on lakes less than twenty acres in size and wetlands associated with such small lakes.

17.15.236 Shoreline Access Segment. Is a part of the shoreline parcel which is fifteen (15) linear feet wide parallel to the shoreline or twenty percent (20%) of the parcel width, whichever is smaller, and extends upland to the existing or proposed structure.

17.15.237 Shorelines of Statewide Significance. The following shorelines of the state are so designated:

A. The area between the ordinary high water mark and the western boundary of the state from Cape Disappointment on the south to Cape Flattery on the north, including harbors, bays, estuaries, and inlets;

B. Those areas of Puget Sound and adjacent salt waters and the Strait of Juan de Fuca between the ordinary high water mark and the line of extreme low tide as follows:
   1) Nisqually Delta -- from DeWolf Bight to Tatsolo Point,
   2) Birch Bay -- from Point Whitehorn to Birch Point,
   3) Hood Canal -- from Tala Point to Foulweather Bluff,
   4) Skagit Bay and adjacent area -- from Brown Point to Yokeko Point, and
   5) Padilla Bay -- from March Point to William Point.

C. Those areas of Puget Sound and the Strait of Juan de Fuca and adjacent salt waters north to the Canadian line and lying seaward from the line of extreme low tide;

D. 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;

E. Those natural rivers or segments thereof as follows:
   1) Any west of the crest of the Cascade range downstream of a point where the mean annual flow is measured at one thousand cubic feet per second or more,
   2) Any east of the crest of the Cascade range downstream of a point where the annual flow is measured at two hundred cubic feet per second or more, or those portions of rivers east of the crest of the Cascade range downstream from the first three hundred square miles of drainage area, whichever is longer.

F. Those shorelands associated with A, B, D, and E.

17.15.238 Shorelines of the State. The total of all shorelines and shorelines of statewide significance within the State of Washington.

17.15.239 Should. Denotes that the particular action is required unless there is a demonstrated, compelling reason, based on policy of the Shoreline Management Act, WAC 173-26 (2), against taking the action.

17.15.240 Sign. Means any commercial communication device, structure or fixture that is intended to aid an establishment in identification and to advertise and/or promote a business, service, activity or interest. For the purpose of this chapter, a sign shall not be considered to be building or structural design, but shall be restricted solely to graphics, symbols or written copy that is meant to be used in the aforementioned way.

17.15.241 Sign, Off-Premise. Means a permanent sign not located on the premises of use or activity to which the sign pertains.

17.15.242 Sign, On-Premise. Any sign identifying the premises on which located or the occupant(s) thereof, or relating to goods or services manufactured, produced or available on the premise.

17.15.243 Sign, Off-Premise Directional. Means an off-premise sign designed to guide the public to an area, place, business or service.

17.15.244 Sign, Real Estate or Property for Sale, Rental or Lease Sign. Means any sign pertaining to the sale, lease or rental of land or buildings.

17.15.245 Sign, Wayfinding. A type of street sign which provides directions to local attractions and sites.

17.15.246 Significant Vegetation Removal. Means the direct and indirect removal of trees and/or ground cover from any public or private undeveloped, partially developed, or developed lot, public lands or public right-of-way. This shall also include any destructive or inappropriate activity applied to a tree that will result in its death or effectively destroy the trees appearance and/or functionality, such as topping. The removal of invasive or noxious weeds does not constitute significant vegetation removal.

17.15.247 Single Family Residence. See Residence, Single Family.

17.15.248 Solid Waste. All solid, semi-solid, and liquid wastes including garbage, rubbish, ashes, plastics, industrial wastes, wood wastes and sort yard wastes associated with commercial logging activities, swill, demolition and construction wastes, abandoned vehicles and parts of vehicles, household appliances and other discarded commodities.

17.15.249 Stairs. A series of steps or flights of steps for passing from one level to another.

17.15.250 Stair Tower. A structure twelve (12) feet or taller in height typically consisting of one (1) or more flights of stairs, usually with landings to pass from one level to another.

17.15.251 Stairway. One or more flights of stairs, usually with landings to pass from one level to another.

17.15.252 State Master Program. The cumulative total of all master programs approved or adopted by the Department of Ecology.

17.15.253 Streambank. The area running along the course of a stream and rising from the ordinary high water mark (OHWM) up to the first significant break in slope. The first significant break in slope is a bench at least fifteen (15) feet wide. The streambank ends at the top of the bank where that break in slope occurs. NOTE: This definition is not intended to include the concept of a buffer for streams. It is only a definition of a physical feature associated with streams.

17.15.254 Streamway. That corridor of a single or multiple channel or channels within which the usual seasonal or stormwater runoff peaks are contained. The flora, fauna, soil and topography is dependent on or influenced by the height and velocity of the fluctuating currents.

17.15.255 Street. See Road.

17.15.256 Street, Flanking. A street, alley or right of way other than the one on which a corner lot has its main frontage.

17.15.257 Street, Public. A street in public ownership.

17.15.258 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.

17.15.259 Submerged Lands. Those areas below the ordinary high-water mark of marine waters, lakes and rivers.

17.15.260 Substantially Degrade. Means to cause significant ecological impact.

17.15.261 Substantial Development. Any development of which the total cost or fair market value exceeds five thousand dollars ($5,718), or any development which materially interferes with the normal public use of the water or shorelines of the state. The dollar threshold established in this subsection must be adjusted for inflation by the office of financial management every five years, beginning July 1, 2007, based upon changes in the consumer price index during that time period. "Consumer price index" means, for any calendar year, that year's annual average consumer price index, Seattle, Washington area, for urban wage earners and clerical workers, all items, compiled by the bureau of labor and statistics, United States Department of Labor. The Office of Financial Management must calculate the new dollar threshold and transmit it to the office of the code reviser for publication in the Washington State Register at least one month before the new dollar threshold is to take effect.

The following shall not be considered substantial developments for the purpose of this master program:

A. Normal maintenance or repair of existing structures or developments, including damage by accident, fire, or elements;

B. Construction of the normal protective bulkhead common to single family residences;

C. Emergency construction necessary to protect property from damage by the elements;

D. Construction and practices normal or necessary for farming, irrigation, and ranching activities, including agricultural service roads and utilities on shorelands, and the construction and maintenance of irrigation structures including but not limited to head gates, pumping facilities, and irrigation channels. A feedlot of any size, all processing plants, other activities of a commercial nature, alteration of the contour of the shorelands by leveling or filling other than that which results from normal cultivation, shall not be considered normal or necessary farming or ranching activities. A feedlot shall be an enclosure or facility used or capable of being used for feeding livestock hay, grain, silage, or other livestock feed, but shall not include land for growing crops or vegetation for livestock feeding and/or grazing, nor shall it include normal livestock wintering operations;

E. Construction or modification of navigational aids such as channel markers and anchor buoys;

F. Construction on shorelands by an owner, lessee, or contract purchaser of a single family residence for his own use or for the use of his or her family, which residence does not exceed a height of thirty-five feet above average grade level and which meets all requirements of the state agency or local government having jurisdiction thereof, other than requirements imposed pursuant to WAC 173-26;

G. Construction of a dock, including a community dock, designed for pleasure craft only, for the private noncommercial use of the owner, lessee, or contract purchaser of single and multiple family residences. This exception applies if either: (A) In salt waters, the fair market value of the dock does not exceed two thousand five hundred dollars; or (B) in fresh waters, the fair market value of the dock does not exceed ten thousand dollars, but if subsequent construction having a fair market value exceeding two thousand five hundred dollars occurs within five years of completion of the prior construction, the subsequent construction shall be considered a substantial development for the purpose of WAC 173-26 or this Master Program;

H. Operation, maintenance, or construction of canals, waterways, drains, reservoirs, or other facilities that now exist or are hereafter created or developed as a part of an irrigation system for the primary purpose of making use of system waters, including return flow and artificially stored groundwater for the irrigation of lands;

I. The marking of property lines or corners on state owned lands, when such marking does not significantly interfere with normal public use of the surface of the water;

J. Operation and maintenance of any system of dikes, ditches, drains, or other facilities existing on September 8, 1975, which were created, developed, or utilized primarily as a part of an agricultural drainage or diking system;

K. Site exploration and investigation activities that are prerequisite to preparation of an application for development authorization under this chapter, if:
   1) The activity does not interfere with the normal public use of the surface waters;
   2) The activity will have no significant adverse impact on the environment including, but not limited to, fish, wildlife, fish or wildlife habitat, water quality, and aesthetic values;
   3) The activity does not involve the installation of a structure, and upon completion of the activity the vegetation and land configuration of the site are restored to conditions existing before the activity;
   4) A private entity seeking development authorization under this section first posts a performance bond or provides other evidence of financial responsibility to the local jurisdiction to ensure that the site is restored to preexisting conditions; and
   5) The activity is not subject to the permit requirements of RCW 90.58.550.

L. The process of removing or controlling an aquatic noxious weed, as defined in RCW 17.26.020, through the use of an herbicide or other treatment methods applicable to weed control that are recommended by a final environmental impact statement published by the Department of Agriculture or the department jointly with other state agencies under RCW 43.21C.

17.15.262 Surface Water Body. Any water area which is within the shorelines of the state.

17.15.270 Tideland. The land on the shore of marine water bodies between OHWM or MHHW and the line of extreme low tide which is submerged daily by tides.

17.15.271 Transmit. To send from one person or place to another by means of mail, email, or hand delivery. The date of transmittal for mailed items is the date that the document is postmarked for emailed items the date emailed and for hand-delivered items the date of receipt at the destination.

17.15.272 Transportation Facilities. Those structures and developments that aid in land and water surface movement of people, goods and services. They include roads and highways, bridges and causeways, bikeways, trails, railroad facilities, ferry terminals, float plane terminals, heliports and other related facilities.

17.15.273 Utilities. Services and facilities that produce, convey, store, process or dispose of electric power, gas, water, sewage, stormwater, communications (including cellular towers), oil, waste and the like.

17.15.274 Utilities, Accessory. Those small-scale on-site services connected directly to a primary use along the shoreline.

17.15.275 Variance. Is a means to grant relief from the specific bulk, dimensional or performance standards set forth in the applicable master program and not a means to vary a use of a shoreline.

17.15.276 Vegetation, Native. Native plants commonly found in Thurston County. Generally comprised of three vegetative levels including an overstory of trees, an understory of shrubs, and a floor of herbs.

17.15.277 Vegetation Management, Active. Involves aquatic weed control as well as the restoration of altered or threatened shorelines using a technology called soil bioengineering. Soil bioengineering reestablishes native plant communities as a dynamic system that stabilizes the land from the effects of erosion.

17.15.278 Vegetation Management, Passive. Deals with protection and enhancement of existing diverse native plant communities along all shorelines including rivers, wetlands, lakes and steep bluffs.

17.15.279 Vessel. This includes ships, boats, barges or any other floating craft that is designed and used for navigation and does not interfere with the normal public use of the water.

17.15.280 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.

Water-dependent uses include, but are not limited to:

A. Aquaculture,
B. Boat launch facilities,
C. Ferry terminals,
D. Hydroelectric power plants,
E. Marinas,
F. Marine construction, dismantling and repair,
G. Marine and limnological research and education,
H. Private and public docks for moorage,
I. Terminal and transfer facilities for marine commerce and industry,
J. Water intakes and outfalls,
K. Log booming, and
L. Tug and barge facilities.

17.15.281 Water-Enjoyment Use. A recreational use or other use that facilitates public access to the shoreline as a primary characteristic of the use; or a use that provides for recreational use or aesthetic enjoyment of the shoreline for a substantial number of people as a general characteristic of the use and which through location, design, and operation ensures the public's ability to enjoy the physical and aesthetic qualities of the shoreline. 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-enjoyment uses include but are not limited to:

A. Aquarium, with direct water intake,
B. Restaurants,
C. Public golf courses,
D. Museums,
E. Shared use paths,
F. Boardwalks, and
G. Viewing towers.

17.15.282 Water-Oriented Use. A use that is water-dependent, water-related, or water-enjoyment, or a combination of such uses.

17.15.283 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 master program, 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.

17.15.284 Water-Related Use. A use or portion of a use which is not intrinsically dependent on a waterfront location but whose economic viability is dependent upon a waterfront location because:

A. 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
B. 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.

Water-related uses include, but are not limited to:

A. Warehousing or storage facilities,
B. Support services for fish hatcheries,
C. Seafood processing plants,
D. Wood products manufacturing,
E. Log storage,
F. Watercraft sales, and
G. Boating supplies.

17.15.285 Weir. A device placed in a stream or river to raise or divert the water.

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

17.20.000 Jurisdiction, Designations and Map

17.20.005 Shoreline Jurisdiction, Designations and Map - Conflicts Between Designation and Criteria

In the event that any of the boundaries shown on the maps conflict with the criteria outlined in Sections 17.20.010 to 17.20.035, the criteria shall control.

It is anticipated that all areas within Lacey's shorelines are properly mapped and designated. However, if for any reason an area within shoreline jurisdiction is not mapped and/or designated, it shall automatically be assigned an urban conservancy designation until the shoreline can be re-designated through a master program amendment.

17.20.010 Shorelines of the State

The jurisdiction of this master program is "shorelines of the state", which includes all "shorelines" and "shorelines of statewide significance", as defined in RCW 90.58.030.

17.20.015 Shoreline Jurisdiction for Marine Waters

Shoreline jurisdiction for tidal or marine waters shall include the shorelines of Puget Sound and:

1. Those lands which extend landward two hundred (200) feet as measured on a horizontal plane from the ordinary high water mark; and
2. Those wetlands which are in proximity to and either influence or are influenced by the tidal water. This influence includes but is not limited to one or more of the following: periodic tidal inundation, hydraulic continuity, formation by tidally influenced geohydraulic processes, or a surface connection through a culvert or tide gate.

17.20.020 Shoreline Jurisdiction for Lakes

Shoreline jurisdiction for lakes larger than twenty (20) acres in size shall include:

1. Those lands which extend landward two (200) hundred feet as measured on a horizontal plane from the ordinary high water mark; and
2. Those wetlands which are in proximity to and either influence or are influenced by the lake. This influence includes but is not limited to one or more of the following: periodic inundation or hydraulic continuity.

17.20.025 Shoreline Jurisdiction for Streams and Flood Plains

Shoreline jurisdiction for streams where the mean annual flow is twenty (20) cubic feet per second or greater shall include the greater of the following:

1. Those lands which extend landward two (200) hundred feet as measured on a horizontal plane from the ordinary high water mark;
2. All of the one hundred (100) year flood plain within the associated shorelands;
3. Those wetlands which are in proximity to and either influence or are influenced by the stream. This influence includes but is not limited to one or more of the following: periodic inundation; location within a flood plain, or hydraulic continuity; and
4. Those lands within a river delta flood plain except for 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.

17.20.027 Shoreline Jurisdiction and Relationship to Associated Wetland Buffers

For the purposes of this SMP, the shoreline jurisdiction shall not include the buffer of an associated wetland or other critical area buffer, except those portions of the buffer located on shorelands within 200 feet of the OHWM.

17.20.030 Shorelines within the City of Lacey and its Urban Growth Area

The City of Lacey shall have authority over those shorelines within its municipal boundaries. Those shorelines within the City of Lacey and its Urban Growth Area which have been inventoried and found to meet the criteria of the Sections 17.20.015, 17.20.020, and 17.20.025 are as follows:

1. Marine Waters:
   A. Nisqually Reach

2. Lakes:
   A. Chambers Lake
   B. Hicks Lake
   C. Long Lake
   D. Pattison Lake
   E. Southwick Lake

3. Streams and Floodplains:
   A. Woodland Creek

17.20.035 Shoreline Jurisdiction for Shorelines of Statewide Significance

Shoreline jurisdiction for "shorelines of statewide significance" shall include:

Those areas of Puget Sound between the ordinary high water mark and the line of extreme low tide as follows: Nisqually Delta from Dewolf Bight to Tatsolo Point.

Those shorelands associated with the above referenced areas.

17.20.040 Purpose and Intent

The Shoreline Master Program Guidelines (Chapter 173-26 WAC) recommends a classification system for designating shorelines. The purpose and designation criteria, for each of these "Shoreline Environment Designations" or "SEDs" are described in Sections 17.20.045 to 17.20.075.

17.20.045 Aquatic – Purpose

The purpose of the aquatic environment is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high-water mark.

17.20.046 Aquatic – Designation Criteria

Assign an aquatic environment designation to lands waterward of the ordinary high-water mark (OHWM).

17.20.050 Aquatic – Management Policies

1. Allow new over-water structures only for water-dependent uses, public access, or ecological restoration.
2. The size of new over-water structures should be limited to the minimum necessary to support the structure's intended use.
3. In order to reduce the impacts of shoreline development and increase effective use of water resources, multiple use of over-water facilities should be encouraged.
4. 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.
5. Uses that adversely impact the ecological functions of critical saltwater and freshwater habitats should not be allowed except where necessary to achieve the objectives of RCW 90.58.020, and then only when their impacts are mitigated according to the sequence described in Section 17.40.015 of this SMP as necessary to assure no net loss of ecological functions.
6. Shoreline uses and modifications should be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.

17.20.055 Natural - Purpose

The purpose of the natural environment is to protect those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline functions intolerant of human use. These systems require that only very low intensity uses be allowed in order to maintain the

ecological functions and ecosystem-wide processes. Consistent with the policies of the designation, local government should include planning for restoration of degraded shorelines within this environment.

17.20.060 Natural Designation - Criteria

The natural environment designation has been applied to shoreline areas with the following characteristics:

1. The shoreline is ecologically intact and therefore currently performing an important, irreplaceable function or ecosystem-wide process that would be damaged by human activity;

2. The shoreline is considered to represent ecosystems and geologic types that are of particular scientific and educational interest;

3. The shoreline is unable to support new development or uses without significant adverse impacts to ecological functions or risk to human safety.

Lacey's shoreline areas that meet this criteria include largely undisturbed portions of shoreline areas with wetlands, the Woodland Creek stream corridor system and the ecologically intact shoreline habitat by Butterball Cove in the Hawks Prairie Planned Community.

Ecologically intact shorelines, as used here, means those shoreline areas that retain the majority of their natural shoreline functions, as evidenced by the shoreline configuration and the presence of native vegetation. Lacey's ecologically intact shorelines around Hicks Lake and the Woodland Creek corridor are generally free of structural shoreline modifications, structures, and intensive human uses. These areas have been designated as OSI under Lacey's zoning code for over a decade to protect wetland areas. Prior to that time they were not developed because other properties that were easier to develop were available.

The marine area in the Hawks Prairie Planned Community is also considered "ecologically intact". These areas are generally forested and include native vegetation with diverse plant communities, multiple canopy layers, and the presence of large woody debris available for recruitment to adjacent water bodies. These areas have also been protected by critical area regulations and ownerships that have been good land stewards. Much of the Woodland Creek corridor is under the ownership of Saint Martin's Abbey that has placed a high priority on preservation of the Creek's natural functions and values and has protected the Creek from development. The Hawks Prairie Planned Community also included protection of the marine area by designating it as open space and protecting its natural character.

The term "ecologically intact shorelines" applies to all shoreline areas meeting the above criteria ranging from larger reaches that may include multiple properties to small areas located within a single property.

17.20.061 Natural Designation – Management Policies

1. Any use that would substantially degrade the ecological functions or natural character of the shoreline area should not be allowed.

2. The following new uses should not be allowed in the "natural" environment:
   A. Commercial uses,
   B. Industrial uses,
   C. Nonwater-oriented recreation,
   D. Roads, utility corridors, and parking areas that can be located outside of "natural" designated shorelines.

3. Single family residential development may be allowed but limited to a density and intensity of such use as necessary to protect ecological functions and be consistent with the purpose of the environment designation. Incentive programs are also planned to make transfer of densities off site to upland areas outside of shoreline jurisdiction more valuable than development of the property within shoreline jurisdiction.

4. Scientific, historical, cultural, educational research uses, and low-intensity water-oriented recreational access uses may be allowed provided that no significant ecological impact on the area will result.

5. New development or significant vegetation removal that would reduce the capability of vegetation to perform normal ecological functions should be prohibited. Development of property in a configuration that, to achieve its intended purpose, will require significant vegetation removal or shoreline modification that adversely impacts ecological functions should be prohibited. Incentives will be developed that encourage development outside of shoreline jurisdiction in exchange for significant density transfer bonuses.

17.20.065 Urban Conservancy - Purpose

The purpose of the urban conservancy environment is to protect and restore ecological functions of open space, flood plain and other sensitive lands where they exist in urban and developed settings, while allowing a variety of compatible uses.

17.20.066 Urban Conservancy - Designation Criteria

The urban conservancy environment designation has been applied to shoreline areas appropriate and planned for development that is compatible with maintaining or restoring of the ecological functions of the area. These areas are generally not suitable for water-dependent uses. Areas designated urban conservancy generally have the following characteristics:

1. Shoreline areas that are suitable for water-related or water-enjoyment uses;

2. Shoreline areas that are open space, flood plain or other sensitive areas that should not be more intensively developed;

3. Shoreline areas that have potential for ecological restoration;

4. Shoreline areas that retain important ecological functions, even though partially developed; or

5. Shoreline areas that have the potential for development that is compatible with ecological restoration.

17.20.067 Urban Conservancy - Management Policies

1. Uses that preserve the natural character of the area or promote preservation of open space, floodplain or sensitive lands either directly or over the long term should be the primary allowed uses. Uses that result in restoration of ecological functions should be allowed if the use is otherwise compatible with the purpose of the environment and the setting.

2. Standards have been established for shoreline stabilization measures, vegetation conservation, water quality, and shoreline modifications within the "urban conservancy" designation. These standards are designed to promote no net loss of shoreline ecological functions or values.

3. Public access and public recreation objectives shall be implemented according to priorities of Lacey's Public Access Plan whenever feasible and significant ecological impacts can be mitigated.

4. Water-oriented uses will be given priority over non-water oriented uses.

17.20.070 Shoreline Residential - Purpose

The purpose of the shoreline residential environment is to accommodate residential development and appurtenant structures that are consistent with the SMP, state guidelines and this chapter. An additional purpose is to provide appropriate public access and recreational uses.

17.20.072 Shoreline Residential Designation - Criteria

The shoreline residential environment designation is designed for shoreline areas inside urban growth areas, as defined in RCW 36.70A.110, and incorporated municipalities and areas that are predominantly developed with single-family or multifamily residential development or are planned and platted for residential development. Areas meeting this criterion within Lacey have been designated shoreline residential.

17.20.075 Shoreline Residential - Management Policies

1. Standards for density, setbacks, buffers within the setback area, lot coverage limitations, shoreline stabilization policies and standards, vegetation conservation and restoration requirements, critical area protection, and water quality have been set based upon the

inventory and characterization report and existing use to promote no net loss of shoreline ecological functions.

2. Shoreline environment designations take into account the environmental limitations and sensitivity of specific shoreline area (reaches). Designations also consider the level of infrastructure and services available, recommendations from state agencies with expertise and other comprehensive planning considerations.

3. Areas that have been designated Shoreline Residential meet criteria for this designation are generally already urbanized to some extent and are planned for residential use under Lacey's GMA based Comprehensive Land Use Plan.

4. Multifamily and multi-lot residential and recreational developments should be required to provide public access according to Lacey's Public Access Plan. Flexibility in land form (type of residential development planned; SFR, attached, detached, multifamily etc.),will be allowed to encourage residential forms that can be clustered to minimize environmental impacts and accomplish public access objectives.

5. Access, utilities, and public services should be provided to be available and adequate to serve proposed and future development.

17.20.100 Official Map

1. Approximate Shoreline Jurisdiction and the Shoreline Environment Designations are delineated on a map, hereby incorporated as a part of this SMP that shall be known as the "City of Lacey Shoreline Master Program Map"; see Map 1.

2. For the purposes of coordination of shoreline requirements with general land use regulations and the City Comprehensive Land Use Plan, the shoreline designations are also shown as an overlay on the Comprehensive Land Use Plan Map and Zoning map.

3. The boundaries of shoreline jurisdiction on the map are approximate. The extent of shoreline jurisdiction shall be based upon an on-site inspection and the criteria found in Sections 17.20.015 to 17.20.035.

4. The official copy of this map shall reside with the Washington State Department of Ecology.

   Copies of this map are available for public use from the City of Lacey, Community Development Department.

A marker delineates a wetland associated with the major wetlands system south of Hicks Lake. The delineation will mark off the area that is wetland and a required buffer that is dedicated to the City for preservation of the system and its functions and values over the long term.

Picture showing the view residents enjoy from the north side of Chambers Lake.

17.24.000 Tables for Permitted Uses, Development Standards and Modifications

1. **Uses and Activities**:

   A. Guidelines for vegetative improvements, when required, are provided in Section 17.41.021 Table 1.

   B. Uses and activities may be allowed by shoreline environment designation as listed in Table 3.

   C. Uses and activities shall be subject to the development standards for the specific use(s) or activity and as provided in Table 4.

   D. When there are no development standards for a specific use or activity, application for such use or activity shall be processed as a CUP and the design of the proposed use shall satisfy the goals and policies in Section 17.44 and promote no net loss of shoreline ecological functions and values.

   E. The tables are considered summary information for quick review.
   If there is a conflict between the standards provided in the tables and text of sections dealing with specific uses, modifications or activities, the text shall prevail; individual text sections provide detailed consideration of the topic with the intent behind the standards.

2. **Shoreline Modifications, Table of Shoreline Modifications by Shoreline Environment Designation**:

   A. Shoreline modifications may be allowed by shoreline environment designation as listed in Table 5.

   B. Shoreline modifications shall be subject to the development standards for the specific type of shoreline alteration as described in separate sections dealing with each type of modification and as listed in Table 4.

   C. When there are no development standards for a specific shoreline modification, the shoreline modification shall follow the intent described in general goals and policies provided throughout this SMP, as well as applicable discussion and any goals and policies provided that are applicable to the specific modification. The fundamental requirement to promote no net loss of shoreline ecological functions expressed throughout this SMP shall be used as benchmark for consideration.

17.24.010 Table 3 - Uses and Activities

Table 3 - Uses and Activities by Shoreline Environment Designation

USES & ACTIVITIES	Shoreline Residential	Urban Conservancy	Natural	Aquatic
Agriculture	X	X	X	X
Aquaculture				
• Shellfish Aquaculture	S	S	C	S*
• Fish Hatcheries and other Commercial Aquaculture	S	S	X**	S*
Boating Facilities				
• Launch Ramps	S	S	C	S*
• Marinas	X	X\S+	X	S*
• Covered Moorage	X	X	X	X
(Refer to Table 5 for Piers and Docks)				
Commercial	X	X	X	X
Forestry	X	X	X	X
Historical or Archeological				
• Protection, Rehabilitation and Restoration	**N/A**	**N/A**	**N/A**	**N/A**
• Reconstruction of Replica	**C**	**C**	**C**	**C**
Industrial	X	X	X	X
Mining	X	X	X	X

For description of permit types see Section 17.30.
S = Requires a Shoreline Substantial Development Permit
E = Requires a Shoreline Exemption; and must comply with applicable Master Program sections
C = Requires a Shoreline Conditional Use Permit
X = Prohibited; not eligible for a Substantial Development or Conditional Use Permit

1 = Within one hundred (100) feet of the ordinary high water mark
2 = From one hundred (100) feet from the OHWM to the landward edge of shoreline jurisdiction

* = In the Aquatic environment the use or shoreline modification may be allowed if it is allowed in the adjacent upland shoreline environment designation
**Existing uses shall be given a status of "pre-existing approved use and treated as a permitted use. Provided the use meets requirements of Section 17.47 and any expansion is processed as a conditional use permit.

Table 3 - Uses and Activities by Shoreline Environment Designation

USES & ACTIVITIES	Shoreline Residential	Urban Conservancy	Natural	Aquatic
Parking • Serving an approved use • Serving any other use including paid	**S** **X**	**S** **X**	**S**** **X**	**X** **X**
Recreation				
• Water-dependent	S	S	S	S
• Water-related	S	S	S	S
• Water-enjoyment	S	S	S	C
• Non-water oriented	C^1 / S^2	C^1 / S^2	X^1 / C^2	X
• Pedestrian trail, surfaced with wood chips or other natural permeable material. Designed to minimize impact to shoreline functions and values.	N/A	N/A	N/A	N/A
• Pedestrian trail in a boardwalk design in sensitive area or buffer for public access. Designed to minimize impacts to shoreline functions and values.	N/A	S	S	N/A
Residential • Single-Family • Land Division • Attached Single Family & Multi-Family	E C S	E C S	C C X	X X X
Scientific or Educational	N/A***	N/A***	C	N/A***
Signage • On Premise and Way Finding • Off Premise	N/A X	N/A X	N/A X	N/A X
Solid Waste Disposal	X	X	X	X
Transportation • Roads and Railroads • Shared Use Path	C^1 / S^2 S	C^1 / S^2 S	C S	C* S*
Utilities • **Primary** • **Accessory to primary use**	C^1 / S^2 *Refer to primary use*	C^1 / S^2 *Refer to primary use*	C *Refer to primary use*	C* *Refer to primary use*

S = Requires a Shoreline Substantial Development Permit
E = Requires a Shoreline Exemption; and must comply with applicable Master Program sections
C = Requires a Shoreline Conditional Use Permit
X = Prohibited; not eligible for a Substantial Development or Conditional Use Permit
N/A=Not applicable, refer to the appropriate Master Program section for additional standards. Such uses and activities may not meet the definition of development or threshold to be considered "substantial development".
1 = Within one hundred (100) feet of the ordinary high water mark
2 = From one hundred (100) feet from the OHWM to the landward edge of shoreline jurisdiction
+= New marinas are prohibited until and unless the City's Comprehensive Plan for Outdoor Recreation demonstrates a need. See additional provisions in Section 17.49.020.
* = In the Aquatic environment the use or shoreline modification may be allowed if it is allowed in the adjacent upland shoreline environment designation

** Parking in the natural designation is limited to a single family garage attached to the house. Public access sites may have limited surface parking meeting development standards appropriate to the use provided the applicant illustrates it is infeasible to locate necessary parking outside the shoreline jurisdiction.
***Provided a Conditional Use Permit may be required according to the provisions of Section 17.66 1.G. of this SMP

17.24.015 Development Standards Table 4 – Development Standards by Shoreline Environment Designation

DEVELOPMENT STANDARDS	Shoreline Residential	Urban Conservancy	Natural	Aquatic
Aquaculture				
OHWM setback[@]	15’	25’	50’	NA
Building height	35’	35’	35’	10’
Boating Facilities *(Boat Launches, Marinas)*				
Water-dependent				
OHWM setback[@]	0’	0’	0’	NA
Building height	30’	30’	25’	20’
Water-related				
OHWM setback[@]	15’	15’	25’	NA
Building height	30’	30’	25’	NA
Parking facilities (surface)	50’	75’	150’	N/A
Recreation Development				
Water-dependent				
OHWM Setback[@]	25’	25’	25’	NA
Building Height	25’	25’	25’	10’
Water-related & enjoyment				
OHWM Setback[@]	50’	50’	50’	NA
Building Height	25’	25’	25’	10’
Nonwater-oriented				
OHWM Setback[@]	100’	100’	100’	NA
Building Height	25’	25’	25’	10’
Shared Use Path				
OHWM Setback[@]	25’***	50’***	75’***	NA
Pedestrian Trails and Shoreline Access Segment	0’	0’	0’	
Residential Development				
Single-Family Dwellings				
Maximum Density	4*du/ac	1 du*/ac	1du*/10 ac	NA
OHWM Setback[@]	50’	100’	150’	NA
Building Height	35’	35’	35’	NA
Maximum Impervious Surfaces	50%	30%	10%	NA
Minimum Lot Size/Width	7,500 s.f.[+]/50’	+/50’	+/50’	NA
Attached Single Family & Multi-Family Dwellings				
Maximum Density	4* du/ac	1* du/ac	1* du/10 ac****	NA
OHWM Setback[@]	50 feet	100’	150’	NA
Building Height	35’	35’	35’	NA
Maximum Impervious Surfaces	50%	30%	10%****	NA
Minimum Lot Size/Width		+	+	NA
Accessory structures	50’	100’	150’	N/A
Transportation				
Roads and Railroads				
OHWM setback[@]	50’	75’	150’	NA

Utilities OHWM setback@ Building height Accessory to primary use	 50', 0'** 25[1] / 35[2] *Refer to Primary Use*	 75', 0** 25[1] / 35[2] *Refer to Primary Use*	 150', 0** 20[1] / 30[2] *Refer to Primary Use*	 NA, 0'** NA *Refer to Primary Use*

OHWM = Ordinary high water mark
NA = Not applicable, refer to the appropriate Master Program section for additional standards
+= Refer to residential lot size and width provisions in Section 17.63.025.
1 = Within one hundred (100) feet from the ordinary high water mark
2 = From one hundred (100) feet to the edge of the shoreline jurisdiction
@ = Refer to shoreline vegetation conservation provisions in Sections 17.41.
**Water dependant utilities (such as a desalination plant) may extend into the water and will not be subject to a setback, as determined by the administrator.
*** The Administrator may authorize lesser setbacks upon granting of a variance, according to a site specific analysis considering purpose, need, environmental conditions and design, and provided no other alignment is practical or feasible. If a lesser setback is permitted, objectives of no net loss shall be satisfied.
**** Housing must be clustered and be designed to have the least impact to shoreline resources, including utilization of low impact development techniques. Emphasis is to encourage use of incentive programs,, providing higher value and density opportunities when shoreline area is dedicated to the public. Under incentive programs all development and associated density is transferred out of shoreline jurisdiction to a designated receiving area.

17.24.020 Table 5 - Shoreline Modification by Shoreline Environment Designation

SHORELINE MODIFICATIONS	Shoreline Residential	Urban Conservancy	Natural	Aquatic
Dredging	NA	NA	NA	C
Grading and Fill				
Ecological Restoration Project	S	S	S	S
All Other Activities	C	C	X	C
Buoy	S	S	C	*
Pier and Dock	C[1] / S[2] / C[3]	C[1, 3] / S[2]	C**	C**
Recreational Float	S	S	C	*
Shoreline Stabilization				
Beach Restoration and Enhancement	S	S	S	S
Bioengineering	S	S	C	C
Revetment and Gabion	C	C	X	C
Bulkhead	C	C	X	C
Breakwater, Jetty, Groin and Weirs	X	X	X	X
Dike, Levee and Instream Structure	C	C	X	C*
Stair Tower	X	X	X	X
****Replacement of Modification** (repair exceeds 50% of replacement value)	C	C	C	C
**** **Repair of Modification** (repair value is less than 50% of replacement value)	E	E	E	E

S = Requires a Shoreline Substantial Development Permit
E = Requires a Shoreline Exemption; and must comply with applicable Master Program sections
C = Requires a Shoreline Conditional Use Permit
X = Prohibited; not eligible for a Substantial Development or Conditional Use Permit
NA = Not applicable, refer to the appropriate Master Program section for additional standards

1 = Serving one (1) property
2 = Serving two (2) or more properties and exceeding the exemption threshold for a Substantial Development Permit pursuant to Section 17.30.035 (7).
3 = Serving more than one property but under the exempt threshold for a Substantial Development Permit pursuant to Section 17.30.035 (7).
*The use or shoreline modification may be allowed in the Aquatic Environment if it is allowed in the adjacent upland environment. In such case the underlying permit process will be used for review and conditioning of the use or modification to ensure mitigation and no net loss of function or value.
** Use is prohibited in the Natural designation, and Aquatic designation when located adjacent to shorelands with the Natural designation, except as provided in Section 17.61.020 (4), (8) and (9)
**** Value will be calculated from the International Building Code Tables used to calculate the value of improvements for determining the cost of permits. If no value can be assigned from the IBC, other means for determining the "fair market value"will be utilized.

17.25.000 Nonconforming Uses, Lots, and Structures:

Lacey's SMP has been written with the concern of having a home that is designated as nonconforming in mind. Lacey's strategy simply excludes the footprint of an existing legally established residence located within the shoreline setback from the ordinary high water mark (OHWM) from being labeled as nonconforming, while achieving no net loss of shoreline resources through mitigation as redevelopment or expansion occurs.

17.25.005 Nonconforming Concept and Lacey's Use of this Concept in this SMP:

1. **Traditional application of the term nonconforming**:
   The terms nonconforming use or nonconforming structure are used in zoning ordinances. Generally in zoning ordinances, a legal nonconforming status indicates a structure or use does not meet a standard in the current ordinance which has changed and is different from the standard in the ordinance in place at the time the use or structure was legally established.

   Because of the public interest, the nonconforming structure or use may be strictly regulated. Dependent upon a jurisdiction's emphasis on gaining compliance over time, regulations can vary from being permissive to very restrictive.

   Restrictive treatment might include preventing replacement of a structure or restrictions on any expansion. However, generally a balanced approach is taken weighing the public interest with the fair treatment of structures and uses legally established prior to the code requirement.

2. **Concern with implications**:
   Because of possible adverse implications a designation of "nonconforming" could have on a home, the City of Lacey has chosen not to create a situation where existing, legally established single family homes are labeled nonconforming as a result of new setbacks from the OHWM in this SMP.

   At the same time, the City has determined the new setbacks and associated vegetation management areas and retention standards are necessary to achieve protection of shoreline resources and functions such as water quality.

3. **Lacey's approach for setbacks and related vegetation management areas for existing, legally established residential houses**:

   A. **Policy**: When establishing the setback from the OHWM on a waterfront lot for purposes of administering this SMP, the City will "draw" the setback and the associated vegetation management area around the footprint of any single family residential house that falls within the new OHWM setback and vegetation management area. In such cases, the setback and vegetation management area will wrap around the existing house in a configuration that excludes the footprint of the residence from the OHWM setback and vegetation management area. This will provide for a setback and vegetation management area surrounding the house, but will exclude the footprint of the existing residence from being labeled as nonconforming because of its location within such area.

B. Policy: An existing, legally established home where the setback and vegetation management area wrap around its perimeter, as outlined above, will be considered conforming to the OHWM setback standards in this SMP. Because of its location in relationship to the setback from the OHWM which surrounds it, such houses will be referred to as "conforming, expansion limited".

4. Maintaining conforming status with an approved expansion:

A. Policy: A proposal for enlargement or expansion of a residence that is designated "conforming, expansion limited" will be considered in the same way as a proposal for expansion of a structure that is designated nonconforming. Both should meet applicable requirements of this SMP for avoidance, minimization, and mitigation of impacts and no net loss of shoreline function and value.

B. Policy: If expansion of a "conforming, expansion limited" house can be accommodated pursuant to the policies and standards of Sections 17.25.015 and 17.25.020, upon approval of the expansion the setback line and vegetation management area may be redrawn around the new footprint of the expanded structure to maintain the residence's status as "conforming, expansion limited".

5. Nonconforming term used for other structures:

Policy: The term nonconforming will be applied to accessory residential structures, such as garages, storage sheds, decks and similar structures not used as the principle living area where such structures are located within the setback and/or vegetation management area.

6. General provisions:

A. **Policy**: Uses, lots, or structures within shoreline jurisdiction that were legally established prior to Lacey's update of this SMP on October 13, 2011, which do not meet the specific standards of this Master Program, are subject to the provisions of Section 17.25.

B. Policy: Subject to the provisions of this program, a nonconforming use, lot, or structure lawfully existing prior to the effective date of this program, October 13, 2011 or any amendment thereto, which is rendered nonconforming or "conforming, expansion limited" by adoption of the Program or an amendment, may continue as is and in the manner and to the extent that it existed upon the effective date of the Program or amendment, respectively.

17.25.010 Continuance - Contiguous Lots

Policy: When a nonconforming lot is contiguous to another lot and both lots have the same owner, the contiguous lots are deemed a single, undivided lot for purposes of this Program unless:

1. Each lot has a dwelling;
2. The purchase of an adjacent lot is subsequent to the adoption of this Program (i.e., May 21, 1976); or
3. Pursuant to RCW 58.17.170, one or more of the lots is a platted lot, and less than five (5) years has lapsed since the final plat in which either of the lots is located was filed for record.

17.25.015 Alterations and Expansions of Nonconforming or "Conforming, Expansion Limited" Residential Structures

1. General Policies:

A. Policy: Expansion of all residential structures should meet requirements and standards of the environment designation in which they are located, including setbacks from the OHWM.

B. **Policy**: Proposals for expansion of a non conforming structure, or a structure designated "conforming, expansion limited", should include consideration of the potential for loss of ecological function.

C. **Policy:** Expansion of a nonconforming structure or "conforming, limited expansion" structure should meet the test of no increase in nonconformance. No increase in nonconformance means an action will not increase an aspect of the structure that resulted in it being designated nonconforming or "conforming, expansion limited" and that it does not materially interfere or jeopardize further the public interest.

D. **Policy:** Vertical expansions (within permissible height restrictions), expansion to the side (within permissible side yard restrictions), or expansion away from the OHWM will generally not be considered an increase in nonconformity. However, expansions vertically or to the side in areas that overlap the OHWM setback or vegetation management area may be considered an increase in nonconformance. Expansion requests of this type should comply with mitigation sequencing and minimize impacts to views and view corridors.

E. **Policy:** Dependent upon impacts identified and appropriate use of the mitigation sequence, expansion of a nonconforming structure or a structure designated "conforming, expansion limited" may be able to expand without increasing overall impact to shoreline resources and result in no net loss of ecological functions.

F. **Policy:** Landscaping standards of this SMP should be used to help implement the community's expectations for protection of Lacey's natural aesthetic qualities and capitalize on the benefits trees and native vegetation provide as identified in Lacey's Urban Forest Management Plan.

G. **Policy:** Expansion of a structure within the OHWM setback area or vegetation management area will require a vegetation management and mitigation plan to ensure all unavoidable impacts are mitigated for and that no net loss of shoreline ecological function occurs.

2. Mitigation Standards:

A. Standard: Requests for expansion of a nonconforming structure or "conforming, expansion limited" residential structure shall utilize the mitigation sequence and mitigation strategies set forth in this SMP to satisfy no net loss requirements.

B. Standard: Expansions of nonconforming or "conforming, expansion limited" structures within the vegetation management area shall provide compensatory mitigation in accordance with the thresholds outlined in Section 17.41.021, Table 1.

C. Standard: If expansion of a nonconforming structure or "conforming, expansion limited" structure will result in better management of shoreline resources expansion shall be approved.

D. If impacts cannot be mitigated or the proposal cannot demonstrate protection and/or the maintenance of ecological function of shoreline resources expansion may be denied.

3. Expansion of any structure for a nonconforming use prohibited:

Policy: Expansions of a structure into the OHWM setback is prohibited when the expansion is to accommodate a nonconforming use. However, when expansion of a structure involves encroachment into setbacks other than the setback from the OHWM, said expansion may be permitted pursuant to other requirements of this SMP.

4. Permit requirements for expansion of a nonconforming structure or a structure designated "conforming, expansion limited":

A. Standard: Expansion of a nonconforming structure or a structure designated "conforming, expansion limited" where such expansion is proposed to further encroach on the OHWM setback by decreasing the distance between the structure and the OHWM, shall require a variance under Section 17.30.020. This does not apply to expansions to the side or rear of the structure within the setback/vegetation management area.

B. Standard: Expansion of a nonconforming structure or a structure designated "conforming, expansion limited", where such expansion does not further encroach into the OHWM setback or vegetation management area by decreasing the distance between it and the OHWM, shall follow permit process requirements outlined in Section 17.30 and Table 3.

17.25.025 Expansions of Nonconforming Uses

Standard: The expansion of a nonconforming use shall be prohibited. An intensification of use is permitted when the intensified use is contained within the existing structure, or area which has been in use, and is not different in kind from the existing nonconforming use. Refer to Section 17.47 for policies and standards relating to expansion of a pre-existing approved use as defined in this SMP.

17.25.030 Relocation of Nonconforming or "Conforming, Expansion Limited" Structure

1. **Policy**: When a nonconforming structure or a structure designated "conforming, expansion limited" is moved, the new location should decrease the nonconformance or increase the setback from the OHWM and not result in an impact on shoreline functions and values. In circumstances where compliance with the OHWM setback is not possible or would result in extraordinary hardship, the Administrator may allow the structure to be moved to a new location within the setback area.

2. **Standard**: A nonconforming or "conforming, expansion limited" structure shall be brought into compliance with the Shoreline Master Program when it is moved. The decision to allow such a structure to be relocated to another location within the setback area shall be at the sole discretion of the Administrator, through application of the mitigation sequence.

3. **Standard**: The process for reviewing relocation of a nonconforming structure or "conforming, expansion limited" structure to another location within the setback area shall be a conditional use permit.

17.25.035 Resumption of Discontinued or Abandoned Nonconforming Use

Standard: A nonconforming use, when abandoned or discontinued, shall not be resumed. Discontinuance or abandonment is presumed to occur when land or a structure is not used for a particular use for eighteen (18) consecutive months pursuant to Lacey's nonconforming use provisions in LMC 16.93.030. Any person may appeal the Administrator's determination that discontinuance or abandonment has occurred pursuant to the requirements of LMC 2.30 and Chapter One of the Development Guidelines and Public Works Standards.

17.25.040 Development of a Nonconforming Lot

Policy: When the shape or size of an existing, legally created lot would prevent development consistent with the applicable bulk or dimensional requirements in this SMP, the Administrator may authorize development under the following conditions:

A. A written request is received from the project proponent;

B. The development will be located as far landward as possible from the ordinary high-water mark;

C. The decision of the Administrator is based upon the shoreline variance criteria found in Section 17.30.020.

17.25.045 Notification for Development of a Nonconforming Lot

1. **Policy**: Upon receiving a written request, the Administrator shall mail notice of the request to all property owners within three hundred (300) feet. At a minimum, the notice shall state the following:

   A. The decision on the request will be made within ten days from the date that the notice was mailed; and

   B. Interested citizens may contact the Shoreline Administrator for further information and to learn the Administrator's decision.

2. **Policy**: Appeal of the Administrator's decision shall be made in accordance with the procedures of appeal established in LMC 2.30 and Chapter One of the Development Guidelines and Public Works Standards.

17.25.050 Reconstruction of a Nonconforming Structure

1. **Policy**: In the event that a nonconforming structure is destroyed by fire, explosion, natural catastrophe, or act of public enemy, nothing in this Program shall prevent the reconstruction of that or a more conforming structure provided a building permit must be obtained for reconstruction within one (1) year after the destruction and timely progress towards completion of the reconstruction must be demonstrated.

2. **Policy**: If progress towards completion is not demonstrated the building permit shall expire without an opportunity for renewal.

17.25.055 Conversion of a Nonconforming Use

Policy: A nonconforming use may not be converted to a prohibited use.

A swing set and deck adjacent to Pattison Lake off Rumac will provide fond memories for residents, but the structures are considered nonconforming and would not meet new standards.

17.30.000 Shoreline Permits

Shoreline permits and exemptions shall be processed according to the procedures described in Chapter I of the City Development Guidelines and Public Works Standards.

17.30.010 Substantial Development Permit Criteria

1. A shoreline substantial development permit shall be required for all proposed uses and developments of shorelines unless the proposal is specifically exempted by Section 17.30.030.

2. In order to be approved, the City of Lacey shall find that the proposal is consistent with the following criteria:

    A. All 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 under Section 17.30.020;

    B. All general goals and policies of this program, and goals, policies and standards specific to the appropriate shoreline environment designation and the type of use or development activity proposed shall be considered and substantial compliance demonstrated.

3. Consideration shall be given to the cumulative environmental impact of additional requests for like actions in the shoreline vicinity. For example, if shoreline substantial development permits were granted for other developments in the area where similar circumstances exist, the sum of the permitted actions should also remain consistent with the policy of RCW 90.58.020 and should not produce significant adverse effects to the shoreline ecological functions and processes or other users.

4. The City of Lacey is the final authority for a Shoreline Substantial Development Permit, unless there is an appeal filed with the State Shoreline Hearing Board.

17.30.015 Shoreline Conditional Use Permit

The purpose of a conditional use permit is to provide a system within the master program which allows flexibility in the application of use regulations in a manner consistent with the policies of RCW 90.58.020. In authorizing a conditional use, the City or Department may attach special conditions to the permit to prevent undesirable effects of the proposed use and/or to assure consistency of the project with the Act and the local master program.

1. Uses which are classified or set forth in the City of Lacey's Shoreline Master 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 of RCW 90.58.020 and the master 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 Land Use Plan and Shoreline Master Program;

D. That the proposed use will cause no significant adverse effects to the shoreline environment in which it is to be located; and
E. That the public interest suffers no substantial detrimental effect.

2. In the granting of all conditional use permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area, for example, if conditional use permits 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.

3. Other uses which are not classified or set forth in Lacey's Master 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 the Shoreline Master Program, and the intent of provisions of the Comprehensive Land Use Plan.

4. Uses which are specifically prohibited by the Shoreline Master Program may not be authorized.

17.30.020 Shoreline Variance Permit

The purpose of a variance permit is strictly limited to granting relief from specific bulk, dimensional or performance standards set forth in the applicable master program where there are extraordinary circumstances relating to the physical character or configuration of property such that the strict implementation of the master program will impose unnecessary hardships on the applicant or thwart the policies set forth in RCW 90.58.020.

1. Variance permits 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.

2. Variance permits for development and/or uses that will be located landward of the ordinary high water mark (OHWM) and/or landward of any wetland as defined in this Master Program may be authorized provided the applicant can demonstrate all of the following:

   A. That the strict application of the bulk, dimensional or performance standards set forth in Lacey's Master Program precludes or significantly interferes with reasonable use of the property;

   B. That the hardship described in (A.) of this subsection 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 the master program, and not, for example, from deed restrictions or the applicant's own actions;

   C. That the design of the project is compatible with other authorized uses within the area and with uses planned for the area under the Comprehensive Land Use Plan and Shoreline Master Program and will not cause adverse impacts to the shoreline environment;

   D. That the variance will not constitute a grant of special privilege not enjoyed by the other properties in the area;

   E. That the variance requested is the minimum necessary to afford relief; and

F. That the public interest will suffer no substantial detrimental effect.

3. Variance permits for development and/or uses that will be located waterward of the ordinary high water mark (OHWM) or within any wetland as defined in this Master Program may be authorized provided the applicant can demonstrate all of the following:

   A. That the strict application of the bulk, dimensional or performance standards set forth in Lacey's Master Program precludes all reasonable use of the property;

   B. That the proposal is consistent with the criteria established under Section 17.20.030. 2 A-F; and

   C. That the public rights of navigation and use of the shorelines will not be adversely affected.

4. In the granting of all variance permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area, for example, if variances were granted to other developments and/or uses in the area where similar circumstances exist. The total of the variances shall also remain consistent with the policies of RCW 90.58.020 and shall not cause substantial adverse effects to the shoreline environment.

5. Variances from the use regulations of the Shoreline Master Program are prohibited.

6. Water-oriented and water-related uses may be located within the required shoreline setback and vegetation management area without a shoreline variance, provided other required permits are obtained and the mitigation sequence is followed. Uses that may locate within the setback and vegetation management area without a variance include the following:

   A. Boating facilities accessory to a single-family residential development including piers, docks, buoys and floats;

   B. Pedestrian beach access structures including stairs, with the exception of stair towers;

   C. Public access trails and paths and structures for public access including but not limited to stairways, piers, docks, or floats.

17.30.030 Shoreline Exemption Criteria

1. An exemption from the substantial development permit process is not an exemption from compliance with the Act or this Program, or from any other regulatory requirements. To be authorized, all uses and developments must be consistent with the policies and regulatory provisions of this Program and the Act. A statement of exemption shall be obtained for exempt activities.

2. Exemptions shall be construed narrowly. Only those developments that meet the precise terms of one or more of the listed exemptions may be granted exemptions from the substantial development permit process.

3. The burden of proof that a development or use is exempt is on the applicant or proponent.

4. If any part of a proposed development is not eligible for exemption, then a substantial development permit is required for the entire project.

5. A development or use that is listed as a conditional use pursuant to this Program or is an unlisted use must obtain a shoreline conditional use permit even if the development or use does not require a shoreline substantial development permit.

6. When a development or use is proposed that does not comply with the bulk, dimensional and/or performance standards of the Program, such development or use shall only be authorized by approval of a shoreline variance even if the development or use does not require a substantial development permit.

7. All permits or statements of exemption issued for development or use within the shoreline jurisdiction shall include written findings prepared by the Administrator, including compliance with bulk, dimensional standards and policies and regulations of this Master Program. The Administrator may attach conditions to the approval of exempt developments and/or uses as necessary to assure consistency of the project with the Act and the Program.

17.30.035 Shoreline Exemptions Listed

The following shall be considered exempt from the requirement to obtain a shoreline substantial development permit.

1. Any development of which the total cost or fair market value is less than five thousand seven hundred and eighteen dollars ($5,718), and does not materially interfere with the normal public use of the water or shorelines of the state. The dollar threshold established in this subsection must be adjusted for inflation by the Office of Financial Management every five years, beginning July 1, 2007, based upon changes in the consumer price index during that time period. "Consumer price index" means for any calendar year that year's annual average consumer price index of all items in the Seattle, Washington area for urban and clerical workers, compiled by the Bureau of Labor and Statistics, United States Department of Labor. The Office of Financial Management must calculate the new dollar threshold and transmit it to the Office of the Code Reviser for publication in the Washington State Register at least one month before the new dollar threshold is to take effect.

2. Normal maintenance or repair of existing structures or developments, including damage by accident, fire, or elements; see also section defining “normal” maintenance and repair and permit requirements for maintenance that does not qualify under this exemption.

3. Construction of the normal protective bulkhead common to single family residences.

4. Emergency construction necessary to protect property from damage by the elements.

5. Construction or modification of navigational aids such as channel markers and anchor buoys.

6. Construction on shorelands by an owner, lessee, or contract purchaser of a single family residence for his own use or for the use of his or her family. The residence must not exceed a height of thirty-five feet above average grade level, and meet all requirements of the state agency or local government having jurisdiction thereof, other than requirements imposed pursuant to this chapter.

7. Construction of a dock, including a community dock, designed for pleasure craft only, for the private noncommercial use of the owner, lessee, or contract purchaser of single and multiple family residences. This exception applies if either: (A) In salt waters, the fair market value of the dock does not exceed two thousand five hundred dollars; or (B) in fresh waters, the fair market value of the dock does not exceed ten thousand dollars, but if subsequent construction having a fair market value exceeding two thousand five hundred dollars occurs within five years of completion of the prior construction, the subsequent construction shall be considered a substantial development for the purpose of this chapter.

8. Operation, maintenance, or construction of canals, waterways, drains, reservoirs, or other facilities that now exist or are hereafter created or developed as a part of an irrigation system for the primary purpose of making use of system waters, including return flow and artificially stored groundwater for the irrigation of lands.

9. The marking of property lines or corners on state owned lands, when such marking does not significantly interfere with normal public use of the surface of the water.

10. Operation and maintenance of any system of dikes, ditches, drains, or other facilities existing on September 8, 1975, which were created, developed, or utilized primarily as a part of an agricultural drainage or diking system.

11. Site exploration and investigation activities that are prerequisite to preparation of an application for development authorization under this chapter, if:
    A. The activity does not interfere with the normal public use of the surface waters;
    B. The activity will have no significant adverse impact on the environment including, but not limited to, fish, wildlife, fish or wildlife habitat, water quality, and aesthetic values;
    C. The activity does not involve the installation of a structure, and upon completion of the activity the vegetation and land configuration of the site are restored to conditions existing before the activity;
    D. A private entity seeking development authorization under this section first posts a performance bond or provides other evidence of financial responsibility to the City of Lacey local jurisdiction to ensure that the site is restored to preexisting conditions; and
    E. The activity is not subject to the permit requirements of RCW 90.58.550.

12. The process of removing or controlling an aquatic noxious weed, as defined in RCW 17.26.020, through the use of an herbicide or other treatment methods applicable to weed control that are recommended by a final environmental impact statement published by the Department of Agriculture or the Department jointly with other state agencies under RCW 43.21C.

17.30.040 Letter of Exemption from Substantial Development Permit Process

The proponent of a project that qualifies for an exemption must obtain confirmation that it conforms to the Shoreline Master Program and to state law. If it conforms, a letter of exemption will be issued stating that there are no further shoreline permits to obtain, and may contain conditions which the proponent must meet.

17.30.045 Unclassified Uses

This program does not attempt to identify or foresee all conceivable shoreline uses or types of development. When a use or development is proposed which is not readily classified within an existing use or development category, it shall require a conditional use permit. During processing of the application, the Administrator and Hearing Examiner shall identify and apply those program policies and regulations which will best promote the policies of the Shoreline Management Act and the Shoreline Master Program, with special reference to the policies of the environmental designation in which the use will be located. In addition, general goals, policies and standards shall also apply.

17.30.047 Maintenance and Repair Activities - Exemption Threshold and Activity Not Exempted

1. Normal maintenance and repairs to an existing shoreline modification (see description of modification in Section 17.45.000), shall be exempt from acquiring a substantial development permit in accordance with Section 17.30.035 if such repair and maintenance activities are valued at less than 50% of the replacement value of the structure or modification.

2. Where the value of repair of an existing modification is equal to or exceeds 50% of the replacement value, it shall be considered a replacement and a conditional use permit shall be required.

3. When a conditional use permit is required for replacement and the existing modification does not meet standards in this SMP and may be having an adverse impact on shoreline functions and values, review shall include consideration of, and preference for, other more ecologically sound practices that can achieve the same function.

4. Placement of a modification or replacement of an existing modification designed for stabilization must be designed for protection or stabilization of a residence(s) that is in danger from active erosion. Such modification may be permitted through a conditional use permit, if it is demonstrated by a qualified geotechnical engineer, that it is the only feasible way to protect the residence(s), and such modification will not result in a net loss of ecological function or otherwise conflict with the public's interest.

5. Where it is demonstrated that replacement of a modification is necessary for the maintenance of shoreline ecological functions and is in the public interest, such activity may be exempt from permit requirements as determined by the administrator if such replacement does not exceed the exemption threshold for a Substantial Development Permit pursuant to Section 17.30.035 (7).

17.30.050 Inspections

Pursuant to RCW 90.58.200, the Administrator or his authorized representative(s) of that local government may enter land or structures to enforce the provisions of this program. Entry shall be at reasonable times. If the land or structures are occupied, the Administrator shall first present proper credentials and request entry; and if the land or structures are unoccupied, the Administrator shall first make a reasonable effort to locate the owner, or other person having control of the property, and request entry.

17.30.055 Penalties and Enforcement

The Shoreline Management Act imposes significant penalties for violation of the act, regulations and master programs. A violation constitutes a gross misdemeanor, which is punishable by fine or imprisonment (RCW 90.58.220). In addition to the criminal penalty, the Act imposes liability on any person violating the act or conditions of a permit for all damage to public or private property arising from the violation. Furthermore, the violator may have to restore an area affected by a violation, and pay the entire cost of restoration, including attorney's fees and court costs (RCW 90.58.230). There may also be civil penalties that apply (RCW 90.25.210).

17.35.000 Relationship to Other Land Use Regulations

17.35.005 Local Permits, Approvals and Shoreline Exemptions

1. **Activities requiring Shoreline Permits -** In the case of development subject to the shoreline permit requirement of this program, the Administrator shall not issue a building permit for such development until a shoreline permit has been granted. Also, any permit issued by the Administrator for such development shall be subject to the same terms and conditions that apply to the shoreline permit.

2. **Activities exempt from shoreline permit requirements -** In the case of development subject to regulations of this program but exempt from the shoreline substantial development permit requirement, any required statement of exemption shall be obtained prior to issuance of the building permit or applicable approval. For single family residences, a building permit reviewed and signed off by the Administrator and including any conditions, may substitute for a written statement of exemption.

3. **All land use planning permits -** The City shall use a "shoreline zoning overlay" designation to integrate the Shoreline Master Program map and all standards of the Shoreline Master Program with the Lacey zoning code. This overlay zoning will provide the basis for review and application of standards and conditions for all of the City's land use planning processes and permits. For all planning permits and approvals the Administrator shall attach conditions and mitigation measures as necessary to ensure that the design, development, functionality and use is consistent with the goals, policies, standards and intent of this program.

17.35.010 Compliance with Existing Development Regulations

Use and development within shoreline jurisdiction shall comply with City development standards, and applicable state and federal regulations, provided they do not conflict with the shoreline goals, shoreline policies, and development regulations of this program. In the case of conflicts between specific standards and regulations the most restrictive shall usually apply and goals and policies of the Shoreline Management Act and this Master Program shall always guide interpretation of the most appropriate standard to apply.

17.35.020 Critical Areas Regulations within Shoreline Jurisdiction

1. Adoption of Critical Area ordinances of LMC Chapter 14, with exceptions:

The City of Lacey Critical Area Ordinances, in Title 14 of the Lacey Municipal Code, shall be adopted as a part of this SMP, with a few exceptions. The intent of referencing and use of critical

area legislation is to provide the best protection for these resources. It is also the intent of this SMP, to apply a consistent and efficient consolidated process for review and action on proposals involving these resources. To these purposes, the critical area ordinances are adopted as part of the SMP with the following exceptions:

A. **Exceptions of certain provisions in conflict with the intent of the SMP.**

Where there are provisions in chapter 14 that are less restrictive than the SMP, those provisions will not be applied. However, where there are provisions that are more restrictive than the SMP, they will generally be applied, except as provided for in this section of the SMP (17.35). The intent is to ensure the provision providing the most protection is always applied. To this purpose, the following provisions within Chapter 14 shall not apply to proposals involving critical areas that are within shoreline jurisdiction:

1) "Exempt uses and activities" or "exceptions" or "exemptions" – LMC 14.28.140, LMC 14.33.080, and LMC 14.37.080. The only "exemptions" allowed within shoreline jurisdiction are those listed as being exempt from a shoreline substantial development permit.
2) "Administratively authorized uses and activities" or "allowed activities" - Any activity which is not exempt within shoreline jurisdiction will require a shoreline substantial development permit, shoreline conditional use permit, or shoreline variance.
3) "Reduction of standard buffer zone width" – LMC 14.28.300. Reduction of the standard wetland buffer width within shoreline jurisdiction may be permitted in accordance with subsection (C) below. When outside the shoreline residential designation, reductions may be permitted in accordance with the provisions outlined in LMC 14.28.300 when not used in combination with provisions for buffer averaging. Further reductions will require a shoreline variance.
4) "Administrative variances" - Administrative variances, being variances authorized by the administrator without the use of a shoreline variance, are prohibited within shoreline jurisdiction.
5) "Standard buffer width averaging" – LMC 14.28.310, LMC 14.33.116 G (3) and LMC 14.33.117 D (4). Wetland buffer averaging within shoreline jurisdiction is not permitted when used in combination with buffer reduction. If averaging is permitted, the buffer width shall not be reduced by more than 25% of the standard buffer of be less than 35 feet in any location; further averaging will require a shoreline variance. In the case of an associated wetland, the edge of the wetland is the edge of the shoreline jurisdiction. Habitat buffers for both riparian and non-riparian habitats may be averaged if such averaging does not result in a buffer width of less than 75% of the recommended buffer width. Averaging may not be used in combination with reductions. Further averaging will require a shoreline variance.
6) "Reduction to wetland replacement ratios" – LMC 14.28.445 (B) and 14.28.450 D (2). A reduction of the wetland replacement ratio within shoreline jurisdiction will require a shoreline variance.
7) "Reasonable use exception" – LMC 14.28.350 (E). Within a shoreline jurisdiction, a shoreline conditional use permit and/or shoreline variance will serve as a reasonable use exception review. The Administrator shall determine whether a CUP or variance is required depending upon the proposed activity and purpose for which relief is sought; see Sections 17.30.015-17.30.020 of the SMP.
8) Determination of a Wetland Boundary – LMC 14.28.090. Within shoreline jurisdiction, identification of wetlands and delineation of their boundaries shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplements. See WAC 173-22-035.
9) "Building Setback Lines" – Within shoreline jurisdiction, the requirement to locate the setback line a distance that corresponds to the required yard area setback for the

underlying zone from the edge of a wetland buffer (LMC 14.28.340) or designated priority habitat or species buffer (LMC 14.33.190) shall not apply.

B. **Exception of certain provisions related to permit process and timing**:
Permit processes: Where processes or timelines identified in the SMP conflict with critical area permit processes or timelines in LMC Chapter 14, the requirements of the SMP shall apply. Specific permits used to review and condition proposals within chapter 14 of the LMC shall be dovetailed with the underlying SMP permit or approval. The underlying permit, process and timeline used in the SMP shall be utilized.

C. Exception related to buffer widths for freshwater critical areas in the Shoreline residential zone: Within the shoreline residential environment designation, buffers for freshwater critical areas along lake front platted lots may be reduced to match setbacks from the OHWM as identified for the most intensive use expected for the property as illustrated in Section 17.24.015, Table 4.

2. Standards of critical area ordinances and principals and requirements of the SMP:

A. All standards and provisions of the critical area ordinances, relative to performance standards and protection of critical areas and resources are considered a fundamental requirement.

B. No net loss of ecological function and value and mitigation sequencing are the baseline criteria for permit and exemption actions.

3. Critical Area Principles

Principles: The following principles are embodied within Lacey's Critical Area Ordinances, but are not so stated in relationship to shoreline management areas. These principals are stated here for clarity of purpose in application in shoreline jurisdiction under this SMP:

1) Planning Objectives: The planning objective for critical areas in shoreline jurisdiction is the protection of existing ecological functions and ecosystem-wide processes and restoration of degraded ecological functions and ecosystem-wide processes.
2) Regulatory provisions: The regulatory provisions for critical areas are intended to protect existing ecological functions and ecosystem-wide processes.
3) Protection, use and enjoyment: An underlying intent is to promote human uses and values that are compatible with the other objectives of the Shoreline Management Act and this Shoreline Master Program, such as public access and aesthetic values, provided they do not significantly adversely impact critical areas and shoreline ecological functions.

17.35.030 Critical Saltwater Habitat and Marine Riparian Habitat

1. **Location and type**: The marine shoreline in Lacey runs generally from the Butterball Cove area to Mallard Cove. The shorelands are adjacent to aquatic areas that are designated as critical saltwater habitat, which includes pocket estuaries, eel grass beds, forage fish spawning habitat and feeder bluffs; see Map L14 in the inventory.

2. **Shoreline Designation**: With the exception of the area where an existing marina is located in Mallard Cove, area landward of the OHWM and associated wetlands and pocket estuaries have

been designated as Natural. Areas immediately surrounding the marina are designated urban conservancy. Areas water ward of the OHWM are designated aquatic; see Appendix 6.

3. **Land Use**: The majority of this area is in the Hawks Prairie Planned Community. Conditions for the planned community restrict development and preserve the area for enjoyment as passive open space. Trails provide visual and physical access to the beach. The trail is owned by the Planned Community's homeowners association, but historically this access has also been used by the general public.

   The existing marina in Mallard Cove is private and belongs to the Beachcrest Community. The Beachcrest subdivision is located in Thurston County, but a portion of the Marina falls within the Hawks Prairie Planned Community and within the City of Lacey.

17.35.031 Goals and Policies for Protection of Marine Riparian Habitat

1. **Goal: Protect Lacey's marine riparian habitat areas and achieve no net loss of ecological functions or values in these areas.**

   A. **Policy:** Utilize best available science recommendations provided in literature from state resource agencies when developing standards and reviewing habitat management plans, as provided for in LMC 14.33 and incorporated into this SMP, for activities in marine riparian habitat areas.

   B. **Policy:** Utilize standards in Lacey's critical areas ordinances and tree and vegetation protection legislation, as appropriate, to protect marine riparian areas and achieve no net loss objectives of this SMP.

   C. **Policy:** Utilize the recommendations and "general conclusions" of the white paper "Protection Of Marine Riparian Functions In Puget Sound, Washington" prepared by the State's Aquatic Habitat Guidelines (AHG) Program when considering the importance of marine riparian areas and reviewing proposed uses and activities in these areas, including:
      1) "General conclusions" identified in Section VI of the report
      2) "Overarching" recommendations identified in Section VI of the report
      3) "Impact specific" recommendations identified in Section VI of the report.

   D. **Policy:** Adopt the "general conclusions" in Section IV of the AHG white paper as findings in regard to the importance of marine riparian areas. These conclusions should be considered when designing projects and developing management strategies for activities proposed within marine riparian areas.
      1) Riparian areas perform important hydrologic, geomorphic, and biological functions. These areas encompass complex above- and below-ground habitats created by the convergence of biophysical processes in the transition zone between aquatic and terrestrial ecosystems.
      2) Riparian areas cannot be thought of in isolation from associated water bodies. The characteristic geomorphology, plant communities, and associated aquatic and wildlife species of riparian and marine systems are intrinsically linked.
      3) Natural riparian systems have adapted to specific disturbance regimes. Managing riparian areas without regard to their dynamic patterns and influences of adjacent water bodies ignores a fundamental aspect of how these systems function.

4) Riparian areas, in proportion to their area within a watershed, perform more biologically productive functions than do uplands. Riparian areas provide a wide range of functions, such as microclimate modification and shade, bank stabilization and modification of sediment processes, contributions of organic matter and large wood to aquatic systems, nutrient retention and cycling, wildlife habitat, and general food web support for a wide range of aquatic and terrestrial organisms.
5) Riparian areas are effective in filtering and transforming materials (such as dissolved and particulate nonpoint source pollutants) from hill slope runoff.
6) Because riparian areas are located at the convergence of terrestrial and aquatic ecosystems, they are regional hot spots of biodiversity and often exhibit high rates of biological productivity in marked contrast to the larger landscape.
7) During the last decade, a patchwork of federal, state, and local laws and programs has come to acknowledge the importance of riparian areas and to require or encourage special management to restore or protect their essential functions, although the degree of protection, the focus, and the spatial coverage of these laws and programs are highly variable among federal, state, and local levels.

E. **Policy:** Adopt the "overarching recommendations" in Section IV of the AHG white paper as management strategies for marine riparian areas. These strategies should be considered in the design and management of all projects proposed within marine riparian areas.
1) Protect marine riparian soils and vegetation – prevent damage to native riparian soils and vegetation, including clearing and grading, compaction, covering (paving) and removal.
2) Restore damaged marine riparian habitat – restore vegetation, soil characteristics.
3) Account for scale issues (temporal and spatial) when evaluating riparian conditions, current functions and potential for future functions, and cumulative effects of alterations. The dynamic nature and connectivity of riparian areas and linkages between riparian and aquatic systems operate at multiple scales.
4) Exclude all major sources of contamination from the riparian buffer, including construction, impervious surfaces, mining, septic system drain fields, agricultural activity, clear cutting and application of pesticides and herbicides.
5) Manage riparian areas for the long-term. For many sites, substantial time, on the order of years to decades, will be required for vegetation to become fully functional.

17.35.032 Standards for Protection of Marine Riparian Habitat

1. Standard: The following "Recommendations to Avoid or Minimize Specific Impacts" from the AHG white paper, as modified, shall be incorporated into the design and management of all projects within marine riparian areas. Compliance with these standards shall be detailed within a habitat management plan. If one of the provisions below is less restrictive than another applicable provision in Lacey's critical area regulations and in this SMP, the most restrictive and protective shall apply:

A. Vegetation removal on shorelines and bluffs shall be avoided to the maximum extent possible. If vegetation must be removed, the area and amount removed shall be minimized and located as far landward of the ordinary high water mark as possible. Ground disturbance, removal of mature trees, and introduction of nonnative vegetation, especially invasive species such as English Ivy, shall be minimized.

B. Impervious surfaces shall not be located in marine riparian areas. If impervious surfaces must be located within or adjacent to marine riparian areas, the footprint shall be minimized and

impacts shall be mitigated through techniques such as the use of pervious surfaces like pervious pavers and concrete, bioretention facilities such as rain gardens, green roofs, cisterns, etc. Pollutant loading shall be minimized. Bioretention and other facilities that infiltrate water, if located along slopes and bluffs, shall be designed so as to not increase the likelihood of mass failures or erosion.

C. Shoreline modification shall be avoided to the maximum extent possible. Existing native vegetation shall be maintained, particularly at and near the land-water interface. If shoreline alterations must occur they shall be done in a way that minimizes potential negative impacts to natural functions and shall use the least intrusive methods including bioengineering or relocating structures where feasible and practicable. All adverse impacts shall be fully mitigated.

D. Invasive plant species shall be removed from marine riparian areas. Purple Loosestrife, Himalayan blackberry, English Ivy and other invasive plants compete with native species, particularly in disturbed sites along marine bluffs and shorelines.

E. As appropriate through the mitigation sequence, restore and replant marine riparian areas with native vegetation to improve the connectivity between upland and marine riparian habitat and to restore functions that benefit the nearshore and beach ecosystems. Replanted marine riparian areas shall be properly maintained so as to guarantee plant survival.

F. Buildings shall be discouraged within the riparian buffers. If authorized through the appropriate permitting process contained in this SMP, the footprint and site disturbance of structures shall be minimized and structures shall be located as far landward of the water's edge areas as possible.

G. Septic systems and new waste water systems are prohibited in marine riparian areas. Existing systems within the drainage basin that could impact the riparian area shall be maintained, and operated in such a way that human waste and nutrients are prevented from leaching into local water bodies.

H. Disturbance to native vegetation shall be avoided in marine riparian areas, especially near the water's edge, with the goal of maintaining vegetation communities that are resilient to disturbance from surrounding land uses and able to regenerate with minimal human intervention. Nutrients, pathogens, toxics, and fine sediments associated with land-use practices shall be prevented from entering marine water bodies.

I. Salvage or removal of downed trees, LWD or snags in riparian areas and on beaches shall be avoided. All efforts shall be made to maintain complex, multi-aged riparian forest cover and wide buffers to allow natural recruitment of LWD over long time frames.

J. Mitigation sequencing of Section 17.40.015 shall be utilized for all activities in marine riparian buffers. Impacts that cannot be avoided shall be fully mitigated.

17.35.033 Goals and Policies for Protection of Critical Saltwater Habitat

1. **Goal: Protect Lacey's critical saltwater habitat areas and achieve no net loss of ecological functions or values in these areas.**

   A. **Policy:** Utilize best available science recommendations provided in literature from state resource agencies when developing standards and reviewing habitat management plans for projects intruding into or over critical saltwater habitat areas.

   B. **Policy:** Because ecological functions of marine shorelands can affect the viability of critical saltwater habitat, effective protection of critical saltwater habitats should integrate the policies for management of shorelands, outlined in Section 17.35.031, with management policies for submerged areas.

   C. **Policy**: Activities in, over or adjacent to critical saltwater habitat should consider the following, where applicable:

      1) Protecting a system of fish and wildlife habitats with connections between larger habitat blocks and open spaces and restoring such habitats and connections where they are degraded;
      2) Protecting existing and restoring degraded riparian and estuarine ecosystems, especially salt marsh habitats;
      3) Establishing adequate buffer zones around these areas to separate incompatible uses from the habitat areas;
      4) Protecting existing and restoring degraded near-shore habitat;
      5) Protecting existing and restoring degraded or lost salmonid habitat;
      6) Protecting existing and restoring degraded upland ecological functions important to critical saltwater habitats, including riparian vegetation;
      7) Improving water quality;
      8) Protecting existing and restoring degraded sediment inflow and transport regimens; and
      9) Correcting activities that cause excessive sediment input where human activity has led to mass wasting.

17.35.035 Standards for Protection of Critical Saltwater Habitat

1. **Standard**: Docks, bulkheads, bridges, fill, floats, jetties, utility crossings, and other human-made structures shall not intrude into or over critical saltwater habitats except when all of the conditions below are met.

   A. The public's need for such an action or structure is clearly demonstrated and the proposal is consistent with protection of the public trust, as embodied in RCW 90.58.020;

B. Avoidance of impacts to critical saltwater habitats by an alternative alignment or location is not feasible or would result in unreasonable and disproportionate cost to accomplish the same general purpose;

C. The project including any required mitigation will result in no net loss of ecological functions associated with critical saltwater habitat.

D. The project is consistent with the state's interest in resource protection and species recovery.

E. Docks for community use may be authorized provided that:
   1) Avoidance of impacts to critical saltwater habitats by an alternative alignment or location is not feasible;
   2) The project, including any required mitigation, will result in no net loss of ecological functions associated with critical saltwater habitat.

17.35.036 Buffer requirements for Protection of Lacey's Marine Riparian Areas and Critical Saltwater Habitat

1. **Standard:** The minimum baseline marine riparian habitat area buffer shall be 200 feet measured landward from the OHWM. The Administrator may authorize reduction of the standard buffer under the conditions and through the process provided for in LMC 14.33 and incorporated into this SMP.

2. **Standard**: Activities and structures associated with water oriented public access opportunities may intrude into marine riparian area or critical saltwater habitat area buffers, provided such public access is consistent with the intent and applicable provisions of Lacey's Public Access Plan, is approved and maintained by the City of Lacey, is the minimum intrusion necessary to support the authorized use, and the mitigation sequence is followed.

17.35.037 Critical Fresh Water Habitat

1. **Location and Type**: Critical fresh water habitat areas in Lacey include Woodland Creek, its floodplain, and the associated, almost continuous, stretch of wetland complex that connects and extends around portions of area lakes; including Hicks Lake, Pattison Lake, and Long Lake, to the extent such areas fall within shoreline jurisdiction, and the lake basins. See map L-1 in the inventory.

2. **Shoreline Designation:** The shoreline residential designation has been applied to properties around Lacey's lakes where residential development has occurred. These areas are predominantly built out. Woodland Creek is designated urban conservancy and natural, and the large, associated wetland complex connecting them all is designated natural. Protection of the vast complex of wetland areas surrounding Hicks, Pattison and Long Lake has come naturally as it was considered unusable. Most all of this complex has been protected and remains undeveloped.

3. **Land use**: Land use along Woodland Creek and Lakes within Lacey and Lacey's UGA is somewhat variable, ranging from undeveloped land to low density residential, with some commercial land uses along Woodland Creek's associated wetlands north of Martin Way. Most of Woodland Creek from this point north within Lacey and its UGA is undeveloped and has maintained critical area functions, particularly in regard to flood storage capacity and habitat associated with wetland areas. Where lakefront property contained developable area, it has generally been platted and developed with residential uses. Continuation of the residential uses and reasonable expansions are anticipated to continue to occur.

17.35.038 Goal and Policies for Protection of Critical Fresh Water Habitat

1. **Goal: Protect Lacey's critical fresh water habitats and achieve no net loss of function or value in these areas. Strive for greater levels of ecological function in vegetation management areas over the long term.**

   A. **Policy:** Utilize best available science recommendations provided in literature from state resource agencies when developing standards and reviewing habitat management plans for activities proposed within or adjacent to critical freshwater habitat.

   B. **Policy:** Utilize standards in Lacey's critical areas ordinances and tree and vegetation protection legislation as incorporated into this SMP, as appropriate, to protect critical freshwater habitat areas and achieve no net loss objectives of this SMP.

   C. **Policy:** Accommodate existing uses while achieving no net loss of functions and values with new development and implement mitigation strategies designed to improve the functionality of vegetation management areas.

   D. **Policy:** Emphasize protection and no net loss of ecological function of critical fresh water habitat in the future under GMA and when considering future land uses in shoreline areas.

   E. **Policy:** Where critical areas occur along designated critical freshwater habitat, buffer requirements should be based upon standards identified in Lacey's critical area ordinances as incorporated into this SMP. Exceptions to this policy are outlined in Section 17.35.020 (1) (C).

   F. **Policy:** Water dependant uses and structures or modifications supporting public access or such uses should be authorized uses within critical freshwater habitat, critical areas, critical area buffers and the OHWM setback within any shoreline designation.

17.35.039 Standards for Critical Fresh Water Habitat

1. Uses, structures or modifications that are not water dependant or do not provide public access shall not be permitted within critical freshwater habitat areas or critical areas or their buffers.

2. A water dependant or public access use, structure, or modification may be approved within critical freshwater habitat areas and critical areas and their buffers provided it meets all of the following requirements:

A. Such use, structure, or modification is associated with a residential use on the same property, or if a public use is identified in the Comprehensive Plan for Outdoor Recreation or the Public Access Plan.

B. All standards of this SMP applicable to the use, structure or modification are met including provisions in Part 2 and 3 of the SMP.

C. The intrusion is the minimum amount necessary to support the authorized use and the proposal complies with mitigation sequencing.

D. The proposal can demonstrate no net loss of shoreline ecological function and value.

3. Proposals for activities within critical freshwater habitat areas shall include development of a habitat management plan. The habitat management plan shall illustrate how the proposal complies with the goals, policies and standards relating to critical freshwater habitat areas and critical areas, as applicable, in this SMP.

A reach of shoreline just east of Nisqually, viewed from a kayak.

A picnic table stands as the last remnant of open space improvements in an area north of Long Lake that once was the site of a recreation vehicle park.

Picture of Chamber's Lake from Lakeview Drive. Unfortunately, most views surrounding Lacey's lakes are obscured from public view by homes and fences designed for privacy of residents. In this case "Lakeview Drive" does not really provide visual access to the general public. To take this picture the photographer had to climb on top of his car to get a peek-a-boo view for the camera. One issue considered in this Master Program is visual access for the public to designated "shorelines of the state". New standards require consideration of views when designing plats. While this plat has an area of open space that could be enjoyed by residents and the public, fences obscure everyone's view except for the few who enjoy lakeside access. New standards require consideration of both resident's privacy and public view opportunities. Well planned developments can achieve both.

PART TWO

ENVIRONMENTAL CONCEPTS, SHORELINE VALUES AND FUNCTIONS, VEGETATION AND RESTORATION

Elected officials, City staff and citizens working together at the January 19, 2010 open house

Picture of Cynthia Pratt, Lacey Council, in blue coat, and Sandra Romero, Thurston County Commissioner, discussing shoreline issues at the Lacey Open House for the Shoreline Master Program update. Also shown in the background on the left side of the photo, working with several citizens to answer questions, is David R. Burns, AICP, Lacey's Principal Planner. In the background, on the right hand side of the photo, Lacey Council member Andy Ryder is seen discussing shoreline issues with Rick Walk, AICP, Lacey's Community Development Director.

Picture by Lori Flemm

17.40.000 Shoreline Ecological Functions

17.40.005 General Provisions

The SMA and the Guidelines for the SMP place an emphasis on the protection of ecosystem-wide processes and ecological functions. This SMP must contain policies, regulations and standards designed to achieve "no net loss" of these processes and functions. To accomplish this objective, Lacey has developed this SMP with the necessary goals, policies and development regulations to assure development within the shoreline jurisdiction will promote no let loss of ecological functions necessary to sustain the natural shoreline.

17.40.007 General Goals and Policies for Protection of Ecological Functions

1. **Goal: Use the comprehensive unique inventory and characterization report provided in Appendix 4 to recognize, appreciate and respect the individual nature of Lacey's shoreline reaches and the natural ecological processes important to the health and vitality of these shorelines.**

   A. **Policy:** Designate shorelines based upon findings of the shoreline inventory and what designation is best suited to each individual reach considering its identified functions and values.

   B. **Policy:** Require design that is sensitive to shoreline processes and the requirements necessary for protection of identified functions and values. Design and density shall promote no net loss of ecological functions. To further this intent, the City will consider incentive programs to encourage dedication of shoreline property to the City for management and protection over the long term.

2. **Goal: Plan land use around shoreline resources considering the characterization report and cumulative impacts analysis, and responsibly balance impacts from urbanization required under GMA with the necessary protection of these limited and valuable resources over the long term.**

   A. **Policy:** Require a vegetation management area appropriate to each designation and expected use, to promote the natural functions of stormwater absorption and treatment and promote water quality and natural habitat functions and values.

   B. **Policy:** Allow alternatives for vegetation improvements within the vegetation management area as long as the area will achieve similar results in mitigating upland development and impacts of urbanization on the shorelines natural functions and values.

3. **Goal: Achieve goals of the Shoreline Management Act for state interests, and achieve local interests for the protection of identified functions and values. This shall include enjoyment of these resources for both passive and active recreation opportunities, as appropriate given characteristics, functions and values of individual shoreline areas.**

A. **Policy:** Ensure that uses and activities address the goals and policies in Sections 17.40 through 17.70.

B. **Policy:** Public use of shoreline will be a priority pursuant to the City Public Access Plan. However, public access must be balanced with the needs of each individual reach for maintaining a healthy shoreline and its ecological functions and values.

C. **Policy:** Public access with active or intensive uses should not be planned where critical areas are present or the shoreline would be particularly sensitive to the planned use.

D. **Policy:** Access should be integrated into shoreline areas with the least amount of impact possible and impacts should be mitigated to promote no net loss of ecological function.

E. **Policy:** To balance public access and use of shoreline resources with ecological function, Lacey will consider offsite mitigation and restoration consistent with priorities in the City's Restoration Plan. Offsite mitigation can be used to achieve no net loss on a community wide basis if this cannot be achieved onsite.

4. **Goal: Promote new development only where appropriate for the shoreline designation and ensure all development is sensitive to and protects ecological processes and functions.**

A. **Policy:** Design and locate all development and structures, including residential development, to make beach stabilization measures and other shoreline modifications unnecessary, including but not limited to, protective measures such as filling, beach feeding, bulkheading, shoreline berms, construction groins or jetties, or substantial grading of the site.

B. **Policy:** Ensure that permits for shoreline modifications address the goals and policies in Sections 17.40 through 17.70.

C. **Policy:** Ensure that exemptions and permits for uses, activities and shoreline modifications use mitigation sequencing in Section 17.40.015.

D. **Policy:** Programs that enhance opportunities for the development community as well as meet City and state goals for shoreline protection should be given priority. An example is a program that would allow significant increased density credit that can be transferred to upland areas outside shoreline jurisdiction or off site in exchange for dedication of the shoreline area to the public. This can enhance development opportunities and achieve GMA goals and environmental protection of shoreline resources over the long term.

17.40.015 Mitigation Sequencing

A shoreline permit applicant or project proponent shall include measures in their proposal to mitigate environmental impacts not otherwise avoided or mitigated by compliance with the SMP and other applicable regulations. Where required, mitigation shall occur in the following prioritized order:

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

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

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

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

5. Compensating for the adverse impact by replacing, enhancing, or providing similar substitute resources or environments and monitoring the adverse impact and the mitigation project and taking appropriate corrective measures.

17.40.020 Development Standards for Protection of Ecological Functions

1. **Standards applicable to ecological functions, generally**: The entire Shoreline Master Program has an emphasis on protection of ecological functions and promoting no net loss of ecological functions and values. Standards achieving this are found throughout the document under sections dealing with specific uses and modifications. All goals, policies and standards in this section of the SMP (LMC 17.40) are applicable to protection of ecological functions and are considered fundamental to management of shoreline resources. All goals, policies and standards in LMC 17.40 shall be satisfied with any use, activity, structure or modification under shoreline jurisdiction:

   A. General goals, policies and standards applicable to all uses, activities and modifications in Sections 17.44 and 17.45.

   B. General goals, policies and standards for uses and modifications in Sections 17.46 through 17.70.

   C. All vegetation management policies and standards of Section 17.41.

   D. All restoration policies and standards of Section 17.42.

2. **Vegetation management areas when critical areas are not present**: Where no designated critical area exists within shoreline jurisdiction, a vegetation management area shall be required to overlay the setback from the OHWM for the primary and most intensive use planned for the site.

   Along lakes in Lacey, the most intensive use will generally be residential homes. Matching the vegetation management area with the setback for the most intensive use permitted on the property is intended to correspond to the general needs and character of each shoreline designation and uses permitted within the designation.

3. **Buffers when critical area is present**: Where critical areas occur, the intent and requirements of Sections 17.35.020 shall be satisfied.

4. **Vegetation requirements for vegetation management areas**: Vegetation Management Areas required in item 17.40.020 (2) above shall consist of native species typical to riparian areas, or a functional equivalent. There are several intents to this provision which include:

   A. To promote no net loss of ecological functions as further urbanization or more intensive use of individual sites occur.

B. To maintain the health and value of the shoreline, as well as individual properties, when new development takes place by maintaining areas that can help mitigate impacts and result healthy riparian areas over the long term.

C. To implement requirements that are flexible to meet individual needs (provide a tool box of options accomplishing the intended objectives) and are proportionate to planned improvements.

See Section 17.41.021 Table 1 for vegetation guidelines for vegetation management areas.

5. **Uses designated for location within a vegetation management area must promote shoreline goals**: Generally, structures and activities that do not promote shoreline goals as expressed in the SMA and this SMP are prohibited within the designated vegetation management and setback areas. Examples include:

A. New or expanded lawns and gardens (typically heavily fertilized, contaminate the water body through nutrient loading, generally not efficient in filtering runoff or allowing water to infiltrate and provide little habitat value);

B. New or expanded parking and stormwater facilities (potential to contribute significant contaminants);

C. New or expanded fences (that degrade the natural look and aesthetics of shorelines and restrict movement of wildlife and people); and

D. New or expanded accessory structures (which can have a range of adverse impacts).

E. New or expanded uses, structures, activities and modifications not otherwise permitted in this SMP that can adversely impact shoreline functions and values.

17.41.000 Vegetation Management

17.41.010 Importance of Vegetation

Native vegetation along the shoreline provides and supports many ecological functions or processes which are critical to the health, vitality, function and value of Lacey's shorelines. These functions and values include but are not limited to:

A. Providing shade necessary to maintain water temperatures required by salmonids, forage fish, and other aquatic biota.

B. Regulating microclimate in riparian and nearshore areas.

C. Providing organic inputs necessary for aquatic life, including providing food in the form of various insects and other benthic macro invertebrates.

D. Stabilizing banks, minimizing erosion and sedimentation, and reducing the occurrence/severity of landslides.

E. Reducing fine sediment input into the aquatic environment by minimizing erosion, aiding infiltration, and retaining runoff.

F. Improving water quality through filtration and vegetative uptake of nutrients and pollutants;

G. Providing a source of large woody debris to moderate flows, create hydraulic roughness, form pools, and increase aquatic diversity for salmonids and other species.

H. Providing habitat for wildlife, including connectivity for travel and migration corridors.

Based upon identified functions and values and the role vegetation plays in maintenance of these functions and values, Lacey will promote proper restoration, landscaping and maintenance of its shoreline areas. The goals and policies in Sections 17.41.015 and general development standards in Section 17.41.020 are intended to provide the vision and general framework for this effort.

17.41.015 Vegetation Management - Goals and Policies

1. **Goal: Over the long term, achieve vegetated shorelines with materials supportive of natural shoreline functions and values that will help maintain and improve water quality and habitat.**

   A. **Policy:** Limit the removal of vegetation within shoreline jurisdiction to the minimum necessary to accommodate authorized shoreline development. Designate a vegetation management area corresponding to each designation's setback area as outlined in Section 17.24.010, Table 4. To be providing buffering functions, it is assumed such areas are well vegetated with native species appropriate to the eco-region. Where buffering functions are compromised by loss of, lack of, or replacement of native vegetation, vegetation management plans should focus on improving buffering function.

B. Policy: Native/approved vegetation is desired within designated vegetation management areas to further the City's goals of shoreline restoration and to promote no net loss of ecological function and value with new development. A Vegetation Management Plan should be developed for uses and activities proposed in shoreline jurisdiction, and should consider legitimate competing interests for shoreline areas. These interests include but are not limited to habitat, views and compatibility and integration of the full range of land use activities anticipated in the applicable shoreline environment and adjacent uplands. Example Vegetation Management Plans are provided in Appendix 2.

C. Policy: The Administrator may allow selective pruning of native/approved vegetation for view corridors and limited vegetation removal for shoreline access segments, provided ecological functions are not compromised. Proposals to remove vegetation for shoreline access segments should follow the mitigation sequence. All proposals for vegetation removal or pruning should be reviewed by the City Forester/Arborist, who will provide a recommendation to the Administrator. See Sections 17.41.020 (3) and 17.41.020 (10).

D. Policy: Preserve existing native vegetation along the shoreline, encourage and incentivize planting when it does not exist, and avoid, minimize and mitigate for impacts to shoreline vegetation.

E. Policy: Provide flexibility when balancing overlapping shoreline policies and priorities in including vegetation conservation, preferences for water-dependant uses, and requirements to provide public access.

F. Policy: When nonconforming or "conforming, expansion limited" structures are expanded within designated vegetation management areas and native/approved vegetative does not exist within the vegetation management area, the City should encourage the installation of vegetation within these areas to the level the site can reasonably accommodate and commensurate to offset the proposed level of expansion. If through review of the Vegetation Management Plan, the Administrator determines there is not adequate space onsite to accommodate vegetation that will adequately offset and mitigate impacts anticipated from the expansion, the Administrator may consider offsite mitigation or payment of fees in lieu of onsite mitigation.

G. Policy: Vegetation within designated vegetation management areas should be comprised of three vegetative levels including an over story of trees, an understory of shrubs, and a floor of herbs and with native plants commonly found in riparian areas of Thurston County; see example Vegetation Management Plans in Appendix 2.

H. Policy: Where revegetation of vegetation management areas is anticipated, such areas should be planted to resemble native conditions. The Administrator may consider and approve use of other vegetative materials that are demonstrated through the Vegetation Management Plan to achieve protection or maintenance of shoreline ecological function equivalent to native vegetation.

I. Policy: Where uses or activities are proposed along shorelines that also contain critical areas, Vegetation Management Plans may be consolidated with Habitat Management Plans required under Section 17.35.

Cyanobacteria algae bloom in another community in Spanaway Lake caused by surrounding urbanization and its related drainage impacts and use of septic tank drainfields. This contamination is becoming a major problem in nearby Pierce County communities. This particular species is highly toxic to wildlife and humans producing a very potent liver toxin that will kill dogs and wildlife after just a couple of drinks. It is also toxic to humans and is a danger just from contact with your skin. Health departments post warning signs where these blooms occur to keep humans away from the water. The pollutants that head the list leading to Cyanobacteria blooms are nitrogen and phosphorous.

To avoid the situation pictured above, it is critical to maintain existing native vegetation and restore natural vegetation in designated buffer areas along our shorelines. Positive drainage features like rain gardens can filter and clean runoff before entering the adjacent water body.

Lacey lakes have not yet faced this problem, and Lacey is working very hard to maintain our healthy water resources. Landscaping requirements are part of this effort and are designed to prevent the type of situation displayed in this picture for the benefit of shoreline property owners as well as the larger community.

Picture taken by Don Russell.

2. **Goal: Develop and implement public information efforts that put shoreline vegetation restoration and management tools in the hands of shoreline property owners.**

   A. **Policy:** Because of the importance of vegetation in managing water quality, the City will promote public education on this topic.

   B. **Policy:** Develop a full range of materials to share with the public ranging from how to implement shoreline revegetation requirements in accordance with this SMP to basic

information regarding shoreline functions and values and how vegetation management can be involved in maintaining shoreline property.

C. **Policy:** The City will support efforts of realtors and work in partnership with the local Board of Realtors to inform new and existing shoreline property owners of protective covenants that may be applicable to shoreline properties, and on the topic of ecologically friendly vegetation management. This may include a range of strategies such as educational presentations at realtor membership meetings, presentations to home owner associations, scheduling informational meetings with lot owners or perspective buyers and helping to develop brochures for general circulation to interested groups.

17.41.020 Vegetation Management - Development Standards

1. **Standard**: A Shoreline Vegetation Management Plan shall be developed and implemented for any shoreline parcel as a requirement of a shoreline substantial development permit, shoreline conditional use permit, shoreline variance and any action requiring an exemption letter. If there is no permit or exemption letter required for an activity, structure or use, a Shoreline Vegetation Management Plan is not required. However, in such situations any new landscaping of the site must adhere to the goals, policies and standards of the SMP with regard to the intent to promote natural functions and values of shoreline property. See Appendix 2 for sample Vegetation Management Plans.

   Parcels within shoreline jurisdiction which do not front onto a lake or stream and have property within a required shoreline buffer shall still be required to develop and implement a Shoreline Vegetation Management Plan pursuant to requirements for this section. Said plan will have a different focus than lots with shoreline frontage. Focus for these parcels will be runoff and drainage treatment, overstory vegetation to promote tree canopy and proper maintenance, involving use and minimizing fertilizers and other contaminants that could impact water quality.

2. **Standard**: The Shoreline Vegetation Management Plan shall include or address the following:

   A. The plan shall cover the entire project area or parcel(s) upon which uses or activities requiring authorization are proposed, as outlined above. The plan shall illustrate the location of the OHWM, the dimensions and location of the vegetation management area and of any shoreline access segment or clear zone established under Section 17.41.020 (7). The plan shall also illustrate the contours and general slope of the lot, the dimension of all existing and proposed structures (principle and accessory), impervious surfaces, lawn or turf areas, easements, and utility lines/connections. The plan shall illustrate general areas, approximate dimensions, and species makeup of vegetated areas located on portions of the subject site within shoreline jurisdiction but outside of the designated vegetation management area. Where combined with a Habitat Management Plan, the combined plan shall also illustrate the location and type of critical area(s) existing on the site in accordance with the provisions in Section 17.35 of this SMP. This plan shall be prepared by a licensed landscape architect, Washington certified nurseryperson or Washington certified landscape professional. When combined with a Habitat Management Plan, the plan shall also incorporate information from a qualified biologist or ecologist. The Administrator may waive the requirement for a qualified professional to prepare the plan, under appropriate circumstances as determined by the Administrator.

B. The Plan shall provide for the retention and/or replanting of native shoreline vegetation, or its functional equivalent, within the required vegetation management area; see example Vegetation Management Plans in Appendix 2. When expansion of a nonconforming structure, "conforming, expansion limited" structure, or development of a nonconforming lot is proposed within the vegetation management area, or when the impacts of development outside of the vegetation management area cannot be offset because of insufficient native vegetation in the vegetation management area, vegetative improvements (replanting) proposed to offset unavoidable impacts through the mitigation sequence shall be provided according to the schedule and tier threshold provisions in Section 17.41.021, Table 1.

C. Authorized uses or development shall retain all vegetation occurring on the lot until such time as a building permit or shoreline authorization is issued. Such permit or authorization shall specify the extent to which and in what locations vegetation can be removed. Development occurring outside of vegetation management areas will generally satisfy the first step in the mitigation sequence (avoidance). If, in the opinion of the Administrator, the use or activity may still result in a net loss of shoreline ecological function due to the character of the proposed activity or because of specific site conditions, the Administrator may require compensatory mitigation commensurate to offset identified impacts.

D. Specific revegetation strategies that are developed to meet objectives of this SMP may differ from those in Table 1 provided the Administrator finds such strategies are proportionate to provide for equivalent levels of shoreline function.

E. The Administrator may waive the requirement for preparation of a Shoreline Vegetation Management Plan when the proposed permit or action seeks to improve ecological functions of the shoreline, such as the removal of a bulkhead. In this situation, the level of functional improvement resulting from the proposed action shall be proportionate to that which would be provided through implementation of a Vegetation Management Plan, as determined by the Administrator.

F. Example Vegetation Management Plan: To aid applicants in preparation of Shoreline Vegetation Management Plan, the City has provided example Vegetation Management Plans and a general list of preferred species for Lacey's shoreline areas in Appendix 2. Species listed in Appendix 2 have been selected based upon characteristics that contribute and support the natural functions and values of the shorelines. The example plans shall be utilized by applicants to achieve mitigation or incentivized restoration efforts unless an alternative approach is authorized by the Administrator utilizing the criteria outlined in 17.41.020 (D) above.

3. **Standards for Review of Vegetation Management Plan**: The Shoreline Vegetation Management Plan shall be reviewed by the City Arborist and Tree Protection Professional who shall utilize guidance from the Department of Fish and Wildlife and the information in Appendix 2 to evaluate preferred and proposed species and functional needs. The Arborist/Tree Protection Professional shall consult the Shoreline Inventory, Characterization and Analysis Reports for information on shoreline functions and values relative to the individual shoreline and subject reach where activities are proposed. Based upon the review, he/she shall provide recommendations to the Administrator for action on the Plan. Plans that do not protect and mitigate for impacts to shoreline ecological functions will not be approved.

4. **Standards for Maintenance**: Each Shoreline Vegetation Management Plan shall contain a maintenance component that details maintenance requirements. This shall include proper use of fertilizers to reduce impacts to water quality, irrigation needs and responsibilities, and adaptive management requirements to guarantee implementation of the plan.

5. **Standards to Ensure Retention**: Each Shoreline Vegetation Management Plan shall be retained and implemented throughout the life of the use and/or development by means of a conservation easement or similar legal instrument recorded with the Thurston County Auditor, prior to issuance of a permit or exemption.

6. **Standards for Use of Lawn as Landscaping**: Lawn or turf is not permitted within the designated vegetation management area because it compromises the buffering effectiveness of the area and does not serve a buffering function. Turf also generally encourages fertilization, which can result in an increased the nutrient load to the water body and compromise water quality. Turf shall only be permitted within the vegetation management area in the following situations when approved by the Administrator:

   A. When expansion of an existing nonconforming or "conforming, expansion limited" structure is authorized, or when construction on a nonconforming lot involves encroaching into a designated vegetation management area, the portion of the vegetation management area within 10 feet of the structure, as allowed pursuant to Section 17.41.020 (7), may include or remain turf. New development shall apply the mitigation sequence to avoid conflicts with vegetation such that this clear zone for turf or lawn within the vegetation management area is not needed, to the extent feasible.

   B. When new construction is proposed, turf shall not be utilized in the designated vegetation management area. However if the Administrator determines there is no reasonable alternative that provides the applicant with usable yard space, lawn or turf may be utilized within up to 10 feet of the principle structure within the vegetation management area. The Administrator shall review the proposal utilizing the variance criteria in Section 17.30.020 and shall only approve such requests utilizing the mitigation sequence and when the allowance is the minimum necessary to afford relief.

   C. Wherever lawn is permitted it shall meet requirements of Section 17.41.020 (4) concerning proper use of fertilizer.

7. **Standards for Shoreline Access Segments and Clear Zones Permitted around Structures**: Nonconforming or "conforming, expansion limited" structures proposing to expand may maintain non buffer related vegetative improvements adjacent to and within a 10 foot radius of the structure (clear zone). As outlined above, new residential construction shall be sited so that any lawn or turf area is located outside of the vegetation management area, to the extent feasible. New residential uses on shoreline parcels may establish a shoreline access segment as defined in 17.15.236. In locating shoreline access segments or locating clear zones, the mitigation sequence shall be followed. Compensatory mitigation shall offset direct impacts from structural expansion as well as from any resulting loss of function due to expansion of the clear zone further into the vegetation management area, if applicable. Compensatory mitigation shall also be provided for unavoidable impacts resulting from the establishment of shoreline access segments. Compensatory mitigation shall be authorized by the Administrator and may include such things as:

   A. Vegetative improvements in other portions of the vegetation management area, as outlined in Table 1;

   B. Strategies designed to provide more effective buffering functions within the vegetation management area, such as installation of rain garden that is particularly effective in mitigating runoff impacts;

C. Activity that improves the existing function and value of the shoreline in ways other than installing vegetation, as outlined in Table 1. Such activities may include removing overwater structures that do not provide public access or serve a water dependent use, replacing materials on docks with light penetrating materials, or removing hard shoreline stabilization structures where softer measures would provide adequate shoreline stabilization;

D. Other strategy or techniques designed to provide functions proportionate to and to compensate for buffering functions within the vegetation management area that are lost, as approved by the Administrator.

E. If reasonable effective opportunities for compensatory mitigation have been exhausted on site, off site mitigation may be conducted at priority restoration sites as determined by the Administrator. At such time as the City has designed and implemented a fee in lieu of program, paying a fee in lieu of additional on site mitigation shall also be an option at the sole discretion of the Administrator.

8. **Standards for Covenants for New Plats**: Protective covenants and articles of incorporation for new plats shall include discussion of the location of and required maintenance for designated vegetation management areas. The discussion shall include a responsibility for the homeowners association to call the attention of residents to policies and standards in this SMP. It shall also detail the responsibility of individual lot owners to follow prescribed rules in regard to protection and maintenance of vegetation and appropriate maintenance practices to preserve water quality.

9. **Standards for Hazard Trees**: Hazard trees within vegetation management areas or critical area buffers may be converted to habitat tree or pushed over toward the aquatic area and retained as large woody debris. Such proposals shall be reviewed by the City's Tree Protection Professional and approved by the Administrator in accordance with the process for hazard tree review in LMC 14.32 as incorporated into this SMP.

10. **Standards for Limbing Trees**: The limbing or crown thinning of trees larger than three (3) inches in caliper shall comply with National Arborist Association pruning standards, unless the tree is a hazard tree as defined by the Program. No more than twenty-five percent (25%) of the limbs on any single tree may be removed and no more than twenty-five percent (25%) of the canopy cover in any single stand of trees may be removed for a single view corridor. All limbing shall comply with Lacey's Tree Protection and Preservation Ordinance (LMC 14.32) and applicable policies and criteria of the Lacey Urban Forest Management Plan, as incorporated into this SMP.

11. **Standard:** Requirements of this SMP to maintain and conserve vegetation shall not apply to the removal of aquatic weeds and fresh water algae undertaken pursuant to WAC 173-201.

View of a backyard along the north side of Chambers Lake. Notice the storm drain located in the foreground. While the situation provides a serene environment for residents, drainage into the lake and cultivation of lawn is a real threat to the quality of our water and the health and productivity of shoreline resources. Lawns also encourage geese by providing an area free of predators and has led to many complaints because of the mess visiting geese can create. Native landscaping can provide an attractive setting for residents, a healthier shoreline and also discourage geese. New standards require functional and productive landscaping designs with indigenous species and discourage the utilization of grass.

17.41.021 Table 1: Vegetation Management - Re-vegetation and Mitigation Schedule and Tiers

Because use of vegetation management for mitigation and restoration may involve a myriad of activities and designs that can meet the objectives of this SMP, the description of tiers/improvements given in this table should be used as a guideline. Table 1 is intended to provide a basic framework for meeting objectives and should be used when considering expectations for revegetation and mitigation, when necessary. However, the thresholds listed in this table are standards and shall be utilized in all Vegetation Management Plans.

Improvements specified in the table and example plans provided in Appendix 2 can be used by applicants that prefer a standardized approach. As outlined in Section 17.41.020, applicants may develop a non-standard plan utilizing other strategies and approaches provided the plan incorporates the thresholds included in Table 1 and that the plan meets the same objectives for functional equivalency and no net loss of shoreline ecological function. These thresholds and tiers/improvements are in addition to applicable requirements for revegetation of disturbed areas and landscaping in the Lacey Zoning Codes.

Level of Expansion/Action in the Vegetation Management Area	**Thresholds ***	**Description of Tiers/Improvements * ****
No expansion permit – Permit associated with residential structure and no expansion; Electrical, plumbing, roofing permit, etc.	Not applicable.	Not applicable.
Low Impact Expansion – Expansion with no increase in impervious surface (vertical)	**Tree** and **Tier One**	**Tree Tier** - Meet minimum tree requirements of Chapter 14.32, as incorporated into this SMP. Required trees must be placed within vegetation management area. **Tier One–** Provide a 10 foot strip of landscaped area of native plants in the vegetation management area.
Minor Expansion - Expansion of building footprint by up to 500 square feet or up to 10% of structure (whichever is less) OR Expansion of impervious surface by up to 1,000 square feet or up to 10% (whichever is less)	**Tier Two**	**Tier Two -** Install native vegetation in at least **50%** of the vegetation management area. Priority given to overstory vegetation along the shoreline. OR [+]**Reduced Vegetation/Structure and Use Option** – Install native vegetation in at least 25% of the vegetation management area. Priority given to overstory vegetation along the shoreline. AND, do one of the following: • Replace solid surfaces on piers and docks with light penetrating surfacing materials. • Remove over water structures that do not provide public access, or do not serve a water dependent use. • Remove and replace hard shoreline stabilization structures with bioengineered or softer shoreline stabilization measures.
Moderate Expansion- Expansion of the building footprint by more than 500 square feet or between 10.1 to 25% (whichever is less)	**Tier Three**	**Tier Three** – Install native vegetation in at least **80%** of the vegetation management area. Priority given to overstory vegetation along the shoreline.

OR Expansion of impervious surface by more than 1,000 square feet, or between 10.1 to 25% (whichever is less)		OR [+]**Reduced Vegetation/Structure and Use Option** – Install native vegetation in at least 50% of the vegetation management area. Priority given to overstory vegetation along the shoreline. AND, do one of the following: • Replace solid surfaces on piers and docks with light penetrating surfacing materials. • Remove over water structures that do not provide public access, or do not serve a water dependent use. • Remove and replace hard shoreline stabilization structures with bioengineered or softer shoreline stabilization measures.
Major Expansion– Expansion of the building footprint by more than 25%, or redevelopment (replacement/teardown) of existing structures involving more than 25% of the square footage of the existing structure, or all new construction on an undeveloped lot. Or Expansion of impervious surface by more than 25%	**Tier Four**	**Tier Four** – Install native vegetation in 100% of the vegetation management area. OR [+]**Reduced Vegetation/Structure and Use Option** – Install native vegetation in at least 75% of the vegetation management area. Priority given to overstory vegetation along the shoreline. AND, do one of the following: • Replace solid surfaces on piers and docks with light penetrating surfacing materials. • Remove over water structures that do not provide public access, or do not serve a water dependent use. • Remove and replace hard shoreline stabilization structures with bioengineered or softer shoreline stabilization measures.
New Development or expansion outside of the vegetation management area, where native vegetation within the vegetation management area is not sufficient to offset the impacts of development.	**Tree** and **Tier One**	See row two above for description of tiers.

* Requirements may vary according to the following considerations:

- Where a property has been fully landscaped with qualifying vegetation and meets all other requirements of the SMP, no additional landscaping will be required.
- Credit will be given for participation in weed control provided the property also practices landscaping strategies that do not contribute to weed growth (this does not include standard herbicide use). Credit will be proportionate to the investment made in weed control and the relative priority that should be given to weed control considering the existing condition of property being developed.

** Vegetation used should include native varieties or approved alternatives. For trees, select from the Lacey General Tree List in Lacey's Urban Forest Management Plan or in Appendix 2. For shrub and ground cover types, preferred species are listed in Appendix 2. Alternative varieties may be approved by the Administrator.

[+] The Administrator may grant additional credit for certain activities such as weed control as outlined in the footnotes above, and reduce required landscaping. Such reductions will be dependent on the scope of the proposed expansion, site conditions, and shall be at the sole discretion of the Administrator.

17.42.000 Restoration - Goals and Policies

1. **Goal: Identify and take advantage of opportunities where restoration goals can be integrated into the design and planning of public or private shoreline development projects.**

   A. **Policy:** Recognize that restoration and enhancement may result from:
      1) Mitigation of impacts from new development.
      2) Adoption of shoreline setbacks and vegetation management areas with a protective function, which are based upon shoreline ecological functions and processes.

   B. **Policy:** Reestablish, rehabilitate and/or otherwise improve impaired shoreline ecological functions and/or processes through voluntary and incentive-based public and private programs and actions that are consistent with this master program and other approved restoration plans.

2. **Goal: Where opportunities are present, work with other state and local jurisdictions in planning and implementation of restoration projects that cross jurisdictional boundaries**.

   A. **Policy:** Encourage and facilitate cooperative restoration and enhancement programs between local, state, and federal public agencies, tribes, non-profit organizations, and landowners to address shorelines with impaired ecological functions and/or processes.

3. **Goal: Implement restoration efforts consistent with the City Shoreline Restoration Plan: Appendix 3.**

   A. **Policy:** Integrate restoration and enhancement with other parallel natural resource management efforts such as the WRIA 13 Salmonid Recovery Plan, Puget Sound Salmon Recovery Plan, and the City of Lacey Comprehensive Land Use Plan and its Environmental Protection and Resource Conservation element.

   B. **Policy:** Ensure restoration and enhancement is consistent with and, where practicable, prioritized based on the biological recovery goals for early Chinook, bull trout populations and other species and/or populations for which a recovery plan is available.

   C. **Policy:** Target restoration and enhancement towards improving habitat requirements of priority and/or locally important wildlife species.

   D. **Policy:** Restoration should be carried out in accordance with an approved vegetation management plan and in accordance with the policies and regulations of this SMP.

   E. **Policy:** Prioritize restoration actions and stand-alone projects in the following order:
      1) Create dynamic and sustainable ecosystems.
      2) Restore connectivity between stream channels, floodplains and hyporheic zones.
      3) Restore natural channel-forming geomorphologic processes.
      4) Mitigate peak flows and associated impacts caused by high stormwater runoff volume.
      5) Reduce sediment input to streams and associated impacts.
      6) Improve water quality.
      7) Restore native vegetation and natural hydrologic functions of degraded and former wetlands.
      8) Replant native vegetation in riparian areas to restore functions.
      9) Restore nearshore ecosystem processes, such as sediment transport and delivery and tidal currents that create and sustain habitat.

10) Restore pocket estuaries that support salmon life histories, including feeding and growth, refuge, osmoregulation, and migration.
11) Remove obsolete and no longer needed shoreline modifications.

4. **Goal: Achieve natural beach areas by restoration that meets needs of the land owner without hard armoring**.

A. **Policy:** Insure that permits for beach restoration and enhancement projects address the goals, policies and development standards within the Shoreline Ecological Function Chapter 17.40.000.

B. **Policy:** Give preference in permitting beach restoration and enhancement projects which use naturally regenerating systems, rather than bulkheads and other structures to prevent and control beach erosion where:
1) The length and configuration of the beach will accommodate such systems.
2) Such protection is a reasonable solution to the needs of the specific site.
3) Beach restoration/enhancement will accomplish one or more of the following objectives:
a) Recreate or enhance natural shoreline conditions.
b) Create or enhance natural habitat.
c) Reverse otherwise erosion-prone conditions.
d) Enhance access to the shoreline, especially to public shorelines.

C. **Policy:** Design and construct beach enhancement projects so that they will not degrade aquatic habitats, water quality and flood holding capacity.

D. **Policy:** Prefer self-maintaining designs over those which depend upon regular maintenance.

E. **Policy:** Require supplementary beach nourishment where structural stabilization works are likely to increase impoverishment of existing beach materials at or downdrift from the project site.

F. **Policy:** Limit the waterward extent of beach enhancement to that which is necessary to achieve the intended results.

G. **Policy:** Encourage the beneficial reuse of dredged materials for beach restoration and enhancement projects when it has suitable organic and physical properties.

17.42.020 General Development Standards for Restoration

1. All restoration activities utilizing landscaping materials shall meet the vegetation management standards of Section 17.41.020 according to the tier threshold schedule in Table 1 (17.41.021).

2. Projects proposed on shoreline property shall meet applicable standards for restoration identified for specific uses, activities and modifications in Sections 17.44 through 17.70.

3. If off site mitigation is used, it shall be consistent with Lacey's Restoration Plan and the plan's goals, policies and priorities. Restoration priority will generally be for no net loss of function and value on site where a proposal is planned and implemented. However, when comprehensive on site restoration is not possible, Lacey may use off site mitigation to achieve no net loss of

function and value. Such determination to use off site mitigation, in association with a public or private proposal, will be at the City's option and sole discretion.

4. Beach restoration and enhancement:

   A. Beach restoration and enhancement shall be the preferred way to protect an existing single-family residence or to maintain access to an authorized shoreline use, as opposed to hard shoreline stabilization structures such as bulkheads, landfills, levees, dikes, groins, or jetties.

   B. Beach restoration and enhancement may be permitted to restore or enhance degraded shoreline functions.

   C. The location and design of beach restoration and enhancement projects shall utilize the best available technology, such as the use of gravel berms, large woody debris, and sediment mixtures designed to either move within the drift cell or to resist the normal wave action of the site.

   D. Beach restoration and enhancement project shall demonstrate that they will not:
      1) Cause significant change in littoral drift or river currents,
      2) Adversely affect adjacent properties,
      3) Adversely affect adjacent spawning grounds or other areas of biological significance, and
      4) Interfere with the normal public use of the navigable waters of the state.

PART THREE:

GENERAL SECTIONS IDENTIFYING GOALS, POLICIES AND DEVELOPMENT STANDARDS FOR USES, ACTIVITIES AND MODIFICATIONS

17.43.000 Organization of this Document Relating to Uses, Activities and Modifications

For the reader's convenience, this document has been organized with all of the uses, activities and modifications in alphabetical order. Each use, activity or modification has its own separate section.

Modifications are addressed in Table 5. In addition, Section 17.45 provides general goal and policy statements applying to all modifications. Additional policies and development standards are provided under separate sections that deal with each particular modification. These sections are integrated and organized into the alphabetized sections of uses and activities. Section 17.45 lists the separate sections dealing with each modification for easy referral.

17.44.000 Goals and Policies Applicable to all Uses and Activities

1. **Goal: Achieve appropriate use, protection and restoration of shoreline resources, by identification of their values and functions and application of criteria and standards to shoreline uses, activities and modifications.**

   A. **Policy:** Apply standards for proper maintenance and restoration of degraded shorelines. Where there are no regulatory opportunities, use incentives to encourage developers, property owners, community groups and others to enhance degraded shorelines and return them to an ecologically functioning condition.

   B. **Policy:** Design, locate and construct residential development in a manner that will:
      1) Maintain existing public access to the publicly-owned shorelines,
      2) Not interfere with the public use of water areas fronting such shorelines, and
      3) Not adversely affect aquatic habitat.

   C. **Policy:** Evaluate all shoreline uses and activities for their effect on the aquatic environment to ensure every proposal that is approved achieves no net loss of ecological functions and values and does not adversely impact public health.

   D. **Policy:** Adopt a full range of development standards and incentive opportunities to protect and achieve no net loss of existing shoreline ecological functions and processes. Development standards may include regulations on use, density, frontage, setbacks, impervious surface, shoreline stabilization, vegetation conservation, buffers, critical areas and water quality and other elements in the public's interest for management and use of shoreline resources.

   E. **Policy:** Assess project-specific impacts, cumulative impacts, and a project's potential to result in a net loss of ecological functions. Require compliance with the mitigation sequence and compensatory mitigation as necessary to mitigate unavoidable impacts. If impacts cannot be mitigated, the application for use, activity or modification may be denied.

   F. **Policy:** Require shoreline permits to be consistent with the Shoreline Management Act (RCW 90.58), the Washington Administrative Code (WAC 173-26), and this Master Program.

   G. **Policy:** Generally prohibit activities that would degrade existing levels of ecological function. Mitigation of impacts should occur on site or on other priority shoreline sites that offset on site impacts. Activities should always be consistent with state long term goals and requirements for protection and restoration of shoreline areas.

   H. **Policy:** Eliminate inappropriate shoreline uses and poor quality shoreline conditions when authorizing a new shoreline development or activity on the same property and under the same ownership.

2. **Goal: Develop a Shoreline Master Program with an efficient customer service process, enforcement of program requirements and periodic evaluation of key objectives.**

   A. **Policy:** Continue Lacey's cultural customer service orientation. Listen to each customer's unique issues to understand the specific situation and needs of the owner, explain the need,

purpose and intent of the SMP as it applies to the subject property and try to identify a way to help the owner meet their objectives for use of property while meeting Lacey's objectives for use, protection and restoration of shoreline resources.

B. Policy: Approach work with the owner as a partnership in use and management of shoreline resources. The partnership should benefit the individual owner and be consistent with the overall intent, vision and public interest of the community.

C. Policy: Monitor and track developments approved within shoreline jurisdiction, to provide a baseline of data to evaluate key shoreline program elements.

D. Policy: Provide appropriate enforcement measures for projects approved under Lacey's shoreline program to ensure that all conditions of projects are met, and that required improvements or mitigation is accomplished.

17.45.000 Shoreline Modifications – Goals and Policies

The Department of Ecology guidelines make the following statement to clarify the distinction between uses, activities and modifications: "Shoreline modifications are generally related to construction of a physical element such as a dike, breakwater, dredged basin, or fill, but they can include other actions such as clearing, grading, application of chemicals, or significant vegetation removal. 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)."

This SMP classifies the following items or activities as modifications:

- **Dredging; see Section 17.53**
- **Fill; see Section 17.54**
- **Buoy; see Section 17.52**
- **Pier and Dock; see Section 17.61**
- **Recreational Float; see Section 17.55**
- **Shoreline Stabilization; see general goals, policies and standards in this section and:**
    - Beach Restoration and Enhancement; see Section 17.42
    - Bioengineering; see Section 17.48
    - Revetment and Gabion; see Section 17.65
    - Bulkhead; see Section 17.51
    - Breakwater, Jetty, Groin and Weirs; see Section 17.50
    - Dike, Levee and Instream Structure; see Section 17.58
- **Stair Tower; not applicable, not permitted.**

These modifications each have a section dealing with policies and standards for the modification. The goals and policies that apply to all modifications are provided below to avoid the need for duplication in each of the individual sections. The policies for shoreline stabilization are presented here as well, as many activities will fall within this category.

1. **Goal: Achieve protection of shoreline functions and values by implementation of Shoreline Master Program policies that foster design with nature. Use naturalized concepts and strategies that promote natural functions and processes over concepts that require structural modification**.

    A. **Policy:** Preserve shorelines which exist in their natural state free of shoreline modifications.

B. Policy: Where possible remove existing shoreline modifications and instream structures to improve ecosystem-wide processes and shoreline ecological functions.

C. Policy: Design and locate new development to prevent the need for shoreline stabilization measures and flood protection works.

D. Policy: Discourage new residential development which requires shoreline stabilization.

E. Policy: Discourage structural shoreline modifications so that they do not individually or cumulatively result in a net loss of ecological functions.

F. Policy: Allow structural shoreline modifications only when it is desirable for reconfiguration of the shoreline for mitigation or enhancement purposes.

G. Policy: Structural shoreline modifications should:

1) Be based on a comprehensive analysis of drift cells for marine water or reach conditions for stream systems and lakes; and

2) Incorporate all feasible measures to protect ecosystem-wide processes and shoreline ecological functions.

H. Policy: Bank stabilization measures should be designed, located and constructed only to prevent damage to existing development.

I. Policy: Use mitigation sequencing to support the use of nonstructural stabilization techniques over bio-engineering with structural components. If bio-engineering is necessary use mitigation sequencing to support its use over structural shoreline stabilization such as rip rap revetments or bulkheads.

J. Policy: Car bodies, demolition debris, concrete rubble, scrap building equipment or appliances should not be used for shoreline stabilization.

K. Policy: Substantial stream channel modifications and realignment and/or straightening as a means of shoreline stabilization and flood protection should be discouraged. Work within the natural shoreline processes and avoid development within flood plains, floodways or other areas that require stabilization of the natural processes with infrastructure.

L. Policy: Design stabilization or protection works for multiple uses with public access to public shorelines.

M. Policy: Retain natural features serving a stabilization function such as snags, stumps or uprooted trees that support fish and wildlife and other aquatic systems and that are not a significant navigation hazard.

N. Policy: Locate flood protection measures landward of the natural floodway boundary, including wetlands that are associated with the water body.

O. Policy: Beach restoration/enhancement using naturally regenerating systems for the prevention and control of beach erosion are preferred rather than bulkheads and other structures where:

1) The length and configuration of the beach will accommodate such systems.

2) Such protection is a reasonable solution to the needs of the specific site.

3) Beach restoration/enhancement will accomplish one or more of the following objectives:
   a) Recreate or enhance natural shoreline conditions;
   b) Create or enhance natural habitat;
   c) Reverse otherwise erosion-prone conditions; and
   d) Enhance access to the shoreline, especially to public shorelines.

17.45.010 Shoreline Modifications – Policies Applying to all Shoreline Stabilization

1. Policies applying to all shoreline stabilization activities:

A. Policy: Shore stabilization should be located and designed to:

1) Protect and maintain shoreline ecological functions, ongoing shore processes and the integrity of shore features;

2) Not unnecessarily interfere with public access to public shorelines or with other appropriate shoreline uses including, but not limited to, navigation, seafood harvest or private recreation; and

3) Not intrude into or over critical saltwater or freshwater habitats.

B. Policy: Shoreline stabilization on streams should be located and designed to fit the physical character and hydraulic energy potential of a specific shoreline reach, which may differ substantially from adjacent reaches.

C. Policy: Public or quasi-public shoreline stabilization projects should be located and designed for multiple use, restoration, and/or public access, where feasible.

D. Policy: Design land divisions to assure that future development on the created lots will not require structural shore stabilization.

E. Policy: New or expanded structural shore stabilization should be limited to when:

1) It is conclusively demonstrated by a geotechnical analysis to be necessary to protect an existing primary structure that is in danger of loss or substantial damage caused by tidal action, currents or waves;

2) The erosion is not being caused by upland conditions such as vegetation loss and drainage problems;

3) Non-structural solutions will not be feasible or sufficient; and

4) Impacts can be mitigated so that they will not result in a net loss of ecosystem-wide processes and shoreline ecological functions.

F. Policy: Prohibit larger shoreline stabilization projects (such as jetties, breakwaters, weirs or groin systems).

G. Policy: Shore stabilization projects should not be allowed on publicly owned shorelines which result in a long-term decrease in public use of the shoreline.

H. Policy: Shore stabilization should not be allowed for the purpose of filling shorelines.

I. Policy: Structural shoreline stabilization should not be located on or at the base of eroding bluffs, except where existing structures are threatened or non-structural methods have been determined to be infeasible.

J. Policy: Encourage shore stabilization efforts which coordinate affected property owners and public agencies for a whole drift sector (net shore-drift cell) to address ecological and geo-hydraulic processes, sediment conveyance and beach management issues. Encourage the creation of a comprehensive management program where beach erosion threatens existing development.

K. Policy: Encourage removal of failing, harmful, unnecessary, or ineffective structures and restore shoreline processes and ecological functions by using more natural long-term stabilization measures.

L. Policy: Shoreline stabilization projects should be prioritized in the following order. Applications that propose less preferred methods must demonstrate why preferred methods are not feasible:

1) No action (allow the shoreline to retreat naturally), increased building setbacks, and structure relocation.

2) Upland vegetation enhancement and drainage controls.

3) Flexible defense works constructed of natural materials including soft shore protection, bioengineering, including beach nourishment, protective berms or vegetative stabilization.

4) Rigid works constructed such as bulkheads, seawalls and bluff walls of artificial materials such as riprap or concrete. Materials used for construction of shoreline stabilization is to be selected for long-term durability, ease of maintenance, compatibility with local shore features, including aesthetic values and flexibility for future uses.

17.45.015 Shoreline Stabilization Standards

1. New development shall be located and designed to avoid the need for future shoreline stabilization to the extent feasible.

Subdivision of land must be regulated to assure that the lots created will not require shoreline stabilization in order for reasonable development to occur using geotechnical analysis of the site and shoreline characteristics. New development 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. New development that would require shoreline stabilization which causes significant impacts to adjacent or down-current properties

and shoreline areas shall not be allowed.

2. **New structural stabilization measures shall not be allowed except when necessity is demonstrated in the following manner**:

   A. To protect existing primary structures:

      1) New or enlarged structural shoreline stabilization measures for an existing primary structure, including residences, shall not be allowed unless there is conclusive evidence documented by a geotechnical analysis that the structure is in danger from shoreline erosion caused by tidal action, currents, or waves. Normal sloughing, erosion of steep bluffs, or shoreline erosion itself, without a scientific or geotechnical analysis, is not demonstration of need. The geotechnical analysis shall evaluate on-site drainage issues and address drainage problems away from the shoreline edge before considering structural shoreline stabilization.

      2) The erosion control structure will not result in a net loss of shoreline ecological functions.

      3) The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage.

      4) Nonstructural measures, such as placing the development further from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.

   B. To protect restoration projects or hazardous substance remediation projects pursuant to Chapter 70.105D RCW when all of the conditions below apply:

      1) Nonstructural measures, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.

      2) The erosion control structure will not result in a net loss of shoreline ecological functions.

3. **An existing shoreline stabilization structure may be replaced with a similar structure if there is a demonstrated need to protect principal uses or structures from erosion caused by currents, tidal action, or waves and provided there is no other more ecologically sound practice that can serve the same purpose**. **For purposes of this section standards on shoreline stabilization measures, "replacement" means the construction of a new structure to perform a shoreline stabilization function of an existing structure which can no longer adequately serve its purpose. Additions to or increases in size of existing shoreline stabilization measures shall be considered new structures.**

   A. The replacement structure shall be designed, located, sized, and constructed to assure no net loss of ecological functions.

   B. Replacement walls or bulkheads shall not encroach waterward of the ordinary high-water mark 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.

   C. Where a net loss of ecological functions associated with critical saltwater habitats would occur by leaving the existing structure, remove it as part of the replacement measure.

D. Soft shoreline stabilization measures that provide restoration of shoreline ecological functions may be permitted waterward of the ordinary high-water mark. State and federal permits may be required.

4. Geotechnical reports pursuant to this section shall include in their analysis the necessity for shoreline stabilization by estimating time frames and rates of erosion and report on the urgency associated with the specific situation.

As a general matter, hard armoring solutions shall not be authorized except when a report confirms that there is a significant possibility that such a structure will be damaged within three years as a result of shoreline erosion in the absence of such hard armoring measures, or where waiting until the need is that immediate, would foreclose the opportunity to use measures that avoid impacts on ecological functions. Thus, where the geotechnical report confirms a need to prevent potential damage to a primary structure but the need is not as immediate as the three years that report may still be used to justify more immediate authorization to protect against erosion using soft measures.

5. When any structural shoreline stabilization measures are demonstrated to be necessary:

A. Limit the size of stabilization measures to the minimum necessary. Use measures designed to assure no net loss of shoreline ecological functions. Soft approaches shall be used unless demonstrated not to be sufficient to protect primary structures, dwellings, and businesses.

B. Publicly financed or subsidized shoreline erosion control measures shall not restrict appropriate public access to the shoreline except where such access is determined to be infeasible because of incompatible uses, safety, security, or harm to ecological functions. See public access provisions; WAC 173-26-221(4). Ecological restoration and public access improvements shall be incorporated into the project where feasible.

C. Mitigate new erosion control measures, including replacement structures, on feeder bluffs or other actions that affect beach sediment-producing areas to avoid and, if that is not possible, to minimize adverse impacts to sediment conveyance functions. Where sediment conveyance systems cross jurisdictional boundaries, local governments shall coordinate shoreline management efforts. If beach erosion is threatening existing development, the City may adopt master program provisions for a beach management district or other institutional mechanism to provide comprehensive mitigation for the adverse impacts of erosion control measures.

6. Other Modifications: See also policies and standards for the individual type of modification proposed as listed in 17.45.000.

Forested Path at Wanschers Community Park on Hicks Lake. This park was a gift to the City of Lacey from Lettie Wanscher. The dedication of the park provided the public access to this portion of Hicks Lake and preservation of this beautiful canopy of trees adjacent to the lake's shoreline for perpetuity.

17.46.000 Access (Public) - Goals and Policies

1. **Goal: Provide a full range of shoreline access and use for the Lacey community.**

2. **Goal: Provide public access to and along the shorelines pursuant to the requirements of state law, guidance provided in the City Public Access Plan (see Appendix 1) and the goals and policies of this SMP.**

3. **Goal: Increase the ability of the general public to reach, touch, and enjoy the water's edge, to travel on the waters of the state, and/or to view the water and the shoreline from adjacent locations, provided that private rights, the public safety, and shoreline ecological functions and processes are protected consistent with the U.S. and state constitutions, and state statutes.**

   A. **Policy:** Consider the type of public shoreline access that is needed for the Lacey community; passive, active, view points, beach recreation etc. Determine what access opportunities exist and what additional opportunities should be pursued based upon value to the public.

   B. **Policy:** Develop an inventory of existing public access to shorelines and potential opportunities for public access that Lacey could pursue in achieving its public access goals.

   C. **Policy:** To support implementing efforts, particularly regulatory actions of conditioning permits, include a discussion of SMP identified public access needs and opportunities in planning documents (The Comprehensive Land Use Plan, The Comprehensive Plan for Outdoor Recreation, and The Capital Facilities Element) with justification and expectations for acquisition and development.

   D. **Policy:** Actively pursue public access opportunities with a variety of special programs;

   E. **Policy:** Where appropriate, acquire access to publicly owned tidelands and shorelands. Encourage cooperation among the City and Thurston County, adjacent cities, landowners, developers, other agencies and organizations to enhance and increase public access to shorelines as specific opportunities arise.

   F. **Policy:** Provide and protect visual access to shorelines and tidelands.

   G. **Policy:** Shoreline development by public entities such as local governments, state agencies, and public utility districts should provide public access measures as part of each development project unless such access is shown to be incompatible due to reasons of safety or impacts to the shoreline.

   H. **Policy:** Physical or visual access to shorelines should be incorporated in all new development when the development would either generate a demand for one or more forms of such access, and/or would impair existing legal access opportunities or rights. Public health and safety concerns should also be adequately addressed and maintenance of shoreline ecological functions and/or processes should be assured.

4. **Goal: Develop innovative program(s) that achieve Lacey's public access goals through incentives attractive to the development community.**

   A. **Policy:** Incentive programs to gain public access should provide development options that are superior in balancing environmental protection with public use/interest, should meet all

requirements of the Shoreline Management Act and further its spirit and intent, and should be superior from a market and business standpoint and result in a developer's independent decision to pursue the program.

B. Policy: Development resulting from an incentive program should be compatible with and further the intent of GMA plans and the City's community vision, and result in development that is compatible with and complementary to the neighborhood in which it is located.

5. Goal: Ensure public access is designed and constructed so that it preserves or enhances the characteristics and natural functions and values of the shoreline.

A. Policy: Public access should be located, designed, managed and maintained in a manner that protects shoreline ecological processes and functions as well as the public health and safety.

B. Policy: Select public access sites appropriate to the shoreline designation, the requirements for its environmental protection, and the maintenance of its natural functions and values.

C. Policy: Evaluation of sites for public access should include an analysis of the site's potential to accommodate the improvements necessary for the proposed form and level of intensity of public access activities.

D. Policy: Public access facilities such as over water fishing piers should only be authorized if ecological impacts are mitigated, if is consistent with the intent of this SMP and if it demonstrates no net loss of ecological function and value.

E. Policy: Design and development of public access facilities should consider view corridors. Emphasis should be placed on consideration of neighboring views and existing views from surrounding properties.

6. Goal: Implement a shoreline access strategy that meets City of Lacey shoreline access goals while being sensitive to needs of landowners, surrounding neighborhood residents, and the general public.

A. Policy: Lacey will demonstrate need for an access to provide the applicant a reason, purpose, and justification for public access as discussed in Appendix 1.

B. Policy: Lacey will provide the applicant with the use and intended design of the public access and assure successful integration of the access with the applicant's goals and objectives.

C. Policy: Lacey will increase public access to publically owned shorelines.

D. Policy: Lacey will consider objectives of private projects and landowners as it develops plans for public access and as much as possible, without compromising Lacey's public access goals and goals of the state, will design the access and long term management in a way that accomplishes the objectives of both parties.

E. Policy: Public access developed as part of a shoreline permit requirement should be designed to enhance the proposed project by adding value to the property for current and future residents of the site/ownership/development. Ideally, the relationship should be considered a partnership between the developer and the city, where the establishment of public access tied into other public amenities (regional trail, lake trail, parks etc.) will improve a project's

marketability and attractiveness, adding value to the proposed development by establishing an amenity residents of the site/ownership/development will see as added value to their home.

F. **Policy:** Physical or visual access to shorelines should be required as a condition of approval for shoreline development activities commensurate with the anticipated needs of future residents or users of the development, impacts of such development, and the corresponding benefit to the public, and consistent with constitutional limitations. Use an incentive dedication agreement program, such as Section 17.46.025, to provide economic incentives for a developer to design projects that include dedication of shoreline areas and access to the public.

G. **Policy:** Public access area and/or facility requirements should be commensurate with the scale and character of the development and should be reasonable, effective and fair to all affected parties including but not limited to the land owner and the public.

H. **Policy:** Design review standards should be applied to all projects taking place within shoreline jurisdiction. All projects should meet community expectations detailed in the Comprehensive Land Use Plan for neighborhood form and functionality and be compatible with and complementary to existing and planned development.

I. **Policy:** Public access design should provide for public safety, minimize potential impacts to private property and individual privacy, and protect shoreline ecological functions and processes.

J. **Policy:** Public access should be designed for integration with the existing built environment. In the context of a shoreline environment, successful integration will necessitate context sensitive design and will provide value to shoreline land owners, surrounding residents and the general public.

7. **Goal: Provide public access opportunities that are sensitive to the needs of water dependant uses and reflect priorities of the state for use of shorelines.**

A. **Policy:** Public access should be designed and managed in a manner that ensures compatibility with water-dependent uses.

B. **Policy:** Public access should be provided for water enjoyment, water related, and non-water dependent uses and subdivisions of more than 4 lots, and for all developments that increase public use of the shorelines and public aquatic lands or that would impair existing legal access opportunities, as provided in/supported by the City's Public Access Plan.

C. **Policy:** Uses and developments that provide an opportunity for substantial numbers of the people to enjoy the shorelines of the state are a preferred use.

8. **Goal: Achieve Lacey's identified public access goals using strategies, methodology and targets established in the Lacey Public Access Plan; see Appendix 1.**

9. **Goal: Achieve safe and respectful use of lake resources by partnering with lake residents and Thurston County and monitoring public access sites and lake use.**

A. **Policy:** Consider opportunities for a program that enables local lake residents to establish a "Lake Watch Program" based upon the same principals as a Neighborhood Watch Program. Provide support as necessary to empower lake residents to help maintain a safe lake and respectful use of these resources for the benefit of all Lacey citizens.

B. Policy: Coordinate responsibility with Thurston County for monitoring activity on lakes within Lacey's UGA. As much as possible, within existing resources, provide support for calls reporting dangerous or abusive behavior on lakes in Lacey and Lacey's growth area.

C. Policy: Coordinate with the Lacey Police Department in the planning and design of public access facilities to lakes and incorporate Crime Prevention through Environmental Design (CPTED) considerations.

17.46.020 Access (Public) - Development Standards

1. Public access shall consist of a dedication of land, recorded easement or a physical improvement in the form of a walkway, trail, bikeway, corridor, viewpoint, park, deck, observation tower, pier, boat launching ramp, dock or pier area, or other facility serving as a means of view and/or physical approach to public waters. These facilities may include interpretive centers and displays.

2. Opportunities to provide public access shall be evaluated with all applications for shoreline permits. Public access will generally not be considered for the uses listed below, except as determined on a case-by-case basis where the public access plan (Appendix 1) supports it. The Incentive Dedication Agreement Program detailed in 17.46.025 may be utilized with any development, except when in conflict with the provisions in subsection 3 below.

   A. Agriculture;

   B. Dredging;

   C. Ecological restoration or enhancement activities not associated with development, except when undertaken by a public entity or publicly financed/subsidized;

   D. Instream structures, except when undertaken by a public entity or publicly financed/subsidized;

   E. Landfill and excavation;

   F. Private docks serving four (4) or fewer dwelling units;

   G. Shoreline stabilization, except when undertaken by a public entity or publicly financed/subsidized;

   H. Single-family residential development of four (4) or fewer lots.

3. The Administrator may waive public access requirements for any water enjoyment, water related, non-water dependent use or subdivision of more than 4 lots when one or more of the following provisions apply:

   A. Unavoidable health or safety hazards to the public exist that cannot be prevented by any practical means;

   B. The cost of providing the access, easement, alternative amenity, or mitigating the impacts of development of the public access is unreasonably disproportionate to the total long term cost of the proposed development;

C. Significant impacts to shoreline ecological functions will result from the public access that cannot be mitigated; or

D. Provision of public access would not be consistent with Appendix 1, the City Public Access Plan.

4. In waiving public access per Section 17.46.020 #3 above, the Administrator must determine that all reasonable alternatives have been exhausted, including:

   A. Regulating access by such means as maintaining a gate and/or limiting hours of use;

   B. Designing separation of uses and activities (e.g. fences, terracing, use of one-way glazing, hedges, landscaping, etc.);

   C. Providing for access at a site geographically separated from the proposal such as a street end, vista, tideland or trail system.

5. Parcels developing within shoreline jurisdiction, which do not front onto a lake, marine, stream, or wetland shoreline may not be required to provide shoreline public access. They may be required to provide public access to other parcels along the shoreline (e.g. water's edge), where this is needed to support connections to shoreline public access on shoreline property. The nexus, proportionality, need and support for such a connection shall be based on goals, policies, objectives and provisions identified in Appendix 1, the City's Comprehensive Land Use Plan, Transportation Plan, and/or Comprehensive Plan for Outdoor Recreation.

6. If physical public access on shoreline parcels is demonstrated to be infeasible or inappropriate due to significant interference to operations or hazards to life and property, alternative visual access opportunities may be provided at a location not directly adjacent to the water such as a viewpoint, observation tower, or other areas serving as a means to view public waters.

7. The City shall evaluate public access opportunities against needs on a case by case basis utilizing the criteria and methodology outlined in Appendix 1.

8. Public access shall be provided in the following order of preference, where appropriate, and incorporate the following location and design criteria:

   A. A public pedestrian path or trail shall be provided along the shoreline in a manner that will not adversely impact shoreline ecological functions and/or processes. Such path or trail shall include the following features:

      1) The walkway shall be buffered from sensitive ecological features and provide limited and controlled access to sensitive features and the water's edge, where appropriate.

      2) Fencing may be provided to control damage to plants and other sensitive ecological features, where appropriate.

      3) Trails shall be constructed of permeable materials unless shown to be infeasible, and limited in width to reduce impacts to ecologically sensitive resources, except for a shared use trail or public access which is part of a boardwalk.

   B. Other forms of physical public access shall be located adjacent to other public areas, accesses and connecting trails, and connected to the nearest public street. If such physical access is a shared use path as defined in this SMP, the design shall comply with the classification of the

trail as stated in the Public Access Plan and shall include provisions for handicapped and physically impaired persons, where feasible.

C. Where views of the water or shoreline are available and physical access to the water's edge is not feasible or appropriate, a public viewing area shall be provided.

D. Design of public access facilities shall minimize intrusions on the privacy of adjacent landowners, utilizing techniques and approaches outlined in Lacey's Design Review Ordinance (LMC 14.23).

E. Public access facilities shall be designed to provide for the safety of users and neighboring landowners, including discouraging offensive conduct through public visibility of the public access area, or through provisions for oversight. The Administrator may authorize a public access facility to be temporarily closed in order to develop a program to address offensive conduct. If offensive conduct cannot be reasonably controlled, alternative facilities may be approved through a permit revision.

F. Public amenities appropriate to the use of the public access area such as benches, picnic tables, restrooms and sufficient public parking shall be provided to serve users in accordance with the standards in this SMP.

9. Unless in conflict with the Public Access Plan or the City Comprehensive Plan for Outdoor Recreation, the minimum width of public access easements or dedications shall be ten (10) feet in width, with twenty (20) feet being the preferred width where significant public use is expected. The Administrator may reduce the width of public access easements if undue hardship would result or increase the width if necessary to serve the intended function. However, the reduction or enlargement shall only be what is necessary to achieve the intended purpose.

10. Public access sites shall be fully developed and available for public use at the time of occupancy of the use or activity or in accordance with other provisions for guaranteeing installation through a monetary performance assurance.

11. Public access facilities shall be maintained over the life of the use or development. The party responsible for maintenance shall be identified in the authorization or permit decision documents. Future actions by successors in interest or other parties shall not diminish the usefulness or value of required public access areas and associated improvements.

12. Public access provisions shall run with the land and be recorded via a legal instrument such as an easement or dedication. Such legal instruments shall be recorded with the Thurston County Auditor's Office at the time the land division is recorded and/or prior to the time of shoreline permit approval or building occupancy whichever comes first.

13. Management of public access areas including protection and preservation of sensitive areas, provision of appropriate infrastructure and facilities, security, and long term maintenance shall normally be the responsibility of the City of Lacey. However, at its option, the Administrator may approve another public or non-profit agency to assume this responsibility if appropriate given the use. This responsibility may also be required of the owner, future home owners association, or other entity approved by the Administrator. If the Administrator approves another entity to assume this responsibility, it shall be through a formal agreement recorded with the Thurston County Auditor's Office.

14. Public access facilities shall be available to the public twenty four (24) hours per day unless other hours apply according to standards of the Comprehensive Plan for Outdoor Recreation or Parks Department Administrative criteria. Hours of operation shall be specified in the shoreline permit.

15. Appropriate signage shall be posted to inform facility users of necessary information including rules and responsible use of the resource. The City's phone number and contact information shall be included. The City's approved access sign(s) shall be installed in conspicuous locations at public access sites by the owner/developer. Once the signing of the property has been accepted by the City, it shall be maintained by the City or entity approved by the City that has the long term responsibility for maintenance and management of the access.

16. Development of new uses and expansion of existing uses shall consider existing view corridors from both designated public access/view areas and existing private development. The ability to view the water is considered a form of access to shorelines. Impacts to existing views shall be minimized utilizing techniques in Lacey's Design Review Ordinance (LMC 14.23).

17. Over-water or in-water public access facilities shall follow the mitigation sequence. Recommendations for "Building Better Docks" in Appendix 2 shall be utilized unless the Administrator agrees that a different design will have less environmental impact given specific site conditions.

17.46.025 Access (Public) - Incentive Dedication Agreement

Lacey has developed an incentive program for the development community and shoreline land owners to further objectives for public access and management of shoreline resources. The project utilizes a Shoreline Access Incentive Dedication Agreement, and is designed to achieve dedication of shoreline areas for public use and protection as provided in the City's Public Access Plan (Appendix 1).The basis of the concept is to incentivize dedication of shoreline areas to the public in exchange for density bonuses and transfers to upland areas under the same ownership or other areas throughout the city. In the context of this program, upland means on lands not within shoreline jurisdiction. Receiving areas for the density bonus or transfer would be designated based upon a determination such sites are able to support increased density in accordance with established City or Regional TDR policies. In addition, development planned for receiving areas needs to be consistent with the objectives of the Comprehensive Land Use Plan. Project planning and development under the shoreline access incentive dedication agreement program will be reviewed to ensure that the objectives of the dedication program are satisfied. Through this incentive program the Administrator may waive or modify zoning restrictions at the receiving site for such things as setbacks, lot size, height limits, and dimensional requirements provided all of the following provisions can be satisfied:

A. The design of the development results in a concept of superior quality and functionality as discussed in the Comprehensive Land Use Plan;

B. Development that occurs under the incentive program is designed in a way that results in a land use configuration that is superior to or compatible and complementary to adjacent surrounding land use and the overall character of the neighborhood in which it is located; and

C. All standards of the master program and its intent are satisfied for any development taking place within shorelines jurisdiction.

17.47.000 Discussion and General Policy for Aquaculture Use in Lacey

Review and Discussion: Potential locations for aquaculture are relatively restricted due to specific requirements for water quality, temperature, flows, oxygen content, adjacent land uses, wind protection, commercial navigation, and, in marine waters, salinity.

The Woodland Creek riparian area has an existing upland trout fish hatchery. The Nisqually Trout Farms, Inc. has been a successful, family owned business since 1948. This area was previously out of shoreline jurisdiction. Due to adjustments in mapping it will be within shorelines jurisdiction under the new update. The carrying capacity for this type of use in Woodland Creek is limited based upon its size, sensitivity and the scope of the existing hatchery. This area has been designated as natural and should not be expected to support new fish hatchery aquacultural activity. On Woodland Creek, aquaculture activity should be limited to the existing fish hatchery operation with opportunity for limited expansion if no net loss can be achieved with the expansion.

Lacey's lakes do not have salmon runs. The residential character of the lakes is not compatible with commercial aquacultural operations. On lake properties designated shoreline residential, aquaculture should be limited to activities that can meet standards in Section 17.47.020 and address compatibility issues with existing residential uses.

17.47.010 Aquaculture - Goals and Policies

1. **Goal: Provide opportunities for aquaculture and harvest of natural resources in a way that is compatible with the natural shoreline resource, complements specific reach designations and associated functions and values and meets requirements of the SMA.**

   A. **Policy:** Allow aquaculture consistent with the shoreline environment designation and the SMA.

   B. **Policy:** Design, locate and operate aquaculture activities in a manner that supports long-term beneficial use of the shoreline and protects and maintains shoreline ecological functions and processes.

   C. **Policy:** Prohibit aquaculture where it would result in a net loss of shoreline ecological functions, would have a significant adverse impact on natural dynamic shoreline processes, or interfere with other water-dependent uses.

   D. **Policy:** Accommodate the existing upland fish hatchery as a "pre existing approved use" as long as it is operated in a manner that supports long-term beneficial use of the shoreline and protects and maintains shoreline ecological functions and processes.

   E. **Policy:** Allow operation of aquaculture enterprises in a manner that allows navigational access of shoreline owners and commercial traffic.

   F. **Policy:** Aquaculture structures and activities that are not water-dependent (e.g., warehouses for storage of products, parking lots) shall be located outside shoreline jurisdiction to minimize the detrimental impact to the shoreline and other shoreline uses.

2. **Goal: Ensure long term health and viability of the marine resource through wise management of the resource and sound aquaculture practices.**

   A. **Policy:** Design, locate and operate aquaculture activities in a manner that supports long-term use of the resource.

   B. **Policy:** Give preference to an aquaculture use or activity that involves little or no substrate modification over those that involve substantial modification. The applicant should demonstrate that the degree of proposed substrate modification is the minimum necessary for feasible aquaculture operations at the site.

3. **Goal: Achieve compatible integration of aquaculture activities with other permitted uses in areas appropriate for this use.**

   A. **Policy:** Minimize the detrimental impact aquaculture development might have on views from upland property.

   B. **Policy:** Review proposed surface installations for conflicts with other uses in areas that are utilized for moorage, recreational boating, sport fishing, commercial fishing or commercial navigation. Incorporate features to reduce use conflicts. Unlimited recreational boating should not be construed as normal public use.

   C. **Policy:** Aquaculture processing plants that are not water dependant should be located outside of shoreline areas in an appropriate light industrial zone designed for manufacturing and processing activities.

17.47.020 Standards:

1. Aquaculture shall not be permitted in areas where it would:

   A. Result in net loss ecological functions, particularly areas that currently support native salmon runs;

   B. Adversely impact eelgrass and macroalgae; and

   C. Significantly conflict with navigation and other water-dependent uses.

2. Aquaculture facilities shall be designed and located according to the following:

   A. To not spread disease to native aquatic life;

   B. Establish new nonnative species which cause significant ecological impacts;

   C. Significantly impact the aesthetic qualities of the shoreline; and

   D. Impacts to ecological functions shall be mitigated according to the mitigation sequencing.

3. The existing fish hatchery on Woodland Creek shall be given a status of “pre-existing approved use” with opportunities for limited expansion if the following standards can be satisfied:

   A. All standards of Section 17.47.020 can be satisfied; and

B. Expansion will be the least physical expansion that can accommodate the objective.

C. Expansion shall be reviewed through a conditional use permit (CUP).

4. Commercial shellfish activity shall meet requirements of Section 17.35 and shall demonstrate no net loss of function and value with emphasis on impacts to the adjacent natural designation with other critical and sensitive habitat.

View of Long Lake looking north from Holmes Island Road. Note the two covered boat storage structures along the docks. New covered storage is not permitted under the new standards because it is considered unnecessary and distracts from the natural beauty of the shorelines.

17.48.000 Bioengineering - Goals

See General Goals, Policies and Standards under Modifications, Section 17.45.

17.48.010 Bioengineering - Policies

1. **Policy:** Insure that permits for bioengineering projects address the goals, policies and development standards within the Shoreline Ecological Function Chapter 17.40.000.

2. **Policy:** Give preference in permitting to bioengineering projects which incorporate self-maintaining vegetation and materials over those which require routine maintenance.

3. **Policy:** Design and construct bioengineering projects to:
   A. Ensure that water quality, fish and wildlife habitats and flood holding capacity are not degraded, and projects are timed so that the survival of new plantings is optimized;
   B. Maximize the use of native vegetation;
   C. Minimize the structural soil stabilization components, including riprap, to last only until vegetation is well established; and
   D. Include vegetation, fencing and/or other measures to avoid disturbance of the project site by livestock and vehicles.

4. **Policy:** Limit the waterward extent of bioengineering projects to that which is necessary to achieve the intended results.

17.48.020 Bioengineering - Development Standards

1. Bioengineering shall be used to protect an existing single-family residence or to maintain access to an authorized shoreline use, as opposed to hard shoreline stabilization structures such as bulkheads, landfills, levees, dikes, groins, or jetties.

2. Bioengineering shall be used when a geotechnical analysis confirms a need to prevent potential damage to a primary structure, but the need is not as immediate as within three (3) years.

3. Bioengineering projects shall incorporate the following:
   A. All bioengineering projects shall use a diverse variety of native plant materials, including trees, shrubs and grasses, unless demonstrated infeasible for the particular site.
   B. All cleared areas shall be replanted following construction and irrigated (if necessary) to ensure that all vegetation is fully re-established within three years. Areas that fail to adequately reestablish vegetation shall be replanted with approved plant materials until such time as the plantings are viable.
   C. Vegetation shall be incorporated into the vegetation management area to allow bank protection plantings to become established within three years. The vegetation management area shall exclude livestock, vehicles and activities that could further disturb the site.
   D. All bioengineering projects shall be monitored and maintained as necessary. Areas damaged by pests and/or the elements shall be promptly repaired.
   E. All construction and planting activities shall be scheduled to minimize impacts to water quality, fish and wildlife aquatic and upland habitat, and to optimize survival of new vegetation.

A majestic evergreen tree is a prominent feature in this view of Pattison Lake. Lacey's tree protection ordinance requires the preservation of trees like the one shown. The new shoreline regulations adopt the standards of Lacey's environmental ordinances, including the Urban Forestry Management Plan and its related tree protection ordinance. This will continue to ensure protection of the valuable habitat, drainage and aesthetic benefits (values and functions) provided by our tree resources within the shoreline area.

17.49.000 Boating Facilities - Goals

Goal: Meet demonstrated public need and demand for boating facilities for shoreline areas consistent with the City Comprehensive Plan for Outdoor Recreation, City Public Access Plan, shoreline designations and the overall emphasis on protection of shoreline natural functions and values.

17.49.010 Marinas and Boat Launch Facilities – Discussion and Policies

Discussion: An existing small private marina for Beachcrest exists just east of the Butterball Cove area along the shoreline of Dewolfe Bight. It is the only marina on shorelines under Lacey jurisdiction. It was developed as part of the Beachcrest development in the late 1940s. Approximately half of the marina is within the City of Lacey and the rest is within Lacey's UGA and unincorporated Thurston County.

The existing private Beachcrest marina is considered a viable use and is expected to continue over the long term. At the same time, environmental impacts of the Beachcrest marina on the shoreline environment should be acknowledged.

Looking at the need for public marinas, there is little justification for location of a public marina in the Lacey area. The marine shoreline of Lacey is extremely limited and its sensitivity and designation as Natural does not lend it to establishment of another marina use. The lakes under Lacey's jurisdiction are too small to have a need for or to support a marina.

Policies for marinas:

1. **Policy:** Expansion and maintenance or repair activities at the Beachcrest marina should follow the mitigation sequence.

2. **Policy:** The Beachcrest Community Association is encouraged to look for environmental restoration opportunities when performing marina maintenance or repairs. Incentives should be provided to the Beachcrest Community Association for activities that meet restoration objectives. Priority should be for restoration of degraded areas on this reach, as discussed in Lacey's Restoration Plan (Appendix 3).

3. **Policy:** Because the Beachcrest marina falls under the jurisdiction of both Thurston County and the City of Lacey, permitting activities may be complex for the Beachcrest HOA. To this end, the City of Lacey will support an interlocal agreement with Thurston County to have one jurisdiction be the lead local jurisdiction for permitting activities. The SMP of the lead jurisdiction per the interlocal agreement should be the SMP used to determine permitting process and requirements.

Policies for boat launch facilities:

1. **Policy:** The City's Comprehensive Plan for Outdoor Recreation and Public Access Plan should be used as a guide to determine public need for new boat launch facilities. Evidence of substantial demand should be given before considering approval of new facilities.

2. **Policy:** Locate boat launch ramps on stable shorelines where water depths are adequate to avoid the net loss of shoreline ecological functions or processes, and eliminate or minimize the need for

offshore or foreshore channel construction dredging, maintenance dredging, spoil disposal, filling, beach enhancement and other river, lake, harbor and channel maintenance activities.

3. **Policy:** Where provided, require fuel handling and storage procedures that minimize accidental spillage and provide satisfactory means for handling those spills that do occur.

4. **Policy:** Locate launch ramps to minimize the adverse effects upon fish and shellfish and their habitat(s).

5. **Policy:** Locate boat launching facilities in areas where parking and access to the facility can be accommodated without causing adverse impacts to adjacent properties.

6. **Policy:** Minimize off-site light and glare by using fully shielded and appropriately aimed fixtures.

7. **Policy:** Design boat launch facilities to provide for as many compatible water oriented recreational uses as possible, according to the size and extent of the facilities.

8. **Policy:** All facilities should provide adequate parking and landscaping.

9. **Policy:** Boat launch facilities should be designed and conditioned to avoid and mitigate impacts to adjacent properties. This includes but is not limited to impacts such as wave action, erosion, and privacy issues.

17.49.015 Covered Moorage - Policies

Policy: Covered moorage in Lacey is considered un-necessary and would distract from the shoreline's aesthetic and functional values. This use should be prohibited.

17.49.020 Boating Facilities Development Standards

Marinas:

1. New marinas shall be prohibited until such time as there is a demonstrated need shown and the activity is planned for according to goals, policies and priorities in Lacey's Comprehensive Plan for Outdoor Recreation. The existing Beachcrest marina shall not be labeled nonconforming as a result of this provisional prohibition on new marinas.

2. If Lacey is the lead local jurisdiction for permitting under an interlocal agreement as described above, maintenance and repair activities at the Beachcrest marina shall comply with the provisions of Section 17.30.047. However, to facilitate and encourage restoration objectives, repair and maintenance activities to modifications that exceed the 50% threshold for normal repair and maintenance and considered replacement modifications under Section 17.30.047 shall qualify for an exemption. To qualify for exemption, such activity must:

   A. Promote Lacey's restoration objectives as discussed in Appendix 3 and other applicable portions of this SMP;
   B. Result in a net gain of ecological function in this reach, as determined by the Administrator in consultation with applicable state resource agencies; and

C. Provide adequate documentation and analysis to make an informed decision on the environmental benefits of the proposed activity, as determined by the Administrator.

Boat Launch Facilities:

1. Launch facilities shall be located in areas where there is adequate water mixing and flushing and shall be designed not to retard or negatively influence flushing characteristics.

2. Launch facilities shall be located on stable shorelines where water depths are adequate to eliminate or minimize the need for offshore or foreshore channel construction dredging, maintenance dredging, spoil disposal, filling, beach feeding and other lake or channel maintenance activities.

3. All boating facilities shall utilize effective, environmentally friendly measures to prevent the release of oil, chemicals, or other hazardous materials onto or into the water.

4. Restroom facilities shall be provided at boat launching facilities if determined necessary by the Administrator and appropriate given site classification and conditions.

5. Launch facilities shall meet parking and landscaping requirements of the Lacey zoning code and the parking section (Section 17.60) of this SMP.

6. A sign(s) shall be posted at boating facilities advising users of responsible conduct and care of the lake and will include the specific rules adopted by the proper authority over the lake and will generally have language similar in intent to the following: This lake provides recreation opportunities for all persons. Please respect its use and character, be kind and respectful and observe the rules adopted for this public resource: 1. Speed limited to ...; 2. Please don't litter; 3. Limit excessive noise; 4. Boating during daylight hours only; for help and assistance please phone (insert current Lacey Police phone number).

Covered Moorage:

New covered moorage is not permitted. Existing covered moorage may be maintained and is considered grandfathered but may not be expanded.

17.50.000 Breakwaters, Jetties, Groins and Weirs - Goals and Policies

See General Goals, Policies and Standards under Modifications, Section 17.45.

17.50.020 Breakwaters, Jetties, Groins and Weirs - Development Standards

There are no identified areas under Lacey's shoreline jurisdiction where these uses and structures would be needed or appropriate. Because of no demonstrated need they are listed as prohibited in all of Lacey's environmental designations.

17.51.000 Bulkheads - Goals

See General Goals, Policies and Standards under Modifications, Section 17.45.

17.51.010 Bulkheads - Policies

1. **Policy:** Insure that permits for bulkhead projects address the goals, policies and development standards within the Shoreline Ecological Function Chapter 17.40.000.

2. **Policy:** Locate and design residential development along shorelines to make shoreline stabilization projects such as filling, bulkheading, or substantial grading of the site unnecessary.

3. **Policy:** Where new bulkheads are necessary, applications should be processed as a shoreline conditional use permit to consider natural shoreline functions, habitat, drainage treatment and water quality.

4. **Policy:** Where replacement of an existing bulkhead is necessary, emphasis should be placed on developing alternative naturalized concepts (soft stabilization).

17.51.020 Bulkheads - Development Standards

1. Normal maintenance and repairs to an existing bulkhead that is designed and located for the protection of an existing single family home or accessory structure shall be exempt from permits if such repair and maintenance value is less than 50% of the replacement value of the bulkhead.
2. Where the value of repair of an existing bulkhead designed and located for the protection of an existing single family home or accessory structure is equal to or exceeds 50% of the value of the bulkhead it shall be considered a replacement and processed as a conditional use permit pursuant to requirements of Section 17.30.047.
3. Bulkheads shall be subject to mitigation sequencing outlined in Section 17.40.015 to assure no net loss of shoreline ecological functions.

4. A bulkhead may be allowed to protect an existing single-family residence or to maintain access to an authorized shoreline use after the Administrator has determined, based on a geotechnical analysis, that other techniques such as beach restoration and enhancement or bioengineering are not feasible (see also Section 17.45.015).

5. Bulkheads are prohibited on shores where valuable geohydraulic-hydraulic or biological processes are sensitive to interference and critical to shoreline conservation, such as feeder bluffs, marshes, accretion shoreforms such as spits, hooks, bars or barrier beaches, on estuarine shores, in wetlands, on point and channel bars, and in salmon and trout spawning areas, except for the purpose of fish or wildlife habitat enhancement or restoration.

6. A bulkhead shall not be located waterward of the ordinary high-water mark except for shoreline stabilization as provided in Section 17.45.015 #3B.

7. Installation of a bulkhead to protect a platted lot where no structure presently exists is prohibited.

8. The construction of a bulkhead for the primary purpose of retaining or creating dry land is prohibited, except as allowed by the fill development standards in Section 17.54.

9. Bulkheads are prohibited for any purpose if they will cause significant erosion or beach starvation.

10. The design of a bulkhead shall incorporate proper consideration of:
    A. Data on local geophysical conditions;
    B. Data on stream flow, velocity, and flood capacity; and
    C. Effects on adjacent properties.

11. The design and construction of bulkheads shall conform to all other applicable state agency policies and regulations including the Washington Department of Fish & Wildlife criteria governing the design of bulkheads.

12. Stairs or other permitted structures may be built into a bulkhead, but shall not extend waterward of its face.

17.52.000 Buoy - Goals

See General Goals, Policies and Standards under Modifications, Section 17.45.

17.52.010 Buoy - Policies

1. **Policy:** Insure that permits for buoy projects address the goals, policies and development standards within the Shoreline Ecological Function Chapter 17.40.000.

2. **Policy:** Give preference in permitting to moorage buoys over piers, docks, and float structures, especially in tidal waters.

3. **Policy:** Locate moorage buoys so as to:
   A. Cause minimal interference with navigable waters and the public's use of the shoreline, and
   B. Avoid locations where they will adversely impact shoreline ecological functions or processes, including currents and littoral drift, water circulation and quality, and fish and wildlife habitat.

17.52.020 Buoy Development Standards

1. A private mooring buoy for an individual waterfront lot is allowed only if shared moorage was not developed as a part of that subdivision or development.

2. To prevent the proliferation of moorage facilities, only one mooring buoy or recreational float will be allowed per waterfront lot unless there is a demonstration of need. Such demonstration may include a community park or residential development where lot owners both on and away from the shoreline share a shoreline open space area. Such requests will be reviewed as a shoreline variance.

3. New mooring buoys shall not be located farther waterward than existing mooring buoys or established swimming areas on an adjacent lot, and shall not significantly interfere with use of waters for navigation.

4. Moorage buoys must be discernible under normal daylight conditions at a minimum of one hundred (100) yards and must have reflectors for nighttime visibility.

5. Moorage buoys shall comply with standards of the Washington Departments of Fish and Wildlife and the aquatic lease requirements of the Washington Department of Natural Resources.

Planning Commission work-session on the Shoreline Master Program. The Lacey Planning Commission spent over nine months reviewing, discussing and refining the generic draft provided by Regional to craft a Master Program that would meet Lacey's specific needs.

17.53.000 Dredging - Goals

See General Goals, Policies and Standards under Modifications, Section 17.45.

17.53.010 Dredging - Policies

1. **Policy:** Allow dredging only where it is necessary for assuring safe and efficient accommodation of existing navigational uses and when significant ecological impacts are minimized and mitigation is provided.

2. **Policy:** Limit maintenance dredging of established navigation channels and basins to maintaining previously dredged and/or existing authorized location, depth, and width.

3. **Policy:** Allow dredging in locations where a comprehensive management plan has been evaluated and authorized by local and state governmental entities.

4. **Policy:** Design and locate new development to avoid, or if that is not possible, to minimize the need for new and maintenance dredging.

5. **Policy:** Conduct dredging in such a manner as to minimize damage to natural systems in both the area to be dredged and the area for deposit of dredged materials.

6. **Policy:** Dispose of the dredged material at an approved disposal site when chemicals are present in concentrations high enough to cause significant harm to resident biota.

7. **Policy:** Plan and conduct dredging to minimize interference with navigation and adverse impacts to other shoreline uses, properties and values.

8. **Policy:** Allow dredging of less than five hundred (500) cubic yards as part of ecological restoration or enhancement, beach nourishment, public access or public recreation as an exemption; Provided such dredging is otherwise consistent with the policies and provisions of this master program.

9. **Policy:** Dredging should be limited to the following activities through a conditional use permit:
   A. In conjunction with a water-dependent use of water bodies or adjacent shorelands.
   B. In conjunction with a bridge, navigational structure or wastewater treatment facility for which there is a documented public need and where other feasible sites or routes do not exist.
   C. Maintenance of irrigation reservoirs, drains, canals or ditches for agricultural and stormwater purposes.
   D. Maintenance dredging of established navigation channels and basins is restricted to maintaining previously dredged and/or existing authorized location, depth and width.
   E. Expanding, relocating or reconfiguring navigation channels where necessary to assure safe and efficient accommodation of existing navigational uses.
   F. Removal of gravel for flood management purposes consistent with an adopted flood hazard reduction plan and only after a biological and geomorphological study demonstrates that extraction has a long-term benefit to flood hazard reduction, does not result in a net loss of shoreline ecological processes and functions and is part of a comprehensive flood management solution.
   G. Restoration or enhancement of shoreline ecological processes and functions benefiting water quality and/or fish and wildlife habitat.

H. Minor trenching to allow the installation of necessary underground pipes or cables if no alternative, including boring, is feasible, and:
   1) Impacts to fish and wildlife habitat are avoided to the maximum extent possible.
   2) The utility installation does not increase or decrease the natural rate, extent or opportunity of channel migration.
   3) Appropriate best management practices are employed to prevent water quality impacts or other environmental degradation.

17.53.020 Dredging Development Standards

1. All applications for permits which include dredging shall include a dredging plan which includes the following information:
   A. A description of the purpose of the proposed dredging and an analysis of compliance with the policies and regulations of this master program.
   B. A detailed description of the existing physical character, shoreline geomorphology and biological resources (including migratory, seasonal and spawning use) provided by the area proposed to be dredged, including:
      1) A site plan map outlining the perimeter of the proposed dredge area. The map must also include the existing bathymetry depths based on Mean Lower Low Water (MLLW) and have data points at a minimum of 2-foot depth increments.
      2) A habitat survey must be conducted and WDFW must be contacted to ensure the survey is conducted according to the most recent WDFW eelgrass/macroalgae survey guidelines.
      3) Information on stability of bedlands adjacent to proposed dredging and spoils disposal areas.
   C. A detailed description of the physical, chemical and biological characteristics of the dredge spoils to be removed.
      1) Physical analysis of material to be dredged: material composition and amount, grain size, organic materials present, source of material, etc.
      2) Chemical analysis of material to be dredged: volatile solids, chemical oxygen demand (COD), grease and oil content, mercury, lead and zinc content, etc.
      3) Biological analysis of material to be dredged.
   D. A description of the method by which materials will be removed, including facilities to address settlement and movement.
      1) Dredging procedure: length of time it will take to complete dredging, method of dredging and amount of materials removed.
      2) Frequency and quantity of maintenance dredging.
   E. Detailed plans for dredge spoil disposal, including specific land disposal sites and relevant information on the disposal site, including but not limited to:
      1) Spoils disposal area, including:
         a) Physical characteristics including location, topography, existing drainage patterns, surface and ground water;
         b) Size and capacity of disposal site;
         c) Means of transportation to the disposal site;
         d) Proposed dewatering and stabilization of spoils;
         e) Methods of controlling erosion and sedimentation; and
         f) Future use of the site and conformance with land use policies and regulations.
      2) Total initial spoils volume.
      3) Plan for disposal of maintenance spoils for at least a fifty (50) year period.
   F. Hydraulic modeling studies sufficient to identify existing geo-hydraulic patterns and probable effects of dredging.

2. Toxic dredge spoil deposits shall not be placed on sites from which toxic leachates could reach shorelines and/or associated wetlands.

3. Dredging and dredge disposal shall be prohibited on or in archaeological sites that are listed on the Washington State Register of Historic Places until such time that they have been released by the State Archaeologist.

4. No permit shall be issued for dredging unless it has been shown that the material to be dredged will not exceed the Environmental Protection Agency and/or Department of Ecology criteria for toxic sediments.

5. Dredging for the sole purpose of obtaining landfill material is prohibited.

6. The disposal of dredged material at a Puget Sound Dredged Disposal Analysis (PSDDA) open-water disposal site may be allowed when it is found:
   A. To comply with Department of Natural Resources leasing practices, Ecology Water Quality Certification process, and the U.S. Army Corp of Engineers permit requirements;
   B. To have been reviewed based upon the criteria and guidelines established in the Puget Sound Dredged Disposal Analysis (PSDDA) report;
   C. That the disposal within the nearshore environment for the restoration or enhancement of shoreline ecological functions and processes, such as beach nourishment, feeding or beach enhancement is not feasible; and
   D. That it protects or mitigates shoreline ecological functions and processes, such as:
      1) Offshore habitat will be protected, restored or enhanced;
      2) Adverse effects on water quality or biologic resources from contaminated materials will be mitigated;
      3) Shifting and dispersal of spoil will be minimal; and
      4) Water quality will not be adversely affected.

7. Dredging to construct canals or small basins for water ski landings or swimming holes is prohibited.

8. In-water dredge spoil disposal sites shall be prohibited in critical salt water habitats or in locations where the disposal of dredge spoil materials is likely to result in the deposition of sediments on critical salt water habitats.

9. Dredging shall be limited to in support of water dependent uses, navigation, public access, and restoration. Dredging which will damage shallow water habitat used by salmon and steelhead for migration corridors, rearing, feeding and refuge shall be prohibited, unless the proponent demonstrates all of the following conditions are met:
   A. An alternative alignment or location is not feasible.
   B. The project is designed to minimize its impacts on the environment.
   C. The facility is in the public interest.
   D. If the project will create significant unavoidable adverse impacts, the impacts are mitigated by creating in-kind replacement habitat near the project. Where in-kind replacement mitigation is not feasible, rehabilitating degraded habitat may be required as a substitute.
   E. Dredging for flood control is performed as a temporary action and needed in the course of implementing a long-term solution for a sediment transport problem identified in a comprehensive flood hazard management plan.

10. Proposals for dredging shall include all feasible mitigating measures to protect marine habitats and to minimize adverse impacts such as: turbidity, release of nutrients, heavy metals, sulfides, organic material or toxic substances, dissolved oxygen depletion, disruption of food chains, loss of benthic productivity and disturbance of fish runs and important localized biological communities.

An early morning view of Chambers Lake from the north shore looking south.

17.54.000 Grading and Fill - Goals

See General Goals, Policies and Standards under Modifications, Section 17.45.

17.54.010 Grading and Fill - Policies

1. **Policy:** Design and locate shoreline developments to avoid or, if that is not possible, to minimize the need for fill.

2. **Policy:** Use mitigation sequencing to limit the size and location of fills. Limit the size of fills and, when allowed, minimize its potential adverse impacts.

3. **Policy:** Design and locate shoreline fills to avoid loss of ecological values or natural resources, and to avoid creating a risk of significant injury to life or adjacent property.

4. **Policy:** Design the perimeter of a fill to avoid or eliminate erosion and sedimentation impacts, both during initial landfill activities and over time. Natural appearing and self sustaining control methods are preferred over structural methods.

5. **Policy:** Fills should be located, designed, and constructed to protect shoreline ecological functions and ecosystem-wide processes, including channel migration.

6. **Policy:** Fills waterward of the ordinary high-water mark should be allowed only when necessary to support:

   A. A water-dependent use.

   B. A public access.

   C. Cleanup and disposal of contaminated sediments as part of an interagency environmental clean-up plan.

   D. Disposal of dredged material considered suitable under and conducted in accordance with the dredged material management program of the Department of Natural Resources.

   E. Expansion or alteration of transportation facilities of statewide significance currently located on the shoreline and then only upon a demonstration that alternatives to fill are not feasible,

   F. Mitigation action.

   G. Environmental restoration.

   H. Beach nourishment.

   I. Enhancement project.

7. **Policy:** Prohibit the placement of fill in floodways or wetlands, unless part of an approved ecological restoration activity.

17.54.020 Grading and Fill - Development Standards

1. The use of solid wastes and organic debris in a fill, such as wood and other vegetative materials, is prohibited.

2. Fills shall consist of clean materials including such earth materials as clay, sand, and gravel, and also may include oyster or clam shells. In addition, concrete may be included in fill material if it is not liable to pollute ground water and is approved by the Administrator.

3. Fills, except for beach feeding, shall be designed, constructed, and maintained to prevent, minimize and control all material movement, erosion, and sedimentation from the affected area.

4. Fill areas shall be covered with sufficient earth material to support indigenous vegetative ground cover and replanted with vegetation to blend with the surrounding environment. To facilitate this purpose, fills shall comply with the requirements of LMC Chapter 17.41 regarding provisions for development and implementation of a Vegetation Management Plan.

5. Fills shall be allowed only when it can be demonstrated that the proposed action will not:
   A. Result in significant damage to water quality, fish, shellfish and/or wildlife habitat; and
   B. Adversely alter natural drainage and circulation patterns, currents, river and tidal flows or significantly reduce flood water capacities.

6. Artificial beach maintenance (beach feeding) shall be allowed as a type of shoreline stabilization.

7. Fill which will interfere with public rights of navigation and rights corollary thereto shall not be permitted unless there is an overriding public interest.

8. Fill for the purpose of providing land to ensure the required distance for a septic tank drainfield is prohibited.

9. Fill for the sole purpose of creating new dry land is prohibited.

10. Fill within a floodway and the 100-year floodplain are prohibited.

11. Fill located waterward of the ordinary high water mark for the purpose of ecological restoration shall be allowed subject to a shoreline substantial development permit, rather than a shoreline conditional use permit.

12. Use of beach material for backfill with any shoreline stabilization project is prohibited. Fill is prohibited where structural shoreline stabilization is necessary to maintain the fill.

A public informational sign posted by the Department of Fish and Wildlife for public fishing on Hicks Lake.

View of Long Lake looking south from Holmes Island Road.

17.55.000 Floats (Recreational) - Goals

See General Goals, Policies and Standards under Modifications, Section 17.45.

17.55.010 Floats (Recreational) - Policies

1. **Policy:** Insure that permits for recreational float projects address the goals, policies and development standards within the Shoreline Ecological Function Chapter 17.40.000.

2. **Policy:** Individual shoreline residents should consider joint-use or community recreational floats.

3. **Policy:** Give preference in permitting to community recreational floats in new subdivisions or planned residential developments over those for individual properties.

4. **Policy:** Apply the pier and dock policies of Section 17.61 to recreational floats.

17.55.020 Floats (Recreational) - Development Standards

1. To prevent the proliferation of moorage facilities, only one mooring buoy or recreational float will be allowed per waterfront lot unless there is a demonstration of need. Such demonstration may include a community park or residential development where lot owners both on and away from the shoreline share a shoreline open space area. The request will be reviewed as a shoreline variance.

2. A recreational float shall not be located farther waterward than existing floats or established swimming areas.

3. Single property owner recreational floats shall not exceed sixty-four (64) square feet. Multiple property owner recreational floats shall not exceed ninety-six (96) square feet.

4. The standards for recreational floats are as follows:
   A. Recreational floats anchored offshore and used for residential recreational uses shall comply with the following standards:
      1) Applicants shall contact the Washington Department of Natural Resources to inquire on the need for a aquatic lease for locating recreational floats within state aquatic areas; and
      2) When feasible, floats shall be removed seasonally and placed in an appropriate un-vegetated upland location.
   B. Recreational floats shall be located as close to shore as possible without interfering with natural beach processes or negatively affecting aquatic vegetation.
   C. Recreational floats shall not rest on the tidal substrate at any time. Floats shall be located (anchored) at sufficient depth to maintain a minimum of one (1) foot of draft between the float and the beach substrate at low tide.
   D. Recreational floats shall not exceed thirty (30) feet in length.
   E. Recreational floats shall comply with the following standards:
      1) Floats with a width of six (6) feet or less shall incorporate a minimum of thirty percent (30%) functional grating into float surface area.

2) Floats with a width greater than six (6) feet that do not exceed eight (8) feet in width shall incorporate a minimum of fifty percent (50%) functional grating into the float surface area.
3) Recreational floats shall be anchored utilizing either helical screw or "duckbill" anchor; anchor lines shall not rest on or disturb the substrate.

5. Recreation floats must be discernible under normal daylight conditions at a minimum of one hundred (100) yards and must have reflectors for nighttime visibility.

An old Big Leaf Maple's canopy preserved at Wanschers Community Park. Hicks Lake can be seen in the background.

17.56.000 Forestry/Mining - Goals and Policies

Policy: Resource areas for forestry and mining activities are designated in appropriate areas outside the UGA and outside critical areas and shoreline areas. Forestry and mining activities are incompatible with goals for Lacey's shoreline areas. Prohibit forestry and mining activities within any shoreline environment designation.

17.56.010 Forestry/Mining – Development Standards

Standard: Forestry and mining uses and activities are prohibited in any shoreline environment designation.

In a cove at the north end of Long Lake, an empty boat floats amidst a speckling of water fowl going about their daily foraging.

17.57.000 Historical and Archeological - Goals and Policies

1. **Goal: Preserve cultural artifacts as they are discovered and identified during the development process.**

   A. **Policy:** Coordinate development review within the shoreline with the Washington Department of Archaeology and Historic Preservation, Certified Local Governments, and affected Indian tribes regarding historic or archaeological interest.

   B. **Policy:** Report the discovery of a historic or prehistoric site during excavation or development to the Washington Department of Archeology and Historic Preservation and to the affected Indian tribes.

2. **Goal: Preserve examples of structures from Lacey's history for the education and enjoyment of future citizens.**

   A. **Policy:** Encourage the enrollment of historic structures or sites on the federal, state or local historic registers.

17.57.020 Historical and Archeological - Development Standards

1. The protection, rehabilitation, restoration, and reconstruction of historic structures shall be governed by The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines for Applying the Standards (1992), as amended.

2. The discovery of a historic or pre-historic site during excavation or development shall be reported to the Administrator, the Washington State Department of Archaeology and Historic Preservation, and the affected Indian tribes.

3. The construction of historical replica buildings may be allowed within the boundaries of a national historic district with a shoreline conditional use permit.

4. The City shall consult with the Washington State Department of Archaeology and Historic Preservation and the affected Indian tribes when known sites are proposed for development. Their comments and recommendations shall be given substantial weight, which may result in denying a development permit where the historic or archaeological value of the site outweighs the development value.

5. Where the protection of a historic or archaeological site is a concern to the administrator of the City’s Certificate Local Government Program, a shoreline conditional use permit shall be required for any use or development.

6. Developers and property owners shall immediately stop work and notify the local government, the Office of Archaeology and Historic Preservation and affected Indian tribes if archaeological resources are uncovered during excavation.

7. Permits issued in areas documented to contain archaeological resources require a site inspection or evaluation by a professional archaeologist in coordination with affected Indian tribes.

17.58.000 Instream Structures, Dikes and Levees - Goals and Policies

1. **Goal: See General Goals, Policies and Standards under Modifications, Section 17.45.**

2. **Goal: Protect and preserve natural systems and functional values while providing some limited flexibility to intervene with improvements to natural systems where necessary to protect the public's health and safety.**

   A. **Policy:** When dikes, levees and instream structures are allowed, compliance with the mitigation sequence should be required to assure there will be a loss of fish and wildlife resources, natural systems including wetlands, or other critical areas and ecological functions. If compensatory mitigation is necessary, dikes, levees and instream structures should be subject to the following:
      1) The mitigation required should be commensurate to the value and type of resource or system lost. No net loss in ecological function, value or acreage shall occur from such development.
      2) Where mitigation for loss of ecological functions is required, a mitigation plan should be prepared by the applicant/proponent that details the objectives of the mitigation activities.
      3) Mitigation activities should be monitored to determine the effectiveness of the mitigation plan. Monitoring should be accomplished by a third party subject to the approval of the City/County and the Department of Ecology. Results of monitoring shall be publicly available.
      4) If mitigation is found to be ineffective, corrective action that satisfies the mitigation objectives should be required of the proponent.
      5) If the mitigation is found to be inadequate or if adequate mitigation is determined to be impossible, the application should be denied.

17.58.020 Instream Structures, Dikes and Levees - Development Standards

1. New dikes and levees may be constructed upon obtaining a conditional use permit as part of a shoreline environmental restoration project, a state-approved comprehensive flood control management plan, an approved watershed plan, or an approved stormwater drainage basin plan.

2. Dikes and levees shall not be constructed with material dredged from the adjacent wetland or stream area unless part of a comprehensive flood and habitat plan.

3. Dikes and levees shall not be placed in the floodway except for current deflectors necessary for protection of bridges and roads.

4. Dikes and levees shall be subject to following:
   A. Such works shall be located and designed to promote no net loss of shoreline ecological processes and functions.
   B. Such works shall be limited in size to the minimum height required to protect adjacent lands from the protected flood stage.
   C. Such works shall be set back to the greatest extent feasible landward of the floodway and ordinary high water mark.

D. Such works are to be located near the tangent to outside meander bends so that the stream can maintain normal meander progression and utilize most of its natural flood water storage capacity.
E. Such works shall not interfere with channel migration except to protect existing structures.
F. Such works shall be designed and constructed to meet Natural Resources Conservation Service technical manual standards.
G. Such works shall be constructed in coordination with the Washington Department of Fish and Wildlife.

5. Instream structures shall be permitted only when it is demonstrated by engineering and scientific evaluations that:
   A. They are necessary to protect health/safety and/or existing development.
   B. Non-structural flood hazard reduction measures are infeasible.
   C. Measures are consistent with an adopted comprehensive flood hazard management plan that evaluates cumulative impacts to the watershed system.

6. Instream structures shall preserve valuable recreation resources and aesthetic values such as point and channel bars, side channels, islands and braided channels.

7. Instream structures shall be designed to avoid modifying flows and water quality in ways that may adversely affect critical fish species.

8. Instream structures shall be constructed and maintained in a manner that does not degrade the quality of affected waters.

There are only a few areas where Long Lake can be seen from public right of way. This picture captures one of them. The horses in the foreground are actually only modeled cut outs for the entertainment of viewers; a northwest version of pink flamingos.

Public property posted for no trespassing at the south end of Southwick Lake. Can we utilize our public land for better use?

17.60.000 Parking - Goals and Policies

1. **Goal: Achieve a proper balance in providing parking for public shoreline access points while deemphasizing use of the automobile and reducing associated impacts on shoreline areas and adjacent residential neighborhoods.**

   A. Policy: Management of public access sites should have an emphasis on reduction of drive alone vehicles and associated impacts. Design should mitigate impacts from automobile use and infrastructure on sensitive areas and adjacent neighborhoods.

   B. Policy: Emphasize reduction in automobile parking pursuant to Chapter 16.72, Table 16T-13, of the Lacey zoning code.

   C. Policy: Parking should be the least amount necessary to serve the intended use.

   D. Policy: Encourage availability of alternative forms of transportation for uses located within shoreline jurisdiction. Encourage design emphasis in walking and biking consistent with the Comprehensive Land Use Plan.

   E. Policy: Where public access points have limited parking facilities, measures should be taken to discourage use of adjacent residential streets for parking.

   F. Policy: Allow parking within the shoreline jurisdiction only for an authorized use.

   G. Policy: Design and construct parking facilities to minimize off-site light and glare.

   H. Policy: Locate parking facilities as far landward of the ordinary high water mark as possible. Where possible, parking and road infrastructure should be located outside shoreline jurisdiction in an upland area and buffered from adjacent residential neighborhoods.

   I. Policy: Link parking facilities with the shoreline uses they serve with walkways.

17.60.020 Parking Development Standards

1. Parking facilities within the shoreline jurisdiction shall only be allowed as necessary to support an authorized use. Any other type of parking is prohibited.

2. Parking facilities shall be located landward of the principal building or use and outside of the shoreline setback and vegetation management area, except when the parking facility is within or beneath a structure and adequately screened, or in cases when an alternate orientation would have less adverse impact on the shoreline, as determined by the Administrator.

3. Over water parking facilities are prohibited.

4. Parking facilities shall be designed and landscaped to minimize adverse impacts upon adjacent shorelines and abutting properties.

5. Parking facilities shall provide safe and convenient pedestrian circulation within the parking area and to the shoreline or use.

6. Refer to Section 17.70.010 for water quality development standards which includes on-site stormwater control measures. Also refer to Sections 17.40 (Shoreline Ecological Function) and 17.41 (Vegetation Management).

7. Parking facilities shall be designed and constructed in accordance with Chapter 16.72 (zoning chapter) of the Lacey Municipal Code.

8. Parking facilities are subject to mitigation sequencing.

No trespassing. This is unfortunate because this property at the north end of Long Lake has been undeveloped for over a decade and could provide an area for people to access the lake. Development plans approved a number of years ago that were never implemented established the shoreline area shown in the background as open space. At one time this area had a dock and served as a beach area for a recreational vehicle park.

17.61.000 Piers and Docks - Goals

See General Goals and Policies for Modifications

17.61.010 Piers and Docks - Policies

1. **Policy:** Recognize that there will be few opportunities, if any, for marine piers/docks in Lacey, unless developed, owned and managed by the City of Lacey.

2. **Policy:** Ensure that permits for pier and dock projects address the goals, policies and development standards within the Shoreline Ecological Function Chapter 17.40.000.

3. **Policy:** Give preference in permitting to moorage buoys and to community piers, docks and floats in new subdivisions or planned residential developments over those for individual properties.

4: **Policy:** Require applications for piers and docks on individual properties to provide the following:
   A. Document why a moorage buoy or recreational float would not provide suitable access to the water; and
   B. Describe the mitigation to be provided so that the project will not cause a net loss in shoreline ecological functions.
   C. Consideration of shared moorage.

5. **Policy:** Design and locate piers and docks to minimize obstructions to scenic views and conflicts with recreational boaters and fishermen.

6. **Policy:** Locate piers and docks so as to:
   A. Cause minimum interference with navigable waters and the public's use of the shoreline; and
   B. Avoid locations where they will adversely impact shoreline ecological functions or processes, including currents and littoral drift, water circulation and quality, and fish and wildlife habitat.

7. **Policy:** Construct piers and docks of materials that will not adversely affect water quality or aquatic plants and animals over the long-term.

8. **Policy:** Minimize the length and size of any dock, pier or float.

9. **Policy:** Use materials that will allow light to pass through the deck for walkways or gangplanks in nearshore areas.

10. **Policy:** Encourage the development of public fishing piers, underwater fishing reefs, and access to public waters and tidelands as part of an overall recreation plan or development.

17.61.020 Piers and Docks - Development Standards

1. New piers and docks shall be allowed only for water-dependent uses or public access. As used here, a dock associated with a single-family residence is a water-dependent use provided that it is

designed and intended as a facility for access to watercraft and otherwise complies with the provisions of this section.

2. Pier and dock construction shall be restricted to the minimum size necessary to meet the needs of the proposed water-dependent use.

3. New pier or dock construction, excluding docks accessory to single-family residences, shall be permitted only when the applicant has demonstrated that a specific need exists to support the intended water-dependent uses.

4. If the City has performed a needs analysis associated with its Comprehensive Plan for Outdoor Recreation, or Public Access Plan, and it determines a pier or dock is necessary and consistent with this Program, it shall serve as the necessary justification for pier or dock design, size, and construction. The intent of this provision is to allow the City the flexibility necessary to provide for existing and future public recreational opportunities associated with the use of piers and docks.

5. New residential development of two or more dwellings must provide joint use or community dock facilities, when feasible, rather than allow individual docks for each residence.

6. Piers and docks, including those accessory to single-family residences, shall be designed and constructed to avoid or, if that is not possible, to minimize and mitigate the impacts to ecological functions, critical areas resources such as eelgrass beds and fish habitats and processes such as currents and littoral drift. See Section 17.35.

7. Piers and docks shall adhere to the Green Shoreline Guidelines concepts in Appendix 2 and construct such structures of materials that have been approved by applicable state agencies.

8. New piers and docks in the marine environment shall only be permitted when identified as a public need in Lacey's Comprehensive Plan for Outdoor Recreation, and when owned and maintained by the City of Lacey. No net loss of function and value of shoreline resources shall be demonstrated.

9. An existing pier/dock in the natural environment designation may be maintained provided it has an identified value to the general public, as identified in Lacey's Comprehensive Plan for Outdoor Recreation, and it is owned and maintained by the City for public benefit.

10. Residential moorage shall include no more than one moorage type (i.e. buoy or pier/dock) per waterfront lot.

11. Prior to approval of a residential pier or dock, the applicant shall document why the use of a mooring buoy or shared moorage are not feasible.

12. Shared moorage proposed for lease to upland property owners shall be reviewed as a marina and shall be subject to requirements for marinas as identified in this SMP. This provision does not apply when the upland property owners share a shoreline open space area with shoreline property owners and shared moorage facilities are provided as outlined in Section 17.55.020 (1).

13. Docks and piers are prohibited on lakes where the distance to the opposite shore is one hundred fifty (150) feet or less. This is to insure the maintenance of navigation.

14. Prior to final project approval of a residential development, a usable area shall be set aside for a community pier or dock unless there is no suitable area.

15. All pier and dock development shall be painted, marked with reflectors or otherwise identified so as to prevent unnecessarily hazardous conditions for water surface users during day or night.

16. The standards for new or repaired piers or docks in fresh water are as follows:
    A. Pier and dock surface coverage shall not exceed: four hundred and eighty (480) square feet for single user structures, seven hundred (700) square feet for two (2) party joint use, and one thousand (1,000) square feet for residential pier/docks serving three (3) or more residences.
    B. Piers shall not exceed four (4) feet in width and must be fully grated with at least sixty percent (60%) open area.
    C. Ramps shall not exceed three (3) feet in width and must be one hundred percent (100 %) grated.
    D. Docks shall not rest on the fresh water substrate at any time. Stoppers on the pilings anchoring the dock or stub pilings shall be installed so that the bottom of the docks floatation is a minimum of one (1) foot above the level of the beach substrate.
    E. Except for docks with floats the bottom of all structures shall be a minimum of one and one half (1.5) feet above the ordinary high water elevation.
    F. The first in-water (nearest shore) set of pilings shall be steel, a maximum of four (4) inches in diameter and at least eighteen (18) feet from the ordinary high water mark. Additional piling shall be spaced a minimum of eighteen (18) feet apart and shall not exceed twelve (12) inches in diameter.
    G. Docks with floats or ells shall be limited to one of the following size options:
        1) Up to six (6) feet wide by twenty (20) feet long with a two (2) foot strip of grating down the center;
        2) Up to six (6) feet wide by twenty six (26) feet long with grating, providing that there is a sixty percent (60%) open area over the entire ell or float; or
        3) A single two (2) feet wide by twenty (20) feet long, with one hundred percent (100 %) grated finger ell.

17. Docks and piers shall be setback from the side property line ten (10) feet on fresh water.

18. The required side yard setbacks may be waived with a shared use moorage facility for two (2) or more property owners. The applicant or proponents shall file with the Thurston County Auditor a legally enforceable joint use agreement or other legal instrument which addresses the following as a condition of permit approval:
    A. Apportionment of construction and maintenance expenses;
    B. Maintenance responsibilities for the facility and associated upland area in perpetuity by identified responsible parties;
    C. Easements and liability agreements;
    D. Use restrictions; and
    E. The easement must acknowledge that each property owner is giving up the right to construct a separate single-family moorage.

A view of Southwick Lake looking north from Ruddell Road. The south end of Southwick Lake has an extensive wetland associated with it. Wetland regulations have prevented development within the shorelines area and have preserved a 200 foot buffer adjacent to this sensitive area. Over the last two decades, two projects have been approved along this side of the Lake and both have dedicated the shoreline/wetland area and associated buffers to the City for long term protection.

17.62.000 Recreation - Goals and Policies

1. **Goal: Integrate planning for public recreation needs and access to shoreline areas with the City's Comprehensive Plan for Outdoor Recreation and Public Access Plan and the Comprehensive Land Use Plan.**

   A. **Policy:** Acknowledge a priority for recreational development along shorelines.

   B. **Policy:** Link shoreline parks and public access points through open spaces, public land, designated sensitive and resource areas and other areas that are pedestrian and neighborhood focus points. Such linkage can include hiking paths, public parks, designated tree tracts, open space in plats, sensitive areas and buffers, bicycle paths, and scenic drives/walks located close to the water's edge.

   C. **Policy:** Encourage the development of public fishing piers, underwater fishing reefs, and access to public waters and tidelands as part of a city recreation plan, or private development.

   D. **Policy:** Acquisition priority should consider need and special opportunities as well as access by public and other modes of transit.

2. **Goal: Provide public access and recreation opportunities within shoreline areas appropriate for the use as identified within the City Comprehensive Plan for Outdoor Recreation, Shorelines Public Access Plan, and Shoreline Environment Designation.**

   A. **Policy:** Consider all recreational development projects on the basis of their compatibility with the environment.

   B. **Policy:** Plan public access to recreational locations to prevent concentration of use pressures and avoid use conflicts.

   C. **Policy:** Design recreational developments to preserve, enhance, or create scenic views and vistas. Ensure that the design of recreational projects complement their environment.

   D. **Policy:** Locate parking areas for recreation upland, away from the immediate edge of the water and recreational beaches. Link the parking to the shoreline by walkways. See Section 17.60.020.

   E. **Policy:** Allow facilities for intensive recreational activities only where sewage disposal and pest control can be accomplished to meet public health standards without having an adverse impact upon the environment.

   F. **Policy:** Allow passive recreational uses in floodplains as long as ecological processes and functions are maintained and the use does not require structures or public infrastructure.

   G. **Policy:** Assure that recreational development is given priority and is primarily related to access to, enjoyment of and use of the water and shorelines of the state.

   H. **Policy:** Design of public access points should consider the context of the neighborhood in which it is located and the expected parking demand. Large public recreation sites for active use should have upland parking to accommodate the recreation use. However, smaller access or observation points associated with a walking trail may not require any parking.

I. **Policy:** Reduced or limited parking may be a strategy to limit automobile use and maintain existing neighborhood character. Such areas should be closely monitored to assess impact of user parking on adjacent residential streets.

17.62.030 Recreation Development Standards

1. Public recreational development and public access associated with recreation facilities shall be located, designed and operated in a manner consistent with the purpose of the shoreline environment designation and that avoids then minimizes the impact on shoreline ecological functions.

2. Non-water oriented facilities or structures and non-water oriented recreation uses are to be setback one hundred (100) feet from the ordinary high water mark as described in Table 4.

3. Recreational events and temporary uses in the public interest may be approved by the Administrator when those uses will not damage the shoreline area.

4. Public or private recreation areas which cater to the use of all-terrain or off-road vehicles as the primary recreational activity are prohibited within shoreline jurisdiction.

5. Recreational developments shall be designed with consideration of public access and public view corridors.

6. Recreational developments shall provide facilities for nonmotorized access, such as pedestrian, bicycle and/or equestrian path links to the shoreline.

7. All shoreline public access associated with recreation or recreational facilities shall be marked with signs approved by the Administrator.

8. For pedestrian paths or trails to and along the water's edge, refer to Sections 17.46.000 and 17.46.020.

9. Refer to Section 17.70.010 for the water quality development standards which includes on-site stormwater control measures. Also refer to Sections 17.40 (Shoreline Ecological Function) and 17.41 (Vegetation Management).

17.63.000 Residential Development Goals and Policies

1. **Goal: Achieve development of residential areas in a way that does not interfere with natural shoreline processes. Ensure new residential development, infill and redevelopment within shoreline jurisdiction is sensitive to and complements shoreline ecological functions**

   A. **Policy:** Residential development should be planned, designed and constructed to avoid then minimize adverse environmental and visual impacts, to be complementary to the shoreline environment and its natural processes and to promote a no net loss of ecological functions.

   B. **Policy:** Residential development should be located so that future shoreline stabilization or armoring is not necessary to protect it.

   C. **Policy:** Residential development should be designed to minimize impacts to views from surrounding homes and viewpoints.

   D. **Policy:** The removal of non-invasive riparian vegetation for residential development should be discouraged and should follow the mitigation sequence.

   E. **Policy:** Open space required through the subdivision code in new residential subdivisions should also promote shoreline goals for resource protection if the subdivision is within shoreline jurisdiction.

   F. **Policy:** Shoreline access segments on residential lots should be designed and located in accordance with the mitigation sequence to avoid and minimize impacts to native vegetation and shoreline ecological functions.

   G. **Policy:** Where non-native or invasive species are present along residential waterfront property, restoration of degraded areas is encouraged.

   H. **Policy:** If alternatives to native species are used in accordance with Section 17.41, the alternative landscaping should provide the same functions as native vegetation.

   I. **Policy:** Lacey should provide information to citizens about the need for and benefits of shoreline protection and restoration and the role of vegetation management in water quality and a healthy shoreline.

2. **Goal: Provide the opportunity for residential development in appropriate shoreline areas and in a variety of forms that are best suited to accomplish objectives of this SMP. Land use form should promote no net loss of function or value with design complementary to and integrated with the natural processes and functions of the shoreline.**

   A. **Policy:** Form, density, design, layout and functionality of residential development should be compatible and sensitive to the shoreline designation, natural processes and to environmental limitations.

   B. **Policy:** Clustering of residential development should be encouraged to minimize the potential for adverse impacts to shoreline ecological functions and to encourage larger, consolidated blocks of open spaces.

C. **Policy:** Clustering should be used with incentive programs that involve the transfer of density to an upland portion of the site outside of shoreline jurisdiction.

D. **Policy:** Utilize provisions in the City's subdivision code to prevent the segmentation of critical in new subdivisions, by placing critical areas in separate tracts that are deeded to the City.

E. **Policy:** New over water residential development should not be authorized.

3. **Goal: Integrate residential development in shoreline jurisdiction with growth management planning, and provide opportunities that promote GMA strategies, quality residential neighborhoods, shoreline protection and restoration of shoreline resources.**

A. **Policy:** Residential development should only be allowed when there are adequate provisions for utilities, circulation and access as provided for in the Comprehensive Land Use Plan.

B. **Policy**: The findings of the shoreline inventory and characterization should be integrated into GMA planning and buildable lands work to ensure protection of shoreline resources is given higher priority than expectations for infill when contemplating development.

4. **Goal: Provide for Lacey's shoreline access needs through thoughtful planning, design, layout and location of new residential development and residential land divisions.**

A. **Policy:** Residential development should provide for the access needs of residents of the development as well as opportunities for public access identified in Lacey's Public Access Plan. Access opportunities should depend on the nexus identified for each project.

B. **Policy:** Open space in residential subdivisions should be designed to accommodate the intended use(s) and intended uses should be appropriate to the capacity of the shoreline resource to support it. Where appropriate, reserve shoreline open space tracts in a relatively undeveloped state, balancing competing interests for open space consistent with Lacey's Urban Forest Management Plan, Public Access Plan, land division open space policies and the goals of this Shoreline Master Program.

C. **Policy:** Provide public access as a part of a residential development in locations where there has been significant historic usage by the public. Historic use is regular use by the public over a period of years rather than incidental or occasional use by one or only few members of the public. This policy is not intended to apply to construction of an individual dwelling on a single lot.

17.63.025 Residential – Development Standards

1. **Permitted Uses and Activities:** Residential uses/activities and development shall be permitted according to environment designations as outlined in Section 17.24.010, Table 3. Residential activity, use, or development shall not result in a net loss of shoreline ecological functions and values and shall follow the mitigation sequence.

2. **Prohibited Uses:** Prohibited residential uses are identified in Table 3. New over water residences are prohibited.

3. **Density:** Residential densities on authorized on lands within shoreline jurisdiction are identified in Section 17.24.015, Table 4.

4. **Housing Form:** Residential housing forms permitted within each shoreline environment designation are outlined in Table 3. A range of housing form options are provided to encourage projects that are compatible with shoreline resources, meet GMA goals for density and provide a quality residential environment.

5. **Clustering:** Compact housing forms that consolidate large areas of open space by reducing individual lot size and clustering units and/or lots shall be encouraged. This provides the opportunity for a design that can achieve a higher level of compatibility with the shoreline environment. This may include condominium, townhome, courtyard cottage or other design forms that accomplish the same objectives.

6. **Design:** Design of residential structures shall incorporate and follow to the extent possible existing, natural topographic contours. Residential development shall be sufficiently setback from the OHWM or otherwise located so that future shoreline stabilization or armoring is not necessary to protect it.

7. **Bulk and Dimensional Standards:** All development within shoreline jurisdiction shall meet setback and vegetation management area requirements as outlined in Section 17.24.015, Table 4, Section 17.41, and all other applicable sections of this SMP. Any modifications to the dimension, content or vegetation within such areas shall also comply with all policies and standards in this SMP.

8. **Setbacks for Porches/Decks/Steps:** Uncovered porches, decks or steps attached to principle residential structures may project into the required setback from the OHWM provided all of the following requirements are met:

   A. Uncovered porches and decks are limited to an 8 foot deep encroachment and the structure may be no higher than thirty (30) inches above average grade;

   B. Material used for porches shall be pervious and approved as a low impact development material by the City;

   C. Uncovered porches and decks that encroach on the OHWM setback shall follow the mitigation sequence, and provide compensatory mitigation for any unavoidable impacts to the vegetation management area by providing vegetation proportionate to the surface area covered by the encroachment elsewhere in the vegetation management area; and

   D. The structure does not compromise other goals, policies or standards of this Shoreline Master Program.

9. **Front Yard and Side Yard Setback:** The following is the requirement for front and side yard setbacks:

   Front yard setback: 20 feet from the fronting right of way, provided this may be reduced to 10 feet if the garage is recessed behind the front façade of the house. This applies to all urban housing forms.

Side yard setback: For detached housing forms, 5 feet or a minimum 10 foot separation. Attached or "zero lot line" developments shall observe side yard setbacks in accordance with the applicable design or development chapter of the Lacey Municipal Code.

To accommodate better preservation or protection of shoreline ecological function, an applicant may request a modified front or side yard setback. The unique setback shall be based on a particular development concept and design that is justified for the targeted urban form and shall demonstrate an ability to protect resources and fulfill other purposes of setbacks and structure separation equivalent to standard setbacks. The burden of demonstration will be on the applicant. Approval of any modification is at the discretion of the City.

10. **Size and Shape of Single Family Detached Lots:**

    A. Minimum lot area, seven thousand five hundred (7,500) square feet or as permitted under another development concept such as clustering, as provided in this section of the SMP or in LMC Section 14.23.072, particularly LMC Section 14.23.072 (L).

    B. Minimum lot width, fifty (50) feet.

11. **Size and Shape of Lots Intended for Attached Single Family Development:** Lots intended for attached single family residences shall be reviewed and approved through a subdivision, townhouse, or PRD process where the concept is identified and the project is reviewed and approved subject to design requirements of LMC Section 14.23.080.

12. **Maximum Building Area Coverage:** Fifty (50) percent.

13. **Maximum Development Coverage:** Residential lot development coverage standards for lots within shoreline jurisdiction are identified in Section 17.24.015, Table 4.

14. **Maximum Height:** For principle structures, as described in Table 4. The maximum height for a residential accessory building is sixteen (16) feet. An additional two (2) feet in height shall be permitted for any residential structure with a green roof occupying at least fifty percent of the area of the roof, as long as such additional height does not block the view of a substantial number of existing residences.

15. **Accessory buildings:** All accessory buildings shall comply with the setback, critical area buffer and vegetation management area provisions of this SMP; however, if an accessory building is less than two hundred square feet in total size, the following side and front yard setbacks are permitted provided the OHWM setback shall not be reduced:

    A. Front yard, fifteen (15) feet.
    B. Side yard, five (5) feet.

    Accessory buildings shall be constructed in such a manner as to be complementary to the basic architectural character of the main building on the lot, or appropriate to the accessory use. Such uses shall generally meet the same design requirements of the primary structures and shall result in no net loss of shoreline ecological functions.

16. **Design Review:**

A. Unique Shoreline Qualities:

In shoreline areas, emphasis will be placed upon protection and long term management of shoreline resources and public use based on unique opportunities specific sites may provide.

B. Emphasis for Shoreline Areas:

1) Specific shoreline emphasis will be for integration of the development with a site's specific unique shoreline features and preservation and respect for the site's natural processes and functions.

2) Emphasis will include design for a sustainable development that will have minimal impact upon the environment and provide an opportunity for residents to enjoy the shoreline resources.

C. Residential Development within shoreline jurisdiction shall comply with all applicable standards of LMC 14.23, Design Review.

17. Views:

A. Development in shorelines jurisdiction shall allow views for new residents while maintaining views enjoyed by surrounding residents and the traveling public.

B. To the extent reasonable objectives of the builder can be achieved, residential development shall be arranged and designed to:
1) Protect views, vistas and aesthetic values of the shoreline;
2) Minimize impacts to the character of the shoreline environment;
3) Minimize impacts to the views neighboring property owners enjoy.

18. Public Access: Public access shall be considered, evaluated, required, located, planned, designed, constructed and maintained in accordance with the provisions in Section 17.46 and Appendix 1 of this SMP.

17.63.034 Shoreline Access Incentive Dedication Agreement - Density Credit

1. Density Bonus:

A. With a Shoreline Access Incentive Dedication project implemented under the development agreement process of RCW 36.70B, and provisions of LMC 16.58 and Section 17.46 of this SMP, density credit available for transfer to receiving sites outside of shoreline jurisdiction shall be granted for up to 20 units per gross acre in the Shoreline Residential, Urban Conservancy and Natural designations.

B. To qualify for the density credit, the shoreline project shall include dedication of the 200 foot shoreline jurisdiction area to the public and transfer of the development and density credit to lands outside of the 200 foot shoreline designation and to a receiving area approved by the City. Receiving sites may include lands within the same ownership, a contiguous ownership, or any other site reviewed and approved by the Administrator.

2. Receiving Sites Location and Criteria for Development:

Receiving site(s) shall meet criteria established in LMC 16.58.

3. Wetlands Excluded from Calculations:

Wetlands and lands below the ordinary high water mark shall not be included in calculations of lot area or allowed densities.

17.63.038 Environmental Performance Standards

1. Nuisance Characteristics:

Authorized residential uses shall create no noise, emissions, odors or other nuisances which are demonstrably disruptive or disturbing to other uses in the area, or which are of a quality or quantity not normally associated with such a residential use.

2. Dedication of Critical Areas:

Design of land divisions and location of land uses shall protect streams, wetlands, wetland buffers, floodways, channel migration zones, and geologic hazards by locating these features within a separate tract or parcels when land division is proposed. Such areas shall be dedicated to the City of Lacey or held in common by the subdivision landowners as determined by the City pursuant to LMC 14.28.030.

17.63.039 Off-Street Parking

Off-street parking standards shall be provided in accordance Chapter 16.72 of the Lacey Municipal Code.

17.63.040 Landscaping

Landscaping Required Generally:

Preservation, maintenance and revegetation or landscaping of residential lots or subdivisions shall be required in accordance with all applicable standards of Section 17.41of this SMP and LMC 14.32, LMC 16.12, and LMC 16.80.

17.63.045 Stormwater Runoff

1. General Requirement:

All requirements of the Lacey Drainage Manual shall be satisfied.

2. Special Drainage Considerations in a Shoreline Designation:

A. An emphasis shall be placed on low impact development techniques.

B. Infrastructure associated with community stormwater systems shall not be located within shoreline jurisdiction, where feasible. In no case shall community drainage improvements, other than natural landscaping, be placed within a designated setback area and its associated vegetation management area. This does not apply to rain gardens for a single family residence on an individual lot.

C. All applicable requirements of Section 17.70 of this SMP shall be satisfied.

View from the north end of Long Lake looking southeast.

Eagle Creek Head Waters

This picture shows the head waters of one branch of Eagle Creek that flows west through the Hawks Prairie planning area. Eagle Creek is a tributary to Woodland Creek, which is a Salmon bearing stream under shorelines jurisdiction. In this picture, Eagle Creek meanders through property just west of the end of 32nd Avenue, about an eighth of a mile east of Carpenter Road. The property in this area is designated Moderate Density Residential, allowing up to 12 units per acre (MD 6 to 12) and High Density Residential, allowing up to 20 units per acre (HD 6 to 20).

In this area, Eagle Creek will disappear below ground periodically only to resurface a few dozen yards later downhill. This is an example of an area that will be problematic for development. Development of this area will need to take into consideration potential impacts to the area's unique hydrology to ensure no runoff impacts occur to Woodland Creek. The critical areas ordinance will require a buffer from the stream, but it will be small because of the streams low volume in this area (considered a seepage area).

During development review, even mapping of the channel for a setback will be problematic and most likely there will be pressure to channel the stream into culverts. Leaving the stream to meander along its natural course, would be the preferred method from an environmental standpoint, but would also encumber most of the property and prevent development at the urban density anticipated under GMA.

This situation is typical of urbanization in cities and their the urban growth areas, where expectation of urban density can run contrary to natural drainage patterns and natural systems. Urbanization and traditional ways of handling storm drainage has caused significant impact to the function and value of the drainage basins and shoreline resources throughout the Puget Sound area. While smart growth principals and containment of population growth is necessary, the expectations for accommodation of density within the UGA, the cultural shift in thinking necessary to make it happen and the potential impacts to our quality of life present very difficult challenges for the City.

17.65.000 Revetments and Gabions - Goals

See General Goals, Policies and Standards under Modifications, Section 17.45.

17.65.010 Revetments and Gabions - Policies

1. **Policy:** Insure that permits for revetment and gabion projects address the goals, policies and development standards within the Shoreline Ecological Function Chapter 17.40.

2. **Policy:** Apply the bulkhead policies listed in Section 17.51 to revetments and gabions.

17.65.020 Revetments and Gabions - Development Standards

Revetments or gabions shall meet all development standards applied to bulkheads; see Section 17.51.020.

Sensitive wetland area at the south end of Southwick Lake.

View of Long Lake from Holmes Island Road looking northeast.

17.66.000 Scientific or Education – Goals, Policies and Standards

1. **Goal: Provide opportunities for the scientific community to study shoreline processes and functions without long term impact to these resources.**

   A. Policy: Conduct scientific studies and educational uses of the shoreline in a way to minimize impacts in accordance with the applicable environmental designations.

   B. Policy: Require a shoreline permit for scientific and educational activities which may significantly affect water quality or natural systems.

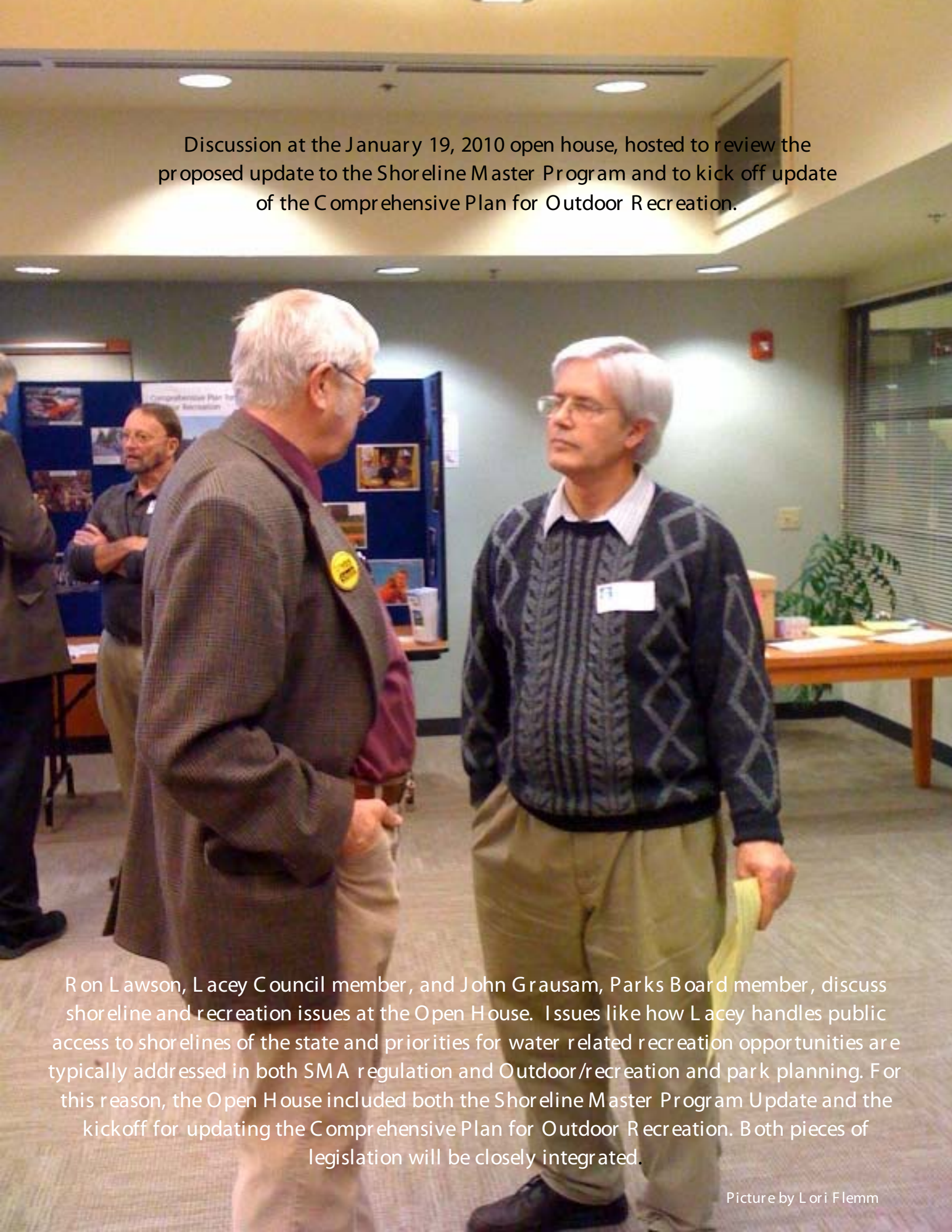
   C. Policy: Scientific or educational uses and activities are limited to those which will not:
   1) Jeopardize existing wildlife populations or organisms;
   2) Permanently alter the character of biological habitats; and
   3) Degrade the character of the shoreline environment in which they are located.

   D. Policy: Temporary disruptions of biological systems may be permitted when a scientific activity will result in their restoration or improvement and sustain requirements for no net loss of ecological function.

   E. Policy: Permits encompassing a variety of scientific or educational activities over an extended period of time may be granted provided that limits on the duration of approval are established.

   F. Policy: Temporary facilities necessary for the conduct of a scientific project shall be removed at the conclusion of the prescribed research activity period.

   G. Standard: Proposals for shoreline development or use in or on known sites of scientific value that would adversely affect, damage, or diminish such resources shall be prohibited unless all identified impacts can be mitigated. Such proposals shall be reviewed through a conditional use permit.



Discussion at the January 19, 2010 open house, hosted to review the proposed update to the Shoreline Master Program and to kick off update of the Comprehensive Plan for Outdoor Recreation.

Ron Lawson, Lacey Council member, and John Grausam, Parks Board member, discuss shoreline and recreation issues at the Open House. Issues like how Lacey handles public access to shorelines of the state and priorities for water related recreation opportunities are typically addressed in both SMA regulation and Outdoor/recreation and park planning. For this reason, the Open House included both the Shoreline Master Program Update and the kickoff for updating the Comprehensive Plan for Outdoor Recreation. Both pieces of legislation will be closely integrated.

Picture by Lori Flemm

17.67.000 Signage - Goals and Policies

1. **Goal: Provide aesthetically attractive shorelines free from clutter of signage.**

   A. **Policy:** Prohibit all commercial signing within the shoreline jurisdiction, with the exception of home occupation identification signs as provided in LMC Section 16.75.120.

   B. **Policy:** Prohibit billboards within all shoreline environment designations.

   C. **Policy:** Only authorize signs consistent with the residential and public use of shorelines. Signs will generally be limited to municipal traffic, municipal pedestrian circulation, and small private signage providing circulation, location and use information to the public necessary for the use and enjoyment of shoreline facilities/area.

   D. **Policy:** Design and locate signs to insure compatibility with the shoreline environment designation, and adjacent land and water uses.

17.67.020 Signage - Development Standards

1. Off-premise signs are prohibited within any shoreline environment designation. Traffic and "wayfinding" signs are not to be considered off-premise signs.

2. All public access shall be marked with signs approved by the Administrator.

3. Signs for a public or community marina or launch ramp facility shall be limited to one sign oriented to the water, not exceeding fifteen (15) feet in total height from average grade.

4. Additional sign regulations can be found in LMC Chapter 16.75.

17.68.000 Transportation - Goals and Policies

1. **Goal: Integrate the Lacey Transportation Plan into transportation planning for lands under shoreline jurisdiction.**

   A. **Policy:** Rely upon the transportation map within the Transportation Element of the City of Lacey Comprehensive Land Use Plan to identify new transportation crossings or corridors within shoreline areas.

2. **Goal: Protect shoreline resources by keeping road infrastructure out of shoreline areas whenever possible.**

   A. **Policy:** Locate arterials, freeways, and railways outside of shoreline jurisdiction unless there are no feasible alternatives.

   B. **Policy:** If necessary to locate in shoreline jurisdiction, roads, shared use paths, and railroads should be located as far landward as possible.

3. **Goal: Ensure impacts are mitigated when there is no feasible alternative to locating needed transportation infrastructure in shoreline jurisdiction.**

   A. **Policy:** Use mitigation sequencing per Section 17.40.015 to locate new transportation corridors and facilities within shoreline jurisdiction.

   B. **Policy:** Roads, shared use paths, and railroads should be designed, constructed and maintained to minimize erosion and to permit natural movement of ground water and flood waters.

   C. **Policy:** Piers and bridges are preferred to the placement of fill within the shoreline jurisdiction for roads, shared use paths, and railroad crossings.

   D. **Policy:** Construction debris, overburden, and other waste materials should be disposed of in such a way as to prevent their entry into any surface water body by erosion from runoff, high water, or other means.

17.68.020 Transportation - Development Standards

1. Roads, shared use paths, and railroads shall be designed to cross shoreline jurisdiction areas by the shortest, most direct route feasible.

2. Future transportation facilities and corridors within shoreline jurisdiction shall be prohibited unless shown/included on the City's Transportation Plan Maps/Figures.

3. Bridges for roads, shared use paths, and railroads may be located within salmon and steelhead habitat provided that the following conditions are met:

   A. The mitigatation sequence is followed, and

   B. Open-piling and piers required to construct the bridge may only be placed waterward of the ordinary high water mark if no alternative method is feasible.

4. The placement of fill for roads, shared use paths, and railroads may be allowed waterward of the OHWM if:

    A. All structural and upland alternatives have been proven to be infeasible,

    B. The transportation facilities are necessary to support uses consistent with this master program, and

    C. The mitigation sequence is followed.

5. Appropriate design and erosion control techniques shall be used to construct or repair roads, shared use paths, and railroads to assure no net loss of shoreline ecological functions.

6. A shared use path may be allowed within the required setback from the ordinary high water mark without a variance when on an abandoned railroad corridor or waterward of the OHWM on a boardwalk without a variance if mitigation sequencing is followed.

7. Refer to Section 17.70.020 for the water quality development standards which includes on-site stormwater control measures. Also refer to Sections 17.40 (Shoreline Ecological Function) and 17.41 (Vegetation Management).

17.69.000 Utilities - Goals and Policies

1. **Goal: Provide opportunity for utilities serving shoreline areas while respecting the special function of these resource areas and maintaining their natural beauty.**

   A. **Policy:** Locate utilities outside of shoreline jurisdiction unless there are no feasibile alternatives. When necessary, locate them as far landward as possible and preserve the natural landscape, shoreline ecology, and minimize conflicts with present and planned land uses. Choose locations that do not obstruct or destroy scenic views whenever utilities must be placed in a shoreline area.

   B. **Policy:** Place utilities underground and design them to do minimal damage to the aesthetic qualities of the shoreline area. Where compelling reasons exist to place utilities above ground based upon impacts to ecological functions or values, this may be permitted with full mitigation of aesthetic impacts.

2. **Goal: Provide for the utility needs of authorized uses within shoreline jurisdiction while minimizing impacts to the environment and to the values and functions of the shoreline resource.**

   A. **Policy:** When utility placement occurs within shorelines, restore banks to their pre-project configuration, replant with native species, and maintain the site until the new vegetation is established.

   B. **Policy:** Design and locate sewage treatment, water reclamation, desalinization and power plants and associated infrastructure so as to be compatible with and not to interfere with recreational, residential or other public uses of the water and shorelands.

   C. **Policy:** Recycling or land disposal of sewage wastes is preferred to new sewage outfalls to shoreline waterbodies. Where no alternative to outfalls into water exist, the location is to be part of a management plan.

   D. **Policy:** Use utility rights-of-way for public access to and along shoreline waterbodies where feasible.

   E. **Policy:** Where utilities must cross a body of water, design and construct bridge-like structures for above water crossing of utilities or bore utilities rather than using trenching with fill.

   F. **Policy:** Mitigation sequencing per Section 17.40.015 should apply when locating new utility corridors within shoreline areas. Co-locate new major transmission facilities along existing utility corridors where possible.

17.69.020 Utilities - Development Standards

1. Utility facilities and lines shall be designed and located to assure no net loss of shoreline ecological functions, preserve the natural landscape, and minimize conflicts with present and planned land and shoreline uses while meeting the needs of future populations in areas planned to accommodate growth.

2. Utility facilities and lines shall be located outside of the shoreline area where feasible. When the utility needs to be located within shoreline jurisdiction, mitigation sequencing pursuant to Section 17.40.015 shall be used to justify the location. Existing rights of way and utility corridors shall be used, to the extent feasible.

3. In-water utility corridors may be located within salmon and steelhead habitat provided that the following conditions are met:
   A. An alternative alignment is not feasible,

   B. The project is located and designed to minimize its impacts on the environment,

   C. Any adverse impacts are mitigated,

   D. Any fill, other than required for refilling the trench where the utility is placed, is located landward of the ordinary high water mark, and

   E. Open-piling and piers required to construct a bridge necessary for a utility crossing may be placed waterward of the ordinary high water mark if no alternative method is feasible.

4. Utility facilities and lines shall document how the size of the facility or line has been minimized within the shoreline area.

5. Utility facilities and lines shall identify methods of revegetation of the affected area to pre-development conditions where feasible, replant with native or pre-existing species, and make provisions for the maintenance and care for the newly planted vegetation.

6. Accessory utility services to primary authorized uses within shoreline jurisdiction shall not require a separate permit, but shall be regulated by the use regulations and permit requirements for the primary use or activity and the standards of this section.

7. Utilities located landward of the OHWM shall be placed underground unless shown to be infeasible or if such undergrounding would be significantly detrimental to the environment. Utilities located waterward of the OHWM shall be bridged or bored unless shown to be infeasible or if such approach would be significantly detrimental to the environment.

8. Utility facilities shall be designed for minimal environmental and aesthetic impact.

9. Underwater utilities shall be located at a depth sufficient to prevent interference between the utility and other shoreline use activities.

10. Utility facilities and lines shall identify safeguards to ensure that no long-term damage will be caused to the adjacent or downstream environment should an accident occur involving that facility or line.

11. Refer to Section 17.70.010 for the water quality development standards which includes on-site stormwater control measures.

17.70.000 Water Quality - Goals and Policies

1. **Goal: Protect water quality and aquatic habitat with all new shoreline development.**

2. **Goal: Achieve a high level of protection and wise management of surface and ground water resources with a variety of strategies that consider larger drainage basin issues as well as site specific techniques designed to treat runoff on site.**

   A. **Policy:** Utilize a drainage manual that meets all state requirements and provides a range of low impact development options and techniques that will help achieve water quality goals.

   B. **Policy:** Locate, design, construct, and maintain shoreline uses and activities to avoid ecological impacts from altering water quality, quantity, or hydrology.

   C. **Policy:** Utilize setbacks and vegetation management areas, and encourage low-impact development techniques and materials where practical to lessen impacts from shoreline use and development on water quality.

   D. **Policy:** Plan land use and put in place development standards that work with and respect natural drainage features and functions. Emphasize utilization of development techniques that do not alter natural drainage patterns or disrupt natural recharge processes. Where necessary ensure measures for controlling erosion, stream flow rates, or flood waters are located, designed, constructed and maintained to preserve and improve existing water quality.

   E. **Policy:** The City will seek to improve water quality, quantity, and flow characteristics in order to protect and restore ecological functions and ecosystem-wide processes of shorelines within Shoreline Management Act jurisdiction. This will be implemented through the regulation of development and activities, through the design of new public works, such as roads, drainage, and water treatment facilities, and through coordination with other local, state, and federal water quality regulations and programs.

   F. **Policy:** Discourage uses and activities in shoreline or other sensitive areas that may pose a risk of contamination of ground or surface waters, such as:
      1) Storage, disposal, or land application of waste (excluding secondary/tertiary treated effluent from municipal sewer systems), including solid waste landfills;
      2) Operations for confinement feeding of animals;
      3) Junk yards and auto wrecking yards;
      4) Storage of hazardous or dangerous substances within a floodplain; and
      5) Alterations to structures and uses served by septic systems that do not meet state septic requirements.

3. **Goal: Establish lake management districts for our lakes to improve water quality and natural function and values of these resource areas.**

   A. **Policy:** Encourage and provide support to land owners surrounding our lakes to establish lake management districts.

   B. **Policy:** Provide technical support to lake management districts to help in technical issues once lake management districts are formed.

17.70.010 Water Quality - Development Standards

Related to sewage disposal:

1. New development within shoreline jurisdiction shall not be allowed on septic systems. Property with an approved septic tank drainfield permit for a use otherwise authorized under the zoning designation and Master Program Designation, shall be allowed to develop such use subject to limitations and conditions as required under the approved septic tank drainfield permit; Provided, once the original approval expires it shall not be renewed.

2. When a permit or authorization under the Master Program is necessary for activities associated with existing development operating on septic systems, they shall be required to connect to municipal sewer. If municipal sewer is not available, use of the septic system may be allowed if the development installs stub-outs and any needed agreements are executed to ensure future connection to the sewer service as soon as it is available in the area.

Related to stormwater management and drainage:

3. New development shall provide storm water management facilities designed, constructed, and maintained in accordance with the current storm water management standards of Lacey's Stormwater Drainage manual. Preference shall be given to low impact development concepts.

4. Best management practices (BMPs) for control of erosion and sedimentation shall be implemented for all development in shorelines through an approved temporary erosion and sediment control (TESC) plan, or through administrative conditions.

Related to potential contaminants:

5. Wood treated with creosote, copper chromium arsenic or pentachlorophenol is prohibited in or above shoreline water bodies.

6. All materials that may come in contact with water, such as untreated wood, concrete, approved plastic composites or steel shall be constructed of materials that will not adversely affect water quality or aquatic plants or animals. Materials used for decking or other structural components shall be approved by applicable state agencies for contact with water to avoid discharge of pollutants from wave splash, rain, or runoff.

Related to vegetation management:

7. Proper management of vegetation shall be required as a condition of all new development and permit approvals associated with existing development. At a minimum this shall include:

   A. Shoreline use and development shall minimize, through effective education, site planning and maintenance, the need for chemical fertilizers, pesticides, herbicides or other similar chemical treatments that could contaminate surface or ground water or cause adverse effects on shoreline ecological functions and values;

   B. Compliance with the requirements of Section 17.41.020;

   C. In protective covenants and Home Owner Association documents new plats shall describe acceptable use of organic fertilizers and other green shoreline principals that will not add to the nutrient load in adjacent water bodies.

Hunting dogs enjoying a cool swim at Wanschers Community Park.

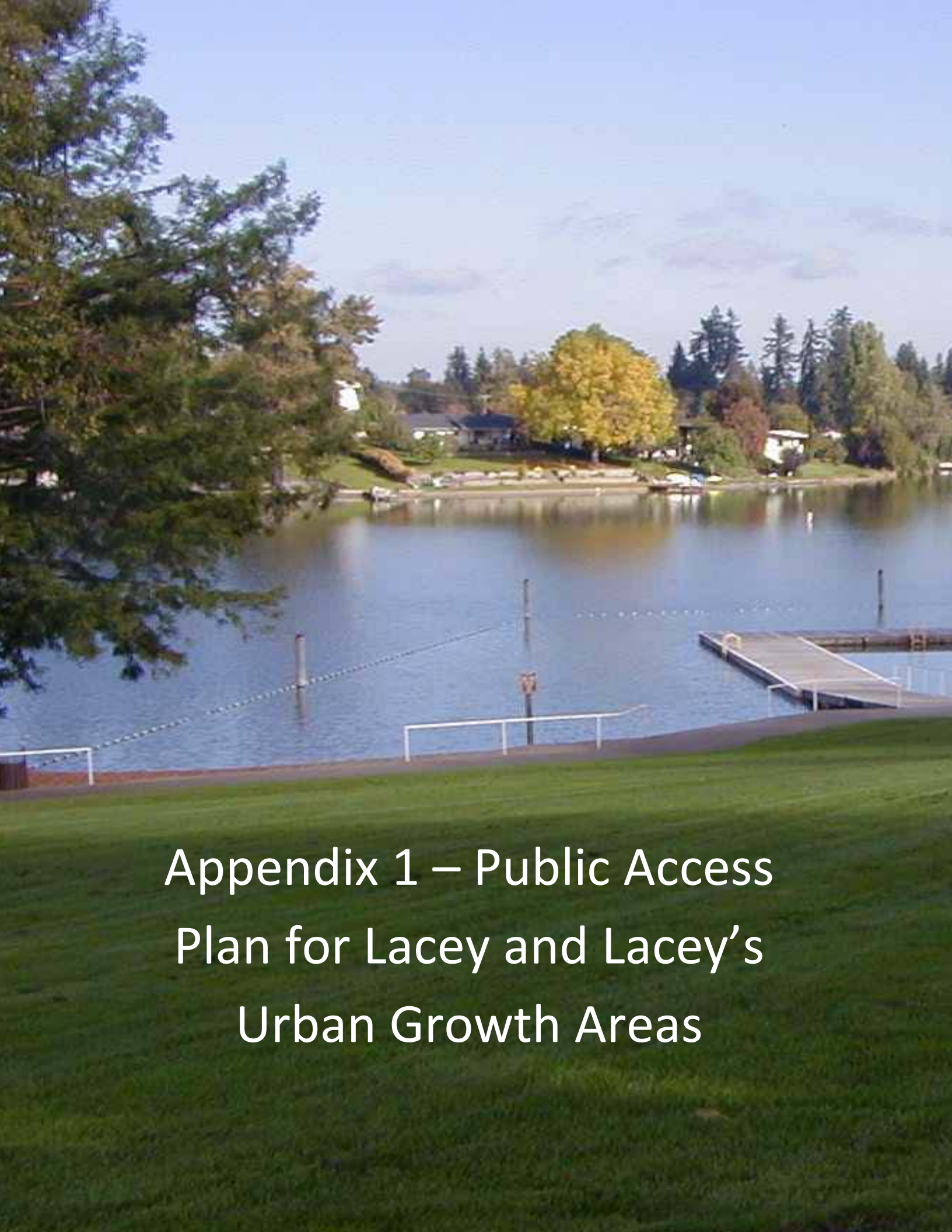
In early 2008, David Burns, Steve Morrison and Hugh Shipman from WDOE, visited Lacey's only marine shoreline to consider the most appropriate shoreline designation. The photo is on the spit at Butterball Cove. Because of its unaltered state and rich value with pocket estuaries, it was designated Natural: the most restrictive designation in the program with a priority for preservation.

This stretch of shoreline was reserved as open space to serve the Hawks Prairie Planned Community. It has a trail with an observation deck to allow viewing of this predominantly unaltered reach of shoreline.

Steve, on the right, a Senior Planner for Thurston Regional Planning Council, was a lead Project Coordinator in development of the original 1983 Shoreline Master Program for the Thurston Region, and the lead staff for development of the first draft of the 2010 Shoreline Master Program update. Dave, Lacey's Principal Planner, was Lacey's lead in completing the 2010 update for the City. Coincidentally, both Dave and Steve are graduates from Huxley College of Environmental Studies with program emphasis in Environmental Planning, Marine Resources and Ecological Systems Analysis.

Photograph taken by Hugh Shipman

PART FOUR: APPENDICES



Appendix 1 – Public Access Plan for Lacey and Lacey's Urban Growth Areas

LACEY CITY COUNCIL
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Virgil Clarkson, Deputy Mayor
Jeff Gadman
Jason Hearn
Ron Lawson
Cynthia Pratt
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Ryan Andrews, Associate Planner
Sarah Schelling, Associate Planner
Samra Seymour, Associate Planner
Jolene Hempel, Permit Technician
Leah Bender, Permit Technician

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Steve Morrison, Senior Planner and Project Manager

Veena Tabbutt, Senior Planner

Andrew Deffobis Assistant Planner

Sarah Morley Administrative Assistant

Toni Tringolo Office Specialist II

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Cindy Wilson, Senior Planner for Thurston County

Molly Levitt, Associate Planner Thurston County

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I. Introduction

A. Background

Generally - This shoreline access plan has been created to provide an analysis of public access needs and opportunities to Lacey's Shoreline areas and to plan for the acquisition and long term management of shoreline access for public use. It meets the requirements of the Shorelines Management Act for Lacey's shoreline public access planning process and is intended to guide Lacey's efforts in achieving public shoreline access goals.

This Plan provides an inventory of existing public access to shorelines, discussion of opportunities for additional access and criteria for evaluation of access opportunities. In addition, this Plan discusses specific strategies and programs to acquire shoreline areas and access for public use and provides policy guidance for achieving shoreline access goals.

This shoreline access plan has been created as an appendix of Lacey's Shoreline Master Program and is intended to be used in concert with the Shoreline Master Program, the Comprehensive Land Use Plan and the Comprehensive Plan for Outdoor Recreation for goal and policy guidance on issues involving public shoreline access and open space.

Requirements of state law for public shoreline access planning - There are three basic policy goals to the Shoreline Management Act: shoreline use, environmental protection and public access. The SMA emphasizes accommodation of reasonable and appropriate uses, protection of shoreline environmental resources, and protection of the public's right to access and use the shorelines (see RCW 90.58.020).

Master programs must include a public access element making provisions for public access to publicly owned areas, and a recreational element for the preservation and expansion of recreational opportunities.

The overarching policy is that “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. Alterations of the natural conditions of the shorelines of the state, in those limited instances when authorized, shall be given priority for…development that will provide an opportunity for substantial numbers of people to enjoy the shorelines of the state.”

The SMA also implements the common law Public Trust Doctrine. The essence of this court doctrine is that the waters of the state are a public resource for the purposes of navigation, conducting commerce, fishing, recreation and similar uses and that this trust is not invalidated by private ownership of the underlying land. The doctrine limits public and private use of tidelands and other shorelands to protect the public's right to use the waters of the state.

Public access is defined as 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 (WAC 173 26 221(4)(a)).

B. Timeline

A timeline for the complete Shoreline Master Program update (a multi-year program) is below:

TABLE 1: TIMELINE FOR THE SHORELINE MASTER PROGRAM UPDATE FOR THE CITY OF LACEY.

Phase	Update Schedule	Timeline
1	• Determine what shorelines are regulated under the act • Conduct an inventory of all existing and available data for shorelines • Public Open Houses	Winter 2008
2	• Analyze and characterize shoreline conditions	Spring 2008
3	• Categorize each shoreline segment into a designation such as urban, suburban, or rural. Each will have a different set of rules. • Develop draft rules and policies • Public meetings	Fall 2008 Winter-Spring 2009
4	• Analyze the cumulative impacts of expected shoreline development or redevelopment • Develop a restoration (and preservation) plan, including public access	Winter-Spring 2009
5	• Planning Commission Consideration of the Regional Draft • Development of a Shoreline Master Program specific to Lacey • Public hearings • Planning Commission recommendation • City Council approval • State approval	Late 2009-2011

C. Methods and Sources of Information

The shoreline Public Access Plan compliments other Lacey planning documents that address our natural resource and environmentally sensitive areas. It provides the same emphasis and vision expressed throughout Lacey's comprehensive planning documents for the wise use, protection and conservation of natural resource and sensitive areas.

This overriding theme and culture is articulated throughout Lacey's Comprehensive Land Use Plan and its many elements including the Environmental Protection and Resource Conservation Plan, the Comprehensive Plan for Outdoor Recreation and the core Land Use element. These documents, and the vision they provide for the community, guide Lacey in its efforts to acquire, develop and manage shoreline properties for parks, habitat, and other recreational and cultural needs and activities.

D. Purpose, Content and Use of this Plan

Summary – This plan is meant to provide a comprehensive analysis of public access to shorelines, with several areas of focus.

One focus is a review of what public access includes and how it relates to goals for protection of shoreline natural functions and values. In defining what public access is, the Plan identifies various types of public access and use. In relationship to shorelines protection, the Plan discusses expectations for use based upon shoreline designation. The designation informs appropriate use and management over the long term.

Another focus is an analysis of shoreline access use and public value. This includes an inventory of existing public access, what types of access are of public value, what opportunities might exist for additional public access, and what criteria should be considered when planning and developing public access.

A third major focus is a discussion of strategies for acquiring public access. This reviews regulatory control, incentive based programs, and development of public property and how these might be utilized to achieve Lacey's public access goals.

A final focus is the articulation of specific public access goals and policies. Goals and policies cover a full range of public access issues.

Together discussion of these focus areas is intended to guide Lacey's effort in meeting the public access needs of the Lacey community and the requirements of state law.

This Plan builds up on the vision expressed in Lacey's existing Comprehensive Land Use Plan, the Comprehensive Plan for Outdoor Recreation and the Lacey Shoreline Master Program. These documents provide a vision for the long term management and protection of Lacey's shoreline resources.

Shoreline designation determines management options – This Plan discusses the balance needed between types and levels of intensity of public access and natural limitations of shoreline areas. Through the SMP, shorelines are given environment designations based upon specific characteristics and identified functions and values.

Long term management of these shoreline areas needs to consider both, and match access opportunities and activities with wise management and protection of the shorelines. This Plan provides general guidance for the appropriate public use of shoreline areas while also protecting their functions and values over the long term.

Analysis of opportunity and need - This plan establishes an inventory of existing public access sites to shorelines and examines what opportunities may be available for additional access. It sets forth criteria for classification of access types and provides criteria and a framework for use in assessing the public value of future access opportunities. The plan also identifies ways to achieve access goals through shoreline development review and incentive programs.

Advantages of using a Public Access Plan as part of Lacey's shoreline program - Public access for every project or type of shoreline may be problematic. Some projects or shorelines may not be well suited for public access. State law allows local governments to consider public access comprehensively through a

public access planning process rather than instituting uniform, site-by-site access requirements. Lacey has used this process and identified issues to consider when public access will be required under shoreline regulatory authority as a condition of a permit.

Developing a public access plan creates an inventory of existing public access and identifies future needs and opportunities that can be implemented through shoreline development proposals with site specific assessments. The public access plan is the foundation for development of public access in the public interest.

II. Shoreline Management Act Public Access Requirements

A. Three Broad Policies

The Shoreline Management Act has three broad policy goals:

1. Give priority to water-dependent uses
2. Protect shoreline natural resources
3. Promote public access and enjoyment

B. Public Access Planning Process, Purpose and Use

The Shoreline Management Act requires local Shoreline Master Programs to contain a public access element that provides for public access to publicly owned shoreline areas. The public access element should be a comprehensive analysis of public access need and opportunity and a blueprint to guide the acquisition, development and management of public access to shoreline resources over the long term.

WAC 173-26-221 (4) Public Access (c) planning process to address public access, states "At a minimum, the public access planning should result in public access requirements for shoreline permits, recommended projects, port master plans, and/or actions to be taken to develop public shoreline access to shorelines on public property...."

WAC 173-26-221 (4) (d) further states that shoreline master programs should "provide standards for the dedication and improvement of public access in developments for water-enjoyment, water-related, and nonwater-dependant uses and for the subdivision of land into more than 4 parcels. In these cases, public access should be required except: (A) Where the local government provides more effective public access through a public access planning process described in WAC 173-26-221 (4)(c). ...."

These WAC provisions provide the City more flexibility in when and how to achieve its shoreline public access goals.

III. Type, Use and Value of Various Forms of Shoreline Public Access

Public access defined - As stated in the introduction of this plan, state law defines public access as "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 (WAC 173 26 221(4)(a))."

Shoreline access may take many forms and have many different uses associated with it and it may have a wide variety of infrastructure requirements and impacts.

Relationship to the City's Comprehensive Plan for Outdoor Recreation - The requirement to plan for public access is very close in concept to the City's planning process used to develop its Comprehensive Plan for Outdoor Recreation. This was once an optional GMA plan that the City developed years ago to accomplish park planning, including city park facilities and properties adjacent to shorelines and waterfront acquisition and development.

The City's Comprehensive Plan for Outdoor Recreation looks at the City's need for outdoor recreation and provides a comprehensive plan for the delivery of this service to the Lacey community. This plan spans a wide range of public activities from what are termed passive (low activity non intrusive recreation use) to very intensive, high activity use; (Long Lake Park for example). This includes our water front property like Long Lake and Wanchers Park, and it includes trail systems that provide shoreline access opportunities.

The Comprehensive Plan for Outdoor Recreation has level of service standards, service area radius standards and a long term plan for management. Essentially it covers the City's need to provide recreation areas for the public, including waterfront active recreation opportunities. This aspect of public access planning does not need to be duplicated in this public access plan.

However, the Comprehensive Plan for Outdoor Recreation does not deal specifically with shoreline access, nor does it look at the types of small shoreline access opportunities that may be beneficial to Lacey and as may be acquired through regulatory action. This access plan will focus on classification of shoreline access types, inventory of existing and potential shoreline access, and strategies to acquire access.

Large significant access to shorelines, generally over an acre in size, will be considered a public responsibility and task requiring public ownership. Major recreation uses can be measured with nationally accepted level of service standards that look at acreage and active recreation land needs. However, there will be many smaller access opportunities that cannot be characterized using level of service standards. These opportunities may require a different level of service standard such as an access point for a certain length of shoreline area and a number of access points considered necessary for each reach. This plan focuses on basic access opportunities not covered with level of service standards; please refer to the Comprehensive Plan for Outdoor Recreation in discussing and detailing goals and policies for larger, publically owned recreation areas.

Identification and classification of various types of public shoreline access -
For classification of shoreline public access types we can fashion descriptions similar to how our Comprehensive Plan for Outdoor Recreation classifies parks. That system classifies parks according to intended use, size, and service radius. For shoreline public access, this plan focuses on intended use and public value. This focus provides a framework for assessing need and assigning priority for particular public access types, uses and location.

General Park Classifications - Classification of parks considers intended use, client base, service radius and associated infrastructure and maintenance needs. Park types are divided into the following classifications in the 2010 Comprehensive Plan for Outdoor Recreation (see page 22 of that Plan);

A. Plazas and Public Spaces - such as children's playgrounds and downtown parks, located within 2 or 3 blocks of every home or business, typically provided by residential developments and retained, maintained and managed by their Homeowners Associations;

B. Neighborhood parks - of 5 to 20 acres, located within one-half mile of every residential area, with a minimum of 2 acres per every 1,000 residents;

C. Community parks - of 40 to 100 acres that offer a broad range of facilities located within 2 to 3 miles of every residential area, with a minimum of 3 acres per 1,000 residents;

D. Regional parks - offers recreation opportunities to a county wide or larger region;

E. Other - There are also special purpose facilities, linear parks, open space and conservancy site classifications, which also have specific purposes and use, design criteria, and infrastructure requirements.

Proposed Shoreline Access Classifications - For the purposes of classifying shoreline public access types, we can consider some of the same elements in regard to client base and location. Shoreline public access may or may not have park activities associated with it, so an acreage per capita level of service measure as utilized for public parks will not be applicable to access opportunities unless they are being considered for park development.

However, there are also differences between shoreline public access and parks when considering location requirements and service radius. For example, shoreline access is geographically limited to the lakes and stream corridors. We cannot choose to place them within a certain distance to all neighborhood areas as we would with a neighborhood park site.

For the purpose of classification of access to shorelines this plan uses the following descriptions:

- Mini residential access, localized interest - localized access generally designed for a specific development or neighborhood, may be part of a subdivision's required open space, and may be designed for active or passive recreation. Designed for a local service of homes within a 2-3 block radius, generally less than one acre. Infrastructure and maintenance issues are minimal and may be the responsibility of a Home Owners Association (HOA) if the access is owned by the association.

  Either implementation strategy (regulatory and/or incentive) discussed in Section V of this plan could be utilized to acquire this type of access for the public;

- Mini residential access, regional interest, active or passive, associated facilities - Small opportunity designed to provide a recognized value to larger community (view point opportunity, rest stop along trail system, etc.), normally but not necessarily associated with a trail system, park, or other recreational opportunity that can provide more than local visibility and access.

Infrastructure needs may vary depending upon intended activities. Active recreation opportunity needs to be located along shoreline areas appropriately designated for active use.

These opportunities should normally be pursued where available because associated recreation opportunities are of a finite nature limited by proximity to other supporting facilities and activities.

Either implementation strategy (regulatory and/or incentive) discussed in Section V of this plan could be utilized to acquire this type of access for the public.

- Mini access, regional interest, passive only - Small opportunity that provides view point, scientific classroom study or other non invasive, passive activity valued by the public because of unique, rare, or sensitive features of the property.

  Infrastructure investment would be minimal except signing and control of access to protect shoreline values.

  This type of access can be associated with a conservancy or natural designation where functions and values are still relatively un-impacted and conservation and protection is the highest priority.

  Opportunities for this type of access are always valued and should be pursued where opportunities exist.

  Regulatory and incentive strategies discussed in Section V of this plan could be utilized to acquire this type of access for the public.

- Neighborhood and Community Access - These facilities are designed for the entire community and use intensity and infrastructure needs would be expected to be relatively significant.

  Such an access will be utilized by persons who live in areas with no other shoreline access opportunities. It is expected to serve a range of intensities of use from passive to active. It may include swimming, boating and fishing. This type of access will require public ownership and infrastructure investment.

  Strategies to acquire ownership for such types of access are discussed in Section V and could include both regulatory and incentive strategies.

Note of caution when classifying access opportunities - This classification system is intended for general guidance only. Opportunities for shoreline access will present themselves in a number of shapes and forms with many possible combinations of use opportunities.

Public Value used in evaluating access opportunities and priority -

Shoreline property is limited. Every development further limits options for acquisition of property for public use and access.

Generally, because this is a limited resource that is becoming rarer and scarcer, it will be in the public's best interest to carefully review development proposals to identify opportunities for public access and to

take advantage of what is available before they are lost. The criteria that will be used to consider public value and help assign priority include:

- Opportunity to provide access to a geographic area that does not have an existing access or the only access is limited, or is not convenient based upon physical limitations/boundaries/other barriers;
- Area needed to provide connectivity to other shoreline access areas;
- Particularly unique and interesting areas because of some feature;
- Sensitive areas that provide a particular rare view or special habitat;
- Viewpoints providing quality opportunity for views of the water or waterfront area. This will be particularly valuable as part of a trail system, or simply sidewalk strolling experience for neighborhood walks;
- The site has opportunities for active recreation and can help meet identified priorities and level of service demands of the Lacey community.

Location considerations - The City's Comprehensive Plan for Outdoor Recreation divides the City into service areas based upon proximity to residential areas, barriers for travel and access to various services. When considering locations for shoreline public access, criteria should address which portion of the water body access is being provided to. For example, three accesses at the same lake property will only provide one experience. Three accesses in different reaches of the lake may provide a more comprehensive access experience.

Valuable opportunities for shoreline access will provide connectivity to shorelines and properties adjacent to shorelines that can interconnect open space areas, parks, key neighborhood focus areas, trails and other sites of value. As the City reviews planning permits, including non shoreline permits, projects should be reviewed for connectivity opportunities using the Comprehensive Land Use Plan map and trail/pedestrian features as a guide.

IV. Existing Public Access Inventory and Opportunities for Additional Public Access along Shorelines

Identification of access, existing and potential - The City has identified partially developed shoreline parcels and buildable land with the potential to develop and exceed the threshold whereby consideration of public access is required (more than four lots). These areas may represent an opportunity for access and should be reviewed and considered as such as discussed in Section V of this plan. These areas are shown on maps A1-1 through A1-6.

In development of these maps, an underlying assumption was made that parcels under an acre with existing development will generally not be subject to considering public access. Subdivisions of up to 4 parcels are not required to consider public access. Lacey's minimum lot size in the LD 0-4 zone, which generally applies to shoreline parcels within the City, is 7,500 square feet. Parcels under an acre in size with existing improvements are not expected to be able to carve out more than 4 lots in an infill scenario.

The resulting maps show parcels greater than 1 acre that are considered under developed (and may redevelop) or un-developed. Symbols have also been placed to identify existing public improvements and activities such as boat launch, swimming facility, water access, etc.

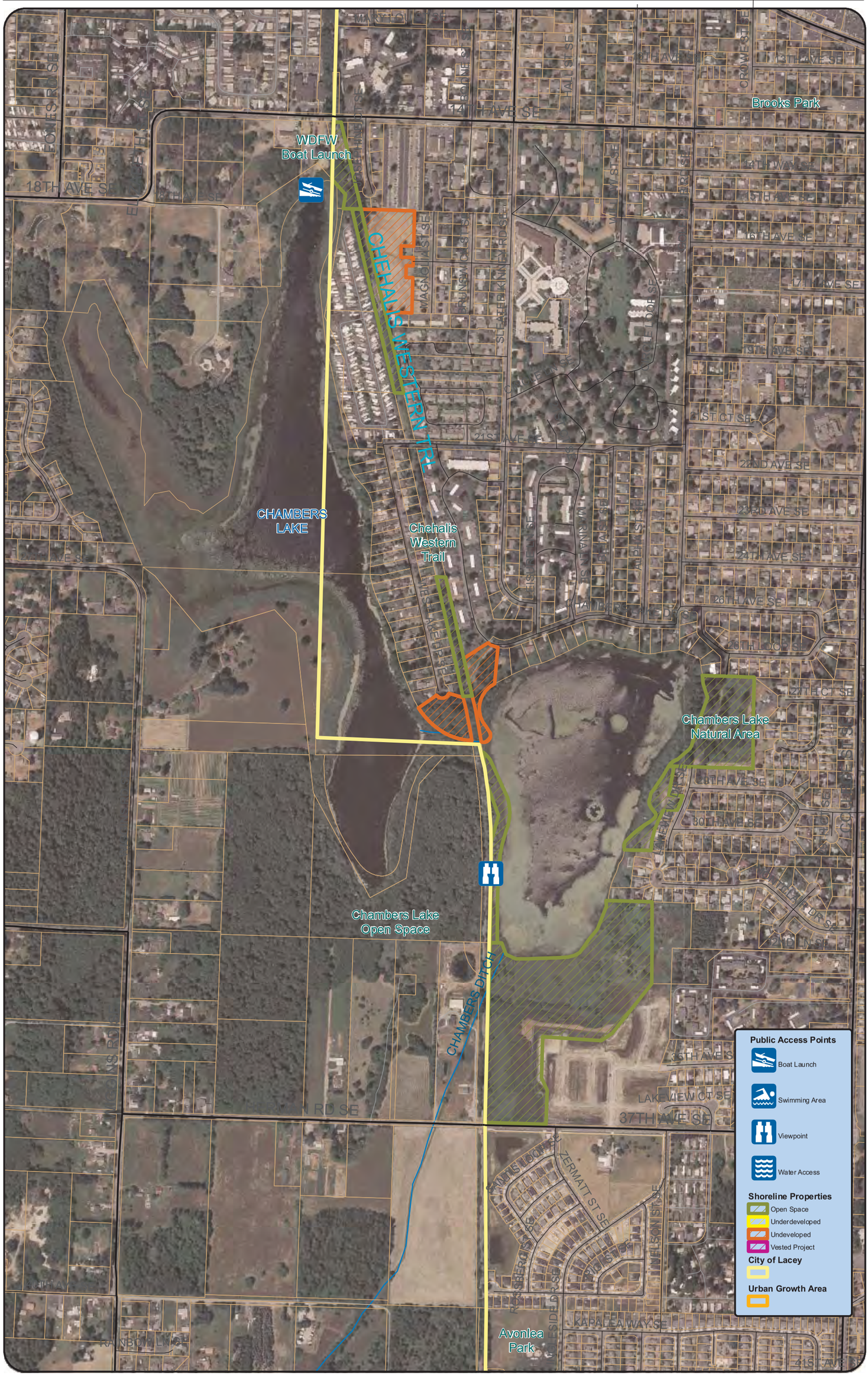
The process of conditioning a project to require access through regulatory review can only accomplish limited opportunities. Development of significant public access opportunities for active recreation, like Long Lake Park, requires City ownership and public resources to create and maintain.

It is expected that major access opportunities will be on public property and developed by the public. From this standpoint, every effort should be made to utilize special programs as discussed in Section V. of this plan to acquire community access that is owned by the public. This may be possible through permit regulation, but only if innovative incentive programs are utilized.

Table 2 lists existing public access opportunities on various shorelines in Lacey and the Lacey growth area, which correspond to Maps A1-1 through A1-6. Table 2 also identifies planned public access as well as other opportunities that should be considered for future acquisition and provision of public access/open space/recreation activities.

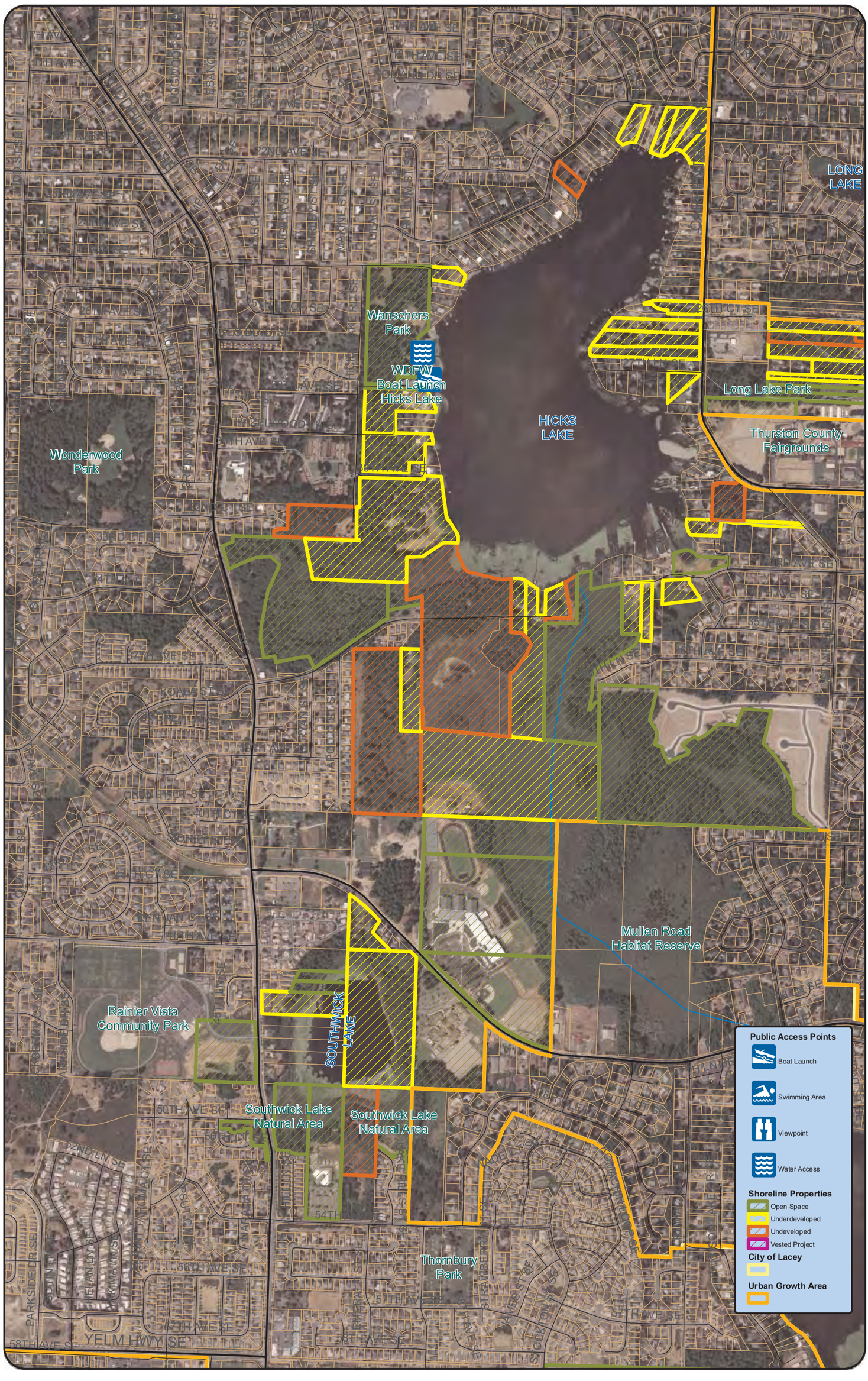
Map A1-1

Shoreline Development and Public Access: Chambers Lake



Map A1-2

Shoreline Development and Public Access: Hicks & Southwick Lakes

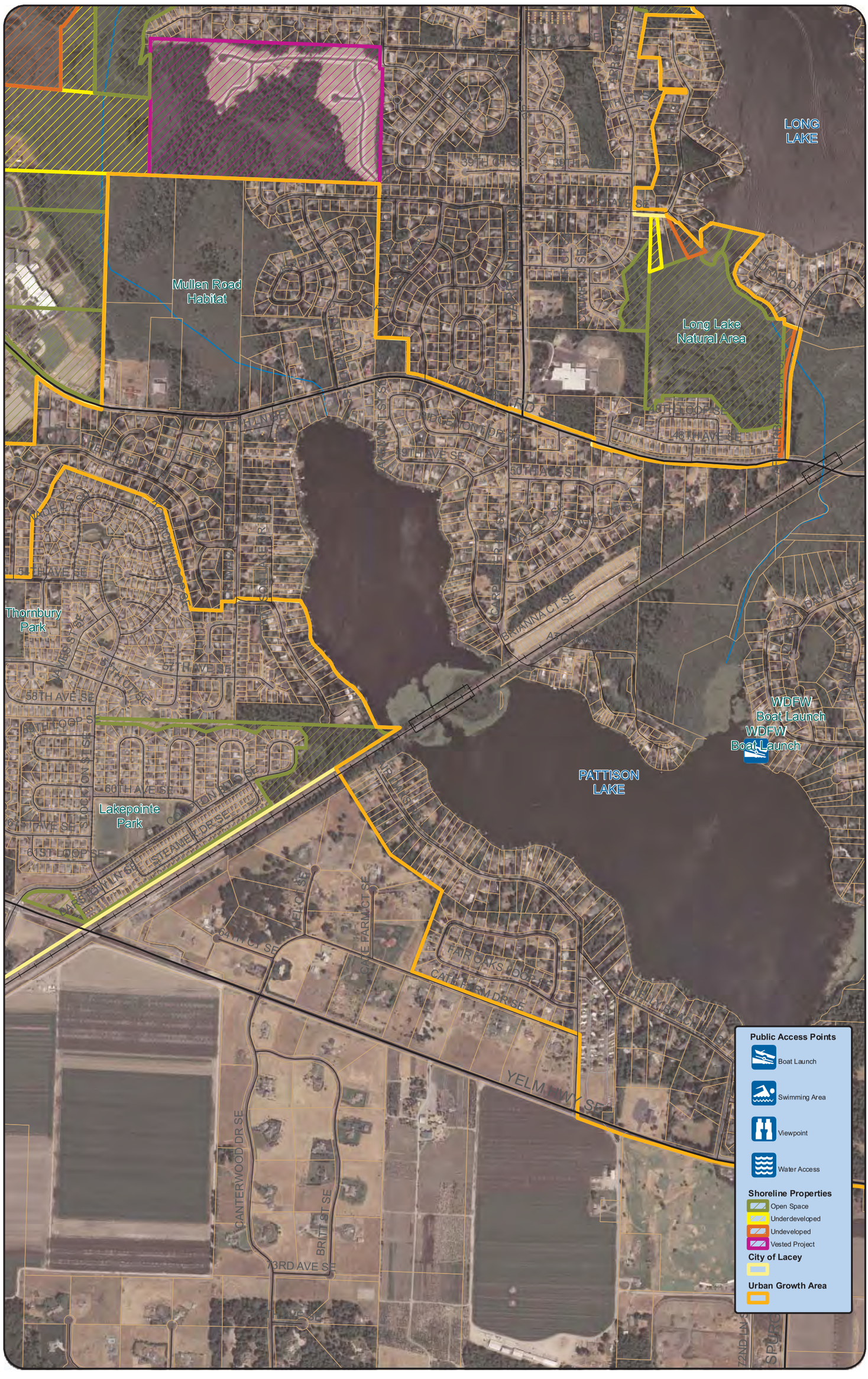


Map A1-3

Shoreline Development and Public Access: Long Lake

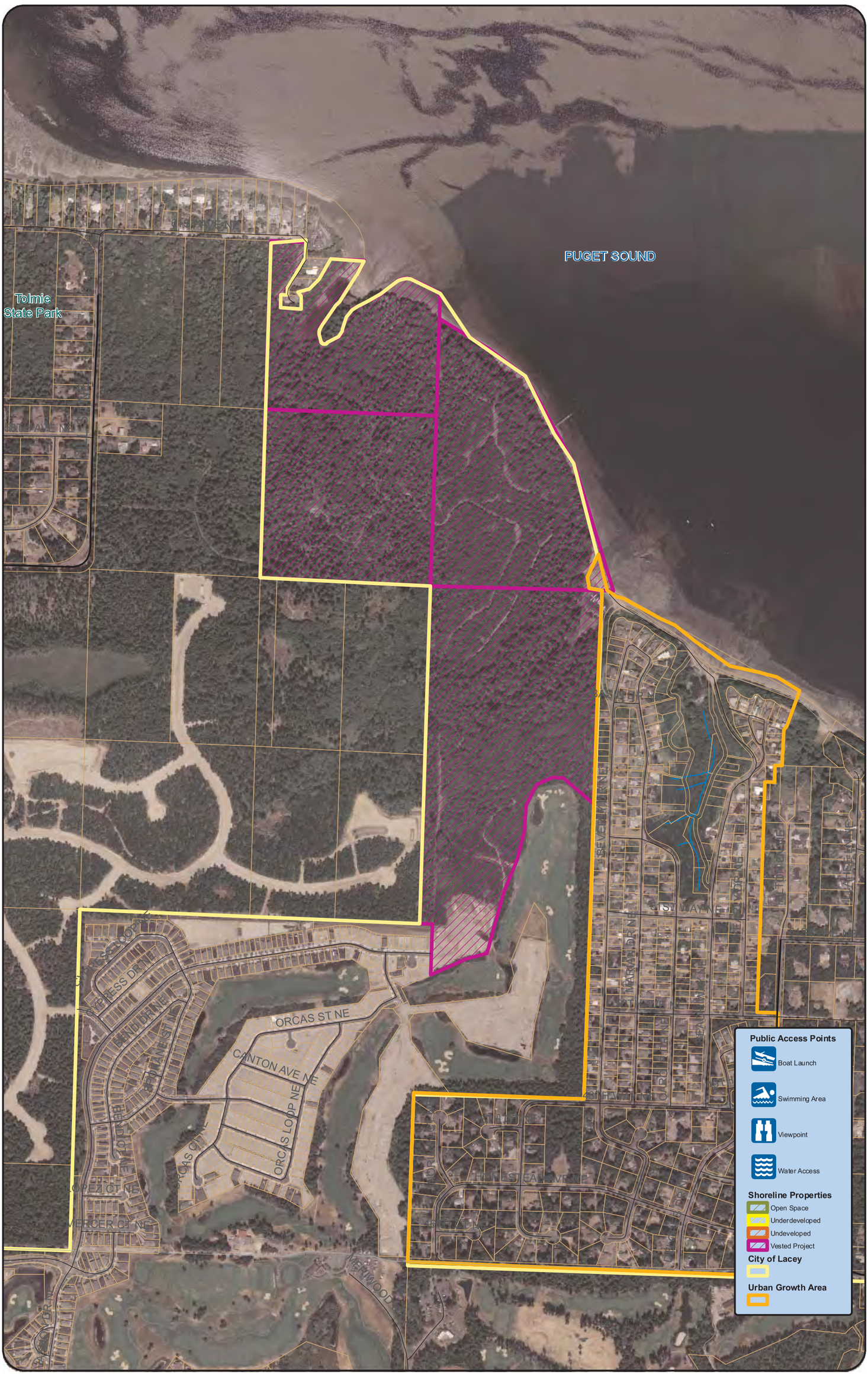
Map A1-4

Shoreline Development and Public Access: Pattison Lake



Map A1-5

Shoreline Development and Public Access: Puget Sound



Map A1-6

Shoreline Development and Public Access: Woodland Creek

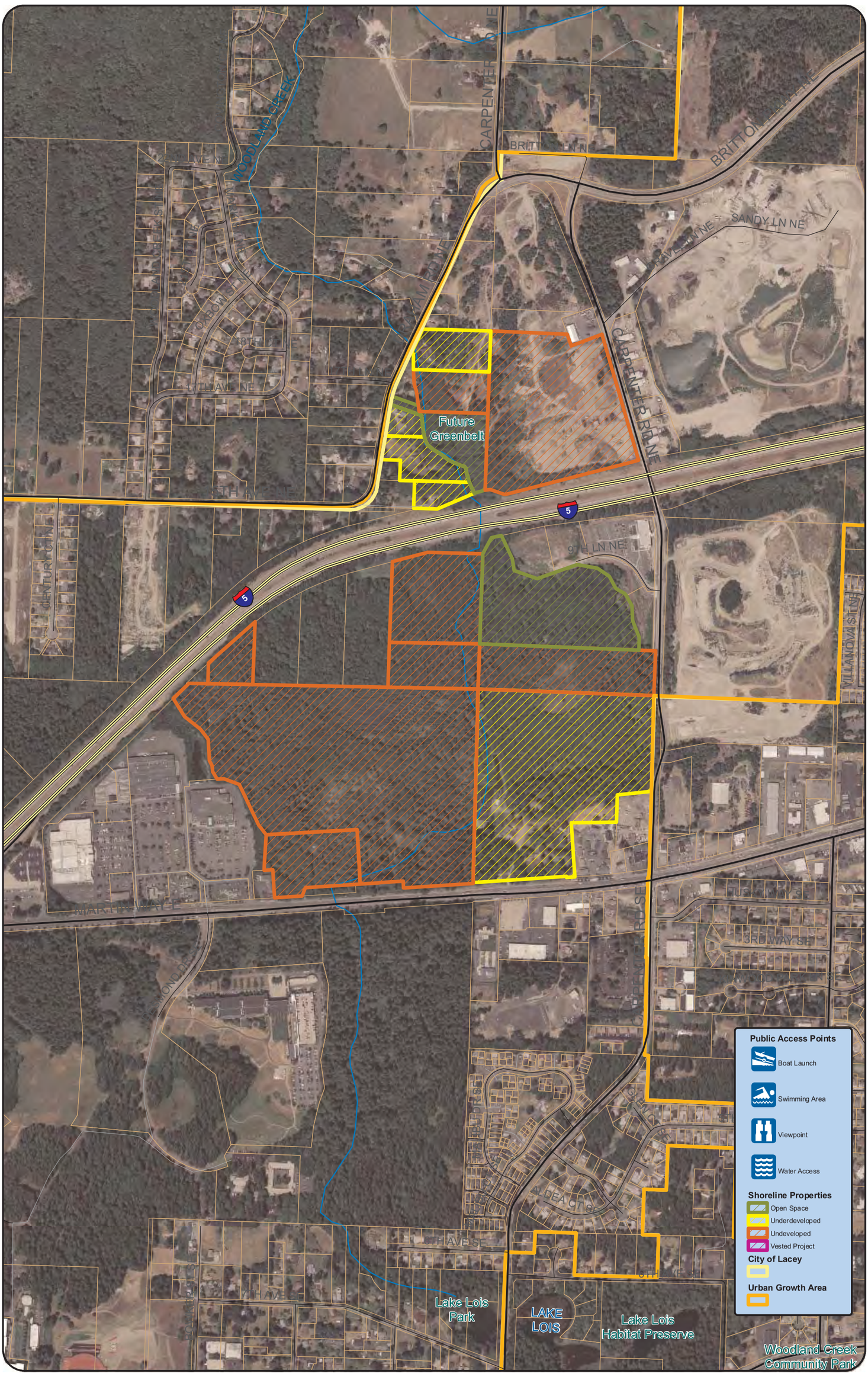


TABLE 2: EXISTING, PLANNED, AND OPPORTUNITIES FOR PUBLIC ACCESS FOR LACEY AND UGA.

Shoreline	Existing Public Access	% and Length of shoreline in public ownership	Planned Public Access	Other Opportunities	Goals for specific water body
Marine Waters					
Nisqually Reach (Map A1-5)	The public has accessed this marine shoreline for many years. However, the Planned Community developed on the property has the open space, associated trail system and marine shoreline dedicated as a Home Owner Association ownership. No official "General Public" access is shown on plat documents. At this time the Home Owners Association has not controlled access to the beach and the trail system is still accessed by the general public.	Shoreline length: 8,249 ft Length in public ownership: 0 ft (0%)	None	The Hawks Prairie Planned Community preserves this stretch of land as part of the planned community's open space. It currently provides a trail to the beach and a view area of this reach. Historically, the public has been able to access this beach. However, it is not a public dedicated trail and by condition of the Master Plan Community only serves the planned community residents. Given maintenance issues it may be to the advantage of the residents to have the City involved in maintenance, security and protection of this shoreline for the benefit of the general public. The City could initiate discussion with the home owner's	Maintaining public access to marine shoreline for viewing. Preservation of this marine area in its natural state. Work with the Hawks prairie Planned Community Home Owners Association to maintain the access to the beach the public has enjoyed over the last several decades. Consider working with the Home Owners Association to take ownership of the property for long term maintenance and management.

Shoreline	Existing Public Access	% and Length of shoreline in public ownership	Planned Public Access	Other Opportunities	Goals for specific water body
				association to transfer ownership and acquire these areas for maintenance and management for all of Lacey's citizens.	
Rivers/Streams					
Woodland Creek (Map A1-6)	Pleasant Glade Park (City of Lacey) St. Martin's University has walking trails in the wetland area south of Interstate 5 used for campus activities and research.	Shoreline length: 12,210 ft Length in public ownership: 4,426 ft (36%)	Urban Trails – preserve the Woodland/Mill Creek Corridor for public access and resource conservation.	The Lacey Comprehensive Land Use Plan shows a future trail system throughout the Woodland Creek corridor. Currently the City has a park and trail system around Lake Lois. These trails tie into trails through Saint Martin's property. Saint Martin's property, north of Martin Way, is the start of the Woodland Creek shoreline jurisdiction. This area has a system of trails that provide the opportunity to create a partnership with Saint Martin's to provide access for educational opportunities consistent with Saint Martin's campus policy and trail use.	

Shoreline	Existing Public Access	% and Length of shoreline in public ownership	Planned Public Access	Other Opportunities	Goals for specific water body
Lakes					
Chambers Lake (Map A1-1)	Chehalis Western Trail (Thurston County) Boat ramp (State)	Shoreline length: 22,156 ft Length in public ownership: 5,705 ft (26%)	Plans for the Chambers Lake Open Space include public access (City of Olympia).	A large parcel containing a designated wetland on the east side of Chambers Lake was acquired by Lacey as part of a plat dedication. This property is owned by the City of Lacey and provides the opportunity for development of public access and use. This lake is also adjacent to the Chehalis Western Trail providing opportunities for connectivity.	Connectivity to Regional trail and preservation of shorelines
Hicks Lake (Map A1-2)	Wanchers Park (City of Lacey) Boat Ramp (State)	Shoreline length: 13,854 ft Length in public ownership: 811 ft (6%)	South Hicks Lake Wetlands (City of Lacey) trails planned. West Hicks Lake Wetlands (City of Lacey) – plans to have a connected trails system between the park, boat ramps, and wetlands.	As part of platting requirements the city acquires wetland areas that are adjacent to the lake to facilitate preservation and proper management of these resources. This provides opportunities for various forms of passive recreation opportunities for the public.	Fishing, swimming, viewing at established Wanchers Park. Connectivity to planned trails surrounding the associated wetland systems and establishment of trail points with habitat views. Ownership of 100% of associated wetlands and 30% or more of waterfront shoreline;10% in

Shoreline	Existing Public Access	% and Length of shoreline in public ownership	Planned Public Access	Other Opportunities	Goals for specific water body
					residential designated areas for active use and 20% in designated Natural areas and associated wetland systems for passive use and preservation
Long Lake (Map A1-3)	Long Lake Park (City of Lacey) (swimming, sunbathing, volleyball). Boat ramp (state)	Shoreline length: 39,084 ft Length in public ownership: 2,097 ft (5%)	Long Lake park expansion to adjacent parcels.	Several portions of the wetlands on the south west side and at the south end of Long Lake were acquired as plat requirements and are owned by the City of Lacey. These properties have opportunity for a trail around the outside edge of the wetland buffer that could also provide access to the lake. This area is considered sensitive but could provide passive recreation opportunity.	Swimming, boating, fishing, views, connectivity to trail systems, preservation of associated wetland areas. Ownership of 10% of shoreline waterfront in residential areas for active use and 100% of shoreline in designated Natural areas and associated wetland systems for connectivity to trails and Preservation.
Pattison Lake (Map A1-4)	Lake Pointe Open Space Institutional Designation	Shoreline length: 23,442 ft Length in public ownership: 95 ft (<1%)		There is a Homeowners association open space on the west side of the lake where the tip has lake frontage. This site may provide an opportunity for future limited public access. This open space	

Shoreline	Existing Public Access	% and Length of shoreline in public ownership	Planned Public Access	Other Opportunities	Goals for specific water body
				corridor has limitations concerning parking potential and the portion touching the lake is not large enough to meet expectations for most recreation activities.	

Shoreline	Existing Public Access	% and Length of shoreline in public ownership	Planned Public Access	Other Opportunities	Goals for specific water body
Southwick (Map A1-2)	The City of Lacey and the North Thurston Public Schools own the majority of the property immediately adjacent to the south end of Southwick Lake. With the exception of one property, these properties run contiguous to one another and provide lake access. The City of Lacey acquired its wetland property and buffers along the south end of Southwick lake as plat requirements, when properties developed in the late 1990s. North Thurston's wetland area was dedicated	Shoreline Length: 5,491 ft Length in public ownership: 1,541 ft (28%)		Lacey currently owns two open space parcels along the lake. These could accommodate a section of trail around the lake for public use at some time in the future. A major city park (Rainier Vista) is immediately across Ruddell Road to the west and could be used as a staging area for a trail system around the lake.	Preserve lake shoreline in natural state for views. Connectivity to surrounding residential areas and Rainier Vista park.

	to open space as a requirement when it established a school on the property.				

TABLE 3: COMMUNITY ACTIVE RECREATION USE: NEED ASSESSMENT

NOTE: Additional material and periodic updates will be added pending update of the Comprehensive Plan for Outdoor Recreation.

Swimming	Boating	Fishing	Trails	General Access
An opportunity for swimming along Hicks Lake has been identified as having benefit for Lacey's recreation program. Wancher's Park is currently being evaluated for having an area designated for this use.	Lacey's lakes are relatively small and not conducive to motor boating, given other uses present. Opportunities currently available at Long Lake, Hicks Lake and Pattison Lake. Additional facilities need to be reviewed and a public need demonstrated before acquiring new sites for this use.	The Parks Department has identified significant use of its existing facilities at the Community Center and has plans for addition of public fishing piers at lakes where it can be accommodated given the shoreline functions and values. Any opportunities to provide area for this amenity should be reviewed for potential.	Trails are planned to be added as identified in Lacey's Comprehensive Land Use Plan map. Lacey's vision is for interconnection of trail systems around Hicks and Southwick Lakes, Woodland Creek and public access at Butterball Cove. Pedestrian trails that tie into key neighborhood access areas, parks and other neighborhood focus points are a priority.	A full range of access points are needed to provide convenient and interconnected access to all of Lacey's lakes and other appropriate shoreline areas as identified on the Lacey Comprehensive Land Use Plan map. All projects near a designated trail area should be reviewed for potential use and benefit.

TABLE 4: IDENTIFIED CRITERIA/PERCEIVED NEED FOR SPECIFIC PUBLIC RECREATION/ACCESS OPPORTUNITIES

NOTE: Additional activities/criteria will be updated with the update of the Comprehensive Plan for Outdoor Recreation and Development of Updated Priorities

	Swimming	Boating	Fishing	Trails	General Access
Description and discussion of need:	An opportunity at each lake capable of supporting a community swimming facility; Expected use of Hicks Lake as an additional resource to supplement community's opportunity at Long Lake.	Opportunity needed at each lake capable of supporting this use. The lakes of Long, Hicks and Pattison all currently provide this opportunity. No additional access need for this use has been identified.	Additional fishing opportunities needed for the community. At least one public fishing pier for each lake that is capable of supporting this activity and opportunity for two if the opportunity becomes available. Demand for this activity would support a number of additional opportunities at Long, Hicks, Pattison and potentially Chambers Lakes.	As specified on Comprehensive Land Use Plan map. A number of trail connections that may or may not involve physical access to lakes are needed. Wherever an interconnection is available that would enhance opportunities for the overall trail system it should be reviewed. Whenever new homes are being proposed there will be a need and a nexus for connection and use of the trail system.	One access for every 1/4 mile of shoreline and at least one for each reach with distinct characteristics. Trail access with views or rest stops that may or may not provide direct access will be needed The need for connectivity is expected to be significant and every project should be evaluated for its potential benefit and suitability for this function.
Assessment	Unmet need		Unmet need	Unmet need	Unmet need

V. Approaches and Strategies to Achieve Goals for Public Access and Protection and Management of Lacey's Shorelines

A. Regulatory Mandate

Shoreline regulation and jurisdiction - State law requires the review and regulation of land use on property within the shoreline jurisdiction. There is an established permitting and review process required for all projects being developed within this jurisdiction (within 200 feet of the ordinary high water mark of a designated shoreline management water body).

As part of this review process, with a few exceptions, there is a requirement to review proposed projects and apply a condition for appropriate public access.

This review process, and guidance under WAC 173.26.221, allows Lacey to review the proposal, the specific project site, applicable environmental criteria and assess the need and potential for establishing public access on the site as a condition of the permit.

Considerations - Generally, when new public access opportunities are identified the City will review individual site suitability and potential impacts to the shoreline environment. This evaluation should include the suitability of the site to accommodate improvements required for the public access, considering its proposed use, and the shoreline designation and environmental sensitivity. In addition, public access planning, for sites being evaluated as part of a permit requirement, should be integrated with and support the goals of the private applicant.

Environmental protection concerns - As part of a site's evaluation, the site must be judged for its suitability for a range of public access and use needs; active water recreation or passive recreation, view opportunities only or full conservation with no physical interaction with the shoreline. Generally, only public access use compatible with the protection of the shorelines identified functions and values should be considered.

Accommodating infrastructure and design needs of the public access use - Along with considerations of suitability for protection of shorelines there are a number of criteria for suitability that go with accommodating various public use scenarios; will there be a need for parking and can it be accommodated, is there a need for sanitary facilities, can public access be designed to complement the existing neighborhood character and design, or would it disrupt the livability of residents and compromise privacy and enjoyment of surrounding residential homes? Is there an opportunity for "eyes" on the area to provide regular monitoring and surveillance of the area, or would there be a security risk?

Integration with the applicant's needs and goals - In addition to environmental and public design considerations, a project needs to consider goals of the private land owner. Without compromising overall goals of the public access program, individual access needs should accommodate goals of the applicant. The applicant's proposed project and public access use and design should both be evaluated for opportunities where one can complement the other. Every effort should be made to achieve both the goals of the applicant and the needs of the public.

Where a residential subdivision is involved, a design for public access should be developed that will provide what home buyers would consider an amenity to the neighborhood. It must consider the values residents consider important and address privacy, security, aesthetics and long term management and maintenance. Most importantly, it must add what residents will consider value to the investment they have made in their home.

Something that adds value to the development and is seen as a long term asset will sell itself. A poorly designed concept, or request for public access for an unquantified use and undisclosed need, will not be as palatable to our development community. In the worse case, a poorly conceived condition for public access might be considered a taking and devaluing of their product and sales potential.

B. Incentive Based Programs

Generally - Another strategy Lacey will use to achieve public access and open space objectives is the development and implementation of unique innovative programs to provide incentives for land owners to dedicate public access and shorelines property to the city for public use and long term protection and management.

These programs will focus on providing incentives to property owners that give the owner special value and opportunities in exchange for the provision of shoreline property and access that provides a special benefit and asset to the public.

Incentive Dedication Density Bonus Strategy - During the beginning stages of the Shoreline Master Program update, advanced planners from the three cities of Lacey, Olympia and Tumwater met to discuss Regional's preliminary work on the first draft being produced with the Department of Ecology's grant. Planners met on a regular basis to review the preliminary work, identify issues and consider new opportunities and strategies.

One idea discussed was the concept of density incentives for a land owner/developer that dedicated shoreline area and public access. In developing this idea, a set of criteria was developed considered necessary for an incentive program to work. These included the following points:

A. Incentive programs should provide an option that is superior for the shorelines considering, environmental protection and public use/interest, that meets all requirements of the Shoreline Management Act and furthers its spirit and intent;

B. The opportunity for the developer should be superior from a market and business standpoint to result in an independent decision to pursue the program opportunity;

C. Any development resulting from the program should be compatible and further the intent of GMA plans and further the concepts the city is emphasizing in implementation of GMA and its community vision;

D. Any development that results from the program should be compatible and complementary to the existing neighborhood in which it is located;

E. Innovative approaches and unique ideas should be encouraged to find ways to make preferred concepts work. Flexibility in general code standards should be permitted with an emphasis on design for compatibility with surrounding developments and functionality considering livability and improvements to a resident's quality of life;

These same points are adopted as goals and policies in Section VI of this plan.

Within this framework, Lacey should develop an optional program for a land owner to dedicate shoreline property and the right for public access for significantly enhanced development opportunity.

Shoreline regulations already restrict what can be developed within the shoreline jurisdiction and the master program has regulatory authority for application of conditions for public access. In looking at development opportunity for shoreline areas there are many restrictions that impact density and location. If wetlands are present development is prohibited within the wetland and its associated buffer.

The incentive program could provide a developer another option to consider when weighing these standards and restrictions in designing a development that will be successful in the market place.
In exchange for dedication of the shoreline portion of an ownership to the City, an option with significant benefits over a traditional development approach can be encouraged. Opportunity might include the following:

A. Significantly enhanced density, over what the underlying shoreline and zoning designation would normally permit.

B. Opportunity for a project designed with a mix of uses not normally permitted within the underlying zoning district. This might be a range of residential forms and types or limited commercial activity consistent with village concepts;

C. Relaxation of normal zoning standards in favor of a design focus that can achieve Comprehensive Land Use Plan goals for compatibility and functionality. This needs to result in a higher quality of life and a superior neighborhood experience for residents.

D. Opportunity to transfer benefits of the program for a project throughout the city consistent with the framework of this program considering the emphasis on GMA principals and the vision for neighborhoods articulated in the Comprehensive Land Use Plan.

E. Opportunity to build a project designed with these special features on the subject property if the physical development takes place outside the shoreline jurisdiction on the sites upland areas;

F. Potential opportunity to build a portion of a project within the shorelines jurisdiction if the fronting shoreline area is dedicated to the public providing significant public benefit and all other public interest goals of the program are satisfied and all shoreline requirements of the Shoreline Master program are met.

Implementation of this program can be accomplished with specific Comprehensive Land Use Plan goals and policies providing the intent and expectations of the program. These relate to the community's vision for quality neighborhoods and compliance with principals and strategies of GMA.

In addition, zoning provisions can be developed to provide for this program throughout a variety of zones and in a variety of areas as a permitted use or in overlay designations or "receiving areas".

Design expectations exist in the design chapter to require a design considering both aesthetic values and functionality for enhanced livability.

C. Use of Shoreline Classifications and Designation for Best Use and Management of Shorelines

An important emphasis of shorelines management is protection of the natural values and functions of our shorelines. As part of the Shoreline Master Program update, Lacey did an inventory and characterization

of its shoreline areas. Through evaluation of individual reaches shorelines were assigned designations appropriate for shoreline use and environmental protection.

Appropriate designations have been assigned based upon the evaluation of functions and values and what the science suggests for management of shoreline over the long term. Designations applied to Lacey's shorelines include Natural, Urban Conservancy, and Shoreline Residential.

These have varying degrees of intensity of use, going from very restrictive under the Natural designation, to accommodating significant residential development under the residential designation.
As access opportunities become available a one size fits all approach will not be an acceptable way of establishing and developing public access and public use. When sites are reviewed for public access opportunities, the shoreline designation applied to an individual site should guide the type and intensity of public use considered.

Generally the Natural designation should not accommodate intensive recreation uses. These areas are sensitive, usually have significant wetland resources in addition to shorelines and because of sensitive aspects are still relatively undeveloped. These types of areas need protection and are opportunities for passive activities with view points and trails providing views of the shorelines. They will generally not be well suited for active water related activities.

The Urban Conservancy environment, as the name implies, is also a designation where restrictions are applied because of the value and sensitivity of shoreline resources and a need for care in management. This designation is also generally not an area expected to accommodate intensive public or private use.

The areas designated Shoreline Residential is predominantly developed out with intensive residential use of the shorelines. These areas may be suited for intensive use and recreation activity and can be worked into development concepts as part of a development recreation/open space requirement.

VI. Goals and Policies Concerning Public Access to Shorelines in Lacey and the Lacey Urban Growth Area: **These Lacey specific goals and policies supplement the more general goals and policies recommended by the State guidebook which are found in the Shoreline Master Program in Section 17.46.000**

1. **Goal - Provide a full range of shoreline access and use for the Lacey community.**
   - **A. Policy** - Consider the type of public shoreline access that is needed for the Lacey community; passive, active, view points, beach recreation etc. Determine what access opportunities exist and what additional opportunities should be pursued based upon value to the public.
   - **B. Policy** - Develop an inventory of existing and public access to shorelines. Develop an inventory of potential opportunities for public access that Lacey could pursue in achieving its public access goals.
   - **C. Policy -** To support implementing efforts, particularly regulatory actions of conditioning permits, Include a discussion of identified public access opportunities in planning documents with justification and expectations for acquisition and development; The Comprehensive Land Use Plan; the Comprehensive Plan for Outdoor Recreation and the Capital Facilities element.
   - **D. Policy -** Consider a range of strategies and programs to acquire valued public access opportunities.
   - **E. Policy -** Actively pursue public access opportunities with a variety of special programs such as the incentive dedication strategy.

2. **Goal - Develop special innovative program(s) to achieve Lacey's public access goals with incentives attractive to the development community.**
   - **A. Policy -** Craft Incentive programs to gain needed public access opportunities that provide a development option that is superior for the shorelines considering, environmental protection and public use/interest, that meet all requirements of the Shoreline Management Act and furthers its spirit and intent;
   - **B. Policy -** Develop program strategies that offer opportunity for the developer that is superior from a market and business standpoint and will result in a developer's independent decision to pursue the program opportunity;
   - **C. Policy -** Any development resulting from an incentive program needs to be compatible and further the intent of GMA plans and further the concepts the city is emphasizing in implementation of GMA and its community vision;
   - **D. Policy -** Any development that results from an incentive program needs to be compatible and complementary to the existing neighborhood in which it is located;
   - **E. Policy -** Innovative approaches and unique ideas should be encouraged to find ways to make preferred concepts work. Flexibility in general code standards should be permitted with an emphasis on design for compatibility with surrounding developments and functionality considering livability and improvements to a resident's quality of life;

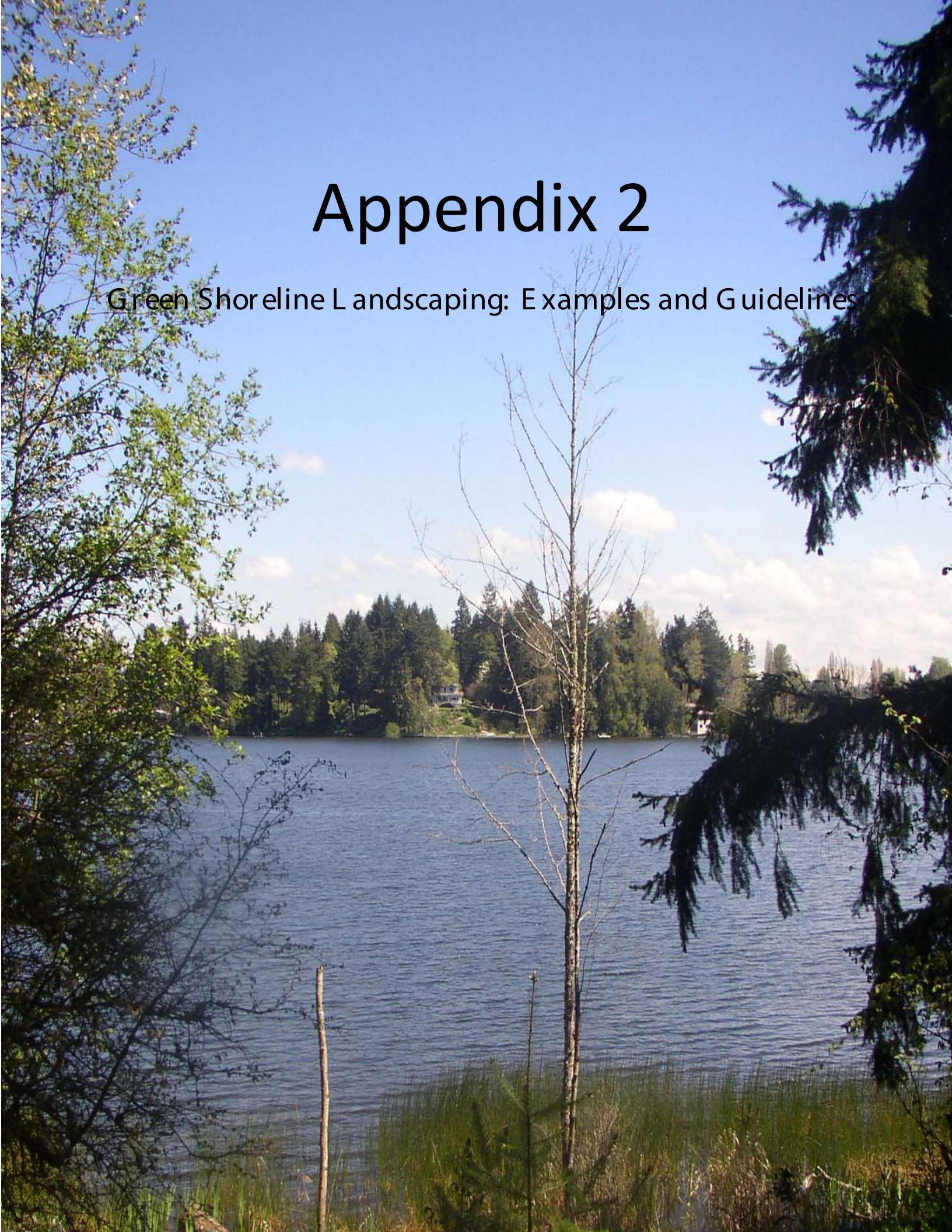
3. **Goal - Establish a shoreline access program that compliments the need for shorelines protection and recovery and restorative planning.**
   - **A. Policy -** Lacey will manage shoreline access opportunities consistent with the emphasis to protect, restore and improve our shorelines identified functions and values.
   - **B. Policy -** When applying conditions for public access, Lacey will select public access sites appropriate to the shoreline designation and requirements for its environmental protection and maintenance of its natural functions and values.
   - **C. Policy -** Site evaluation shall include a site's potential to accommodate the improvement requirements necessary for various public access activities.

D. **Policy -** Public access facilities such as fishing piers may be developed over water if ecological impacts are mitigated.

4. **Goal - Implement a shoreline access strategy that meets City of Lacey needs through permit administration to achieve its shoreline access goals while being sensitive to needs of landowners.**
   A. **Policy -** Lacey will demonstrate need for an access to provide the applicant a reason, purpose and justification for public access;
   B. **Policy -** Lacey will provide specificity of the use and intended design for the applicant to assess and have a comfort level with successful integration of the intended public access with his/her own goals and objectives.
   C. **Policy -** Lacey will increase public access to publically owned shorelines.
   D. **Policy -** Lacey will consider objectives of private projects and landowners as it develops plans for public access and as much as possible, without compromising Lacey's public access goals and goals of the state, will design the access and long term management in a way that accomplishes both.
   E. **Policy -** Public access developed as part of a shoreline permit requirement should be designed to enhance the proposed project by adding value to the property for current and future residents of the site/ownership/development. Ideally, the relationship should be considered a partnership between the developer and the city, where the establishment of public access tied into other public amenities (regional trail, lake trail, parks etc.) will improve a projects marketability and attractiveness, adding value to the proposed development by establishing an amenity residents of the site/ownership/development will see as added value to their home.

VII. Resources

City of Lacey, 2008. Lacey Comprehensive Plan, (including Capital Facilities Chapter).
City of Lacey, 2004. Lacey Comprehensive Plan for Outdoor Recreation.
Thurston Regional Planning Council, 2008. Draft Shoreline Inventory for the Cities of Lacey, Olympia, and Tumwater and their UGAs.
ESA Adolfson, 2009. Lacey, Olympia, and Tumwater - Shoreline Analysis & Characterization Report, prepared for Thurston Regional Planning Council.
Thurston County, 2008. Thurston County Comprehensive Plan (including Capital Facilities Chapter).
Thurston Regional Planning Council, 2007. Thurston Regional Trails Plan.



Appendix 2

Green Shoreline Landscaping: Examples and Guidelines

LACEY CITY COUNCIL

Tom Nelson, Mayor
Virgil Clarkson, Deputy Mayor
Jeff Gadman
Jason Hearn
Ron Lawson
Cynthia Pratt
Andy Ryder

LACEY PLANNING COMMISSION

O'Dean Williamson, Chair
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Kenneth Mitchell
Raymond Payne
Richard Sovde
Gail Madden
Lenny Greenstein

LACEY CITY MANAGER

Scott Spence

LACEY COMMUNITY DEVELOPMENT DEPARTMENT

Rick Walk, AICP, Community Development Director
David R. Burns, AICP, Principal Planner, lead staff on update
Ryan Andrews, Associate Planner
Sarah Schelling, Associate Planner
Samra Seymour, Associate Planner
Jolene Hempel, Permit Technician
Leah Bender, Permit Technician

Appendix 2
Green Shoreline Landscaping:
Vegetation/Landscaping Examples and Guidelines

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Introduction

The following Appendix uses material taken from a guidebook titled "Green Shorelines" and other publications and technical papers developed by the City of Seattle and King County. They are designed to provide information to shoreline landowners about alternatives to the use of bulkheads and other shoreline armoring and generally developing and maintaining more naturalized and healthier shoreline through naturalized landscaping concepts.

Hard engineering is currently the standard approach for erosion control along lake front property, but it has several negative impacts on nearshore habitat as well as the fish and wildlife that depend on them. More sustainable practices, referred to as green shorelines, use plants, beaches, and other natural materials to protect private property and the environment and provide a more ecologically friendly and attractive beach front property.

Green shorelines provide three types of benefits for homeowners:

Green shorelines substantially improve habitat for wildlife while maintaining shoreline stability; they allow improved water access for homeowners and guests, making swimming and shoreline enjoyment easier; and they offer a softer, more natural aesthetic that can enhance views by adding variety and seasonal interest.

Lakes in Lacey embody the best of Western Washington: clean water, bountiful recreational opportunities, striking mountain views, and access to thriving cities. These qualities have inspired many people to make their homes on the shores of our lakes and the Lacey area in general. Over the last several decades, urbanization in Lacey, and that area that is now designated as urban growth area under GMA, has transformed much of what use to be forested waterfronts to a residential one. This change has led to a variety of problems, including loss of important wildlife habitat and some of the area's natural charm. But, lakefront homeowners have opportunities to protect our lakes and regain some of the natural look and feel and the function and value that has been lost.

While homeowners often find green shorelines attractive, many have concerns about effectiveness, reliability, building and maintenance costs, the permitting process, and the potential loss of lawn. The material in this appendix (Appendix 2) addresses these and other concerns by assembling technical information from a wide range of sources and providing local examples. Although much of the information utilized in this appendix was written by the City of Seattle and King County, the principles described can be applied to homes around those lakes in Lacey and Lacey's urban growth area. Technical advice in these pages is offered as guidance; this appendix is not a building code. In the case of any discrepancies, defer to local, state, and federal regulations for shoreline development.

Green shorelines are attractive, reliable, and sustainable. The idea of having your own beach is a major motivator for many people to buy waterfront property. So, why give up your beach for a bulkhead? Why settle for traditional landscaping that threatens your lakes water quality and habitat value, when there are more functional and attractive alternatives that are less expensive and easier to maintain?
The following sections explain and illustrate what the concept of green shorelines is and how these approaches work, where they might be used, and what they look like. Although described separately, keep in mind that in most cases, these strategies are typically used in combination with one another. While the concepts outlined here will give you a broader understanding of the options for improving your shoreline,

it is advisable for you to seek professional assistance to get your project designed and built. Suggestions for selecting designers and contractors are provided in the first section in the subsection titled “Choosing a Shoreline Professional.”

When this appendix uses the term “restoration,” it does not mean returning a lake shore to its pre-development condition. Rather, it refers to restoring specific ecological processes. The shorelines shown in this section look different than they did 150 years ago, but they still can protect fish, wildlife, and water quality in many of the same ways.

Together with design and construction advice, the concepts explored in this appendix provide suggestions to help you get through your permitting process more quickly. Because our lakes may be home to multiple species on the Endangered Species list, lakeshore construction often has to be approved by not only local, but state and federal agencies as well.

While specifics vary, the growing trend across regulatory agencies is to encourage projects that improve shoreline habitat quality through requirements, incentives, and streamlined permitting. Following the principles in this appendix can help you avoid unnecessary permitting hurdles (see “Getting Permits”). Photos of restored shorelines throughout the appendix are included to help demonstrate specific green shoreline techniques, and they also display the aesthetic benefits of natural beaches and plantings. Further, they provide samples of the diverse shoreline restoration projects that already exist around Lacey's lakes.

Bulkheads and docks have altered or eliminated much of the shallow-water habitat around our lakes. By reflecting wave energy back into a lake, these structures tend to wash away nearshore sediment, causing deeper water over time. Lawns have replaced much of the diverse vegetation that provided cover for young fish. Bulkheads also can compromise homeowners’ access to the water and negatively affect views. Entering the water from a bulkhead can be awkward or even dangerous; shoreline armoring accelerates nearshore erosion, deepening the water and making wading difficult.

Further, the widespread use of shoreline armoring is bad for waterfront aesthetics—while homeowners typically prefer greener, natural-looking lakeshores, armoring creates a more heavily developed look along the shoreline. The information provided in this appendix explores some alternatives and how a more natural shoreline can help you achieve and maintain a healthy and attractive shoreline property.

The Water’s Edge

People love to live in places where water and land meet. Shorelines provide work and recreation opportunities, mild climate, and tranquil views.
People are not the only ones drawn to shorelines, however. Due to the diverse resources and habitats that occur along lakeshores, they tend to be biologically rich and productive places. Our lakes are no exception—numerous plant, bird, fish, mammal, and insect species call Lacey's shorelines and associated wetland complexes home.

Problems with "Business as Usual"

Unfortunately, some of the natural elements that attract people to waterfront properties are often casualties of development. Trees, shrubs, and wildflowers are cleared to make way for houses, lawns, and open views. Bulkheads built to control bank erosion displace beaches and cause erosion below the water line. Removal of vegetation along the shore allows contaminants to flow directly into the lake. As beaches and vegetation are replaced by lawn and concrete, prime wildlife habitat disappears, taking with it birds, beneficial insects, and fish.

Beach slope is a critical component of a successful restoration project. A well-designed slope provides resistance to erosion, reducing the need for maintenance. Slopes of 7:1 or flatter are ideal (seven horizontal feet for each vertical foot), but slopes up to 4:1 can be stable in some circumstances. New beaches should be made of an appropriate gravel material. Although people tend to think of sand when they think of shorelines, sand erodes quickly in most parts of Lake Washington. Instead, use clean, well-rounded gravel 1/8" to 2" size – specifics will depend on wave energy and your proximity to known sockeye spawning grounds. Contact the Washington State Department of Fish and Wildlife to learn about requirements in your area (see "Contacts"). If sand is desired it should either be placed well above the water line or physically separated from the gravel beach using stone or wood. Additionally, a successful design for a restored beach must address how the beach will meet neighboring properties. This is not a concern if your neighbors already have or are restoring their own beaches, but it is necessary to plan how the edges of a beach will meet any neighboring bulkheads.

Attractive Alternatives

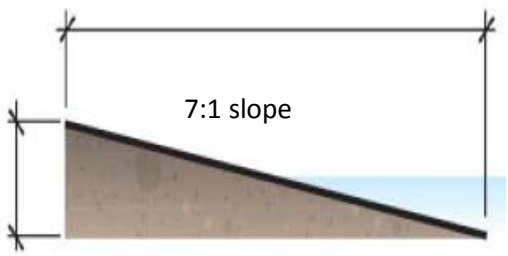
The good news is that people are finding new strategies for protecting their property while also protecting and restoring habitat. Instead of concrete and sheetpile, these practices use a combination of plantings, gravel, stone, logs, and slope modification to protect against shoreline erosion. The ideal is to set structures back far enough to preserve the natural shoreline and vegetation.

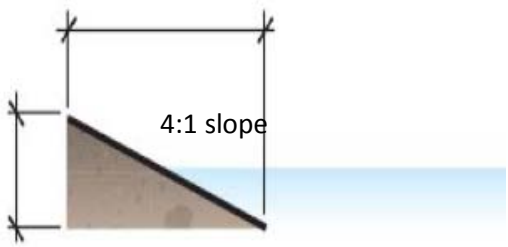
Because a good percentage of our lakes in Lacey are already developed, this appendix focuses on positive steps that you can take to reduce the impact of an existing waterfront home.

Whether your site can accommodate a full beach restoration or only incremental improvements, a wide range of options is available, including:

- full beaches,
- beach coves,
- setting back bulkheads,
- log installation,
- vegetated buffers and
- slope bioengineering.

Green Shoreline Practices





Full Beaches

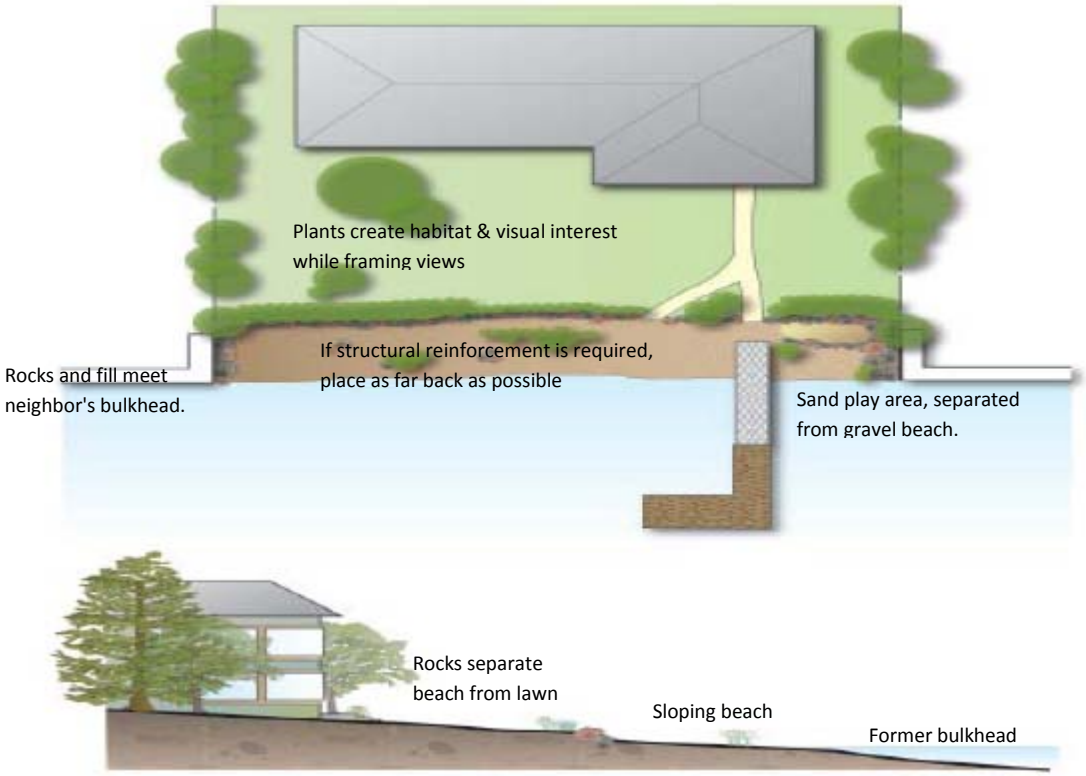
Beach slope is a critical component of a successful restoration project. A well-designed slope provides resistance to erosion, reducing the need for maintenance. Slopes of 7:1 or flatter are ideal (seven horizontal feet for each vertical foot), but slopes up to 4:1 can be stable in some circumstances. New beaches should be made of an appropriate gravel material. Although people tend to think of sand when they think of shorelines, sand can erode quickly. Instead, use clean, well-rounded gravel 1/8” to 2” size – specifics will depend on wave energy. Contact the Washington State Department of Fish and Wildlife to learn about requirements in your area (see “Contacts”).

If sand is desired it should either be placed well above the water line or physically separated from the gravel beach using stone or wood.

Additionally, a successful design for a restored beach must address how the beach will meet neighboring properties. This is not a concern if your neighbors already have or are restoring their own beaches, but it is necessary to plan how the edges of a beach will meet any neighboring bulkheads.

There are two strategies for meeting adjacent bulkheads:

- Install rocks, wood, plantings, or concrete walls at the edges of your beach to reinforce the transition area from beach to bulkhead – these areas will be subject to greater erosive forces.
- Add extra fill below the water line at the edges of your property – this protects your beach from the erosive forces of neighboring bulkheads and protects the bulkheads from undercutting. For shoreline restoration purposes, 25 cubic yards of fill are allowed outright in the water so long as they do not create dry land. More may be approved depending on site conditions.



Some erosion to beaches is normal over time. This can be offset by beach nourishment, the periodic addition of gravel. When a project is designed and installed properly, some nourishment is likely to be necessary every five to ten years. To make beach nourishment easier, it is ideal to include periodic fill as part of the maintenance plan in your initial construction permit. This can help you avoid needing to obtain a local permit to add gravel to your beach in the future. If nourishment is not covered in your initial permit, you will need to obtain a shoreline exemption for each instance of beach nourishment. Time and costs for this process depends on your local jurisdiction. Regardless of whether a local permit is necessary, beach nourishment projects need permits from the Washington State Department of Fish and Wildlife and Army Corps of Engineers. Both have relatively simple application processes so long as your nourishment project will be adding 25 cubic yards of fill or less. Total wait time for both agencies is likely to be 10 to 30 days, and neither permit requires a fee.

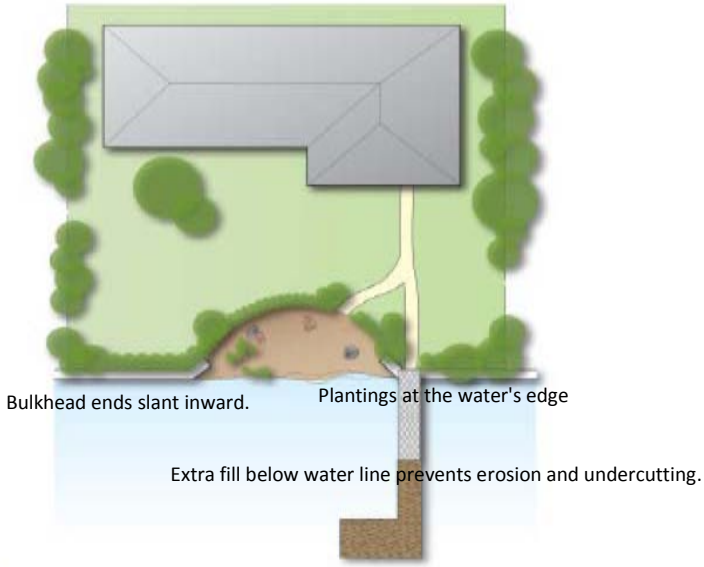
Beach Coves

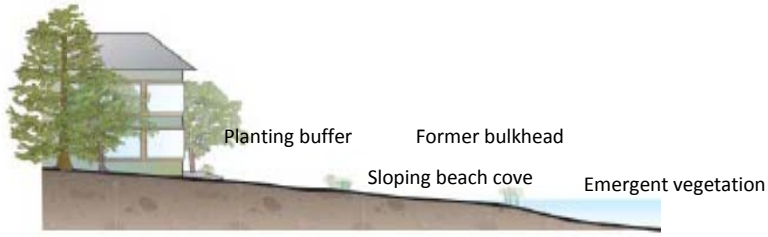
Beach coves or “pocket beaches” are currently the most common type of green shoreline installed around Lake Washington. A beach cove is a beach along a portion of a property’s waterfront, flanked on both sides with hard structural elements. This is a useful strategy to improve habitat quality and water access while keeping armoring if it is necessary. While recommended slope, width, and depth of beach coves vary depending on site conditions, several features are advisable for most beach cove projects. Like full beaches, beach coves should use appropriately sized gravel, and typically not sand. Beach nourishment will be needed with about the same frequency as with a full beach restoration (every 5-10 years), but less fill is needed since the beach area is smaller.

Localized erosion can occur where the bulkhead meets the beach on either side of the cove. Two techniques that help prevent this from happening include:

- Angling the ends of the bulkhead away from the water to dissipate wave energy and decrease erosion.
- Adding extra gravel fill below the water line to help prevent undercutting of the bulkhead.

As with full beaches, beach cove slopes should typically be no steeper than 4:1, i.e., four horizontal feet to one vertical foot. Again, 7:1 is a good goal, but steeper slopes can be stable when appropriate materials are used. Beach coves should not be the first choice if your property can accommodate full beach restoration. They provide less shoreline for wading and other beach activities, and they do less to improve habitat. While fish biologists have observed juvenile salmon using pocket beaches around Lake Washington, research suggests that the fish gravitate to larger beaches and plantings when they are available. Specific criteria to help you consider the practicality of a cove versus a full beach are discussed in "Selecting the Right Approach."



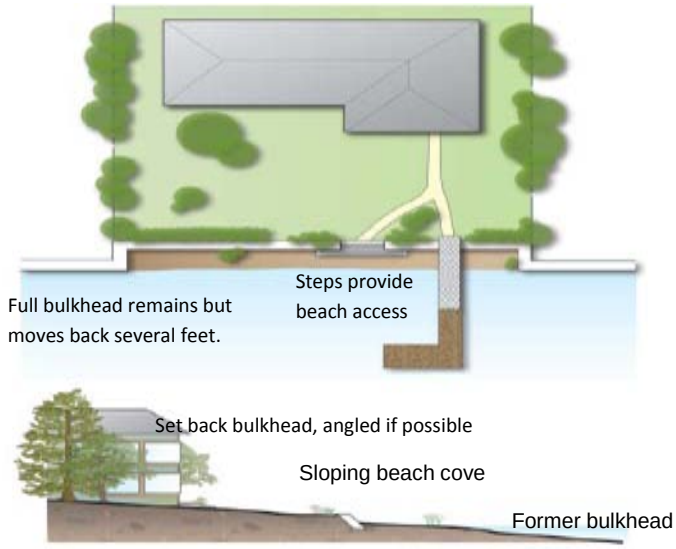


Setting Back Bulkheads

When houses have been built too close to the water, fewer options for shoreline management remain. If there is not an adequate setback between the water line and the house, a bulkhead really may be necessary to protect houses or other structures. In many cases, however, the bulkhead can at least be moved back from the high water mark, providing benefits to the homeowner and the lake ecosystem.

It is a simple concept but one that can make a big difference for access and ecological function. By moving a bulkhead back several feet from the water line, homeowners gain a beach and many of its advantages: safe wading and swimming access, an easy way to launch hand-carried boats, and waterfront play areas. The bulkhead is still there to help accommodate the grade change from house to water or to

provide protection during large storms. Part of the bulkhead can be set back to create a reinforced beach cove, or the whole thing can be set back to create new a new beach all across the shoreline. If you need to keep a bulkhead because of how the site was developed, setting the bulkhead back from the water can simplify your permitting process. The Army Corps of Engineers does not claim jurisdiction above the ordinary high water line, so no federal permit is likely to be required for the new bulkhead provided that it is built before the existing bulkhead is removed. If the old bulkhead you are removing is located at high water, that part of the construction will still require an Army Corps permit.



As with beach coves, a project that sets back a bulkhead need not result in any loss of property. As long as beach fill is properly installed, the high water mark will remain the same distance away from your house as it was before renovation. You may displace some lawn or other upland planting area, but that area will be converted to usable beach. Like other beaches, a beach created by setting back a bulkhead will need periodic additions of gravel fill (see “Full Beaches”). Whether you are setting a bulkhead back or replacing it in the same location, angling back the batter (the slope of the bulkhead) is generally a good idea. With every wave that hits it, a vertical bulkhead reflects most of the wave energy back into the lake. This leads to turbulence and erosion, which results in deeper water at the bulkhead’s base. A sloped bulkhead does a better job of absorbing and dissipating energy, creating less erosion and lengthening the service life of your investment. For Lake Washington, engineers generally recommend a bulkhead slope of 3:1 where site constraints will allow it.

“Won’t a beach attract more geese to my yard?”

While wildlife sightings are a major benefit of living on the water, all creatures are not greeted with equal enthusiasm; the noise, aggressive behavior, and messy habits of Canada geese frequently make them unwelcome guests. Although many worry that creating a new beach may draw more geese into their yard, a more natural shoreline can actually decrease the number of visiting geese.

A lawn extending to the lakeshore is a goose's equivalent of a 24-hour salad bar – geese eat turf grass and snails, and they prefer open areas with no shrubs and trees for predators to hide behind. Two strategies, used separately or together, act as effective deterrents to geese. First, separating the beach from your yard by a few steps makes the ascent too much of a hassle for most geese.

Second, plantings of native vegetation between your yard and the water can act as a visual and physical barrier, separating the geese from your grass. Even with a path through the plantings to allow beach access, geese are reluctant to walk through taller vegetation. "Our old yard was a landing strip for geese. Since we shrank the lawn area and added plants, the geese almost never come here anymore," reports a Bellevue homeowner. In addition to discouraging Canada geese, diverse plantings are likely to increase visits by songbirds and other desirable wildlife.

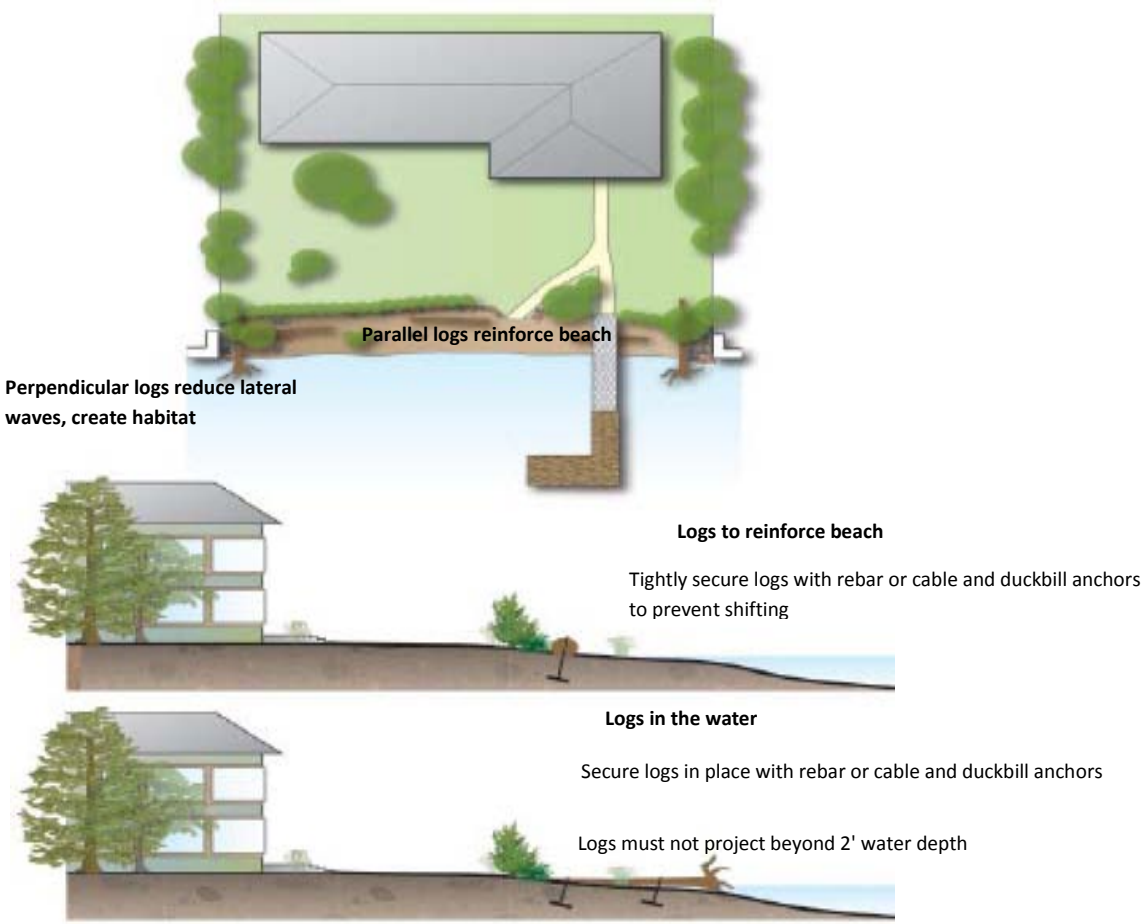
Log Installation

Logs are useful construction materials for green shorelines projects. They can provide strategically placed "hard engineering" structural reinforcement while complementing the aesthetic of a more natural beach project and, in some cases, enhancing ecological function. A few key principles increase the effectiveness of logs.

Logs must be anchored securely in place. Although the dense, weathered wood used for these projects does not float easily, a little buoyancy can be enough to pull a log loose during a storm. A loose log can be hazardous to people, structures, or boats. There are several ways to secure a log, but it is most commonly done using duckbill anchors and cables or by partially burying the log. Also, shorelines that place logs below or partially below the water line must be designed with particular care. Some - restoration efforts around the lake have installed logs perpendicular to the shoreline to enhance fish habitat.

While logs in the water can improve nearshore habitat by creating salmon refuge areas, they should not extend beyond a depth of 2' below ordinary high water. Anything beyond this is thought to create habitat for predator fish species that prey on salmon. In some cases, logs are not allowed to extend beyond the water line, since they can interfere with natural movement of sediments. If logs are used for habitat enhancement, they should be as complex as possible, with root wads and some branches still attached.

The use of trees, shrubs, and perennials is a key characteristic that distinguishes green shorelines from conventional shoreline management. When homeowners see examples of green shorelines, the plants are typically what make the biggest impression; instead of a monotonous swath of lawn and bulkhead, these shorelines use a rich variety of plantings to provide visual interest, create and protect habitat, and help stabilize the lakeshore. In this guidebook, two categories of plantings are discussed: vegetated buffers and slope bioengineering. Vegetated buffers primarily contribute to a shoreline by adding beauty, improving habitat value, and protecting water quality. Slope bioengineering strategically uses plants as an engineering element to hold soil in place.


Parallel logs reinforce beach
Perpendicular logs reduce lateral waves, create habitat
Logs to reinforce beach
Tightly secure logs with rebar or cable and duckbill anchors to prevent shifting
Logs in the water
Secure logs in place with rebar or cable and duckbill anchors
Logs must not project beyond 2' water depth

Shoreline Plantings

The use of trees, shrubs, and perennials is a key characteristic that distinguishes green shorelines from conventional shoreline management. When homeowners see examples of green shorelines, the plants are typically what make the biggest impression; instead of a monotonous swath of lawn and bulkhead, these shorelines use a rich variety of plantings to provide visual interest, create and protect habitat, and help stabilize the lakeshore. In this appendix, two categories of plantings are discussed: vegetated buffers and slope bioengineering. Vegetated buffers primarily contribute to a shoreline by adding beauty, improving habitat value, and protecting water quality. Slope bioengineering strategically uses plants as an engineering element to hold soil in place.

Vegetated Buffers

Vegetated buffers at the water's edge add visual interest to residential landscapes. A mix of textures, flowers, fruit, and colors brings a dynamic quality to your yard throughout the year. Native plants are ideal, not only because they have lower water and maintenance needs, but also because they help draw birds and beneficial insects to your yard.

Vegetated buffers are great options for any lakefront property, whether you have a bulkhead, a beach or a combination of the two. Diverse shoreline plantings contribute to aquatic habitat in four important ways. First, vegetation provides diffuse shade to the water's edge, creating conditions that help juvenile fish blend in with their surroundings.

Second, vegetative buffers restore natural food web processes to the shoreline – plants are home to insects and other small organisms, which become fish food when they fall into the water.

Third, vegetation provides twigs, branches and leaves, which create important refuges from birds and bigger fish.

Finally, planted strips protect water quality by filtering excess nutrients and other contaminants from stormwater. Rainwater flowing over lawns carries fertilizer, pet feces, gasoline, paint, and pesticides into the lake, but shrubs and perennials can help stop and neutralize these contaminants.

How wide should your buffer be? This depends on what your lot can accommodate. While bigger is better, even a few feet can provide a benefit. Most new residences along our lakes will be located in a designation called "Shoreline Residential". In this designation a setback of 50 feet is required. New lots will require the full buffer to be landscaped in a naturalized concept.

However, most of Lacey's lakes have been urbanized, except for those areas that contain sensitive property like wetlands. Where urbanization has occurred it took place under old setback standards. Many times homes were located closer than 50 feet to the ordinary high water mark. As such, these homes have become non-conforming and often will not have room for the full required buffer. In these cases, the buffer will depend upon the amount of property available to be planted. A 20' vegetated buffer will usually fit on most non conforming sites and a 20 to 40' buffer is often feasible.

An additional benefit of vegetated buffers: replacing turf with low-maintenance perennials and shrubs can cut down on yard work by shrinking the area that needs mowing.

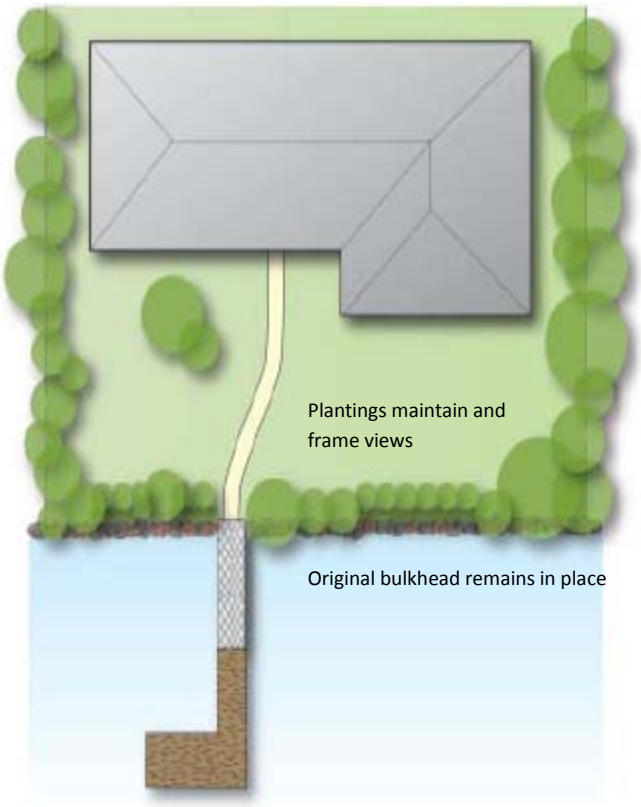
Ideally, shrubs and perennials should be directly adjacent to the water's edge, overhanging the lake wherever possible. When a property has a bulkhead, however, trees and large shrubs need to be sited carefully to prevent damage to shoreline armoring. Black cottonwood, for example, is an ideal tree to

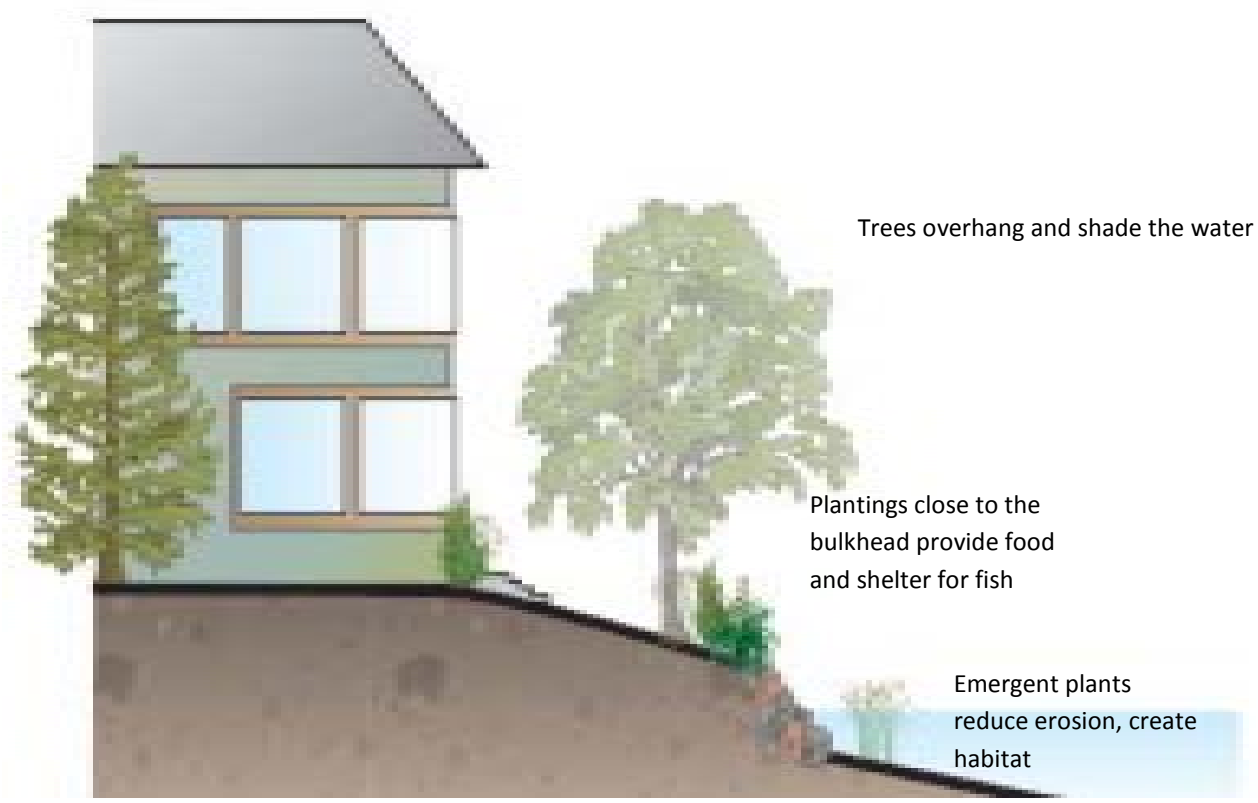
plant next to beach areas, but its vigorous root system could cause problems for a riprap bulkhead. Emergent plants provide excellent habitat and erosion control, but they may struggle on some of our lakes due to the hydrological conditions – the lake's water level.

Water level fluctuated dramatically on some Lakes and low water occurs in the winter. Emergent plants may work well in protected parts of our Lakes, or areas with shallow nearshore slopes. As long as all plants are placed above the high water mark, no permits are necessary to plant shoreline vegetation.

"Sure, I like plants, but maintaining my view of the water is a higher priority."

Many homeowners favor large expanses of lawn because they see it as the best way to protect their view. The truth is that diverse plantings can accent and improve views. Framing views is an important principle of garden and landscape design. Identify which views you want to keep and enhance, and which views would be better screened. Strategic plant placement can help block or soften undesirable views (such as a neighbor's shed or boat house) while maintaining views of the water.
Since houses are always sited above the high water line, it's usually easy to keep views of the water over perennials and low shrubs. Most sites can also accommodate trees without losing views, so long as the trees are maintained properly; limbing them up (trimming out the lower branches to allow views under or through the canopy) may sometimes be desirable. Trees contribute to a sense of privacy, bring birds and other wildlife to your yard, absorb runoff, and can even reduce energy costs by shading your house in the summer. Looking at the examples throughout this appendix will give you more specific ideas of how plantings can preserve and enhance views while reducing your impact on the environment.





Slope Bioengineering

Slope bioengineering is a term used for an array of different techniques that share an elegant principle. Instead of using concrete or sheetpile, bioengineering uses plant material as a self-renewing, ecologically sustainable way to hold soil and gravel in place. These "soft engineering" techniques are commonly used in parks and natural areas for ecological restoration projects, but they may also be used on residential properties.

Each of the dozens of slope bioengineering techniques has its own advantages specific to different situations. A few examples are listed below:

Live stakes are a key element of almost all bioengineering projects. These are cuttings from plants that will grow roots when inserted into moist ground. Willows, dogwoods, and other shoreline species adapted to reproduce through cuttings are all viable candidates. Live stakes can be a simple and cost-effective way to bind soil in place and provide plant cover.

Fascines are long bundles of thin branches, tightly bound with twine. They are partially buried in trenches parallel to incoming waves and "nailed" into place with live stakes. These thick masses of branches provide immediate structural support, catch sediment coming from upslope, and can establish their own roots and new growth. Since they are usually composed of several different species, the resultant growth comes in as a thicket of mixed plants. For this reason, fascines should be placed carefully to avoid blocking views.

Live revetment is used to stabilize steep banks. Geo-textile fabric holds earth-filled terraces in place. Further structural support is provided by live stakes driven through the fabric. Be sure that cuttings are

collected from an approved site – contact Lacey's park Department or the Washington Department of Natural Resources to find out where harvesting is allowed (see “Contacts”). Permits are required for any slope bioengineering installations at or below ordinary high water. However, permits for "green shoreline" eco-friendly stabilization are promoted under Lacey's shoreline Master Program, fees will be minimal and Lacey will process your permit in a fast-tracked review process.

Plant List

Native plants offer many advantages for green shorelines and residential landscaping in general. Because they are adapted to local conditions, they rarely require irrigation. They are surprisingly diverse, offering a wide palette of shapes, textures, and colors to work with. They can be attractively mixed with many nonnative ornamental plants. Also importantly, they offer substantial habitat benefits for birds, beneficial insects, and fish. Finally, native plants do not need fertilizer and pesticide treatments that can put harmful chemicals in the lake.

Many of the plants on this list, like Oregon grape and mock-orange, can be found at any nursery. Others will only be available through nurseries that specialize in native plants. For an up-to-date list of native plant retailers, please contact the Washington Native Plant Society (www.wnps.org).

GREEN SHORELINE PRACTICES: SHORELINE PLANTINGS: PLANT LIST

Trees

Latin name	Common Name	Exposure	Moisture	Height
Abies procera	Noble Fir	sun/part shade	dry/moist	200
Acer circinatum	vine maple	part shade/shade	dry/moist	25
Acer macrophyllum	bigleaf maple	sun/part shade	dry/moist	105
Alnus rubra	red alder	sun/part shade	moist/wet	70
Betula papyrifera	paper birch	sun	moist	80
Crataegus douglasii	black hawthorn	sun/part shade	dry/moist	25
Crataegus douglasii var suksdorfi	Suksdorf's hawthorn	sun/part shade	dry/moist	20
Fraxinus latifolia	Oregon ash	sun/part shade	moist/wet	70
Malus fusca	Pacific crabapple	sun/part shade	dry/moist	40
Picea sitchensis	Sitka spruce	sun/part shade	dry/moist	200
Populus trichocarpa	black cottonwood	sun	moist	100
Populus tremuloides	trembling aspen	sun	dry/moist	75
Pseudotsuga menziesii	Douglas fir	sun/part shade	dry/moist	200
Rhamnus purshiana	cascara	sun/part shade	dry/moist	30
Salix spp.	willow	sun/part shade	moist/wet	6-40
Thuja plicata	Western red cedar	part shade/shade	moist/wet	200
Tsuga heterophylla	Western hemlock	sun/part shade	dry/moist	180

Groundcover

Latin name	Common Name	Exposure	Moisture	Height
Achlys triphylla	vanilla leaf	part shade/shade	moist	1
Allium cernuum	nodding onion	sun	dry/moist	1
Asarum caudatum	wild ginger	part shade/shade	moist	0.5
Camassia quamash	common camas	sun/part shade	dry/moist	1
Cornus canadensis	bunchberry	part shade/shade	moist	0.5
Fragaria chiloensis	beach strawberry	sun/part shade	dry	1
Mahonia nervosa	low Oregon grape	sun/shade	dry/moist	2
Maianthemum dilatatum	false lily-of-the-valley	part shade/shade	dry/moist	1
Vancouveria hexandra	inside-out flower	part shade/shade	moist	1

Shrubs

Latin name	Common Name	Exposure	Moisture	Height
Amelanchier alnifolia	Saskatoon serviceberry	sun/shade	dry/moist	20
Andromeda polifolia	bog rosemary	sun/part shade	wet	1.5
Cornus sericea	red-osier dogwood	sun/shade	moist/wet	15
Corylus californica	beaked hazelnut	sun/shade	dry/moist	20
Gaultheria shallon	salal	part shade/shade	dry/moist	5
Holodiscus discolor	oceanspray	sun/shade	dry	15
Lonicera involucrata	black twinberry	sun/part shade	dry/wet	8
Mahonia aquifolium	tall Oregon grape	sun/shade	dry/moist	8
Philadelphus lewisii	mock-orange	sun/part shade	dry/moist	9
Physocarpus capitatus	pacific ninebark	sun/shade	moist/wet	13
Rhododendron macrophyllum	pacific rhododendron	part shade/shade	dry/moist	20
Ribes sanguineum	red-flowering currant	sun/part shade	dry/moist	6
Rosa gymnocarpa	bald-hip rose	sun/part shade	dry/moist	5
Rosa pisocarpa	cluster rose	sun/part shade	moist/wet	6
Rosa nutkana	Nootka rose	sun/part shade	moist/wet	10
Rubus spectabilis	salmonberry	sun/shade	moist/wet	10
Sambucus racemosa	red elderberry	sun/part shade	moist/wet	20
Sorbus sitchensis	sitka mountain-ash	sun/part shade	moist	10
Spiraea douglasii	spiraea	sun/part shade	moist/wet	12
Symphoricarpos albus	snowberry	sun/shade	dry	5
Vaccinium ovatum	evergreen huckleberry	part shade	dry	12
Viburnum edule	highbush cranberry	sun/part shade	moist/wet	12

Perennials

Latin name	Common Name	Exposure	Moisture	Height
Aruncus sylvester	goat's beard	sun/part shade	moist/wet	5
Aster subspicatus	Douglas' aster	sun/part shade	moist	2
Athyrium fi lix-femina	lady fern	sun/shade	moist/wet	4
Aquilegia formosa	western columbine	sun/part shade	moist	2
Blechnum spicant	deer fern part	shade/part shade	moist/wet	3
Carex canescens	grey sedge	sun/part shade	moist/wet	2
Dicentra formosa	pacific bleeding heart	sun/part shade	moist/wet	1
Iris tenax	Oregon iris	sun/part shade	moist/wet	1
Lupinus polyphyllus	large-leaved lupine	sun	moist/wet	4
Mimulus guttatus	yellow monkey-flower	sun/shade	moist/wet	2
Polystichum munitum	sword fern	part shade/shade	moist	4
Sisyrinchium californicum	golden-eyed-grass	sun/part shade	moist/wet	1
Sisyrinchium idahoense	Idaho blue-eyed-grass	sun/part shade	moist/wet	2
Solidago canadensis	goldenrod	sun/part shade	dry/moist	4
Trillium ovatum	western trillium	part shade/shade	moist/wet	1.5

Emergent Aquatic Plants

Latin name	Common Name	Exposure	Moisture	Height
Alisma plantago-aquatica	water-plantain	sun/part shade	wet	3
Carex kelloggii	Kellogg's sedge	sun/part shade	moist/wet	2
Carex obnupta	slough sedge	sun/part shade	moist/wet	2
Carex stipata	saw beak sedge	sun/part shade	moist/wet	2
Sagittaria latifolia	arrowhead	sun/part shade	wet	3
Scirpus microcarpus	small-fruited bulrush	sun/part shade	wet	3
Scirpus acutus	hardstem bulrush	sun	wet	9

Selecting the Right Approach

Not all of the practices discussed in this appendix are appropriate for every waterfront parcel. Vegetated buffers and logs can be incorporated into just about any shoreline project, including those that require some form of bulkhead. Slope bioengineering and setting back bulkheads also can be used on most sites. While full beach restoration and beach coves are the most desirable options for shoreline management, they may not be effectively implemented on every site.

In cases where bulkheads serve only to maximize lawn area, they can typically be replaced by a beach with minimal grading and little additional reinforcement. Other cases, such as properties where houses are set back just a few feet from the water or are perched steeply above the shoreline, require some amount of armoring. How can you tell which practices might be the most appropriate for your property?

Your property's potential for green shoreline improvements is determined by a combination of four factors: building setback from the water, nearshore slope moving from your shoreline into the lake, yard slope leading from your house to the shoreline, and the intensity of waves in your area.

"High wave energy" on the decision tree does not include the typical waves experienced along our lakes, but rather refers to sites with one or more of the following conditions:

- Site is adjacent to major boat traffic lane.
- Site receives waves that build up over a particularly long fetch (the distance over which waves pick up wind energy).

The decision tree presented here helps evaluate options based on a site's characteristics, but it is not definitive – individual sites may have additional or special characteristics that increase or limit design options.

Setback	Nearshore	Yard Slope	Wave Energy	Type Solution
30 feet or more	Slope 2:1 or less	4:1 or less	Low	1.
			High	2.
		Steeper than 4:1		2.
	Steeper than 2:1	4:1 or less		2.
		Steeper than 4.1		3.
30 feet or less	2.1 or less	4.1 or less		2.
		Steeper than 4.1		3.
	Steeper than 2:1			4.

1. Full Beach, beach coves, setting back bulkhead, bioengineering
2. Beach coves, setting back bulkhead, bioengineering
3. Setting back bulkhead, bioengineering
4. Bioengineering

What's the goal - shade or no shade?

Permitting agencies encourage plants that hang over the water, but discourage overwater structures because they shade the water. So what's the difference? Natural shorelines provide complex habitat: varied sediment sizes, dappled shade, leaves, twigs, branches, logs, and varying depths. All of these factors help juvenile fish by providing shelter and food sources. Shoreline development, especially bulkheads and docks, tend to simplify habitat. It creates large, homogenous swaths, with shallow-water areas alternating between full sun (between docks) and full shade (under docks). Essentially, speckled or patchy shade can be beneficial for salmon, but conventional docks are the equivalent of a dark alley. More complex landscapes such as those promoted by green shoreline practices provide more habitat diversity, which in turn supports relatively high biological diversity. Simplified built landscapes provides homogenous habitat, and only support a few species.

People are often surprised to learn that docks can have a major impact on fish. While problems sometimes arise from toxic preservatives leaching off older docks, the bigger issue is that overwater structures change underwater light conditions, affecting the behavior of juvenile salmon and their predators. Regulators and the construction industry have worked together to address this problem, and new dock-building practices have dramatically decreased impacts on the nearshore environment. Research suggests certain modifications to docks that can improve conditions for fish while maintaining access for people.

Making Construction Clean and Green

Like any construction along the shoreline, building or renovating a dock presents a potential disturbance to sensitive shoreline habitat. However, taking the following steps can decrease the impact: Work with a contractor who is conscientious about preventing spills and minimizing disturbance of sediments, following Best Management Practices. Carefully select wood preservatives for any lumber that will have contact with the water, or use untreated wood. The worst preservatives, creosote and pentachlorophenol, are now banned, but most of the remaining options contain arsenic or copper, which also pose threats to aquatic organisms.

Nontoxic alternatives can be difficult to find and are not yet approved under International Building Code. Fortunately, untreated Douglas fir and galvanized or epoxy-coated steel piles last a long time in freshwater. Use decking materials that will not require toxic finishes and cleaning agents.

No matter how careful you are in applying these chemicals, they end up in the lake. Metal, fiberglass or plastic grating, recycled plastic lumber, and naturally rot-resistant wood can help avoid the problem. For wood needing finishes, look for the least toxic product for the job. The signal word ("poison," "warning," "caution," etc.) at the top of the label gives a general sense of the potential hazards. Avoid products labeled "poison" or "warning" if possible, as these indicate are latively high hazard level.

Schedule construction within approved work windows to minimize disturbance to threatened species. These windows are determined based on the nesting season for bald eagles and the migration patterns of salmon. Work windows vary from one part of the lake to another. You will get information for your area during the application process for Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife (see "Getting Permits").

Let the Sun Shine In

Juvenile Chinook salmon have a complicated relationship with docks. As fry, salmon tend to congregate under docks during the day. This can protect them from bird predation, but may make it easier for larger fish to get them. Additionally, during their migration as smolts, docks present an obstacle for salmon to swim around.

Allowing more light under docks is thought to help salmon during both the fry and smolt life stages. There are several ways to improve the light conditions under a dock:

- Use grated decking with openings that allow light to pass through.
- Make ramps and walkways narrower, ideally 4' or less for walkways and 3' or less for ramps.
- Do not use "skirts," i.e., boards on the sides of the dock that extend down to the water. Multiple agencies prohibit skirts because of their effect on light in the nearshore area.
- Design the dock such that the bottom of the entire structure is at least 18" above ordinary high water.
- Use structural beams such as glu-lams, which allow longer spans between piles.
- Avoid overwater lights that will be on all night. Although salmon need light during the day, artificial light makes them more vulnerable to predation at night.

Estimated costs & maintenance

A survey conducted by Seattle Public Utilities found that most lakefront homeowners prefer vegetation and beaches over bulkheads, but they assume that green shorelines are more expensive than armoring. So what do these projects really cost? It varies, but in general, green shorelines cost about the same as conventional bulkheads. Up-front design, permitting, and construction costs tend to be slightly lower, but maintenance costs make up the difference. There is an enormous range of costs for shoreline construction. The price for any given renovation depends on site characteristics, the professionals that design and build your project, and, to a large extent, your preferences. Also, cost estimates presented here are based on 2008 rates – actual costs fluctuate.

Bulkhead removal

If your site has an existing bulkhead, the cost to remove it is the same whether you are replacing it with a new bulkhead or an alternative. Costs typically range from about $30 to $125 per linear foot, depending on bulkhead material and site access.

Design and Construction

Green shorelines projects tend to cost slightly less for design and permitting, since they tend to require fewer revisions to meet regulatory conditions. “We’ve found that natural shoreline projects sail through the permitting process. We frequently get permits in three months or less, while bulkhead projects can take up to a year,” says one designer who specializes in residential beach restoration. A faster permitting process translates to less money spent sending your designer or contractor to government offices. Once the old bulkhead has been removed to make way for construction, slope bioengineering or beach construction cost about the same as a new bulkhead, while riprap generally costs somewhat less.

Maintenance

Maintenance and long-term costs represent important differences between conventional approaches and green shorelines. While residential bulkheads typically require no maintenance over the course of their 25-50 year life spans, green shorelines may require periodic beach nourishment (see “Full Beaches”).

Although green shorelines require upkeep, beaches and bioengineered shorelines have an important long-term advantage: while bulkheads settle, weaken, and eventually fail, the alternatives can last indefinitely if maintained properly. Aside from supplementary gravel and any replacement plants needed during the establishment period, no large future investments are likely to be needed.

Several factors help determine whether your project is likely to fall at the low end or high end of the possible cost range:

Grading:
Projects that require large volumes of cut or fill are more expensive than those that do not require major excavation.

Access:
If your shoreline can be accessed by land, costs will be lower than they would be for sites that require equipment to be brought by water.

Planting plan:
Planting in the fall and using native plants can bring down costs. Both strategies decrease the need for irrigation and improve plant survival, reducing the need for replacement plantings in the first year.

Project size:
While larger projects cost more as a whole, they carry lower costs per unit. That is, cost per linear foot of a 70' long beach will be less than that of a 25' long beach. Along these lines, working with a neighbor to renovate both shorelines at the same time can substantially lower construction costs for each project.

Bulkhead Removal Costs

Site Access	**Bulkhead Material (Removal)**		
	Wood	**Riprap**	**Concrete**
Accessible from land and water	$30-40 per linear foot	$45-60 per linear foot	$95-110 per lineal foot
Accessible from water only	$40-55 per linear foot	$55-80 per linear foot	$100-125 per linear foot

Shoreline Construction Costs (as of 2008)

	Conventional Treatments		**Green Shorelines**		
Cost Category	**Solid Bulkheads**	**Riprap**	**Beach Establishment**	**Slope Bioengineering**	**Docks**
Capital Costs	Average rock or concrete bulkhead is $350-400 per linear foot, sheetpile is $800+ per linear foot	Average riprapped bank is $125-200 per linear foot	Average beach establishment is $200-500 per linear foot	Average bioengineering project is $200-500	Average new dock costs $100-130 per square foot
Design and Permitting	10-15% of capital costs for larger projects (greater than $100K), 20-25% for smaller projects		7-12% of capital costs for larger projects (greater than $100K), 15-20% for smaller projects		Similar to bulkheads
Maintenance	No maintenance is usually required for 25-50 year life span of projects		Sand replenishment at a 1-5 year frequency, gravel at a 5-10 year frequency, both $3-6 per square feet of beach – with proper maintenance, project can last indefinitely		Similar to bulkheads

Choosing a Shoreline Professional

Almost all shoreline projects, aside from minor landscaping above the water line, will require some hired help from one or more professionals. These individuals use their training and experience to help you navigate the technical details of designing, permitting, building, and maintaining a durable, attractive shoreline. The professionals that you hire help determine how smoothly your design and permitting processes will go, as well as the final outcome of your project. It is worth taking extra care at the outset to find the right professional for you.

Depending on your time, budget, and the specifics of your site, you may find yourself looking for a landscape architect, landscape designer, engineer, contractor, and/or permit specialist. Some companies do all of these things, and others specialize in one. Start by identifying your priorities for your new waterfront. Make a list of features or qualities that you like, either from this guidebook or from projects that you have seen around the lake.

Talk to friends and neighbors who have undertaken recent shoreline work. Their experiences can give you leads, or can help you cross candidates off your list. After identifying several candidates, ask to see photos of recent work or to visit any of their projects. Be sure to tell them that you are interested in a green shorelines or “soft engineering” approach for your project so they can show you the most relevant examples. Inquire specifically about the practices that each contractor uses to minimize impacts on the shoreline environment.

Once you have narrowed the list down to three or four companies invite representatives to your property to get personalized recommendations and estimates. As you interview potential designers or contractors, assess their experience as well as their willingness to help you realize your vision for the project. Make sure that you are confident in their abilities and that you will be able to have a collaborative relationship.

Getting Permits

Staff from the agencies listed in "Contacts" can help you navigate through specific requirements. The Governor's Office of Regulatory Assistance can also provide guidance: Call 1-800-917-0043 or visit www.ora.wa.gov for free support regarding environmental permits and permitting processes. Additionally, jurisdictions at all levels are working to encourage the kinds of practices highlighted in this guidebook. Many of them already have some regulations that favor green shorelines, and most are working to make the process smoother for shoreline restoration. If you follow the recommendations in this guidebook, the permitting process is likely to be noticeably easier and faster. Good design and thorough documentation are always necessary for obtaining permits, but proposed projects that feature beaches and plantings will tend to be more successful than those that emphasize armoring.

Any project that involves work in, over, under, or adjacent to water requires review from three levels. Each project may be required to obtain the following permits from the following agencies:

Local Jurisdiction (City of Lacey or Thurston County)
• Shoreline substantial development permit or exemption
• Environmentally Critical Area Permit
• State Environmental Policy Act (SEPA) permit or exemption
• General construction permits

State Agencies
• Washington State Department of Fish and Wildlife
• Hydraulic Project Approval (HPA)
• Washington Department of Ecology
• Section 401 Water Quality Certification
• Coastal Zone Management Certification
• NPDES Stormwater General Permit

United States Army Corps of Engineers
• Discharge of Dredge or Fill Material,
Section 404 Permit
• Work for Structures in Navigable Waters,
Section 10 Permit

Application Materials

In most cases, the permitting process will be handled by your project designer or contractor. Information that they will need to provide with the application includes:

1. Joint Aquatic Resources Permit Application (JARPA) form. In an effort to streamline permitting, multiple agencies have worked together to develop a single application form. The form is currently used by WDFW, Department of Ecology, and the Corps, and it may be used by some local jurisdictions in the future. Find the form and more information at http://www.epermitting.org/default.aspx.

2. Plans and, if applicable, surveys of existing conditions.

3. Plans for proposed construction, including plan (aerial) view and cross sections. The JARPA specifies an 8½"x 11" copy for fax and public notice purposes, but larger plans are required for most local reviews. Each municipality has its own standards for drawings, so be sure to research these before preparing your application packet.

4. Photos or aerial photos of existing conditions may be helpful.

5. Any additional studies or specifics you already have for your site erring on the side of too much information will help your application get through the process faster. For example, if one agency requires you to conduct a geotechnical study or biological evaluation, include the results in all of your permit applications. Many permit reviews are delayed while agencies wait for additional information from applicants. Remember to review application requirements, use the most current forms, provide all the required information, and obtain all the necessary signatures before attending a permit review meeting.

Permit Application Timeline

Permitting takes time. It is ideal to start the permit application process a full year before the desired work start date. While green shorelines projects are sometimes permitted in as little as three months, the process can be lengthy since several steps have to occur in a specific sequence.

Before you draw any plans, start by reviewing local permitting rules, Corps and WDFW design guidelines, and information requested on the JARPA form. Find out if there are any examples, conditions, or concerns for your specific type of project. Also understand what work windows are and how they might affect your project timeline (see "Building Better Docks").

Once you and your designer complete a concept design for your project, meet with your local agency for early design guidance and review of your preliminary plans. Taking this step before completing plans will save time and money. Since Corps permits are the most complex, consider submitting your applications to both the Corps and local jurisdiction at the same time.

As part of its review process, the Corps is required to consult with other agencies such as the Washington State Department of Ecology (DOE), tribal agencies, NOAA Fisheries, and the United States Department of Fish and Wildlife. Except for the DOE, you probably will not work directly with these other agencies. DOE will begin formal review of your application once it receives official notification from the Corps.

Tips to Facilitate the Army Corps Permit Process

The Corps has written several documents that can accelerate the process of getting federal permits. Most significant for green shoreline projects is a "Programmatic Biological Evaluation" for shoreline restoration that the Army Corps wrote in collaboration with NOAA Fisheries and the U.S. Fish and Wildlife Service. It includes criteria for cut beaches, fill beaches, and bulkhead plantings.

If your project meets the conditions listed, you will be able to forgo the site-specific Endangered Species Act analysis, which is typically the most involved part of getting federal permits. To determine whether your project meets the programmatic conditions, visit: http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagena me=Programmatics.

The Corps has a series of general permits known as Nationwide Permits for activities that have minimal environmental impact. If your project does not meet the criteria of RGP3, Nationwide Permits 3, 13, and 27 may help streamline permitting. For more information, visit: http:// www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename =REG&pagename=What_is_NWP.

Resources

The following publications and websites served as sources for this appendix. They include additional information based on shoreline restoration efforts around the country.
For links to these sites and more, please visit the Green Shorelines website:
www.seattle.gov/dpd/GreenShorelines.

Lakeside Living (King County)
www.govlink.org/watersheds/8/action/lakeside-living
Salmon-Friendly Gardening (City of Seattle)
www.seattle.gov/util/Services/Yard/Natural_Lawn_&_
Garden_Care/Salmon_Friendly_Gardening/
index.asp

Lakescaping for Water Quality and Wildlife
(Minnesota Department of Natural Resources),
by Carrol Henderson, Carolyn Dindorf, and Fred Rozumalski.
May be purchased online at www.comm.media.state.
mn.us/bookstore/bookstore.asp

Slope Stabilization and Erosion Control
(Washington State Department of Ecology)
www.ecy.wa.gov/programs/sea/pubs/
93-30/index.html

Alternative Bank Protection Methods for Puget
Sound Shorelines (Department of Ecology)
www.ecy.wa.gov/biblio/0006012a.html

Native Plant Resources Directory (King County)

Puget Sound Shoreline Stewardship Guidebook
(Puget Sound Action Team)
www.kingcounty.gov/environment/watersheds/
central-puget-sound/shoreline-stewardship-guidebook.

The Shoreline Stabilization Handbook: Lake Champlain
and Other Inland Lakes (Northwest Regional
Planning Commission)

www.nrpcvt.com/nrpcvt/shoreline.html

Green Home Remodel series (City of Seattle)
In particular, see “Landscape Materials” and “Hiring a
Pro.” www.seattle.gov/dpd/GreenBuilding/
SingleFamilyResidential/Resources/RemodelingGuides/
default.asp.

The Water's Edge: Helping fish and wildlife on your waterfront property (Wisconsin Department of Natural Resources)
www.dnr.wi.gov/fi sh/pubs/thewatersedge.pdf

Governor's Office of Regulatory Assistance,
including documents such as a Aquatic Permitting Fact Sheet, a Permit Handbook, permit schematics, and an online permit questionnaire, www.ora.wa.gov

Army Corps of Engineers permit process overview
www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=mainpage_Permit_Applicant_Info

Contacts

United States Army Corps of Engineers,
Seattle District Office
Mailing Address:
P.O. Box 3755
Seattle, WA 98124
Street Address:
4735 E. Marginal Way South
Seattle, WA 98134
(206) 764-3742
www.nws.usace.army.mil

Washington Department of Fish and Wildlife, Region 4

Department of Ecology,
Southwest Regional Office

Governor's Office of Regulatory Assistance
1-800-917-0043
www.ora.wa.gov

City of Lacey, Community Development Department
Mailing Address:
PO Box 3400
Lacey, WA 98509
Street Address:
420 College Street SE
Lacey, WA 98503
(360) 491-5642

Glossary

Armoring: Any hard engineering approach to shoreline protection. This includes structures made of concrete, riprap, and sheetpile. While needed on some properties, armoring is often unnecessary, and causes negative impacts on fi sh habitat, water quality, and access to the water.

Beach nourishment: Adding appropriate gravel to the shoreline in order to offset gradual erosion. Typically needed every five to ten years for beaches on Lake Washington.

Emergent plants: Plants that thrive while partially submerged. In addition to having striking visual qualities, emergent plantings are an effective way to enhance nearshore habitat and provide reinforcement against erosion. Often difficult to establish in Lake Washington, given the lake's unusual hydrology (see "Plant List").

JARPA: Joint Aquatic Resources Permit Application, a form developed by multiple regulatory agencies to streamline the environmental permitting process (see "Getting Permits").

Nearshore habitat: Shallow areas waterward of the shoreline, which make up the most biologically active part of the lake. Aquatic plants, juvenile salmon, shore birds, and numerous other organisms depend on this habitat. Nearshore slope can be a key factor in determining which kinds of restoration work on a given site (see "Selecting the Right Approach").

Ordinary high water line: The elevation where high water meets the shore. Water level in Lake Washington, which peaks in the summer at 21.85 feet above sea level, is regulated at the Ballard Locks. In most cases, local, state, and federal permitting processes are triggered when development occurs at or below the ordinary high water line.

Riprap: Stone commonly used for bulkheads or other bank stabilization efforts; ranging from about 4" to 2' in diameter. Also known as rip-rap, rubble, revetment, or rock armoring.

SEPA: State Environmental Policy Act, a state process that requires state and local agencies to consider the environmental consequences of a proposal before approving or denying the proposal.

Sheetpile: A type of wall used as a bulkhead on sites with shallow setbacks. Typically made of steel, vinyl, fi berglass, or treated wood, sheetpile walls have all the negative effects of concrete and typically cost more.

Shoreline exemption: A determination that a proposed project does not require a shoreline substantial development permit. Shoreline substantial development permits are required by state law for many development activities in shoreline areas, but most single-family residential projects are exempt (see "Getting Permits").

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Section 2

Material in this section was taken from King County Fact Sheets. Various topics that may be helpful to shoreline property owners are included. While these fact sheets were prepared in King County most of the information is applicable to Lacey's lakes and may be helpful to shoreline property owners.

Shoreline Practices for a Healthy Lake

Preserve native vegetation around your lake
A strip of natural plants between the lake and buildings, lawns or cleared areas keeps your lake healthy. The wider this "buffer" of native plants, the better it is for the lake. Natural vegetation:

- filters sediment and nutrients out of surface runoff
- provides habitat and food for fish, insects and other wildlife
- stabilizes banks
- controls erosion and dissipates floodwaters

A buffer of native plants at water's edge can also discourage waterfowl from taking over your lawn. A lawn right to the shore attracts waterfowl which add nutrients to the lake.

Protect your lake from your septic system
Know your system - where it is and how to maintain it. Have your septic tank checked every other year and pumped when necessary. Conserve water to avoid stressing your septic system, and keep solvents, phosphate detergents, additives and other hazardous materials out of the system.

Consider "green gardening" for your lawn
Keep pesticide, herbicide and fertilizer use to a minimum - or replace your lawn with ground cover or shrubs. Native trees and shrubs require little maintenance and look great.]

Locate buildings well back from the shoreline
Build structures in accordance with Lacey's regulations for shoreline development. The Lacey Residential shoreline designation requires a 50 setback from the shoreline. In this areas avoid waterfront structures that require lots of tree clearing, excavating or filling. Again, keep a wide buffer of native vegetation between structures or cleared areas and the lakeside.
Get involved with your lake management district.
Lacey Water Resources Staff and Community Development Staff will provide technical assistance to lakeside residents and others on lake quality and management issues.

Living with Lakes
Hints for Home Landscape and Garden

A gently contoured backyard sweeping down to a glistening lake where fish jump and waterfowl nest and play- this is the scene many people in Lacey imagine when thinking about lakeside life. But if improperly tended, beautiful backyards like these can harm lake water quality and habitats. Lakeside dwellers can protect their lake by carefully planning and maintaining their yards and gardens.

Problems with Soil and Sediment

Transported by surface water runoff, sediment can wreak havoc on a lake's biological productivity. Sediment stresses and damages fish gills and cuts off sunlight that nourishes aquatic plants and animals. Pollutants (including metals and nutrients) can also adhere to these particles. Suspended in water, they can disturb the delicate balance of the lake ecosystem.

Where does this excess sediment come from? In undisturbed areas, rainfall is absorbed by the earth or filtered by vegetation before it can slowly enter a lake. But as people move in, they build roofs, driveways and other hard or impervious surfaces that prevent rain from soaking in. The water can no longer be absorbed, but flows faster, directly into the lake carrying sediment and pollutants with it.

This runoff water with its load of sediment, nutrients and other pollutants can be controlled by structural and non-structural or behavioral measures (called "best management practices" or BMPs) and by maintaining a buffer of native plants around the shoreline of a lake.

A Buffer of Native Plants

Preserving a natural buffer of native plants is one of the best ways to protect a lake. Shoreline plants filter sediment and chemicals from runoff, provide food and shelter for fish and wildlife and can slow or prevent shoreline erosion. Shade from overhanging shrubs and trees can keep waters cool and oxygen-rich while limiting the growth of unwanted aquatic plants.

Established lake buffers are best left undisturbed. Even where a lake's natural plant cover has been removed or damaged, a buffer can usually be restored. An ideal buffer should be at least 20 feet wide, planted with an assortment of native trees, shrubs and groundcovers. Paths or walkways to the lake should remain small so as to minimize shoreline impacts. A lake-friendly landscaper can suggest ways to optimize lake vistas while retaining shoreline vegetation. Low-cost native plants can be obtained from several local suppliers.

Keeping Your Lake Chemical-Free

Fertilizers and pesticides may provide a "quick fix" for lawns and gardens, but can have long-term impacts on the health of a lake. Both can be carried by wind and rain from lawns and gardens into lakes, with significant consequences for aquatic life. Reducing the use of pesticides protects lakes and contributes to a healthier environment for fish, wildlife and people. So instead of chemical pesticides, try a system of natural checks and balances to care for your lakeside plants:

Ask yourself whether you can live with some plant damage and whether destroying a pest is really necessary.

Use organic controls. Discourage pests with scattered borax; dishearten them with soap washes; destroy them with natural enemies like ladybugs or species-specific nematodes, both available at gardening stores.

Outwit pests by rotating crops and timing plantings to avoid peak insect invasions.

If pesticides cannot be avoided, choose the least lethal ones, and be sure they are not toxic to aquatic life. Never apply pesticides during windy weather or with-in 100 feet of a lake. Follow label directions and properly dispose of all hazardous waste at an appropriate collection site.

Chemical fertilizers, especially phosphorus, can stimulate plant growth in your yard as well as in the lake. Nutrients are all too easily washed from land surfaces into ditches and streams or directly into lakes, where they can feed aquatic plants and cause nuisance algal blooms. Organic fertilizers such as composted animal manure, commercially prepared organic soil additives or composted food and garden waste will break down slowly and improve the make-up of garden soils. Composting also keeps garden wastes out of lakes and puts it to good use through recycling.

If you do fertilize the lawn, remember that less fertilizer more often is better than a single, large application. Apply plant or lawn fertilizers only when plants show a need- not because you are following a schedule.

Waterfowl: Too Much of a Good Thing?

In recent years, non-migratory ducks and geese have been living the good life, protected and encouraged by human development in Thurston County. These waterfowl love to feed on the succulent grasses of well kept lawns. With few natural enemies to keep their numbers in balance, geese and ducks can overpopulate and become a nuisance. Large flocks can overgraze lawns, littering yards and docks with droppings and molted feathers. Their droppings pollute lakes with nutrients, and, to make matters worse, their intestines may contain a tiny parasite that can cause a condition known as "swimmer's itch."

Canada geese are protected by the International Migratory Bird Treaty Act and, therefore, should not be harmed. However, these and other waterfowl can be discouraged by deterrents such as two-foot-high fences, large helium balloons, scarecrows, streamers or reflectors. Because geese and ducks are attracted to lawns or domestic grass growing along lake shorelines, a buffer of natural vegetation between the water's edge and a homeowner's lawn will deter them. Most importantly, do not feed waterfowl and discourage others from feeding them as well.

Lakeside Logic

Remove trash, old tires and other unnatural objects from the lake shore. Leave fallen logs, root masses and other wild "clutter" to help form natural habitats.

Keep cars and livestock away from the lake shore. Construct boardwalks and ramps that allow reasonable access to lakes without causing shoreline erosion.

Don't leave soil exposed and vulnerable to erosion. Cover any exposed soils with leaves, straw or other mulching materials. Ideally, the shoreline itself should be planted with native species, rather than bulkheaded with rocks or concrete. Native vegetation buffers provide good shoreline stability and offer refuge for beneficial insects, fish and wildlife.

Most large-scale shoreline projects require a shorelines permit from the **City of Lacey or Thurston County** and a hydraulic permit from the **Washington State Department of Fish and Wildlife (360)775-1311** in Olympia.

The Secret Life of Lakes

Ever wonder why you sometimes feel a layer of cold water when you are swimming in a lake? Or why some lakes shrink in the summer while others stay full year-round? The answers are in the thermal properties of water, the hydrologic cycle, climate and their effects on lakes.

What is the Hydrologic Cycle?

Water moves from the atmosphere to the ground and back again, in a circular pattern called the hydrologic cycle. Clouds hold water vapor, which falls to the earth as rain, snow or sleet. About three-fourths of that water returns directly to the air- either by evaporating from the earth's surface or transpiring from the pores of plants. Much of the water that remains on the earth's surface is stored in streams, lakes, ponds, wetlands, groundwater and oceans. Lakes serve as temporary holding areas for water before it circulates again through the hydrologic cycle.

The Water Budget

The water in a lake is constantly changing. New water enters from several sources: direct precipitation, surface runoff, flows from rivers and streams, and subsurface flows of groundwater. Water also leaves lakes through several different routes, including surface outflows, direct evaporation and seepage into groundwater. The sum of all the water moving into a lake and the water already present in the lake, minus the water leaving the lake on an annual basis makes up the water budget. Timing, duration and intensity of precipitation have dramatic affects on a lake. At the end of summer, lake waters are generally at their lowest levels. In the fall, as the rainy season begins, soils become saturated, streams begin to fill, and lake levels rise. Lacey's lakes acquire most of their water during the six-month period of cool, wet weather, from October to March.

The Time Factor

Some lakes stay relatively clean and clear year-round, while others seem to be more vulnerable to pollution, poor water quality, and algae blooms or other signs of increased productivity. Why? It may be because of each lake's hydraulic residence time- the total time that it takes to completely replace the volume of water through natural inflow to, and outflow from, the lake. Lakes with relatively short hydraulic residence times (days or weeks) stay relatively free of algae, because most of these single-celled plants are flushed out before they can grow and multiply. Lakes with long hydraulic residence times (months or years) favor the growth of algae and are more susceptible to the effects of pollution and decaying aquatic plants.

Layers of Water

The density of water varies with its temperature. At 39 degrees Fahrenheit, water molecules draw closely together and water becomes as dense and heavy as it can get. At temperatures both higher and lower than 39 degrees, the molecules spread out and the water becomes lighter and less dense. Because ice is less dense than water, it forms at a lake's surface and not at the bottom. If not for the unique properties of water, lakes would be very different systems. Lacey's lakes have fairly consistent water temperatures from month to month.

Watersheds and Their Lakes

A watershed is the area of land that drains to a lake or other water body. Watersheds vary in size from just a couple of acres to thousands of square miles. The characteristics of a watershed and the land use activities within it have profound effects on lakes. If a hillside is clear cut or a wetland drained, a lake may receive significant pollution loads or its water cycle may be altered. Changing from undeveloped to residential land uses may result in a 700-percent increase in phosphorus loading to a lake. Much of this

increase can be traced to the loss of forests and the removal of plant material- both of which naturally bind phosphorus, keeping it out of lakes and other water bodies. Other sources of phosphorus in lakes include failing septic systems and activities such as car-washing and landscaping. Watersheds and human activities determine how and at what rate water enters the lake.

Larger watersheds accumulate more water that may flush through lakes at a greater rate. In watersheds with wetlands, lake levels will fluctuate more slowly, because wetlands act as sponges, soaking up and gradually releasing precipitation. As watersheds become urbanized and acquire more rooftops, parking lots and other places where water can't sink in or infiltrate, lakes receive more surface runoff all at once- and more pollutants carried by the runoff.

The Value of Riparian Vegetation

Stream or river banks are riparian areas, and the plants that grow there are called riparian vegetation. Riparian vegetation is extremely important because of the many functions it serves.

1. Bank Stabilization and Water Quality Protection

The roots of riparian trees and shrubs help hold streambanks in place, preventing erosion. Riparian vegetation also traps sediment and pollutants, helping keep the water clean.

2. Fish Habitat

As dying or uprooted trees fall into the stream, their trunks, root wads, and branches slow the flow of water. Large snags create fish habitat by forming pools and riffles in the stream. Riffles are shallow gravelly sections of the stream where water runs faster. Many of the aquatic insects that salmon eat live in riffles. Salmon also require riffles for spawning. They use pools for resting, rearing and refuge from summer drought and winter cold.

3. Wildlife Habitat

Over 80 percent of all wildlife species in western Washington use riparian areas during some part of their life cycle. Riparian vegetation provides food, nesting, and hiding places for these animals. Unfortunately, forested riparian areas account for the smallest percentage of forest land in Washington.

4. Food Chain Support

Salmon and trout, during the freshwater stage of their life cycle, eat mainly aquatic insects. Aquatic insects spend most of their life in water. They feed on leaves and woody material such as logs, stumps and branches that fall into the water from streambanks. Standing riparian vegetation is habitat for other insects that sometimes drop into the water, providing another food source for fish.

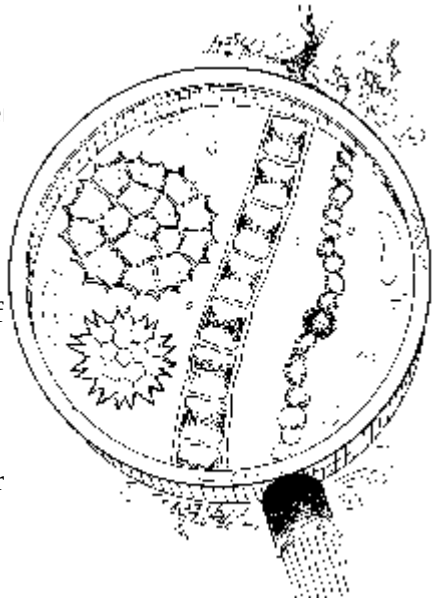
5. Thermal Cover

Riparian vegetation shields streams and rivers from summer and winter temperature extremes that may be very stressful or even fatal to fish and other aquatic life. The cover of leaves and branches brings welcome shade, ensuring that the stream temperature remains cool in the summer and moderate in the winter. Cooler, shaded streams have less algae and are able to hold more dissolved oxygen, which fish need to breathe.

6. Flood Control

During high stream flows, riparian vegetation slows and dissipates floodwaters. This prevents erosion that damages fish spawning areas and aquatic insect habitats.

Riparian vegetation is essential for maintaining high water quality in streams, rivers, lakes, and along shorelines. However, riparian vegetation remains relatively unprotected from poor agricultural practices, residential and commercial construction, landscaping, and logging. In recognition of this, the City of Lacey Sensitive Areas Code (SAC) requires the preservation of riparian vegetation along Woodland Creek, around wetlands, and in other sensitive areas in order to protect the water quality and habitat value of these areas.



Algae and Water Quality

The condition and characteristics of a lake can change over time because of natural processes. However, our actions both along the shoreline and within the surrounding watershed can also cause changes and even create water quality problems.

Nutrients used by algae, such as nitrogen and phosphorus, are necessary for them to grow, and our planet would be sterile without their success. However, big increases in nutrients in lakes due to human activities can cause algae to grow much more rapidly and become nuisances. Cloudy water, thick scums, and foul odors can make lakes unattractive for fishing, swimming, boating or even just hanging out on the beach.

Human activities, including gardening and daily household practices, septic and other waste treatment systems, agriculture, forestry, and land development, serve as pollutant sources and may have dramatic effects on lake water quality.

Green Links in a Great Chain

Algae are tiny aquatic plants that are found as single cells or in colonies of various sizes. They make a primary link in the aquatic food chain, acting as food for microscopic animals called zooplankton. These tiny animals are eaten by many fish and other aquatic animals. As a by-product of photosynthesis, algae also release oxygen into the water that can be used by fish and other aquatic animals. However, when large populations of algae are produced and then die, the process of decomposition also uses oxygen, which can limit its availability for other life in the lake.

An algae bloom is a sudden explosion of algal growth, typically encouraged by warm water temperatures, sunshine and an abundance of nutrients in the water column. Spring blooms are common in many lakes, as the days lengthen and nutrients are abundant from winter water inputs. Once the nutrients are used up, most lakes will settle into summer conditions with less algae. Lacey's lakes also sometimes experience summer blooms, if nutrients are still present. Fall blooms occur as winds and cooler temperatures mix lake water, bringing up nutrients from the deeper parts of the water column.

Blooms usually last several weeks, then "crash" as conditions change to limit their growth. Depending on the type of algae and its characteristics, a greenish scum may occasionally form on a lake's surface, sometimes causing a foul smell and taste to the water. Sometimes bluegreen algae blooms produce toxins that could be harmful to people, pets, and wildlife.

Be Algae Aware

If your lake's water looks like pea soup or has an offensive smell, it is probably undergoing an algal bloom. Lakeside residents and visitors should consider taking these steps:

- If a significant bloom is observed, notify the **City of Lacey Water Resources Division** to arrange a site investigation and possibly laboratory testing.
- Keep your pets away from the water and, in particular, do not allow them to drink it.
- Rinse off with tap water immediately after swimming in an algae-filled lake and dry off vigorously with a towel.
- Never drink untreated lake water, regardless of its clarity or algae content.

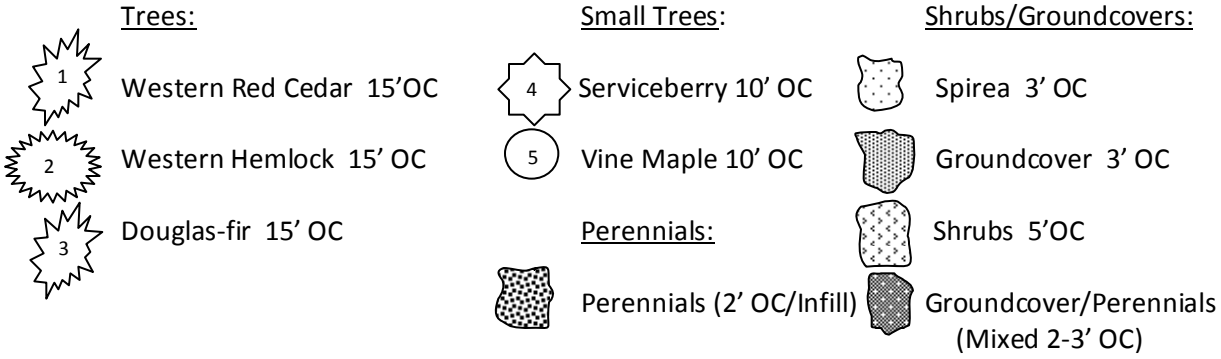
Many lakes can have an occasional algae bloom over the years when conditions are just right, just like the perfect storm. However, repeated blooms throughout each year or having blooms that cause nuisance conditions should be investigated for deterioration of the ecosystem of the lake.

A lake management plan investigates a lake's physical, chemical and biological characteristics and identifies appropriate methods for controlling nutrients that stimulate algae. These might include such actions as reducing watershed nutrient sources from stormwater runoff, implementing lake-friendly lawn and gardening practices and maintaining on-site septic systems to regularly prevent nutrients from entering the water. In other cases, in-lake management actions such as alum treatments or hypolimnetic aeration might be appropriate.

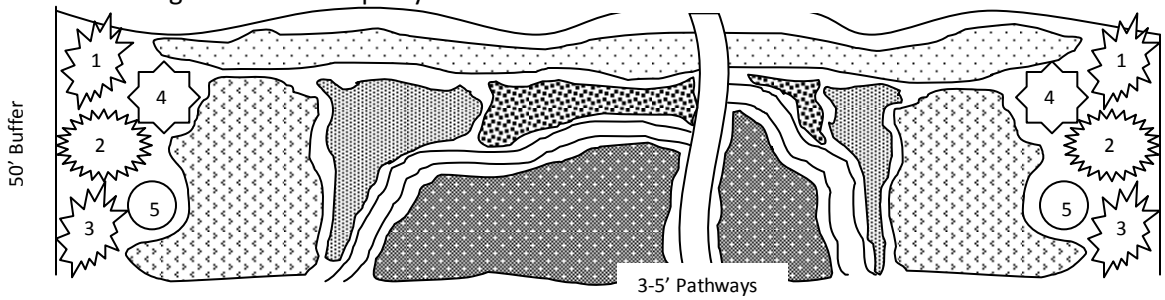
Example Landscape Plans

Planting Template for a 50' Shoreline Buffer Area

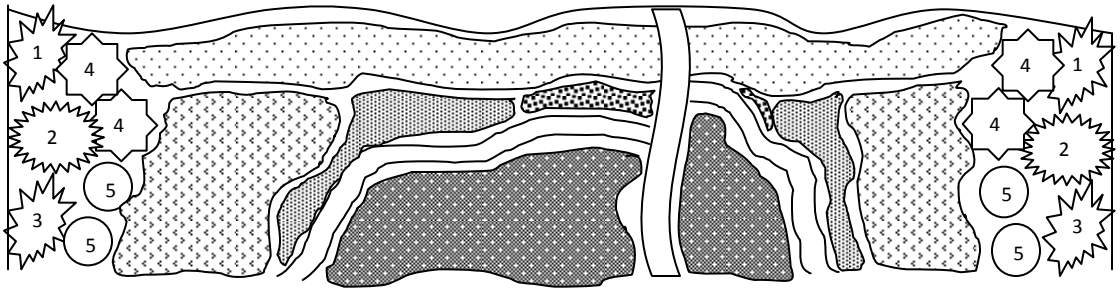
Legend for Trees, Small Trees, Shrubs, Groundcovers, and Perennials from Appendix 2:



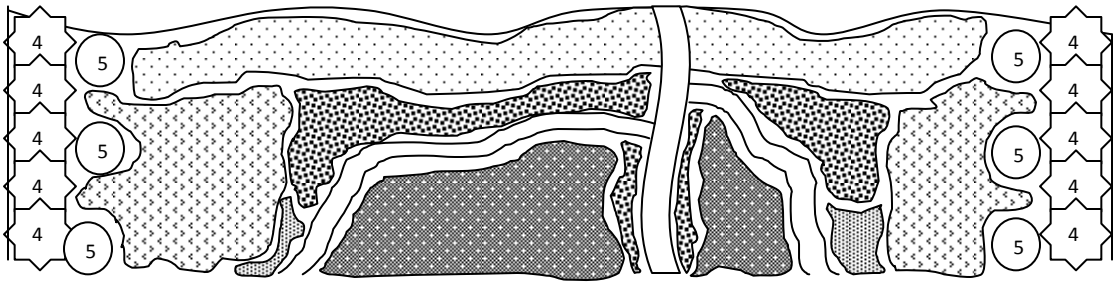
No Existing Conifer on Property Lines:



No Existing Conifer on Property Lines:



Conifers Existing on Property Lines:



*Select any mix of trees, shrubs, groundcovers, or perennials for the appropriate areas (from Appendix 2).

Resources

Algae and King County Lakes [225KB PDF]

Michaud, J.P. 1991. *A Citizen's Guide to Understanding and Monitoring Lakes and Streams.* Puget Sound Water Quality Authority, Olympia, WA.

Taggart, J. and B. Bracht, 1991. *Your Guide to Preventing Water Pollution.* Terrene Institute, Alexandria, VA.

EPA, 1990. *The Lake and Reservoir Restoration Guidance Manual, Second Edition* (EPA-440/4-90-006). U.S. EPA Office of Water, Washington D.C.

Seattle-King County Department of Public Health, 1993. *About Swimmer's Itch brochure.*

Crayton, M. A. 1993. *Toxic Cyanobacteria Blooms: A Field/Laboratory Guide.* Office of Toxic Substances, Washington Department of Health, Olympia, WA.

June 2010

Shoreline Master Program

Appendix 3 - Restoration Plan for the City of Lacey and the Lacey Urban Growth Area

Updated information and analysis June 2010

CITY OF LACEY MISSION

Our mission is to enrich the quality of life in Lacey for all our citizens. To build an attractive, inviting, and secure community; We pledge to work in partnership with our residents to foster community pride, to develop a vibrant, diversified economy, to plan for the future, and to preserve and enhance the natural beauty of our environment.

LACEY CITY COUNCIL

Tom Nelson, Mayor
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LACEY CITY MANAGER

Scott Spence

LACEY COMMUNITY DEVELOPMENT DEPARTMENT

Rick Walk, AICP, Community Development Director
David R. Burns, AICP, Principal Planner, lead staff on update
Ryan Andrews, Associate Planner
Sarah Schelling, Associate Planner
Samra Seymour, Associate Planner
Jolene Hempel, Permit Technician
Leah Bender, Permit Technician

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Steve Morrison, Senior Planner and Project Manager

Veena Tabbutt, Senior Planner

Andrew Deffobis Assistant Planner

Sarah Morley Administrative Assistant

Toni Tringolo Office Specialist II

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Tim Smith, Senior Planner for Tumwater

Jan Weydemeyer, Senior Planner for Olympia

Cindy Wilson, Senior Planner for Thurston County

Molly Levitt, Associate Planner Thurston County

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I. Introduction

A. Background

About this report: This report is the final restoration plan for the City of Lacey, and Lacey's urban growth area. The report has been created as part of Lacey's Shoreline Master Program. It has been prepared from a generic draft created by Thurston Regional Planning Council (Regional) with a grant provided by the Department of Ecology. The generic draft identified issues and opportunities from a bigger picture review of drainage basin wide issues. As a generic document designed for use by the three jurisdictions of Lacey, Olympia and Tumwater, this level of focus was necessary. The generic draft Regional developed was intended to provide a starting point for local jurisdictions.

To address Lacey's specific circumstances and need for protection and restoration of its shorelines, the generic draft was significantly modified during a review and refinement process by the Lacey Planning Commission and Lacey City Council. This final report reflects those modifications.

Detail related to Lacey was generated as part of Lacey's SMP update process: It is important to note that the original generic draft necessarily made many broad conclusions when reviewing bigger picture restoration needs across the full spectrum of shoreline areas in Olympia, Tumwater and Lacey together with all of the associated UGAs. However, when considering restoration opportunities at the local level, Lacey only has jurisdiction over area within its incorporated boundaries. From this standpoint, it is important to specifically address those areas and situations Lacey can regulate and equally important to note differences in regulatory requirements Lacey has implemented that have had positive results towards restoration and protection.

During Lacey's evaluation, the original restoration analysis was taken a step further and review focused on specific sites with known issues and a range of strategies that could achieve desired outcomes. The Planning Commission's work-sessions over a nine month period were the heart of Lacey's SMP update process and acted as the forum for the deliberation, discussion and development of this material.

This plan represents a transparent public process involving neighborhood groups, professional organizations, shoreline landowners, developers, interested members of the community and state resource agencies. These organizations and individuals were tapped for specific insight, expertise, and ideas on topic issues. The observations, conclusions and proposed strategies from this process have been integrated into this report.

Lacey's history of strong environmental legislation: In the original generic draft restoration plan, a number of statements were made regarding filling of wetlands and removal of riparian vegetation that has impacted the health of local shorelines. However, a close look at Lacey's situation paints a different picture. While this may be true in areas outside Lacey, in Lacey there have been stricter regulations protecting wetlands and urban forest resources (trees) for over three decades.

In Lacey, progressive environmental regulations protected these valuable resources many years before it was fashionable in other jurisdictions, or required by state law. In fact, Lacey has lost

very little of its original large wetland areas around its lake systems. The majority of riparian habitat along that portion of Woodland Creek within Lacey has been well established and protected for decades. Riparian vegetation around Lacey's lakes has been impacted to some degree as a result of moderate density urban development.

Tree protection in Lacey predated 1980 and Lacey continued to improve the concept receiving an award from the Washington State Chapter of the American Planning Association (APA) for update of its tree protection ordinance in 1992.

Through environmental focus and development of 1992 environmental legislation and 1994 GMA Plans, Woodland Creek within Lacey was protected with a 200 foot buffer. In addition, that portion of Marine Shoreline in the City was designated as open space in the Hawks Prairie Master Planned Community and has been left in its natural state. Continuing this focus today, most of these areas have been designated as Natural in the updated SMP for permanent protection.

Overall, in the face of significant growth required under GMA, Lacey has maintained a diligent effort at preservation and protection of Lacey's environmentally sensitive areas and the quality of life enjoyed by its citizens.

Conclusions of the original reports have been reviewed and reworked based upon these facts and restoration priorities have been reworked and tailored to Lacey's specific restoration needs.

Use of this Plan: This plan is meant to provide a planning-level framework for understanding these issues and considering priorities for restoration and enhancement of shoreline ecological functions in the city of Lacey and Lacey's UGA. Restoration is defined under the shoreline guidelines as: *"reestablishment or upgrading of impaired ecological shoreline processes or functions."*

It is important to note that for the purposes of shoreline management, the term restoration does not imply returning shoreline areas to aboriginal or pre-European settlement conditions. Instead, the concept is to work with areas that have been impacted by urbanization and to restore the natural functions and values of our shoreline resources as much as practical given what was existing at the time of the inventory and characterization. Little by little, opportunity by opportunity, we can halt and begin to reverse the damage done to promote a cleaner, healthier environment and quality of life. This is our vision, this is our challenge, and this restoration plan is intended to guide this effort.

B. Timeline

A timeline for the complete Shoreline Master Program update (a multi-year program) is below:

TABLE 1: TIMELINE FOR THE SHORELINE MASTER PROGRAM UPDATE FOR THE CITY OF LACEY.

Phase	Update Schedule	Timeline
1	• Determine what shorelines are regulated under the act • Conduct an inventory of all existing and available data for shorelines • Public Open Houses	Winter 2008. Accomplished under Regional contract with DOE
2	• Analyze and characterize shoreline conditions	Spring 2008. Accomplished under Regional contract with DOE
3	• Categorize each shoreline segment into a designation such as urban, suburban, or rural. Each will have a different set of rules. • Develop draft rules and policies • Public meetings	Fall 2008 Winter-Spring 2009. Accomplished under Regional contract with DOE
4	• Analyze the cumulative impacts of expected shoreline development or redevelopment • Develop a restoration (and preservation) plan, including public access	Winter-Spring 2009. Accomplished under Regional contract with DOE and refined by Lacey late 2009 and early 2010
5	• Public hearings • Planning Commission recommendation • City Council approval • State approval	Early 2010

C. Purpose and Scope of Plan

This document has been prepared to comply with the state's SMP guidelines for restoration planning (WAC 173-26-201(2)(f)). The guidelines require that restoration plans:

- Identify degraded areas, impaired ecological functions, and sites with potential for ecological restoration
- Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions

- 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
- Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies, including identifying prospective funding sources for those projects and programs
- Identify timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals
- Provide 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

D. No Net Loss of Shoreline Ecological Functions

The concept of no net loss of shoreline ecological functions is rooted in the Act and in the goals, policies, and governing principles of the state's shoreline guidelines. The Act states: *"permitted uses in the shoreline shall be designed and conducted in a manner that minimizes insofar as practical, any resultant damage to the ecology and environment of the shoreline area."* According to the governing principles of the guidelines (WAC 173-26-186), protection of shoreline ecological functions are accomplished through the following:

- Meaningful understanding of current and potential shoreline ecological conditions
- Regulations and mitigation standards that ensure that permitted developments do not cause net loss of ecological functions
- Regulations that ensure exempt developments in the aggregate do not result in net loss of ecological functions
- Goals and policies for restoring ecologically impaired shorelines
- Regulations and programs that fairly allocate the burden of mitigating adverse cumulative impacts among development opportunities
- Incentives and voluntary measures designed to restore and protect ecological functions

It is not enough to simply prevent further loss of ecological functions, master programs provisions must also *"…achieve overall improvements in shoreline ecological functions over time when compared to the status upon adoption of the master program."* The mandate to improve functions over time provides the basis for restoration planning and creates a distinction between mitigation and restoration in the context of the SMP.

Under the Act, applicants for shoreline permits must fully mitigate new impacts caused by their proposed development. Generally, applicants are not required to restore past ecosystem damages as a condition of permit approval. However, development standards can incrementally achieve restoration objectives simply by requiring a better design that is more in tune with the community's needs for resource management. An example is zoning and landscaping standards adopted to implement a community vision for attractive and healthy shorelines. Standards can

require landscaping with native species that will present a visually attractive appearance and promote restoration of the natural functions and values of Lacey's shoreline resources.

Another important tool Lacey will utilize for protection and restoration of ecological function through the SMP is establishment of setbacks and vegetation management areas along shoreline areas as recommended by The Department of Fish and Wildlife, to promote water quality and habitat objectives. These protections, when established in concert with landscaping standards can be a highly effective strategy for restoration. Setbacks will stabilize the use of the shoreline area and landscaping standards can be used to fill in areas of the setback that currently lack natural vegetative cover. Over the long term, incremental improvements will contribute to buffers of native vegetation that provide water quality benefits and habitat. This promotes restoration objectives for Lacey shoreline resources.

In addition to development regulations designed to promote restoration, Lacey has also provided incentive and other opportunities for protection and restoration. Two examples are options for easier permitting processes when replacing modifications like bulkheads under many situations, and incentives for dedication of shoreline property to the public.

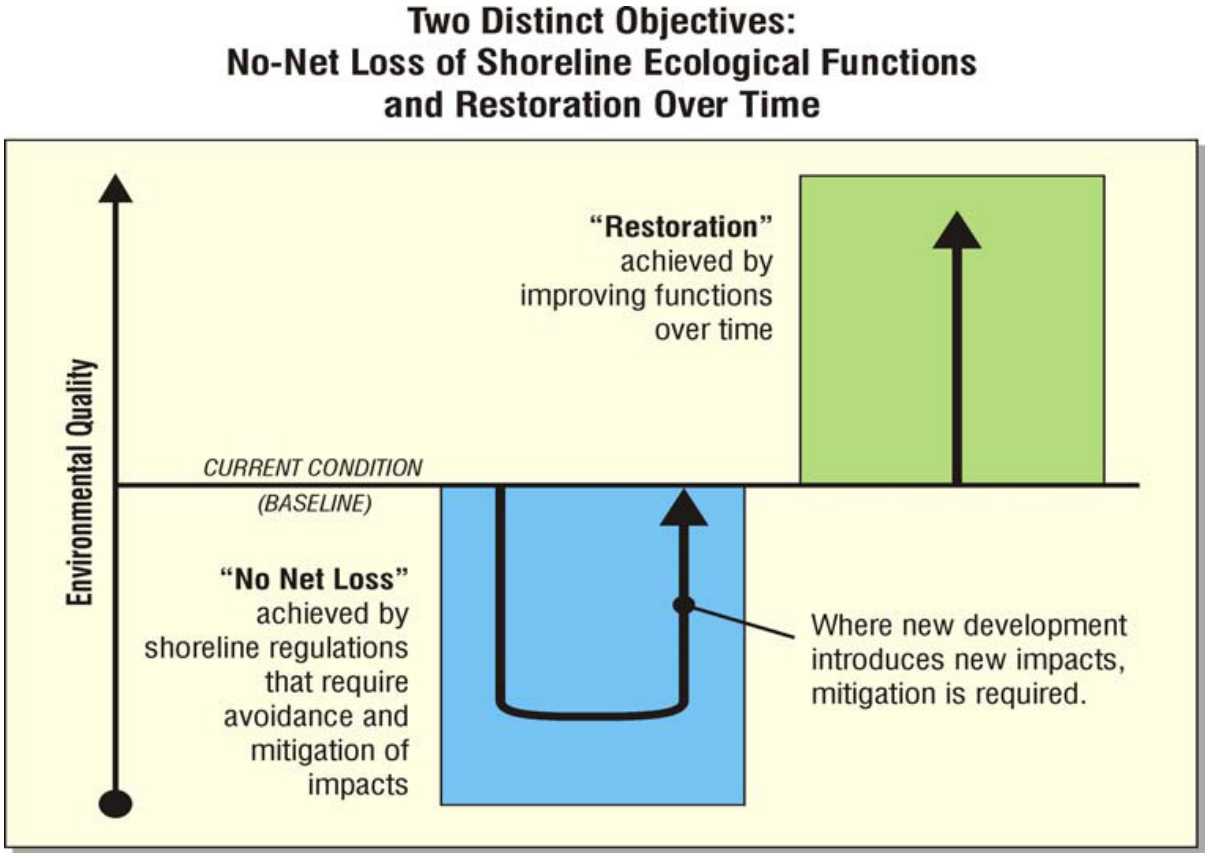
Faced with a significant review process to construct a new bulkhead or replace a bulkhead, the alternative for installation of softer shoreline stabilization measures may be very attractive to a landowner. More ecologically friendly, soft bioengineered approaches for beach stabilization may not meet the definition of development or substantial development so may be exempt from having to obtain a Shoreline Substantial Develoment permit. This promotes restoration objectives.

Incentives for transfer of significant density bonuses to upland sites or other ownerships across the City will encourage dedication of shoreline property to the public. Once in public ownership, plans for protection, restoration and/or use of shoreline area can be implemented.

This will work particularly well where shorelines are sensitive and already have development limitations. Getting significant density credit for property that cannot be utilized for intensive development provides value to the landowner/developer. This could lead to the City being able to acquire shoreline properties for no cost to the public. The City simply allows development on appropriate sites in the City where the density can be accommodated. This actually helps the City meet the intent of GMA as well as gaining control over important shoreline resources.

The figure below (Figure 1) shows the distinction between mitigation and restoration as it is applied through the Shoreline Master Program process.

FIGURE 1: MITIGATION VERSUS RESTORATION IN SHORELINE MASTER PROGRAMS.



(SOURCE: DEPARTMENT OF ECOLOGY)

E. Methods and Sources of Information

This restoration plan is built upon the identification of degraded areas, impaired ecological functions, and sites with potential for ecological restoration identified in the Shoreline Analysis and Characterization Report by ESA Adolfon (Phase 1).

Overall goals and priorities were drawn from existing plans, including Lacey's Comprehensive Plan.

Existing and on-going projects were obtained from the groups and jurisdictions active in shoreline preservation and restoration in the region.

Additional projects and programs were identified at the planning level from existing plans.

All of the sources were considered by the lacey Planning Commission as part of the SMP update. In addition, Lacey’s analysis involved a “hands on” approach, with Planning Commission agendas dedicated to specific issues and discussion with organizations and individuals with a direct interest in specific topic areas. Examples of topic areas and interested parties relative to restoration activities included the following:

- State resources agencies were invited and participated in discussion of habitat, buffers and restoration needs,
- Lake front homeowners were invited and participated in discussion of specific issues related to permit requirements and how restoration with vegetation plans and permit requirements is expected to work.
- Beginning in June 2010, the Beachcrest Community Association was invited and participated in discussing the value and concerns for its marina and restoration needs and opportunities.

II. Shorelines

Table 2 lists the shorelines identified in the Shoreline Inventory for Lacey, and Lacey's Urban Growth Area, classified into functional systems.

TABLE 2 - LACEY: SMA SHORELINES AND FUNCTIONAL SYSTEMS FOR LACEY AND UGA.

Type	Area	System
Marine Waters		
Nisqually Reach	Lacey & UGA	Nearshore/Marine
Rivers/Streams		
Woodland Creek	Lacey & UGA	Woodland Creek System
Lakes		
Chambers Lake	Lacey & Olympia	Freshwater Lake
Hicks Lake	Lacey	Woodland Creek System
Long Lake	Lacey & UGA	Woodland Creek System
Pattison Lake	Lacey & UGA	Woodland Creek System
Southwick Lake	Lacey & UGA	Freshwater Lake

III. Overview of Restoration Priorities

This section provides an overview of areas that are considered priorities for restoration based on the Lacey, Olympia, and Tumwater Shoreline Analysis and Characterization Report. This section will be broken into two components:

- Summary of the Ecosystem Wide Processes and Restoration Potential
- Summary of Reach/System Scale Issues and Restoration Opportunities

A number of shoreline restoration projects are currently underway or are in the planning stages in Lacey. These projects have been initiated by various private, regional, state and federal entities resulting in several successful shoreline restoration and enhancement projects. They will be summarized in the following chapter.

A. Assessment of Nearshore Marine Shorelines

Initial Review: The initial qualitative assessment of the overall condition of the nearshore marine environment within the study area was developed in the Lacey, Olympia, and Tumwater Shoreline Analysis and Characterization Report. The assessment looked at bigger picture conditions of the drainage basin generally. Lacey has about 1.8 miles of marine shoreline in its jurisdiction.

The Lacey, Olympia, and Tumwater Shoreline Analysis and Characterization Report assessed the relative condition of each of the marine nearshore reaches based on a number of characteristics and parameters such as freshwater inputs, structural hydro-modifications, known water quality degradation, presence of important habitat types, etc. The results were translated into numerical scores then divided into three groups (high, medium and low). This provided a simplified assessment of the overall condition of each reach.

TABLE 3: RELATIVE CONDITION OF LACEY AND UGA MARINE NEARSHORE REACHES.

Reach	Condition	Notes
Nisqually 1	High	Low level of alteration, several key habitats.
Nisqually 2	Medium	Medium to high level of alteration with development of marina and roads serving marina and community beach. Several key sediment and habitats.

These results should only be used for general discussion; no sensitivity analysis or other quality control has been performed on this approach. However, these results have generally good agreement with the preservation and restoration recommendations included in the Marine Shoreline Sediment Survey and Assessment (Herrera 2005). Reaches that have been designated high priority for forage fish spawning protection in the 2005 report are listed as ‘high’ in this assessment.

Based upon Planning Commission discussion and review, the analysis and conclusions represent the best available knowledge and ideas for achieving restoration objectives over the long term.

Lacey's Review during the Update: Lacey's update focused specifically on properties in Lacey and Lacey's Urban Growth Area. Lacey's analysis included individual properties with known modification and impact to the natural function of its marine shoreline. This review only identified two concerns:

- **Atlas Powder Dock:** This is a large abandoned historic dock/pier located on Jubilee Beach at the end of a beach access from the Hawks Prairie Planned Community. The pier/dock dates back to World War II and was used for the transport of dynamite from the Dupont facility. This old dock/pier would have had creosote treated piles. This was typical of construction at the time, but would not be permitted today because it presents a serious water quality issue.

  The pier is also in disrepair and is unusable without extensive repair. Thought has been given to the possibility of cleanup and reconstruction of the dock to serve in the capacity as a community fishing pier with an access opportunity for the general public. This would have benefits of cleaning up the site and the establishment of an amenity for the entire community. However, it would be expensive and would also have new impacts that would need to be mitigated to meet the requirements of no net loss.

  In addition, there is no true "public" access to this area. The access trail from Hawks Prairie Planned Community is owned and maintained by the HOA. A project to reconstruct the existing historic pier would need to consider acquiring both the access trail and pier for public use. Because of the access situation and expense reconstruction of the pier represents, there are no firm plans for this at this time. However, the use tables in the SMP contain provisions that leave this idea open for consideration, provided any such project meets requirements of no net loss and environmental impacts at the site are fully mitigated.

- **The Beachcrest Marina:** Most of the marine shoreline environment under Lacey's jurisdiction is protected as open space in the Hawks Prairie Planned Community. However, a private marina (which occupies approximately 350 feet of shoreline), its associated access road and the adjacent Beachcrest community (which are not within the City of Lacey), have had impact to the surrounding shoreline environment dating well into the last century.

  The whole shoreline associated with Beachcrest was engineered in the 1940s as part of the Beachcrest development. It is a use that is expected to continue over the long term.

  The marina and its access road have changed the original shoreline processes in this area. What was once a feeder bluff now has a fronting road that is heavily armored. In addition, the function of a pocket estuary was impacted by changing tidal flow in to the estuary for development of a permanent pond and fountain.

  Restoration requirements are generally not applied to situations that predate inventory and analysis. While restoration of this area to improve habitat and natural estuary functions would be good for the ecology of the area and the larger community, it is not regulated as a requirement of permitting under this SMP. However, because of the value of pocket estuaries, restoration opportunities should be discussed, considered a priority and pursued where available.

Discussion with the Beachcrest Community Association and Use of Incentives to Encourage Restoration: Discussion with the Beachcrest Community Association representatives in June 2010 indicates the current Beachcrest community has an interest in restoration and doing what is healthy for the ecological functions of this area. A recent salmon restoration project is an example of its cooperation in achieving restoration of valuable ecological function. The marina will require continued maintenance and repair. Restoration is something that could be encouraged as maintenance activity occurs. Incentives to promote restoration should be considered that could help gain broad community support to move in this direction.

Beachcrest and the road are located in unincorporated Thurston County. Because of jurisdiction, options are limited for Lacey's lead on restoration of this area. This is a topic for joint planning discussions. At a minimum, consideration should be given to an interlocal agreement that would place permit and exemption requirements with one jurisdiction. The split jurisdiction in the cove would make permitting very complex for the Beachcrest community.

B. Freshwater Ecosystem-Wide Processes and Restoration Potential

Initial Review: Ecosystem-wide processes that create, maintain, or affect the three City's shoreline resources were characterized using an adapted version of the five-step approach to understanding and analyzing watershed processes described in *Protecting Aquatic Ecosystems: A Guide for Puget Sound Planners to Understand Watershed Processes* (Stanley et al, 2005), and presented in Chapter 3 of the original Lacey, Olympia, and Tumwater Shoreline Analysis and Characterization Report. Lacey has jurisdiction for 19.58 miles of freshwater shoreline.

The analysis specifically looked at hydrologic processes, where the important areas are, and how they have been altered over time. The two results are then taken together to suggest areas where protection or restoration of ecosystem process would be the most effective. While the analysis was specifically focused on hydrologic processes, the parameters used are fairly general landscape-level measures that can be used as a general proxy for overall level of functioning.

Important areas and level of alteration for freshwater systems were initially assessed using a three-step framework developed by Ecology to create a relative ranking of where protection or restoration would be most appropriate at the watershed scale. The framework develops a High, Medium 1, Medium 2, or Low score for both importance and alteration for each sub-basin within a study area. The scores for both importance and alteration are then taken together to develop an overall ranking of appropriate actions. Important areas include: 1) rain on snow areas; 2) surface storage (historic depressional wetlands) and floodplains; 3) recharge areas; 4) storage capacity areas; and 5) discharge areas.

The types of alterations that the framework considered are: 1) forest clearing; 2) filling of depressional wetlands; 3) channelization of streams; 4) road presence and density; and 5) impervious surface. The analysis helps identify a set of actions that would be most appropriate for each sub-basin within the watershed.

Considering this bigger picture, Figure 2 shows how the combined alteration and importance rankings are used to prioritize where development, protection and restoration could occur in the watershed to target a net gain in ecosystem functioning. Areas providing a high level of important watershed processes and having a high level of degradation or alteration would be most suitable for "Restoration." Areas providing a low level of watershed processes and are highly altered would be most suitable for "Development." Finally, those areas with high level of

providing important watershed processes and with low alteration are designated most suitable for "Protection." In the middle of the matrix, areas are denoted Protection/Restoration, as either method may be more appropriate. Please note, however, that this analysis should not be interpreted to indicate the only action that is appropriate in any given basin. The resolution of this analysis is limited by the resolution of the supporting datasets, and can only identify high-level trends in the landscape.

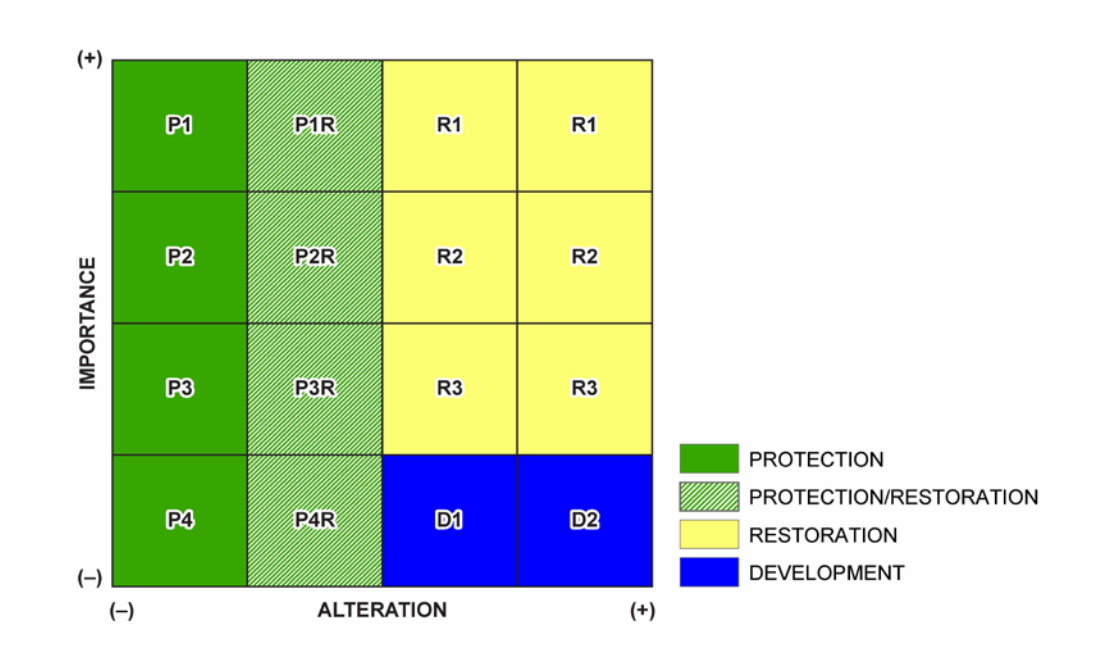


FIGURE 2: CONCEPTUAL VIEW OF THE LANDSCAPE ANALYSIS FRAMEWORK.

The integrated results shown in the Lacey, Olympia, Tumwater Shoreline Analysis and Characterization Report identify the highest restoration potential along the Deschutes River and within the urban core of the Regional study area. Clearly, wholesale restoration of the area is difficult or impossible to achieve, given current infrastructure. However, the restoration of key aquatic areas within the urban area can provide important corridors and connections between the upper watershed and the marine nearshore. The remainder of the area is located within the Preservation/Restoration area. Preservation-only areas are identified outside of the growth area – and are limited to a sub-basin in the upper Deschutes basin, and three small sub-basins along the marine nearshore.

Please note that there are no "Development" subbasins, since there are no "Low" importance areas identified in the Thurston study area. The Protection/Restoration category was applied more broadly.

Lacey's Review during the Update:

Restoration needs identified are primarily directed at residential properties along developed lakeshores that Lacey has jurisdiction over and retrofitting of outdated drainage infrastructure both in Lacey and its UGA where opportunities arise.

Emphasis along lakefronts is re-establishment of vegetation to promote water quality and habitat functions. This can be done through a combination of general vegetation management requirements and mitigation and restoration opportunities during the review and processing of

new permits. Part Two of the SMP is dedicated to discussion of the purpose and strategies to accomplish these objectives.

A significant focus is also being placed on elimination of existing septic tank drainfields in areas of Lacey's UGA in close proximity to Woodland Creek and lakes, which are currently impacting water quality and local shellfish resources. Specific standards in this SMP are adopted in this regard under the water quality section.

C. Summary of Issues and Restoration Opportunities at the Reach System Scale

While the initial review focused on the bigger picture of watershed and sub-basin priorities, later analysis has included more localized site specific micro issues.

Additional discussion and edits have been made to this Plan and associated tables after the original generic draft. This was done to more specifically address and represent Lacey's area of jurisdiction and influence and to consider issues and restoration opportunities identified while updating the SMP.

The following tables, summary of key management issues and restoration opportunities were developed as part of Chapter 5 of the Lacey, Olympia, and Tumwater Shoreline Analysis and Characterization Report, prepared as part of the Shoreline Master Program update. The tables provide a summary of shoreline functions, levels of alteration, and restoration opportunities for shoreline reach systems within the study area. Several of these areas are within Lacey and the Lacey UGA:

- Nearshore/Marine Environment –Nisqually Reach
- Woodland Creek System - Woodland Creek, Long Lake, Pattison Lake, and Hicks Lake

Nearshore/Marine Environment

Table 4 of the original Analysis and Characterization report summarizes the status of the Nearshore / Marine Planning Area and describes the shoreline functions, the level of alteration compared to historical conditions, and the restoration opportunities to improve shoreline functions. However, it should be noted that by considering both the marine areas in Olympia and Lacey in the same table, specific characteristics of Lacey were not emphasized. Changes to the tables have been made in this final report to reflect analysis specific to Lacey and its UGA.

TABLE 4: ASSESSMENT OF NEARSHORE/MARINE FUNCTIONS WITHIN LACEY AND LACEY'S UGA

Process: Function	Level of Alteration	Potential Protection and Restoration Measures and Opportunities
Habitat: Estuarine habitat; subtidal and intertidal mudflats and salt marshes provide transition habitat between fresh and salt water environments.	**Moderate to Low** Lacey's Marine shoreline is relatively intact with associated pocket estuaries. A portion of the small Beachcrest Marina is in Lacey and has had an impact on natural functions of the area, including impact to pocket estuaries. Recent restoration activities at the Beachcrest open space in Lacey's UGA seek to reestablish some of these functions that were impacted when the pocket estuary there was closed off to create a pond and the shoreline was armored with rip rap.	**Moderate to Low** Lacey's marine shoreline is relatively intact. Butterball cove is currently designated as open space in a Master Planned Community, and has been designated Natural in the SMP. The pocket estuary behind the Beachcrest marina has also been designated Natural, with th exception of the physical space occupied by the marina. That area has been designated Urban Conservancy. There may be opportunity to improve/restore the area around Mallard Cove where the marina is located, particularly to enhance the function of pocket estuaries.
Hydrology: Attenuation of wave energy.	**Moderate to Low** Marine shorelines within the City limits, including Butterball Cove, remain unarmored. However, the Beachcrest Marina and an access road to the marina in the UGA have modified the function of wave attenuation. The general trend in harder shorelines has resulted in less overall attenuation than in pre-disturbance conditions.	**Moderate to Low** Lacey's marine shoreline is relatively intact. Butterball Cove is currently designated as open space in a Master Planned Community, and has been designated Natural in the SMP. The pocket estuary behind the Beachcrest marina has also been designated Natural, with the exception of the physical space occupied by the marina. That area has been designated Urban Conservancy. Armoring of areas within the City limits has been and will continue to be prohibited to support existing hydrologic processes and functions. The strategy is to simply let natural processes take place in this area. Non exempt maintenance activities at the marina, in that portion under Lacey's jurisdiction, will be reviewed for restoration opportunities. No expansion will be permitted.
Sediment Generation and Transport: Sediment delivery from coastal bluffs and streams.	**Low to Moderate** Bluffs within the city limits have not been modified and no structures exist at the toe. However, the toe of the bluffs and the bluffs themselves, as well as streams delivering sediment into pocket estuaries, have been modified in Lacey's UGA by the installation of roads and rip rap armoring and residential construction.	**Moderate to Low** Maintenance of existing connections between bluffs and the nearshore is a high priority. Maintenance of the existing connections between stream mouths and the nearshore, for sediment delivery and other habitat benefits, is also a high priority. Designation of the marine shoreline as Natural and Urban Conservancy and continued protection of this system is appropriate.

Process: Function	Level of Alteration	Potential Protection and Restoration Measures and Opportunities
Water Quality: Wetland removal of pollutants through sedimentation and adsorption.	**Low to Moderate** Reduction of wetland areas along Lacey's marine shorelines has not occurred. However alterations to pocket estuaries in Lacey's marine UGA have likely affected the presence, extent and function of wetlands.	**Moderate to Low** Through the SMA assigned environment designations, little to no development is anticipated within Lacey's marine shorelines. Expansion of the Beachcrest marina in Lacey's UGA is prohibited. Maintenance and repair activities occurring at the marina will be reviewed for restoration opportunities.
Water Quality: Delivery, movement, and loss or removal of nutrients, pathogens, and toxicants; storage of phosphorus and removal of nitrogen and toxins through sedimentation and adsorption.	**Low to Moderate** The Butterball Cove area and the marine shoreline within Lacey to the east of Butterball Cove are substantially unaltered. Uplands in this area were designated as reserved area for future development in the Hawks prairie master planned community or open space. This area did not face pressure for urbanization until recently. Wetland and tree protection regulations covering upland area has maintained critical functions and values. This function has been impacted in Lacey's UGA where upland sources of the pollutants have increased and potential storage has decreased through wetland loss and the installation of impervious surfaces.	**Low to Moderate** Lacey's wetland protection regulations and tree protection regulations that predated GMA requirements have effectively preserved and protected associated upland wetlands. Wetlands primarily associated with the marine shoreline have not experienced pressure for urbanization until recently. However, with development upland sources of these pollutants and sediment have increased. Cleanup of the historical atlas powder dock might have some benefit, depending upon the impact the pier is currently having to water quality. The impact 60+ year old creosote pilings are having is unknown. This might be considered in association with reconstruction of the pier as a public access and community fishing pier.
Habitat: Shoreline habitat for wildlife; vegetation provides structure for invertebrates, birds, amphibians, reptiles, and mammals.	**Low to Moderate** Natural vegetation is well established and protected along and adjacent to almost all of Lacey's marine shoreline area in the City limits. However, the small private Beachcrest marina and associated access road has had an impact on shoreline habitat in Lacey's UGA.	**Low to Moderate** No alterations exist along Lacey's marine shorelines that will be designated "Natural", with the exception of an old abandoned pier. The active Beachcrest Marina, in Lacey's UGA, should be given high priority when considering restoration efforts.
Habitat: Source and delivery of LWD.	**Low to Moderate** In Lacey there has been a tree protection ordinance in effect since the early 1980s. This ordinance has historically prohibited loss of trees within the riparian corridor and shoreline environments and loss of canopy in upland areas. Where the Beachcrest marina and open space exist in Lacey's UGA, both the source and delivery of LWD have been altered.	**Low to Moderate** Within the city limits, Lacey's marine system is well established and the natural processes have not been significantly impacted by urbanization of upland area because of sensitive area ordinance regulations. In the UGA at Beachcrest, protection of existing routes for delivery of LWD in the form of stream corridors and maintenance of the source in the form of mature trees on the bluffs will ensure there are no further losses.

Key Management Issues

The key management issues within the South Puget Sound area of Nisqually Reach include the following:

- In Lacey, continued protection of the marine shoreline with a designation of Natural is appropriate. Continued restoration efforts of the shoreline and estuaries at Mallard Cove and just east of Lacey's jurisdiction in unincorporated Thurston County UGA should be supported as high priority. Incentives in the form of permit exemptions for maintenance activities and improvements that accomplish restoration objectives should be pursued.
- Nutrient input to the nearshore from upland sources and freshwater tributaries is contributing to the eutrophication of marine waters in the South Puget Sound. The flushing action and circulation of the South Puget Sound is slower than other parts of the Sound, resulting in sensitivity to nutrient loading.
- In Lacey, continued protection of tree resources pursuant to its Urban Forest Management Plan and implementation through its tree and vegetation protection and preservation ordinance is appropriate.
- Focus should continue on non point source pollution of the Woodland Creek corridor from existing septic tank drainfields, which empties into the Puget Sound.

Restoration Opportunities

Restoration opportunities in the South Puget Sound have been identified in the Nearshore Sediment Survey conducted by Herrera (2005). High priority beaches for preservation and for restoration were identified.

- High priority preservation of Butterball Cove in the Nisqually Reach. Designation of the Butterball Cove area as Natural is part of the SMP update.
- Restoration of pocket estuaries just east of Lacey's UGA should be a high priority.
- Allow natural sediment processes.
- Preservation of unarmored shorelines to minimize further impacts to the South Puget Sound beach habitat.

Woodland Creek System

This section summarizes the status of the shorelines in the Woodland Creek system based upon the inventory information, and describes the shoreline functions, the level of alteration compared to historical conditions, and the opportunities to protect and restore shoreline conditions (Table 5). The Woodland Creek system includes Woodland Creek, Long Lake, Pattison Lake, and Hicks Lake. Generally this table covers all freshwater systems in Lacey, and has been made applicable to Southwick and Chambers Lakes as well. Woodland Creek drains to Henderson Inlet, which lies within Thurston County Shoreline jurisdiction. These tables have been modified from the original Analysis and Characterization Report to specifically address shoreline areas in Lacey and its UGA.

TABLE 5: ASSESSMENT OF FRESHWATER SHORELINE FUNCTIONS IN LACEY AND UGA.

Process: Function	Level of Alteration	Potential Protection and Restoration Measures and Opportunities
Hydrology: Channel and floodplain connection.	**Moderate** Infrastructure such as railroad crossings and roads has altered connections between Woodland Creek and its associated lake/wetland complexes. Levels in Chambers Lake are manipulated by the Ditch District. However, as far as Woodland Creek itself, the channel is relatively well defined and there is no significant floodplain. Wetlands associated with the Creek have been well protected and preserved.	**Moderate** Continued protection of these critical areas and their connections and floodplains under Lacey's SMP is appropriate. Restoration opportunities are low as significant infrastructure expenditures and investments would be necessary to restore connections where railroad dikes or roads have been constructed.
Hydrology: Summer low flows.	**High** Generally, upstream land uses and development have resulted in less water flowing in urban streams. Woodland Creek is no exception during the summer low-flow periods. The Woodland Creek system is also relatively flashy; stormwater runoff is not held in the system for long and the basin is relatively small.	**Moderate** Preservation of wetlands and headwater lakes will maintain base flows to Woodland creek. Use of stormwater management practices that encourage low impact development and infiltration may minimize impervious surfaces in the basin. Opportunities are limited however by the relative size of the basin.
Hydrology: Flood flow retention.	**Low** Large wetland complexes still provide flood storage, except in areas of high groundwater. Chambers Lake levels are managed by a ditch district.	**Low** Continued preservation of floodplain areas and hydrologic connections between water bodies during development will assist in retaining flood flows.

Process: Function	Level of Alteration	Potential Protection and Restoration Measures and Opportunities
Sediment Generation and Transport: Upland sediment generation.	**Moderate** Fine sediment loading has increased due to build-up and wash-off from urban land uses.	**Moderate** Implementation and retrofit of water quality BMPs to the existing stormwater system can reduce fine sediment loading. Requirements and incentives to restore areas of shoreline vegetation can help capture sediment and nutrients it has captured before it enters water bodies.
Water Quality: Wetland removal of pollutants through sedimentation and adsorption.	**Low** Protection of the large wetland complexes under Lacey's critical area ordinances has maintained this function in Lacey.	**Low** Continuation of existing wetland protection strategies and protection of buffer and vegetation management areas is appropriate. Setbacks will assist in distancing sources of pollutants and sediment from water bodies.
Water Quality: Delivery, movement, and loss or removal of nutrients, pathogens, and toxicants; storage of phosphorus and removal of nitrogen and toxins through sedimentation and adsorption.	**High** The delivery, transport, and disposition of nutrients, pathogens, and toxins have been significantly altered from the pre-disturbance condition. Upland sources of these pollutants have increased significantly as a result of urban land uses within the Woodland Creek drainage basin and Southwick and Chambers lakes. Potential storage has decreased through installation of impervious surfaces. The development of the TDML for Woodland Creek has highlighted potential sources of point-source pollution and flow reduction.	**Moderate to High** Significant source control and remediation efforts are currently underway to remove and avoid pollutant discharge to the riverine environment. Significant opportunity exists to reduce septic tank drainfield contamination by sewer or corrective actions for failing septic tank systems. Significant opportunity also exists to minimize the introduction of nutrients, pathogens and toxicants with water quality and setback standards in the SMP, and to increase sedimentation and adsorption of these contaminants through vegetation restoration.
Habitat: Shoreline habitat for wildlife; vegetation provides structure for invertebrates, birds, amphibians, reptiles, and mammals.	**Low to Moderate** Native riparian vegetation has been removed during past development along lake shorelines. However, significant sections of the creek and portions of the lakes where wetlands exist retain the natural riparian vegetation.	**Moderate** Opportunity exists for replanting and enhancement of natural vegetation on lakefront lots. Conditions for proper landscape maintenance will be placed on authorizations during redevelopment or expansion of existing residences. Over the long term this could increase habitat values for wildlife and reduce contamination and nutrient loading of lakes from improper landscaping and fertilization.

Process: Function	Level of Alteration	Potential Protection and Restoration Measures and Opportunities
Habitat: Source and delivery of **Large Woody Debris** (LWD).	**Moderate** Sensitive area ordinances have protected wetlands and shorelines in Lacey and prevent modification of these areas including removal of LWD or other material or conditions valuable for habitat. However, historic development of lake shorelines for residential use has changed the vegetative profile of lakeside lots where residential development has occurred.	**Moderate** The potential to re-introduce LWD, either through planting or placement exists. This should be a focus for the updated SMP.

Key Management Issues

The key management issues for Woodland Creek drainage system are the following:

- Increases in sediment, nutrients, pathogens and other pollutants have accelerated eutrophication of the lakes and reduced water quality in Woodland Creek. This has resulted in downstream impacts to Henderson Inlet, including shellfish closures. Fecal coliform is the main pollutant resulting from septic systems, urban runoff and/or agricultural sources.
- Increased sediments and nutrients in the lakes within this basin (Pattison, Southwick, Long, and Hicks) but also in Chambers and Southwick lakes have encouraged growth of invasive aquatic plants and algae. Phosphorus loading is a problem, although water quality is improving on some lakes.
- Development has resulted in some decreased riparian habitat along Woodland Creek and the lakes within its basin. However, within Lacey Woodland Creek and significant wetland areas adjacent to the lakes have been protected and preserved with extensive buffers and tree protection regulations.

Restoration Opportunities for Woodland Creek

According to the limiting factors analysis for WRIA 13 (Haring and Konovsky, 1999) for Woodland Creek the following restoration opportunities exist:

- Take corrective action to improve water quality in the creek basin, specifically to control pollutants and sediment transport from urban runoff.
- Restore LWD to stream channels to improve in-stream habitat.
- Restore riparian habitat around lakes and woodland creek wherever feasible.
- Preserve and restore headwater wetlands so as to enhance habitat and protect water quality.
- Enhance fish passage by removing barriers.

In addition, Thurston County has initiated the Woodland Creek Pollutant Load Reduction project. Possible corrective actions noted to reduce pollution and restore Woodland Creek and the lakes within its basin included:

- Improving riparian vegetation;
- Improve septic systems and retrofit to improve water quality in basin;
- Encourage low impact development strategies to manage stormwater; and
- Review alternative stormwater conveyance systems.

It should be noted that the study includes portions of the creek that are in unincorporated Thurston County, where Lacey will have little if any regulatory influence.

Fresh Water Lake Systems

Key Management Issues

The key management issues for freshwater lakes in the study area include:

- Loss of riparian forest surrounding the lake shore.
- The installation of artificial bank strengthening.
- The sources and pathways for excess nutrients, pathogens and toxins are significantly altered from the pre-disturbance condition. Increased nutrient loading can significantly modify the trophic status of lakes.

Restoration Opportunities for Freshwater Lakes

There are several programmatic restoration opportunities that can be implemented to improve the overall ecological functioning of the freshwater lakes in the study area.

- Protect, restore and/or enhance riparian forests surrounding lake shores. Because sensitive areas are already protected this will necessarily include developed property where limited opportunity will exist. However, Lacey's tree protection ordinance limits tree removal on every lot within the City, including water front lots. This has resulted in the retention of some heavily wooded lake front lots; see picture on front cover of this SMP.
- With this SMP, policies have been developed to incentivize and require landscaping of designated vegetation management areas along the shoreline that corresponds to the shoreline setback. Depending upon the specific regulatory trigger, this will generally be accomplished through zoning landscaping requirements, tree protection regulations, mitigation related to development or restoration opportunities.
- Implement source control and/or stormwater treatment retrofitting throughout the contributing basin to improve water quality.
- Replacement of artificial bank strengthening (e.g., bulkheads) with soft or no-armor solutions. With new SMP standards, review of modifications will be required when maintenance exceeds 50% of the cost of replacement. At that time maintenance is

defined as a replacement and a CUP will be required. CUP review requires consideration of alternatives and choosing soft solutions over armoring where practical.

IV. Existing Restoration Partners and Programs

The cities of Lacey, Olympia, and Tumwater work with Thurston County on restoration activities throughout the study area through a variety of different programs and departments. In addition there are many other government and non-profit groups active in North Thurston County. Many are listed in the table below.

TABLE 6: GROUPS ACTIVE IN SHORELINE RESTORATION IN NORTHERN THURSTON COUNTY.

Group	Description	Restoration Activities
Stream Team Thurston County, Lacey, Olympia and Tumwater	Stream Team is a program for citizens interested in protecting and enhancing water resources in Thurston County watersheds. The program is jointly coordinated by Thurston County and the cities of Lacey, Olympia, and Tumwater.	Education Volunteer stream vegetation plantings and water quality monitoring Salmon steward training Storm drain marking Habitat Restoration
Stormwater Utilities Thurston County, Lacey Olympia and Tumwater	Stormwater utility departments in all four jurisdictions' work to reduce stormater pollution from urban runoff.	Stormwater utility departments design and build projects to reduce flooding, pollution and erosion caused by stormwater runoff Projects may involve replacing failing drywells and catch basins (storm drains), building stormwater ponds, installing "infiltration galleries," or installing separating devices that remove pollutants. Stormwater utilities also manage NPDES permits and are involved in education and outreach.
Parks Departments Thurston County, Lacey, Olympia and Tumwater and State	Parks departments in all local jurisdictions, in addition to the State, own and manage waterfront property.	Restoring native vegetation and shorelines along park properties. General environmental cleanup.
Capitol Lake Adaptive Management Plan (CLAMP) Steering Committee	The Department of General Administration manages the Capitol Lake as part of the Capitol Campus. The Capitol Lake Adaptive Management Plan (CLAMP) Steering Committee advises General Administration on long-range planning for the lake.	Capitol Lake is a 260-acre lake located on the State Capitol Campus in Olympia and Tumwater. It was created in 1951 when a dam was constructed at the mouth of the Deschutes River, blocking the tidal action of Puget Sound, to form a reflecting pool for the Legislative (Capitol) Building. Research into the feasibility of recreating an estuary at the mouth of the Deschutes River (removing the Capitol Lake dam) has been completed. An evaluation of several alternative scenarios has been prepared. A decision of how best to manage the lake basins is anticipated during the 2nd half of 2009.

Group	Description	Restoration Activities
LOTT Alliance Lacey, Olympia, Tumwater and Thurston County	The LOTT Alliance is a partnership between Lacey, Olympia, Tumwater, and Thurston County to provide wastewater management and reclaimed water production services for the urbanized area of north Thurston County.	LOTT invests in capital projects, to help preserve and protect public health, the environment, and water resources. Invests in water conservation, water quality and habitat improvement projects in the Deschutes River watershed, including Budd Inlet, as compensation for being allowed to increase wintertime discharges from the treatment plant to Budd Inlet. An example of this is the Gull Harbor Estuary.
Squaxin Island Tribe	The Squaxin Island Tribe is a historic steward and a conscientious co-manager and protector of natural resources, working in cooperation with numerous federal, state and county government agencies and organizations.	The tribe participates in natural resources enhancement and protection programs with other groups and agencies to ensure that today's decisions provide for a healthy future.
Nisqually Indian Tribe	The Nisqually Indian Tribe operates as a "Self-Governance" Tribe and utilizes resources from its Tribal economic enterprises as well as Federal program dollars. Their mission of their salmon recovery program is to protect, restore, and enhance the treaty-protected resources of the Nisqually Indian Tribe.	Salmon Recovery: • Plan for the recovery of all Nisqually salmon • Restore salmon habitat • Study Nisqually salmon, salmon habitat; monitor effectiveness of actions • Teach people about salmon habitat (Stream Stewards) • Involve people in protecting and restoring salmon habitat (Stream Stewards)
Thurston Conservation District	The Thurston Conservation District promotes voluntary stewardship among private landowners in Thurston County. Conservation Districts (CDs) are legal subdivisions of state government that administer programs to conserve natural resources.	Conducts, oversees and participates in various restoration projects throughout Thurston County. Works to restore 'riparian habitats' (any habitats near water) since these areas are crucial for the health of all wildlife, especially 'salmonids' (salmon and trout). Also involved with agricultural assessments, education and outreach.
Port of Olympia	The Port of Olympia is a major landowner of shoreline property in Budd Inlet.	Contaminant cleanup in Budd Inlet and upland properties: • Cascade Pole • Dioxin cleanup in Budd Inlet (shipping berths) • East Bay Redevelopment site

Group	Description	Restoration Activities
Budd Inlet Restoration Partnership	The Cities of Olympia and Tumwater, Port of Olympia, Thurston County, LOTT Alliance, and Washington State University Thurston County Extension are forming a partnership to develop an action plan for Budd Inlet restoration.	The first phase of the Action Plan includes: • an inventory/assessment of major current efforts related to Budd Inlet restoration • summary of partner interests, needs and goals relative to Budd Inlet; a community forum to solicit concerns and priorities • identification of potential opportunities to work together • a project description and organizational frameworks for the next phase Planning for Phase II is underway.
Salmon Recovery Funding Board	Created in 1999 by the Washington State Legislature, the Salmon Recovery Funding Board (SRFB) provides grant funds to protect or restore salmon habitat and assist related activities. It works closely with local watershed groups known as lead entities. The board is composed of five citizens appointed by the Governor and five state agency directors.	The Salmon Recovery Funding Board supports salmon recovery by funding habitat protection and restoration projects. It also supports related programs and activities that produce sustainable and measurable benefits for fish and their habitat. SRFB has helped finance over 900 projects.
South Puget Sound Salmon Enhancement Group	The South Puget Sound Salmon Enhancement Group (SPSSEG) is a 501(c)(3) non-profit organization committed to protecting and restoring salmon populations and aquatic habitat with an emphasis on ecosystem function through scientifically informed projects, community education, and volunteer involvement. Part of their mission is to seek out and work in cooperation with other organizations to help plan, fund, carry out, and monitor fishery enhancement and habitat restoration projects.	Habitat Improvement: • Engineered Log Jams (ELJs) • Bulkhead Removal • Riparian Plantings Fish Passage: • Culvert Removal • Other Barrier Removals
Puget Sound Partnership	The Puget Sound Partnership is a community effort of citizens, governments, tribes, scientists, and businesses working together to restore and protect Puget Sound.	Their Action Agenda will prioritize cleanup and improvement projects, coordinate federal, state, local, tribal, and private resources, and make sure that everyone is working cooperatively.
Capitol Land Trust	Non-profit Land Trust	The Capitol Land Trust conserves important wildlife habitat and natural areas by accepting donations of conservation easements and gifts of land, or by working with partners to purchase lands. Since 1989, Capitol Land Trust has been instrumental in permanently conserving 2,957 acres in Mason, Grays Harbor and Thurston Counties.

Group	Description	Restoration Activities
Nisqually Land Trust	Non-profit Land Trust	Since 1989, the Nisqually Land Trust has acquired, for permanent protection, nearly 1,700 acres of superior wildlife habitat--from threatened old-growth forest near the Nisqually River's source to critical salmon habitat near its delta.

V. Implementation Strategies

Restoration projects are implemented by all of the planning partners listed in the previous section. Each entity participates in a prioritization process that includes implementation strategies and identifying sources of funding. Projects are funded through a variety of sources including grants from state and federal sources.

In addition, this SMP is designed to build protection and restoration objectives into development requirements for land use form and design. Several strategies dovetail with other existing regulations to achieve these objectives. Major techniques are summarized below:

- **Zoning, Land Use Form and Design:** For undeveloped parcels, the proper use of design standards to promote the right form of land use development. Requiring environmentally sensitive design will promote protection and restoration opportunities, as well as match land form to shoreline needs and prevent additional impacts as areas urbanize. Rather than promoting standard single family detached housing that has had significant impact to shoreline areas, innovative techniques like clustering of homes can promote restoration objectives. As an example, development in a clustered cottage configuration and common open space with tree tracts and natural vegetation could significantly protect and/or enhance natural functions and values.

- **Vegetation Management Areas:** Vegetation management requirements are implemented in association with the needs of individual environment designations to correspond with setback requirements. Within vegetation management areas, standards are applied that protect and improve natural functions and value, such as avoidance of impacts and landscaping.

- **Landscaping Standards:** Restoration objectives will also be realized incrementally on single family lots that are redeveloped or expanded when existing vegetation is not sufficient to protect resources from impacts. Restoration objectives are promoted through implementation of landscaping requirements, in association with vegetation management requirements that set a vision for the community for shoreline aesthetics, water quality management, and provision of habitat.

- **Development Options:** Options for permit applicants may also promote restoration activities by providing alternatives for development that might not be permitted without restoration actions. An example would be expansion of a structure that does not meet new setbacks from the OHWM. While a structure not meeting setbacks might not normally be permitted to expand, restoration options can be used to offset no net loss concerns. This provides extra value to the landowner by additional use of property and the public by promoting public restoration objectives.

- **Incentives:** Incentives for dedication of property will also promote restoration objectives, by putting shoreline property in public ownership providing restoration opportunities through public management of the resource not otherwise available.

Table lists recent restoration projects within SMA jurisdiction or affecting SMA shorelines.

TABLE 7 - LACEY: EXISTING RESTORATION PROJECTS IN LACEY AND UGA.

Shoreline	Jurisdiction/Group	Project Description	Restored Processes & Functions
General Lake Benefit	City of Lacey Parks/Public Works Departments	Stormwater treatment facility/wetlands (Horizon Point Park).	Stormwater treatment facilities generally promote flood flow retention, the removal of pollutants/sediment through sedimentation and adsorption, and mitigation of upland sediment generation. Wetlands perform these same functions and also help with groundwater recharge and low summer flows while providing shoreline habitat for wildlife such as invertebrates, birds, amphibians, reptiles, and mammals.
Hicks Lake	City of Lacey Parks/Public Works Departments	Stormwater treatment facility/wetlands.	See 'General Lake Benefit'.
Long Lake	City of Lacey	Stormwater mitigation area at north end of lake (wetland).	See discussion of wetlands under 'General Lake Benefit'.
	City of Lacey	Infiltration area at north end of lake.	Infiltration areas promote groundwater recharge and mitigate low summer flows.
Pattison Lake	City of Lacey Parks/Public Works Departments	Stormwater treatment facility/wetlands (Lakepoint Park).	See 'General Lake Benefit'.
Southwick Lake	City of Lacey Parks/Public Works Departments	Stormwater treatment facility/wetlands constructed by the City (Rainier Vista Park).	See 'General Lake Benefit'.
Woodland Creek	Lacey Stream Team	Installing fish weirs, depositing spawning gravel, native plant revegetation, and invasive removal.	These projects will restore shoreline habitat for wildlife, including invertebrates, birds, amphibians, reptiles, and mammals. Native plant revegetation provides erosion control. Depending on the size of native plantings, there is a potential for future sources of LWD.
Woodland Creek	Thurston County, Lacey Stream Team	Repairing drywells and bioswales, construction of rain gardens.	Flood flow retention, removal of pollutants, and providing vegetation for habitat (bioswales and rain gardens). They also promote groundwater recharge.

Shoreline	Jurisdiction/Group	Project Description	Restored Processes & Functions
Woodland Creek WOOD-1	St. Martin's University, City of Lacey	Construction of water quality treatment ponds that collect stormwater from 430 acres that drains to Woodland Creek.	See description of 'stormwater treatment facilities' under 'General Lake Benefit'.
	Lacey Stream Team	Purchased a 4.4 acre parcel along creek to-enhance protection of the stream corridor, performed riparian revegetation at site.	Revegetation helps promote flood flow retention, provides erosion control and storage of phosphorus and nitrogen while providing habitat for wildlife and a potential future source of LWD.
Woodland Creek Both Reaches	Lacey Stream Team	Removed concrete armoring from the stream channel at the outlet of Lake Lois, added spawning gravel to Woodland Creek immediately downstream. Location is upstream from the SMA-affected reaches of Woodland Creek.	The addition of spawning gravel will enhance shoreline habitat for fish, especially salmonids.
	Lacey Stream Team	Ongoing efforts to revegetate the riparian buffer in Woodland Creek Community Park. Location is upstream from the SMA-affected reaches of Woodland Creek.	See revegetation project described above under WOOD-1.
	City of Lacey Parks Department	Pond and stream restoration at Woodland Creek Community Park, as part of an overall construction project at the site.	This project will enhance shoreline habitat for wildlife.

VI. Other Restoration Opportunities

The new Shoreline Master Program provides for protection and restoration opportunities along developed shoreline parcels as redevelopment occurs through the requirement for a Shoreline Vegetation Management plan.

The idea is to slowly replace lawns and turf along shorelines with native vegetation as mitigation, when shoreline properties develop or redevelop.

The new standards apply on parcels with waterfront access when:

- A new structure is constructed
- An existing structure is remodeled and square footage is added
- An accessory structure (such as a garage, deck, or patio) is added
- Any development action requiring a shoreline permit is taken

In order to move toward the goal of restoring native vegetation to shorelines incrementally, the proposal includes a sliding scale for how much vegetation restoration is required. Generally, vegetation will be required when existing vegetation on site is not sufficient to mitigate impacts from the new or expanded use/development or when expansions or new structures are proposed within the setback/vegetation management area.

New Structures

Please see Chapter 17.41.021, Table 1 in the SMP.

VII. Metrics and Ongoing Monitoring

Some of the potential metrics to measure progress in restoring ecological function and processes are listed below:

TABLE 8: POTENTIAL METRICS AND MONITORING.

Metric	Monitoring	Status
Water quality	Thurston County Water Resources	Ongoing
Shellfish water quality	State Department of Health	Ongoing
Critical salt water habitat	Squaxin Island Tribe	Periodic
Fisheries	Various	Ongoing
Storm flows	USGS monitoring stations	Ongoing
Marine bulkheads	Thurston Regional Planning Council	Periodic evaluations
Lake shoreline armoring	None noted	Baseline evaluation should be done
Docks and Piers	Shoreline Master Program Inventory	Updated in 2008
Impervious Surfaces by Basin	Thurston Regional Planning Council	Last update in 2000
Forest Cover	Thurston Regional Planning Council	1985-2000
Wetland Ratings and Functions	None noted	Baseline evaluation should be done
Wetland Acreage	Shoreline Master Program Inventory	Updated in 2008
Contamination sites/cleanup status	State Department of Ecology	Ongoing

VIII. Timelines and Benchmarks in the Context of Restoration Objectives in this SMP

Discussion of organizations doing restoration work is presented in Table 7. For those looking for hard numbers and quantitative data sets, Table 8 presents sources of quantitative study elements provided for future reference. However, while these sources may be helpful in providing baseline data for review and evaluation of change, the data will be of limited value for much of the restoration effort Lacey's SMP and Restoration Plan are designed to promote and implement.

Expectations for determining timelines and benchmarks for Lacey's restoration objectives will generally need to be considered in the context of the market and decisions for private investment. Lacey's SMP is designed to move the community in the direction of restoration objectives by guiding new development, improving landscaping requirements and emphasizing environmentally sound decisions for landowners in management of shoreline properties. These activities involve non-public activities and generally do not lend themselves to reliable forecasts or benchmarks.

Lacey has no control over what the market might do on a macro scale and little if any control on a micro scale for individual property decisions. Development of specific timing expectations and specific benchmarks for measurement of restoration improvements in this arena is not practical or useful.

While significant successes may be realized in restoration objectives through public investment and public sponsored projects, the major restoration advances and the areas of emphasis for this SMP are things that will rely on the individual property owners and decisions on how to manage individual properties. It will also rely to a very large extent on the goal and policy vision set in the SMP and the regulatory language for its implementation.

Restoration strategies that are a focus in the SMP, like improving shoreline vegetation management for habitat and water quality functions, will fall within this private ownership/regulatory arena. Major strides in these areas will be by actions of private property owners developing and managing shoreline properties within the vision established by the community in the SMP and other community planning documents.

A quantitative level of review is not needed for these issues in the context of developing goals, policies and regulatory or incentive strategies for this SMP. Precise numbers are not as important as identifying probable cause and effect and general expectations of a particular course of action. These issues require a qualitative level of consideration. A qualitative process, based upon broad based citizen participation and evaluation of the issues, can achieve timelier and arguably comparable results for community planning purposes.

Lacey can make a difference and achieve restoration objectives by crafting strategies based upon extensive community dialogue and reasoned conclusions of those participating in the update of this SMP. The issues identified and the strategies developed are based on the discussion and reasoned conclusions of Lacey staff, the Planning Commission, the Lacey Council and those citizens and professional resource agency representatives participating in the SMP update.

There are no black and white answers, no spreadsheet that will ever be able to balance community needs, values and objectives. There is no benchmark for measurement that can be trusted to represent all of the variables involved in the complex issues restoration activity might include when encountered in the field.

Instead, community decisions for the effectiveness of restoration objectives will be based upon discussion and open communication with citizens involved in the issues as well as professional staff and resource agency representatives. Given the nature and complexity of these issues and the context decisions must be made in local government, a well developed intuition and reasoned judgment of Lacey's elected officials must serve as the final benchmark for measurement of success in achieving shoreline management objectives.

The timelines for judging the success of long range planning objectives are similarly unpredictable and often must be tested and measured in years. For the purposes of this SMP, the timeline is the same 20-year horizon used for other GMA plans. Periodic evaluation, review and refinement of major concepts is expected at least once every 7 years.

IX. Restoration Goals and Policies

Generally: The SMP restoration goals and policies will be implemented through local projects both public and private. These will restore ecological function to the shorelines within the City of Lacey.

This restoration plan is not specific to the shoreline environment designations. In general, preservation areas have been designated Natural and developed areas have been designated Shoreline Residential.

Promoting and assigning priority to the general type of projects discussed and specific projects identified within this plan will improve ecological function by:

- Improving water quality (examples: construction of stormwater treatment facilities, establishing buffers around lakefront property with native vegetation)
- Restoring habitat for a variety of species (examples: invasive plant removal, landscaping buffers around lakefront property with native vegetation including trees)
- Creating new habitat (examples: installation of large woody debris in streams and rivers, restoring native vegetation to lakefront properties)

Specific Goals, Policies and Standards: Restoration goals, policies and development standards that have been developed through update of the SMP are as follows:

Goals and Policies Related to Landscaping:

1. **Goal: Over the long term, achieve landscaped shorelines with vegetation supportive of natural shoreline functions and values that will help maintain and improve water quality and habitat.**

   A. Policy: Limit the removal of vegetation along the shoreline to the minimum necessary to accommodate the approved shoreline development and establish a buffer area of vegetation corresponding to each designation's setback area.

   B. Policy: Native/approved vegetation along the shoreline will be required to further goals of restoration and promote no net loss of ecological function and value. Landscaping plans will require balancing legitimate competing interests. This will include habitat and view corridor opportunities as well as compatibility and integration with the full range of land use activities permitted and expected in the applicable shoreline classification.

   C. Policy: The Administrator may allow limited selective pruning of native vegetation for view corridors and some limited clearing for access provided ecological functions are not compromised. The activity shall be reviewed by the City Forester/Arborist and a recommendation provided to the Administrator.

   D. Policy: Preserve existing native vegetation along the shoreline and require planting when it does not exist.

   E. Policy: Provide flexibility when balancing overlapping shoreline policies and priorities regarding vegetation conservation, a preference for water-dependant uses, and requirements to provide public access.

   F. Policy: When remodeled structures are located too close to the ordinary high water mark and do not have room to install the normal vegetative improvements in the designated buffer area, the

City will require planting with vegetation the site can reasonably accommodate within the buffer area. In addition, to offset and mitigate impacts that occur for lack of adequate vegetative buffering, the city may require a commensurate amount of vegetation on other offsite priority restoration areas.

G. Policy: Vegetation management development standards for the buffer shall apply to a new structure, to remodeled structures which add square footage, to the addition of an accessory structure, and any permit for a shoreline parcel(s) with waterfront access.

H. Policy: Intact native shoreline vegetation shall be comprised of three vegetative levels including an overstory of trees, an understory of shrubs, and a floor of herbs of native plants commonly found in riparian areas of Thurston County.

I. Policy: When intact native shoreline vegetation is lacking, required areas shall be planted to resemble native riparian vegetation or equivalent from the standpoint of function and value, see Table 1. This canopy should also have an understory of native plants commonly found in riparian areas of Thurston County or of benefit to lake shoreline in Lacey.

J. Policy: A Shoreline Vegetation Management Plan shall address shoreline function and values.

K. Policy: Vegetation conservation development standards shall not apply to the removal of aquatic weeds and fresh water algae undertaken pursuant to WAC 173-201.

L. Policy: Additional tree regulations and policy can be found in Chapter 14.32 of the Lacey Municipal Code and Lacey's Urban Forest Management Plan. Per Section 17.35.010, the more restrictive development standard applies.

M. Policy: The City of Lacey Critical Area Ordinances, including the ordinances for the protection of habitat and wetland areas, requires vegetation along a shoreline or wetland. These requirements will overlay those found within this section. Per Section 17.35.010, the more restrictive development standard applies.

2. Goal: Develop landscaping guidelines that will achieve goals for restoration and that are useful for property owners and will encourage and promote ecological friendly property management.

A. Policy: Utilize the stated goals and policies for each of the different shoreline use and activities sections to explain to citizens the reasons for the regulations.

B. Policy: Develop and provide examples of landscaping strategies and plans citizens can use to implement important concepts on their own property.

3. Goal: Implement a public informational effort that will put shoreline vegetation restoration and management guidelines, in the hands of shoreline property owners.

A. Policy: Because of the importance of native vegetation in managing water quality, the City shall promote public education on this topic and help inform citizens of the purpose and need for retention/replanting/restoration of shoreline area to perform natural drainage mitigation.

B. Policy: Develop a full range of techniques for informing the public of shoreline vegetation requirements as well as basic information regarding shoreline functions and values and how vegetation management is an ecologically friendly way of maintaining shoreline property.

C. Policy: The City will support efforts of realtors and work in partnership with the local Board of Realtors in informing new and existing lot owners of requirements of protective covenants and proper vegetation management. This may include a range of strategies such as educational

presentations at realtor membership meetings, presentations to home owner associations, scheduling informational meetings with lot owners or perspective buyers and helping to develop brochures for general circulation to interested groups.

Goals and Policies Related to General Restoration:

1. **Goal: Identify and take advantage of restoration opportunities where restoration goals can be integrated into the design and planning of public or private shoreline development projects.**

   A. **Policy:** Recognize that restoration and enhancement may result from:
      1) Mitigation of impacts from new development.
      2) Adoption of shoreline setbacks with a buffering function which are based upon shoreline ecological functions and processes.

   B. **Policy:** Reestablish, rehabilitate and/or otherwise improve impaired shoreline ecological functions and/or processes through voluntary and incentive-based public and private programs and actions that are consistent with this master program and other approved restoration plans.

   C. **Policy:** Restore and enhance shoreline ecological functions and processes as well as shoreline features through voluntary and incentive-based public and private programs.

2. **Goal: Where opportunities are present, work with other state and local jurisdictions in planning and implementation of restoration projects that cross jurisdictional boundaries**.

   A. **Policy:** Encourage and facilitate cooperative restoration and enhancement programs between local, state, and federal public agencies, tribes, non-profit organizations, and landowners to address shorelines with impaired ecological functions and/or processes.

3. **Goal: Implement restoration efforts consistent with the City Shoreline Restoration Plan: Appendix 3.**

   A. **Policy:** Integrate restoration and enhancement with other parallel natural resource management efforts such as the WRIA 13 Salmonid Recovery Plan, Puget Sound Salmon Recovery Plan, and the City of Lacey Comprehensive Land Use Plan and its Environmental Protection and Resource Conservation element.

   B. **Policy:** Ensure restoration and enhancement is consistent with and, where practicable, prioritized based on the biological recovery goals for early Chinook, bull trout populations and other species and/or populations for which a recovery plan is available.

   C. **Policy:** Target restoration and enhancement towards improving habitat requirements of priority and/or locally important wildlife species.

   D. **Policy:** Restoration shall be carried out in accordance with an approved shoreline restoration plan and in accordance with the policies and regulations of this SMP.

   E. **Policy:** Prioritize restoration actions and stand-alone projects in the following order:
      1) Create dynamic and sustainable ecosystems.
      2) Restore connectivity between stream channels, floodplains and hyporheic zones.
      3) Restore natural channel-forming geomorphologic processes.
      4) Mitigate peak flows and associated impacts caused by high stormwater runoff volume.
      5) Reduce sediment input to streams and associated impacts.
      6) Improve water quality.
      7) Restore native vegetation and natural hydrologic functions of degraded and former wetlands.
      8) Replant native vegetation in riparian areas to restore functions.

9) Restore nearshore ecosystem processes, such as sediment transport and delivery and tidal currents that create and sustain habitat.
10) Restore pocket estuaries that support salmon life histories, including feeding and growth, refuge, osmoregulation, and migration.
11) Remove obsolete and no longer needed shoreline modifications.

4. Goal: Achieve natural beach areas by restoration that meets needs of the land owner without hard armoring.

1. **Policy:** Insure that permits for beach restoration and enhancement projects address the goals, policies and development standards within the Shoreline Ecological Function Chapter 17.40.000.

2. **Policy:** Give preference in permitting beach restoration and enhancement projects which use naturally regenerating systems, rather than bulkheads and other structures to prevent and control beach erosion where:

   A. The length and configuration of the beach will accommodate such systems.

   B. Such protection is a reasonable solution to the needs of the specific site.

   C. Beach restoration/enhancement will accomplish one or more of the following objectives:
      1) Recreate or enhance natural shoreline conditions.
      2) Create or enhance natural habitat.
      3) Reverse otherwise erosion-prone conditions.
      4) Enhance access to the shoreline, especially to public shorelines.

3. **Policy:** Design and construct beach enhancement projects so that they will not degrade aquatic habitats, water quality and flood holding capacity.

4. **Policy:** Prefer self-maintaining designs over those which depend upon regular maintenance.

5. **Policy:** Require supplementary beach nourishment where structural stabilization works are likely to increase impoverishment of existing beach materials at or downdrift from the project site.

6. **Policy:** Limit the waterward extent of beach enhancement to that which is necessary to achieve the intended results.

7. **Policy:** Encourage the use of dredged materials for beach restoration and enhancement projects when it has suitable organic and physical properties.

X. Summary

The Restoration Plan is designed to meet the requirements for restoration planning outlined in the Department of Ecology Guidelines. A Restoration Plan is not a regulatory document or a set of regulatory requirements.

This plan is meant to be used as a resource for shoreline restoration planning for Lacey, identifying priorities and potential restoration opportunities.

Restoration efforts identified in Table 6 are ongoing and may change. Table 6 shows specific projects that were planned at the time of the Plan's development. Discussion in Tables 4 and 5 present various priorities based upon current knowledge and possible opportunities that may become available. These conclusions may also change.

This Plan should be used as a guidepost on the types of activities that may prove beneficial in achieving desired outcomes and priority for restoration activities based upon current available science and knowledge. It is not intended to be a regulation that sets one way to approach restoration policy, but only a reasoned intent to follow.

The best restoration strategy will be to plan for what the City can identify now, continue to look for and identify opportunities that may become available in the future and a willingness to try new innovative approaches to accomplish public objectives. This will require flexibility in how we approach each project. It will require a willingness to develop implementation solutions based upon each situation's unique features, the opportunity it presents and the customer service needs of the people involved.

XI. Resources Used in Developing this Plan

City of Lacey, 2008. *Lacey Comprehensive Plan, (including Capital Facilities Chapter).*

City of Lacey, 2004. *Lacey Comprehensive Plan for Outdoor Recreation.*

Thurston Regional Planning Council, 2008. *Draft Shoreline Inventory for the Cities of Lacey, Olympia, and Tumwater and their UGAs.*

ESA Adolfson, 2009. *Lacey, Olympia, and Tumwater - Shoreline Analysis & Characterization Report,* prepared for Thurston Regional Planning Council.

Haring, D. and Konovsky, J., 1999. *Washington State Conservation Commission: Salmon Habitat Limiting Factors Final Report, Water Resource Inventory Area 13*. 118 pp.

Herrera Environmental Consultants, 2005. Marine Shoreline Sediment Survey and Assessment, Thurston County, Washington. Prepared for Thurston Regional Planning Council, Olympia, Washington. Available at: http://www.trpc.org/library/environment/water/marine+shoreline+sediment+survey+and+assessment.htm.

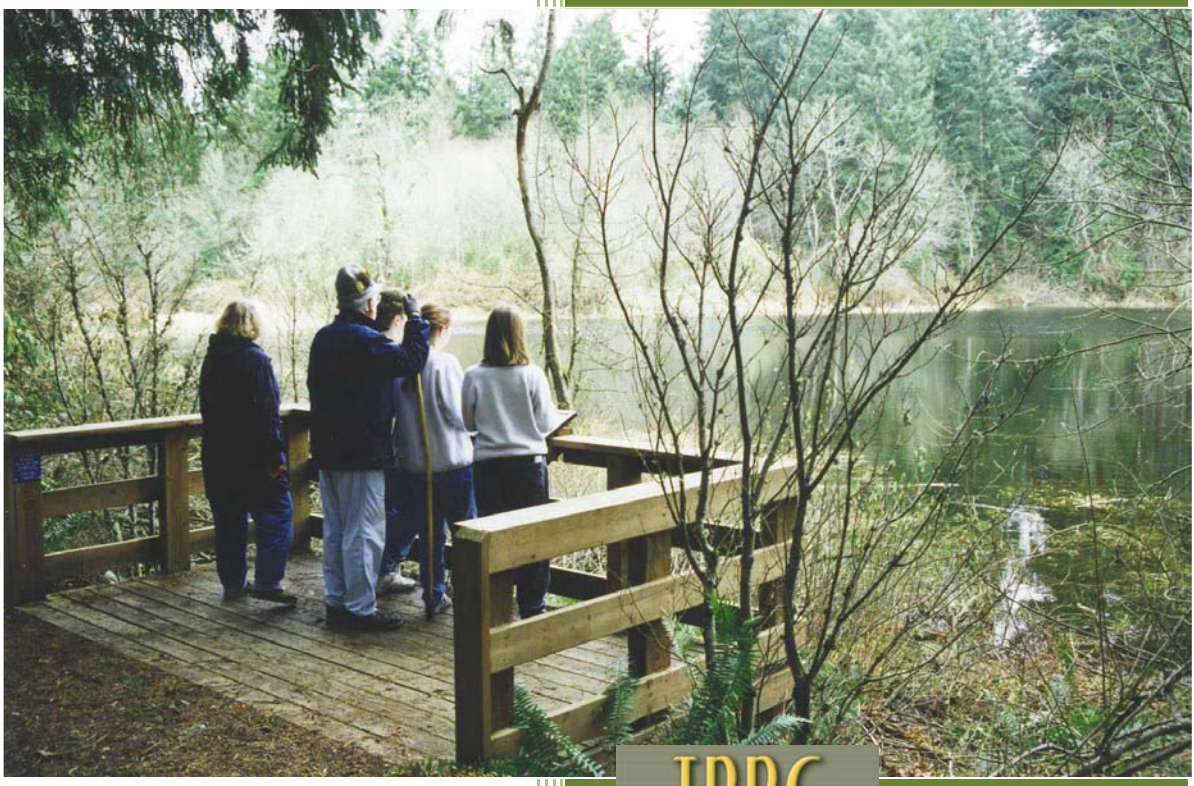
Stanley, S., J. Brown, and S. Grigsby. 2005. *Protecting Aquatic Ecosystems: A Guide for Puget Sound Planners to Understand Watershed Processes.* Washington State Department of Ecology, Publication #05-06-013, Olympia, Washington. Available at: http://www.ecy.wa.gov/biblio/0506027.html.

Thurston County, 2008. *Thurston County Comprehensive Plan (including Capital Facilities Chapter).*

January 2010 City of Lacey Shoreline Master Program update - Appendix 4

Characterization and Inventory; In original form as received from Thurston Regional Planning. Includes Lacey, Olympia, Tumwater and the their urban growth areas (UGAs)

Shoreline Inventory for the Cities of Lacey, Olympia, and Tumwater and their Urban Growth Areas



TRPC
Thurston Regional Planning Council

THURSTON REGIONAL PLANNING COUNCIL (TRPC) is a 22-member intergovernmental board made up of local governmental jurisdictions within Thurston County, plus the Confederated Tribes of the Chehalis Reservation and the Nisqually Indian Tribe. The Council was established in 1967 under RCW 36.70.060, which authorized creation of regional planning councils.

TRPC's mission is to **"Provide Visionary Leadership on Regional Plans, Policies, and Issues."** The primary functions of TRPC are to develop regional plans and policies for **transportation** [as the federally recognized Metropolitan Planning Organization (MPO) and state recognized Regional Transportation Planning Organization (RTPO)], **growth management, environmental quality**, and other topics determined by the Council; provide **data and analysis to support local and regional decision making;** act as a "**convener**" to build **community consensus** on regional issues through information and citizen involvement; build **intergovernmental consensus** on regional plans, policies, and issues, and advocate local implementation; and provide **planning, historic preservation, and technical services** on a contractual basis.

2009 MEMBERSHIP OF THURSTON REGIONAL PLANNING COUNCIL

Governmental Jurisdiction	Name of 2009 Representative
City of Lacey	**Virgil Clarkson,** Councilmember
City of Olympia	**Joan Machlis,** Councilmember
City of Rainier	**Dennis McVey,** Councilmember
City of Tenino	**Ken Jones,** Mayor
City of Tumwater	**Ed Stanley,** Councilmember
City of Yelm	**Robert Isom,** Councilmember
Town of Bucoda	**Kathy Martin,** Mayor
Thurston County	**Cathy Wolfe,** County Commissioner
Intercity Transit	**Sandra Romero,** Transit Authority Board Member
LOTT Alliance	**Graeme Sackrison,** Board Member
Thurston PUD	**Paul Pickett,** PUD Commissioner
North Thurston Public Schools	**Chuck Namit,** School Board Member
Olympia School District	**Frank Wilson,** School Board Member
Confederated Tribes of the Chehalis Reservation	**Lennea Magnus,** Planning Director
Nisqually Indian Tribe	**Francine Lester,** Tribal Councilmember
Associate Members	
CAPCOM	**Jeff Kingsbury,** Board Chairman
Economic Development Council of Thurston County	**Joseph Beaulieu,** EDC President
Lacey Fire District #3	**Frank Kirkbride,** Commissioner
Olympic Region Clean Air Agency	**Ann Burgman,** Board Member
Puget Sound Regional Council	**Norman Abbott,** Director
Timberland Regional Library	**Dick Nichols,** Library Board Member
The Evergreen State College	**Paul Smith,** Director of Facilities Services

Chair	Vice Chair	Secretary
Ed Stanley	**Dennis McVey**	**Cathy Wolfe**
City of Tumwater	City of Rainier	Thurston County

Lon D. Wyrick, Executive Director

Thurston Regional Planning Council Staff

Veena Tabbutt	Senior Planner
Steven W. Morrison	Senior Planner
Andrew Deffobis	Assistant Planner
Scott Carte	GIS Manager
Paul Brewster	Associate Planner
Rosalie Bostwick	Office Manager
Toni Tringolo	Office Specialist II
Lon Wyrick	Executive Director
Susan Andrews	Assistant Director

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About This Report

Consistent with Governor Gregoire's Plain Talk Executive Order 05-03 (2005), this report is written in a manner that is brief and to-the-point, uses non-bureaucratic language and features a clean design that promotes fast scanning and reading.

Scientific and legal references are kept to a minimum, replaced by a full list of sources in the report appendix.

Explanation of limited inclusion in Lacey's SMP.
Because of the extensive nature of this report in covering the whole County, only minor sections that deal with Lacey have been reproduced in this SMP. However, the full version is included in an attached CD in a slip cover to this appendix.

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I. Notes and Explanations

A. Water Quality Explanations

Water quality information comes from several sources, including federal, state and local agencies.

State Water Quality Information

The Washington State Department of Ecology measures water quality standards in surface waters, including rivers, lakes, and marine waters. Under the federal Clean Water Act, water quality standards must be adequate for the protection of beneficial uses of water bodies, including recreation, habitat for aquatic and marine life, and water supplies for agriculture and the general public.

The State Department of Ecology measures waterbodies and evaluates how observed measurements of water quality parameter affect each water body. Measurements of each water quality parameter are taken from water, sediment and tissue samples. Water bodies are then divided into categories, separated by varying degrees of degradation. The categories, as defined in Washington State's Water Quality Assessment for 2004 are as follows:

A. Category 5: Polluted waters requiring a TMDL[1].

   Data has shown that water quality standards have been violated for at least one pollutant, and that there is no TMDL or pollution control plan in place. TMDLs must be created for waterbodies in this category.

B. Category 4: Polluted waters not requiring a TMDL.

   Water bodies in this category have pollution problems that are being addressed by one of three methods:

   1. Category 4a: Water bodies that already have an approved TMDL.
   2. Category 4b: Water bodies that have another pollution control plan in place. They are required to exhibit many features of TMDL plans and must include legal or financial guarantees that the plans will be implemented.
   3. Category 4c: Water bodies impaired by a non-pollutant, including low water flow, stream channelization and dams.

[1] A TMDL or Total Maximum Daily Load is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. Water quality standards are set by States, Territories, and Tribes. TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The calculation must include a margin of safety to ensure that the waterbody can be used for the purposes the State has designated. The calculation must also account for seasonal variation in water quality. The Clean Water Act, section 303, establishes the water quality standards and TMDL programs.

C. Category 2: Waters of concern.

Water bodies are placed in this category for several reasons. Pollution levels may not be high enough to violate water quality standards, or there may have been too few violations to characterize the water body as impaired under Ecology's policies. There could be data that indicates water quality violations, but the data may have been collected improperly.

D. Category 1[2]: Meets tested standards for clean waters.

This designation does not mean that a water body is free of pollutants, only that it met standards for the pollutants for which it was tested. Specific monitoring results can be found in each water body's individual listing.

The "State Information" in this report includes evaluations made by the Department of Ecology, based on water, sediment and tissue samples. Information is provided for Shoreline-regulated waterbodies within WRIA 13, and is separated into categories as defined by Ecology. A comprehensive listing of all water bodies in violation of water quality standards in the State of Washington is available from the Washington State Department of Ecology.

Local Water Quality Information

Thurston County also conducts its own water quality testing. In 2006, Thurston County Public Health and Social Services Department, Thurston County Water and Waste Management Department and the Storm and Surface Water Program in conjunction with the Public Works and Water Resources Programs of the cities of Olympia and Lacey, the City of Tumwater's Public Works Department and the Washington State Department of Ecology collectively published the Thurston County Water Resources Monitoring Report for the 2003-2004 and 2004-2005 Water Years. It includes water quality information on streams and lakes in Thurston County. This study separated water quality parameters into two sets of criteria: water contact recreation and freshwater aquatic life uses.

In addition to reporting on the status of various water quality parameters found during the study, water bodies were rated on a scale from "Excellent" to "Poor". The guidelines below, taken from the Water Resources Monitoring Report, show what considerations were used to rate water bodies in the study.

[2] Category 1 listings were not included in this report.

Stream Water Quality Categories

"Excellent" - No water quality standard violations, and very low fecal coliform and nutrient concentrations.

"Good" - Usually meets water quality standards; OR violates only one part of the two part fecal coliform standard; OR the violation is most likely the result of natural conditions rather than pollution.

"Fair" - Frequently fails one or more water quality standards and other parameters such as nutrients indicate water quality is being impacted by pollution.

"Poor" - Routinely fails water quality standards by a large margin; other parameters such as nutrients are at elevated concentrations.

Lake Water Quality Categories

"Excellent" - Very low nutrient and chlorophyll *a* concentrations, and very high water clarity; Classified as Oligotrophic; Uses not impaired.

"Good" - Low to moderate nutrient and chlorophyll *a* concentrations, and moderate to high water clarity; Classified as Mesotrophic; Uses not impaired.

"Fair" - Moderate to high nutrient and chlorophyll *a* concentrations, and low to moderate water clarity; Classified as Eutrophic; Uses sometimes impaired.

"Poor" - High nutrient and chlorophyll *a* concentrations, and low water clarity; Classified as Eutrophic; Uses impaired during most of the summer season by excess algae and/or aquatic macrophyte (plant) growth.

B. Critical Areas

Wetlands

Wetland Indicator maps were prepared for the cities of Lacey, Olympia, Tumwater, and their urban growth areas during the early 1990s. Wetland consultants were used as described in Keany and Rozenbaum (1992), and on the TRPC web site - Wetland Mapping for the Thurston Region.

Landslide Hazard Areas

Each jurisdiction has identified steep slopes while developing their Critical Areas Ordinances. For local jurisdictions they are defined as follows:

- Lacey – not applicable (no steep slopes or landslide hazard areas)
- Olympia – 40 percent or greater slopes
- Tumwater – 40 percent or greater slopes
- Thurston County – 50 percent or greater slopes

Habitat Conservation Areas

Habitat conservation areas are the riparian buffer around streams protected under local Critical Area Ordinances by a riparian buffer. Buffers have been generalized for mapping purposes, and are shown in the table below:

TABLE A - 1: RIPARIAN BUFFER WIDTHS BY STREAM TYPE FOR LACEY, OLYMPIA, TUMWATER AND THURSTON COUNTY.

Streams	Lacey	Olympia	Tumwater	Thurston County
Current Washington State Department of Natural Resources Stream Typing System				
Type S	n/a	250 ft	n/a	n/a
Type F	n/a	200 ft	n/a	n/a
Type N	n/a	150 ft	n/a	n/a
Type U (unknown)	n/a	100 ft	n/a	n/a
Previous Washington State Department of Natural Resources Stream Typing System				
Type I	200 ft	n/a	200 ft	100 ft
Type II	200 ft	n/a	200 ft	100 ft
Type III	200 ft	n/a	100 ft	100 ft
Type IV	150 ft	n/a	50 ft	50 ft
Type V	150 ft	n/a	50 ft	25 ft

100 Year Floodplains

Floodplains with a one in one hundred chance of flooding (hereafter know as *100 Year Floodplains*) were mapped by FEMA within the three cities and Thurston County during the late 1970s and early 1980s. Field data collection and surveying was accomplished along the major

rivers within Thurston County, including the Deschutes River. The results of the studies were published by FEMA in a report for each local jurisdiction City of Lacey (FEMA, 1981), City of Olympia (FEMA, 1981), City of Tumwater (FEMA 1984) and Thurston County (1982).

FEMA undertook a hydrologic study of Capitol Lake following the 2001 Nisqually earthquake. The recommendation of that report (URS & Dewberry, 2003) was to raise the elevation of the 100 Year Floodplain of Capitol Lake from 11.0 feet NVGD to 11.5 feet NVGD. FEMA then changed the FIRM panels for Capitol Lake. In response a slight berm was designed into the landscaping of Heritage Park which surrounds the eastern shore of the North Basin. (Schilperoot and Morrison, 2002) Improvements to the park and this landscaping to prevent flooding of downtown Olympia from the lake during a 100 year flood event were completed in 2006.

II. Reach Break Methodology and Results

A. Overview

Reach breaks were developed by ESA Adolphson working in conjunction with TRPC staff, and with the Scientific and Technical Advisory Group review.

Main data sources used to develop the reach breaks included:

- Draft minimum SMA jurisdiction map developed by the TRPC;
- WA DNR shorezone mapping (2000);
- Recent (2006) NAIP aerial photography;
- WA DNR hydro streams GIS layer;
- The Draft Shoreline Inventory (TRPC, 2008); and
- The Capitol Lake Sediment Transport Study (USGS, 2006).

B. Lakes

In general, shoreline lakes in Lacey, Olympia and Tumwater area were considered to be each one reach. Most of the lakes within the study area have relatively consistent surrounding land uses, and generally homogenous morphologies. Reach breaks were assigned for lakes if:

1. There was a mapped inlet and outlet channel;
2. A city boundary ran along or through the lake (e.g., Chambers Lake);
3. Distinct land use and/or critical areas (e.g., wetlands or floodplains)

Capitol Lake was treated differently, and was broken into several segments (south, middle, north, and Percival Cove) to be consistent with past work. These breaks also constitute constructions in the lake.

TABLE A -2: LAKE REACHES IN WITHIN LACEY

Long Lake	LONG-1	Residential area in north basin
	LONG-2	Residential area in south basin
	LONG-3	Residential, wetland area, and inlet channel/ditch in south basin
	LONG-4	Residential area in south basin
	LONG-5	Residential area in north basin
	LONG-6	Wetland and outlet channel in north basin.
Chambers Lake	CHAM-1	Eastern basin
	CHAM-2	Less developed portion, generally within Olympia
	CHAM-3	Developed portion, generally within Lacey.
Southwick	SOU-1	
Hicks	HICKS-1	Wetland along south rim
	HICKS-2	Residential area
Pattison	PAT-1	Residential area north of road crossing
	PAT-2	Residential area in southwest portion
	PAT-3	Less developed and wetland area
	PAT-4	Mix of residential and wetland area, including outlet.

C. Rivers

Reach breaks were typically assigned along river shorelines at:

1. Confluences of major tributaries;
2. City or UGA boundaries; and/or
3. Major morphologic breaks (e.g., Tumwater Falls on the Deschutes).

TABLE A -3: RIVER REACHES IN THE LACEY URBAN AREA.

Waterbody	Reach	Rationale
Woodland Creek	WOOD-1	I-5 to confluence with tributary
	WOOD-2	Tributary to UGA boundary
Chambers Creek	CHAM-1	Extent of SMA jurisdiction to Deschutes River

D. Marine

Reach breaks were assigned along the marine shoreline at:

1. Major shorezone unit boundaries as mapped by WA DNR; and/or
2. Major land use shifts.
3. The sub category of A and B for Nisqually 2 is used to delineate the line between Lacey and unincorporated Thurston County in Mallard Cove.

Not all shoreline units were used to break our reaches, but all of our reach breaks occurred at or very close to a shoreline unit break. Examples where we did not assign a reach break on a shoreline unit boundary included: shoreline unit boundaries that appeared to be based on a similar British Columbia coastal class unit (e.g., “sand beach” to “sand flat”).

TABLE A - 4: MARINE REACHES IN THE LACEY AREA.

Waterbody	Reach	Rationale
Nisqually	NIS-1	UGA/City boundary to Drift cell, near Shorezone unit break, and land use break at Mallard Cove
	NIS-2A NIS-2B	City of Lacey Mallard Cove Unincorporated Thurston County Mallard Cove to UGA boundary.

III. Establishing Minimum Jurisdiction for Select Lakes

The following study was undertaken to establish the Ordinary High Water Mark and/or Associated Wetlands for select lakes within the Olympia, Lacey, and Tumwater urban areas as part of the Shorelane Master Program Update process.

THE COOT COMPANY
Wetland and Wildlife Consulting Services
416 S. Washington St., Suite 202
Olympia, WA 98501
(360) 352-9897
FAX (360) 352-9914

SHORELINE REVIEW

FOR THE

SHORELINE MASTER PROGRAM

Lacey, Olympia, Tumwater, Thurston County

APRIL 2008

prepared for:

Thurston Regional Planning Council
Steven W. Morrison, Senior Planner
2424 Heritage Court SW, Suite A
Olympia, WA 98502

prepared by:

Steve Shanewise, PWS
Senior Ecologist

Society of Wetland Scientists
SWS
000994
Professional Wetland Scientist

Trpcsmpapril08rpt.doc

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- Bigelow Lake
- Chambers Lake
- Long Lake North
- Setchfield Lake
- Smith Lake
- Susan, Munn, and Trails and Lake

EXECUTIVE SUMMARY

This report documents work performed to assist Thurston Regional Planning Council (TRPC) in updating the Shoreline Master Program (SMP) for the cities of Lacey, Olympia and Tumwater and their urban growth areas.

Field work was performed during winter high water conditions to determine the Ordinary High Water Mark (OHWM) and associated wetlands for all or portions of seven separate lake systems. Washington Department of Ecology personnel provided assistance through field review, particularly if any determination was difficult. TRPC provided detailed GIS maps for use in field review, including aerial photographs, topography and LIDAR depictions of each system reviewed.

Two systems reviewed, Smith and Setchfield Lakes, were determined to be below the 20-acre minimum for Shoreline jurisdiction. Trail's End Lake was determined to not be associated with the Susan/Munn Lake system, and would therefore also fall below the 20-acre Shoreline minimum.

Barnes Lake, which was not previously administered through Shoreline jurisdiction, was mapped at over 34 acres; putting it well within the 20-acre minimum limit for such jurisdiction.

Long Lake North had minor adjustments (increases) to the mapped OHWM, resulting in slight extensions of Shoreline jurisdiction within the adjacent landscape. The final two systems reviewed, Chambers, and especially Bigelow Lake, had significant expansions of OHWM and, for Bigelow, associated wetlands. Indeed, Bigelow Lake changed from being below the 20-acre minimum for Shoreline jurisdiction to exceeding 78 acres of OHWM area.

INTRODUCTION

Thurston Regional Planning Council (TRPC) is updating the Shoreline Master Program (SMP) for the cities of Lacey, Olympia, and Tumwater and their urban growth areas. This SMP update is being done in cooperation with Thurston County. Assistance was sought by TRPC to help locate the Ordinary High Water Mark (OHWM) and the extent of associated wetlands on several lakes within the three cities. This report documents the findings of that field review.

METHODS

1. **Winter Ordinary High Water Mark Conditions**
   Field reviews for this project were primarily conducted during the month of March to coincide with the normal, seasonal occurrence of the OHWM conditions within the lakes. This allowed for maximum ease and certainty of locating the OHWM by simply identifying the extent of surface water conditions within each landscape.

2. **Ordinary High Water Mark Review**
   Specific field reviews involved accessing each system at as many points as possible around the perimeter shorelines. The number of individual points accessed at each lake was based on Best Professional Judgment of what would be necessary to determine the OHWM condition for the entire system. Public access points were always used where available, but access permission from private landowners was also requested if no public access was available. However, not all private access requests were successful; Some landowners denied access and others were not available for consent.

3. **Associated Wetland Review**
   Determination of the extent of associated wetlands was performed simultaneously with the OHWM field review in many cases, and also included review of Thurston County Soil Maps, aerial photography, topography and LIDAR maps. Finally, personal knowledge from previous field work was frequently used.

4. **GIS Mapping**
   Thurston Regional Planning Council generated all the GIS maps for this analysis. They provided high quality, matched sets of aerial photography and LIDAR depictions of the shoreline landscapes reviewed. These maps also displayed the existing designated shoreline boundaries, as well as photo-interpreted wetland conditions. These maps were especially helpful in determining the extent of associated wetlands. TRPC remapped the location of the OHWM based upon field reconnaissance. TRPC also provided the area of calculations from these GIS maps to determine the SMA Jurisdiction in this report.

5. **Washington Department of Ecology Assistance**
   On 10 March and 7 April 2008, Brad Murphy of the Washington Department of Ecology assisted with field reviews and made jurisdictional determinations where conditions were not clear. Specifically, Mr. Murphy made the determination of OHWM association for Trails End Lake and the north end of Long Lake North. He also reviewed portions of OHWMs for Barnes, Bigelow and Setchfield Lakes.

RESULTS

A. Barnes Lake

Much of the Barnes Lake shoreline was viewable from public roads. Direct shoreline access was made at two locations. This system has almost no associated wetlands due to the highly developed shoreline. It appears that past grading activities have basically pushed upland ground right up to the edge of the OHWM. Only minor adjustments were made to the previous OHWM depiction. The area of the OHWM for Barnes Lake is well above the SMA jurisdictional threshold at approximately 34.7 acres. TRPC remapped the location of the OHWM based upon the new delineation.

B. Bigelow Lake

The mapped OHWM for this system was confined to the open water portion of the lake. Field review determined that the actual OHWM extends dramatically beyond this limit into densely vegetated emergent, shrub and forested wetlands around the entire perimeter of open water. In addition, because the overall system has been significantly drained by past ditching, extensive areas of associated wetlands occur well beyond the current OHWM limit.

Field access to this system was fairly comprehensive except for portions of the central east and west shorelines, and most of the southwest lobe, where access was limited to only a handful of sites. In this latter location, the extent of the OHWM was primarily identified through vegetation patterns on aerial photography and not from ground-truthed review of the existing waterline. However, the edge of associated wetlands here, as well as throughout the remainder of the system, were precisely identified through topography (uplands rise distinctly from a flat wetland bottom) and previous delineation work. The area of the OHWM for Bigelow Lake is now well above the SMA jurisdictional threshold at approximately 78.1 acres. TRPC remapped the location of the OHWM based upon the new delineation.

C. Chambers Lake

Field review for this system only included the south end of both lake basins. The mapped OWHM for this system was limited to the visible open water of the lake. The actual OHWM is located another 10 to 100 feet further out into the lake from this old limit within vegetated wetland, and the associated wetlands then extend another 10 to 200 feet beyond this. Nearly the entire shoreline reviewed for this system was directly checked in the field because it is primarily public land. Chambers Lake has been drained in the past and is managed by an active Drainage District. The area of the OHWM for Chambers Lake is well above the SMA

jurisdictional threshold at approximately 142.7 acres. TRPC remapped the location of the OHWM based upon the new delineation.

D. Long Lake North

Review of this system was limited to the outfall channel at the north end of the lake. The mapped OHWM for Long Lake North stops at a vegetation break between emergent and shrub habitat conditions. Field review confirmed that the OHWM extends throughout the shrub as well as emergent areas. TRPC remapped the location of the OHWM based upon the new delineation.

Review here also focused on whether the Long Lake North SMA jurisdiction should extend north to include Long Pond and its associated wetlands. WDOE aided in the field delineation at this site, and concluded that the railroad embankment crossing the outfall from Long Lake North constituted a significant break in hydrology and sustained a "uni-directional" flow through this artificial barrier. The railroad embankment therefore will constitute the new northern limit of SMA jurisdiction for Long Lake North. Long Pond, by itself, is below the jurisdictional minimum of 20 acres for shoreline designation.

E. Setchfield Lake

The mapped OHWM for this system was confined to the open water of the lake. Field review determined that the actual OHWM extends considerably beyond this limit into densely vegetated shrub and forested wetlands around the entire perimeter of interior open water. Field review included walking nearly all of the northern and southern portions of the system, plus some of the west side; access to the east side was not achieved.

The northern limit of the OHWM was determined (Brad Murphy, WDOE) to be the point where surface water from the lake begins to drain out through a defined, excavated channel, separating Setchfield Lake from an extensive, connected wetland system to the north. Even though the true OHWM designation for this system increased considerably to 18.88 acres from the previous shoreline depiction, it continues to falls below the 20 acre minimum threshold for SMA jurisdiction. TRPC remapped the location of the OHWM based upon the new delineation.

F. Smith Lake

The primary focus for this system was to determine if the mapped OHWM was accurate because it was within one acre of the SMA's jurisdictional 20-acre threshold. However, brief review of the north and south ends of the lake determined that the mapped depiction was actually excessive. The area of the

OHWM for Smith Lake is well below the SMA jurisdictional threshold at approximately 17.1 acres. TRPC remapped the location of the OHWM based upon the new delineation.

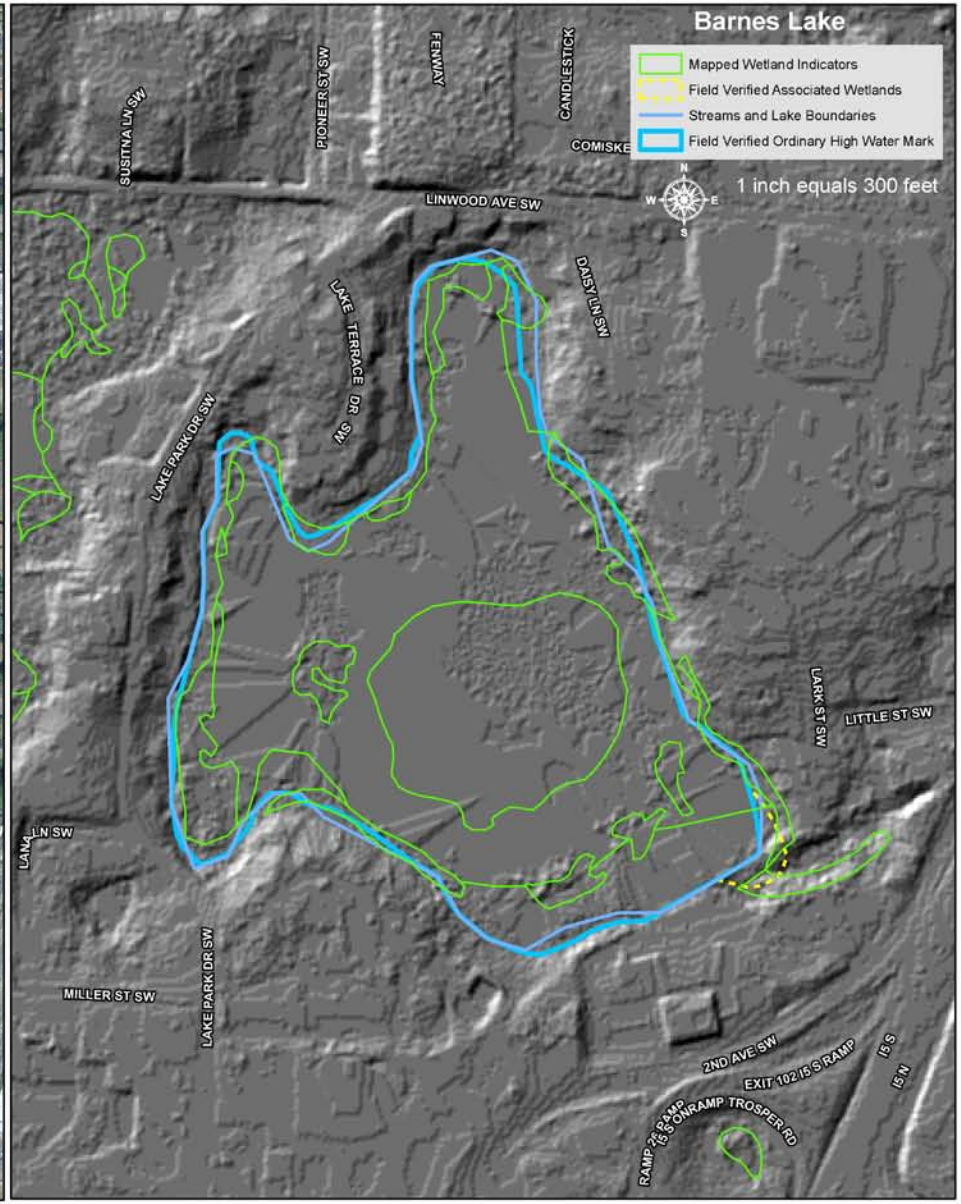
G. Susan, Munn, and Trails End Lakes

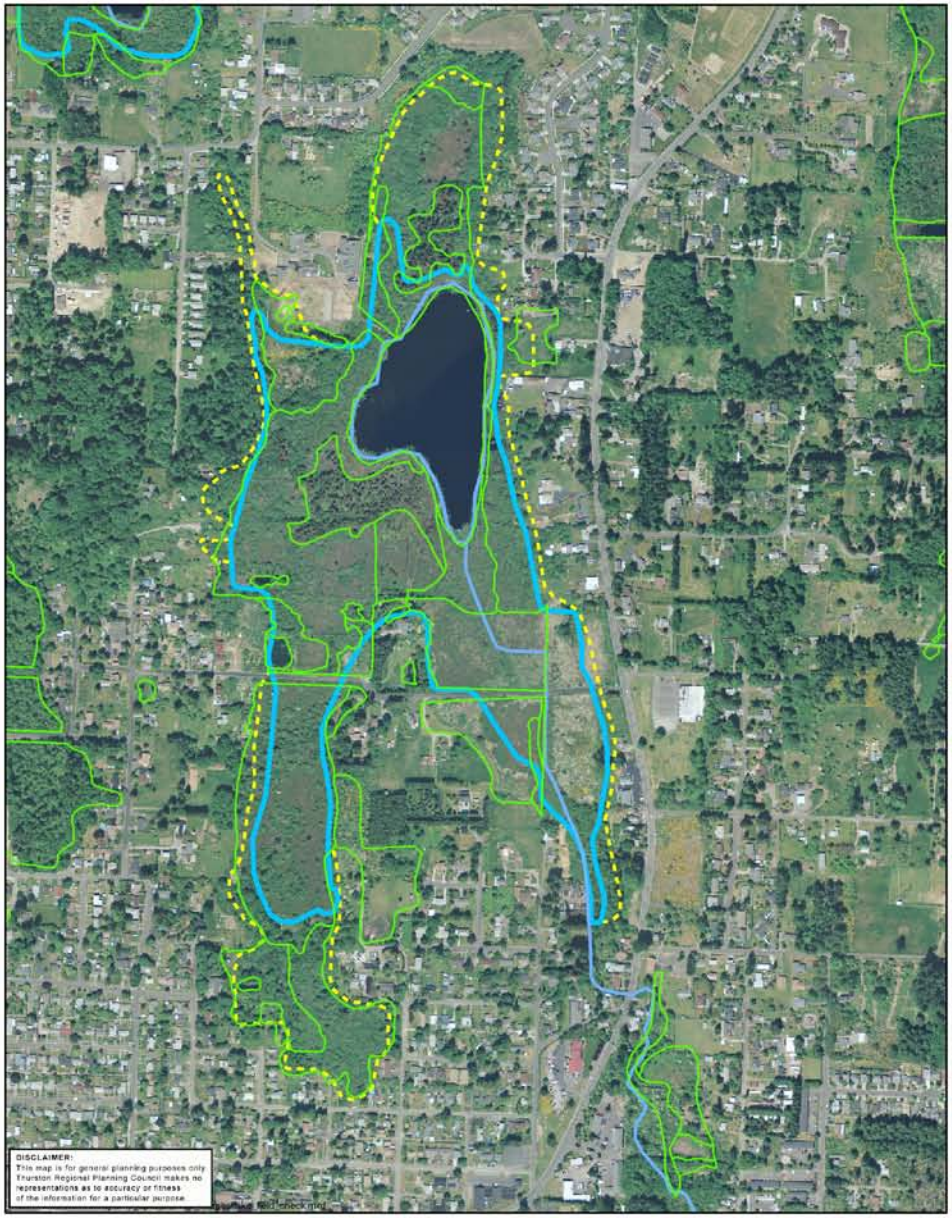
This site was investigated to determine whether or not Trails End Lake would be considered connected to Munn Lake, and therefore part of Shoreline Management Act (SMA) jurisdiction. Because the water flow through the road culvert connecting Trails End Lake to Munn Lake was determined to be "uni-directional" (water only flows from Trails End to Munn, and never the reverse). Trails End Lake was determined to not be a part of the Munn/Susan Lake system for purposes of determining SMA jurisdiction. Once this determination was made, no further review of the OHWM or associated wetland conditions for Trails End Lake were performed.

APPENDIX I: MAPS

SHORELINE MASTER PROGRAM

DISCLAIMER:
This map is for general planning purposes only. Thurston Regional Planning Council makes no representations as to accuracy or fitness of the information for a particular purpose.


Barnes Lake
Mapped Wetland Indicators
Field Verified Associated Wetlands
Streams and Lake Boundaries
Field Verified Ordinary High Water Mark
1 inch equals 300 feet
N
W
E
S
SUSITNA LN SW
PIONEER ST SW
FENWAY
CANDLESTICK
COMISKE
LINWOOD AVE SW
DAISY LN SW
LAKE TERRACE DR SW
LAKE PARK DR SW
LARK ST SW
LITTLE ST SW
LANA LN SW
MILLER ST SW
LAKE PARK DR SW
2ND AVE SW
EXIT 102 I5 S RAMP
I5 S
I5 N
RAMP 2 I5 S ONRAMP TROSPER RD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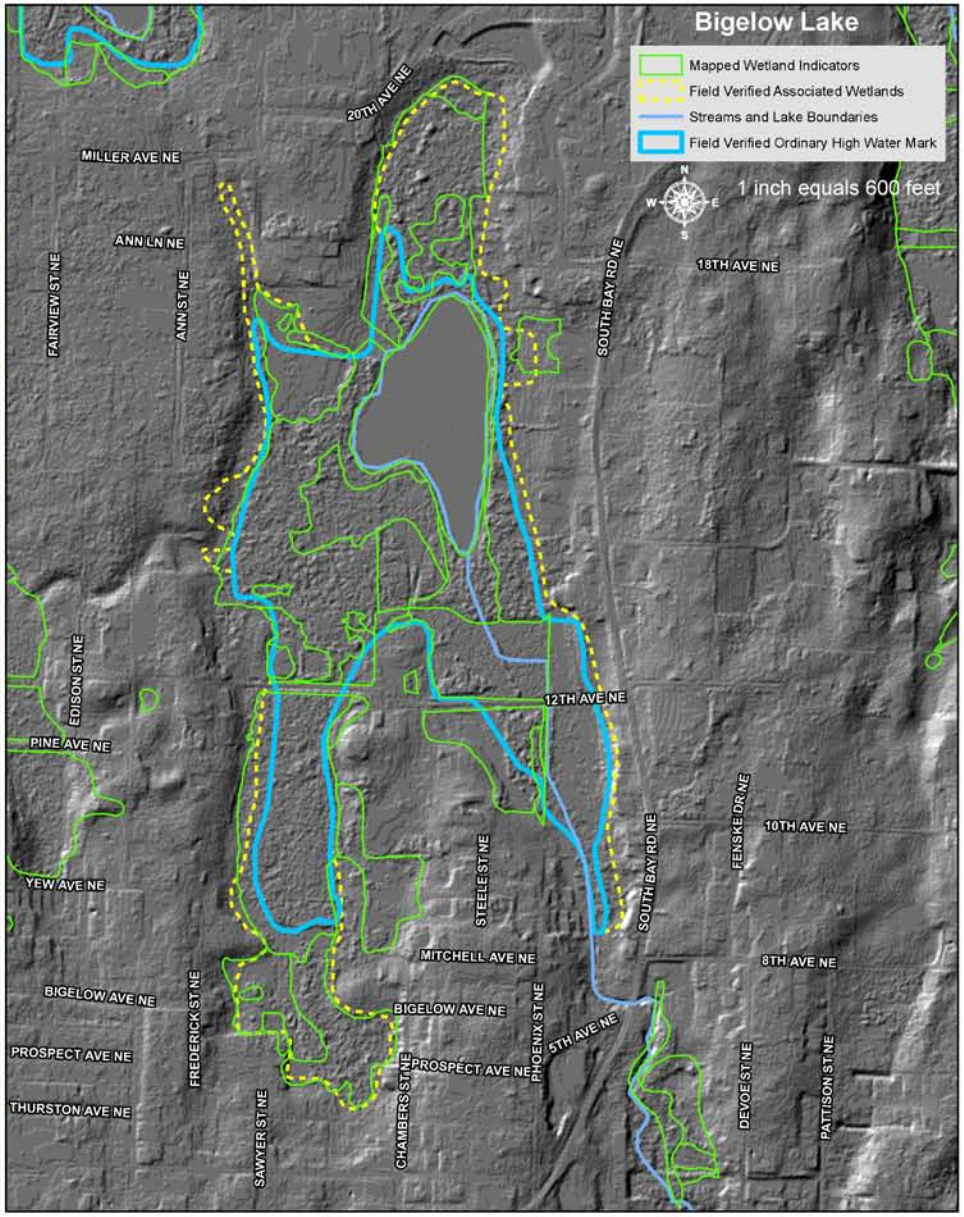
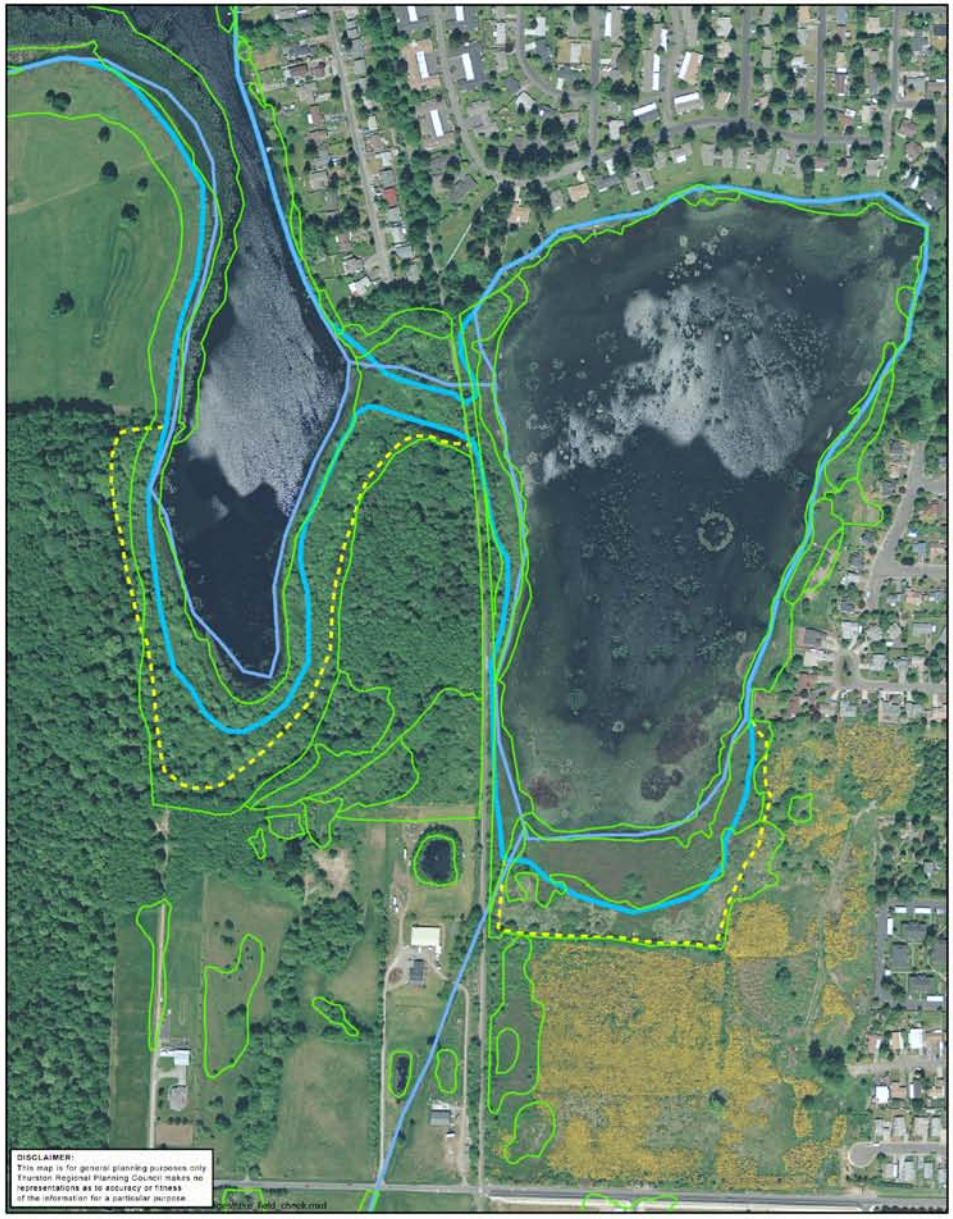

Bigelow Lake
Mapped Wetland Indicators
Field Verified Associated Wetlands
Streams and Lake Boundaries
Field Verified Ordinary High Water Mark
1 inch equals 600 feet
N
W
E
S
20TH AVE NE
MILLER AVE NE
ANN LN NE
FAIRVIEW ST NE
ANN ST NE
SOUTH BAY RD NE
18TH AVE NE
EDISON ST NE
12TH AVE NE
PINE AVE NE
FENSKE DR NE
10TH AVE NE
STEELE ST NE
SOUTH BAY RD NE
YEW AVE NE
MITCHELL AVE NE
8TH AVE NE
BIGELOW AVE NE
BIGELOW AVE NE
FREDERICK ST NE
PHOENIX ST NE
5TH AVE NE
PROSPECT AVE NE
PROSPECT AVE NE
CHAMBERS ST NE
DEVOE ST NE
PATTISON ST NE
THURSTON AVE NE
SAWYER ST NE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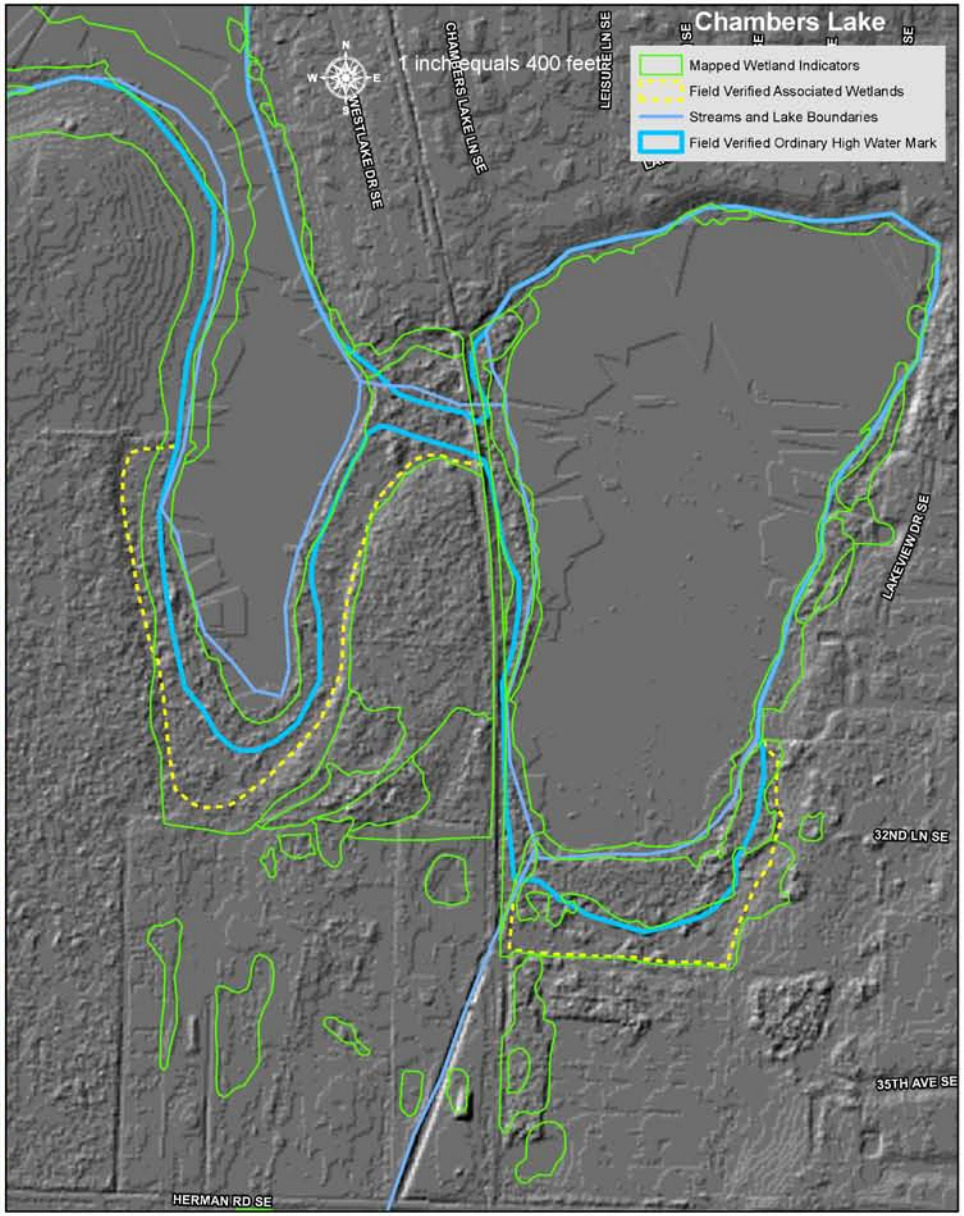
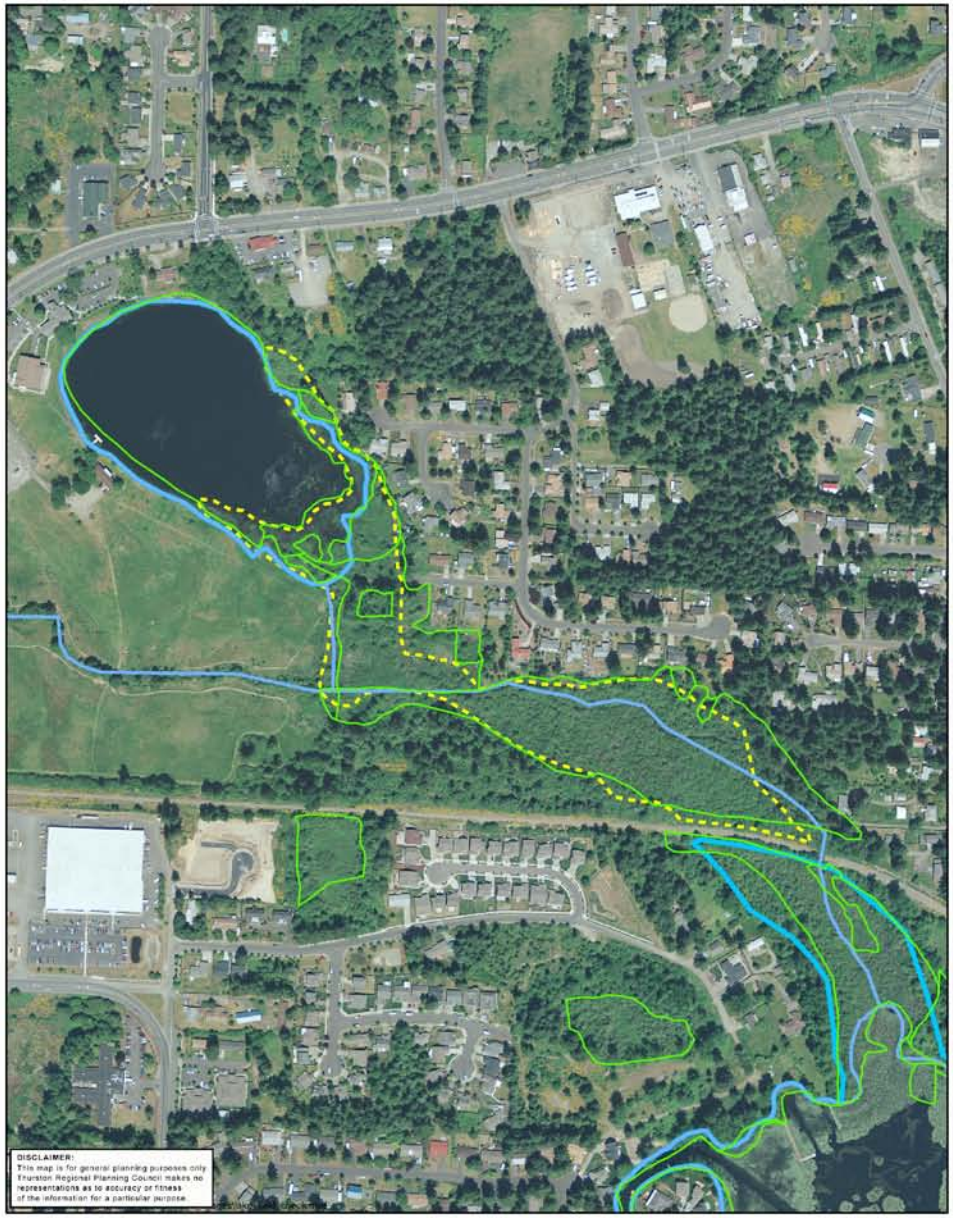

Chambers Lake
1 inch equals 400 feet
Mapped Wetland Indicators
Field Verified Associated Wetlands
Streams and Lake Boundaries
Field Verified Ordinary High Water Mark
WESTLAKE DR SE
CHAMBERS LAKE LN SE
LEISURE LN SE
LAKEVIEW DR SE
32ND LN SE
35TH AVE SE
HERMAN RD SE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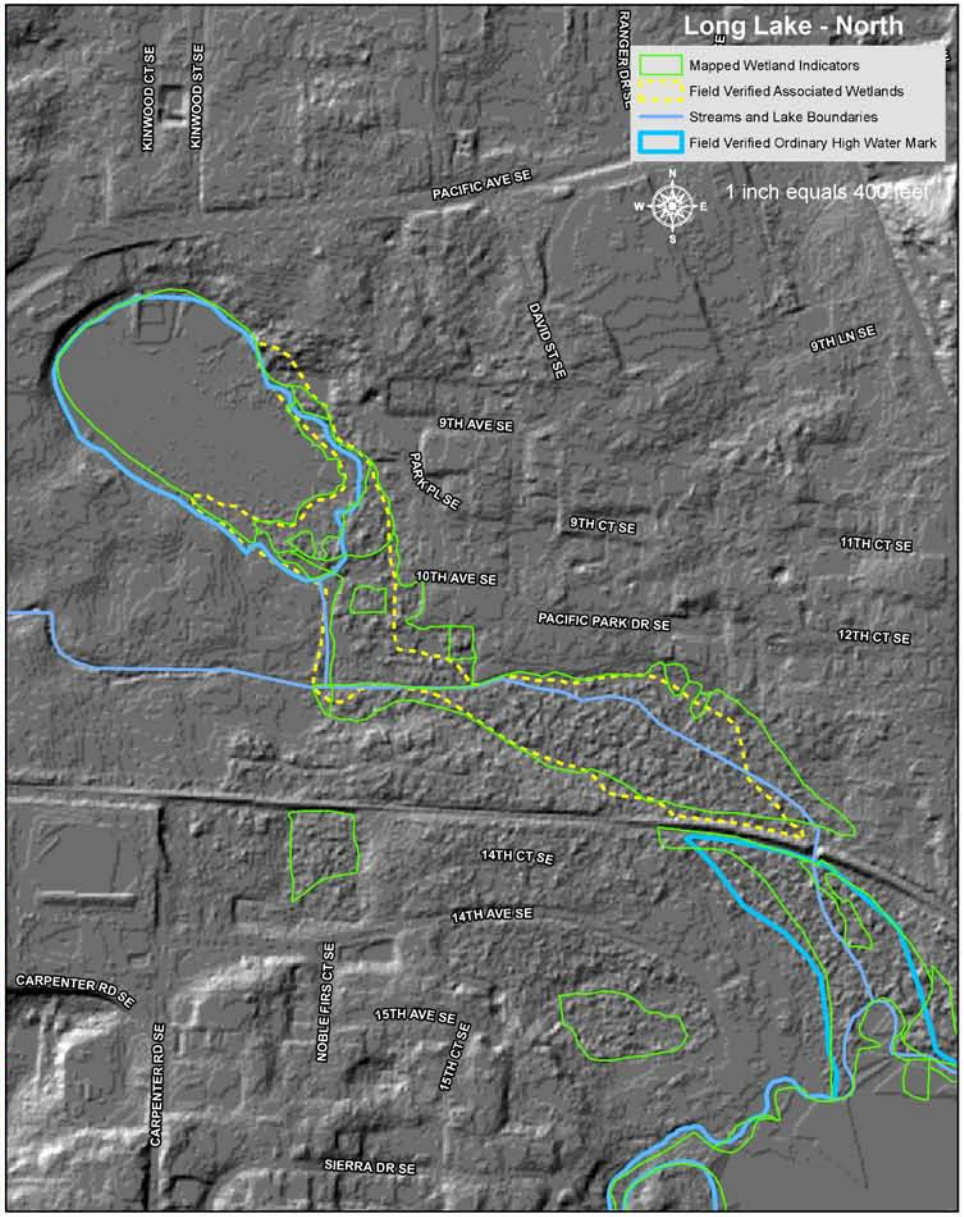
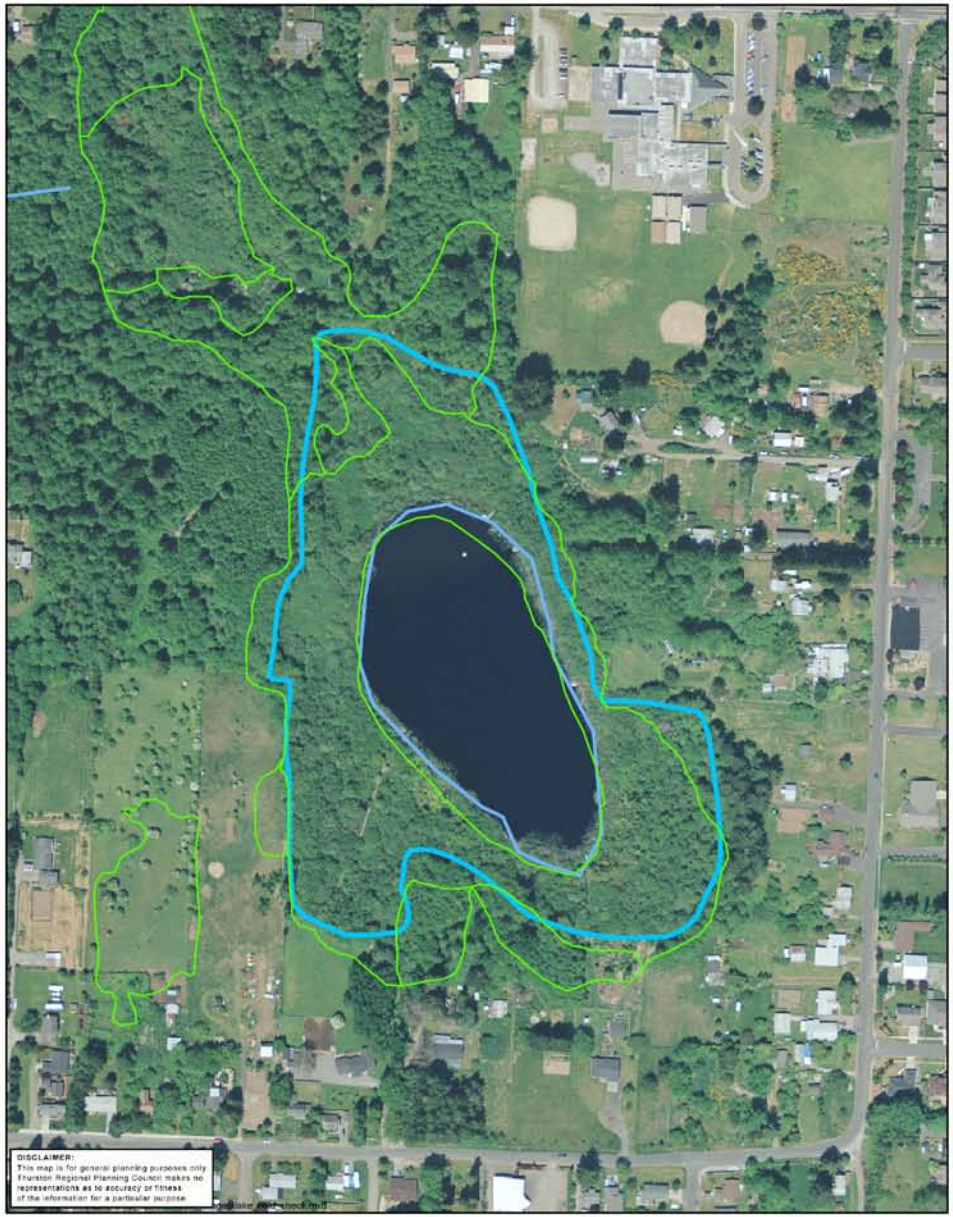

Long Lake - North
Mapped Wetland Indicators
Field Verified Associated Wetlands
Streams and Lake Boundaries
Field Verified Ordinary High Water Mark
1 inch equals 400 feet
N
W
E
S
KINWOOD CT SE
KINWOOD ST SE
RANGER DR SE
PACIFIC AVE SE
DAVID ST SE
9TH LN SE
9TH AVE SE
PARK PL SE
9TH CT SE
11TH CT SE
10TH AVE SE
PACIFIC PARK DR SE
12TH CT SE
14TH CT SE
14TH AVE SE
CARPENTER RD SE
NOBLE FIRS CT SE
15TH AVE SE
15TH CT SE
CARPENTER RD SE
SIERRA DR SE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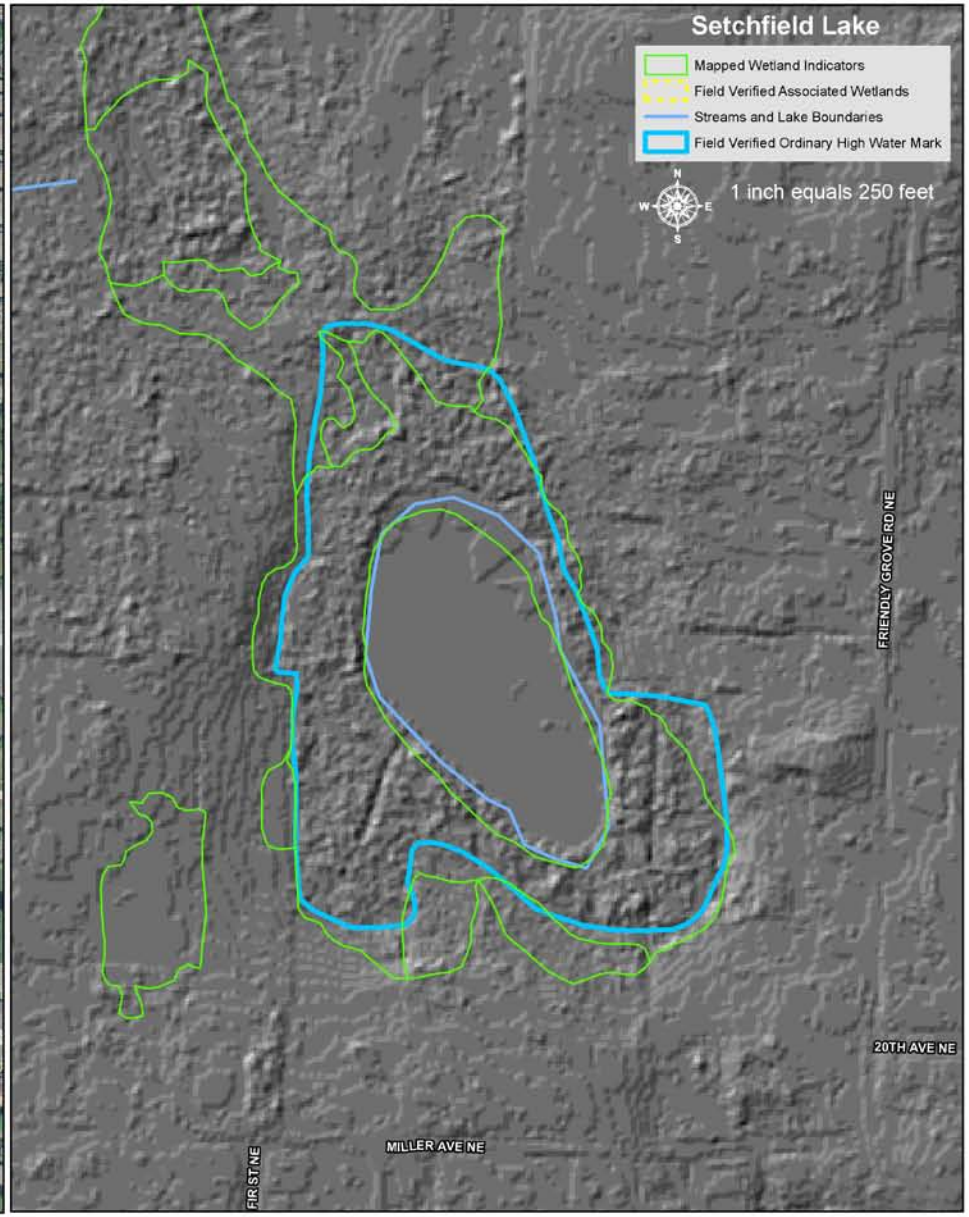
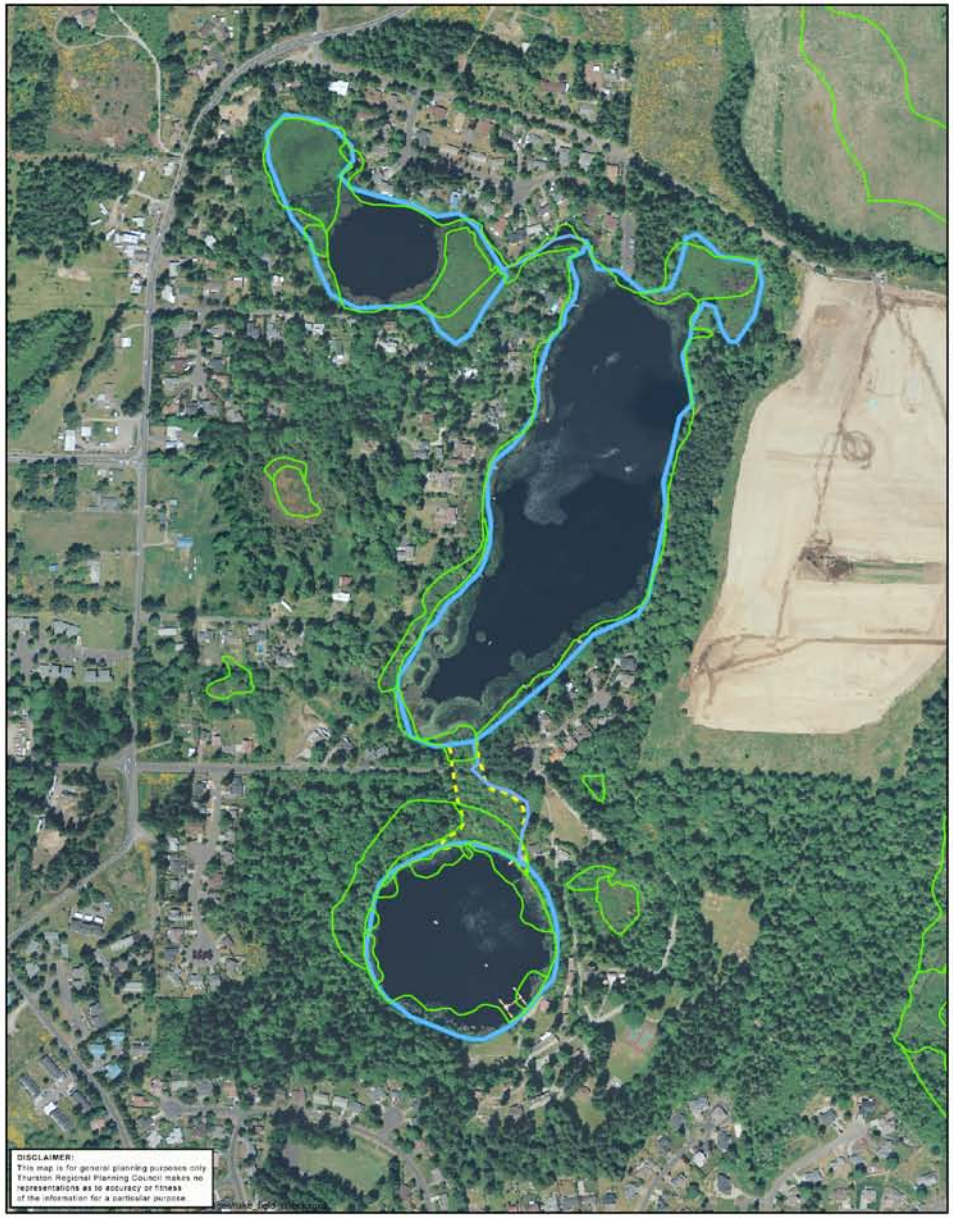

Setchfield Lake
Mapped Wetland Indicators
Field Verified Associated Wetlands
Streams and Lake Boundaries
Field Verified Ordinary High Water Mark
1 inch equals 250 feet
N
W
E
S
FRIENDLY GROVE RD NE
20TH AVE NE
MILLER AVE NE
FIR ST NE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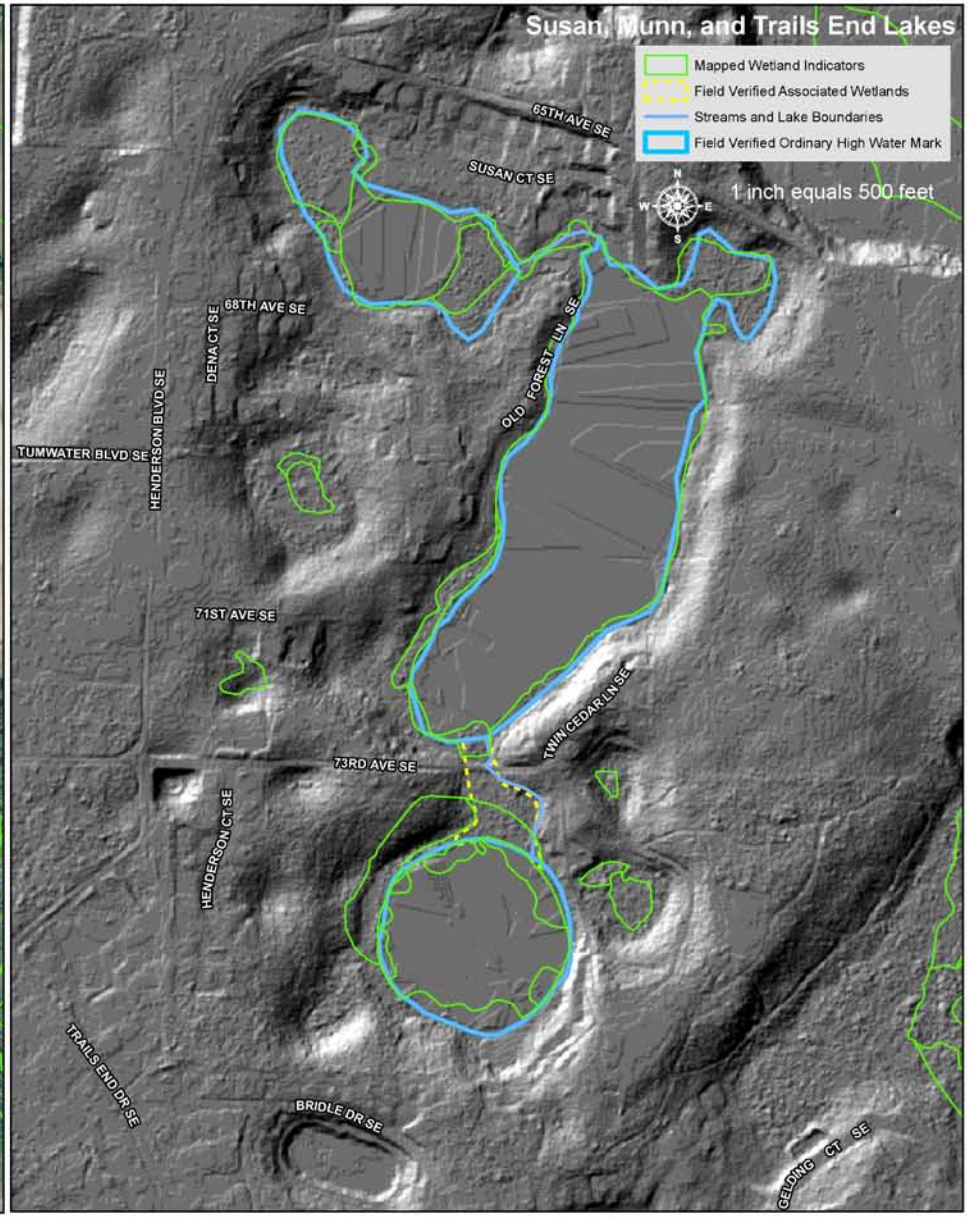
Susan, Munn, and Trails End Lakes
Mapped Wetland Indicators
Field Verified Associated Wetlands
Streams and Lake Boundaries
Field Verified Ordinary High Water Mark
1 inch equals 500 feet
N
W
E
S
65TH AVE SE
SUSAN CT SE
68TH AVE SE
DENA CT SE
HENDERSON BLVD SE
OLD FOREST LN SE
TUMWATER BLVD SE
71ST AVE SE
TWIN CEDAR LN SE
73RD AVE SE
HENDERSON CT SE
TRAILS END DR SE
BRIDLE DR SE
GELDING CT SE

~~CINDY WILSON~~
→ Steve Friddle
FY Files

THURSTON REGIONAL PLANNING COUNCIL

2404 B HERITAGE COURT SW OLYMPIA, WASHINGTON 98502-6031

November 18, 1992

NOV 18 1992
OLYMPIA
PUBLIC WORKS DEPT

Tom Youell
110 - 110th Avenue NE, Suite 445
Bellevue, WA 98004

Dear Tom:

In September City and County staff met with you and your representatives to discuss wetlands and shorelands issues that affected your property. We decided to pursue additional meetings between staff and the Department of Ecology (DOE) to try to resolve outstanding questions. Those meetings were held and the results are summarized for you below.

SHORELANDS MEETING

Participants: Harold Robertson, TRPC
Linda Donaldson, TRPC
Tom Mark, DOE
Roger Giebelhaus, TRPC

The topic was whether or not the eastern and northwestern wetlands on your property were actually part of Grass Lake itself or associated wetlands. City staff had surveyed a number of road and culvert elevations and culvert invert elevations[1] that were related to the wetlands on your property (see attached map). These data were presented to Tom Mark. The data suggested that the double culvert under the sewer easement in Grass Lake Park was the highest elevation point in the surveyed system. They also suggested that the eastern wetland drained to the south but that the northwestern wetland lobe was within the lake's ordinary high water mark. Furthermore, the culverts

Members:
City of Lacey
City of Olympia
City of Tenino
City of Tumwater
City of Yelm
Town of Buccoda
Town of Rainier
Thurston County
Intercity Transit
Port of Olympia
Griffin School District
North Thurston School District
Olympia School District
Tumwater School District
The Evergreen State College
State Capitol Committee

Harold Robertson, AICP
Executive Director

(206) 786-5480
FAX 754-4413

[1] The elevation of the bottom of the culvert.

under Mud Bay Road and the sewer easement road had been cleaned out which would affect water flows in the area. Tom reviewed this information with other DOE staff and responded with the attached letter.

WETLANDS BUFFER MEETING

Participants:	Linda Donaldson, TRPC	Matt Mathes, RCA
	Dave Hanna, Olympia	Andy McMillan, DOE
	Terry Meyer, Olympia	Peggy Clifford, DOE
	Paula Ehlers, TRPC	
	Doreen Milward, Owens, Davies, Mackie	

Discussion revolved around whether there were other techniques or mechanisms that could be used to protect wetlands other than a 200 foot buffer as required by the Olympia Critical Areas Ordinance. DOE staff pointed out that there was no additional flexibility available for the required wetlands buffers outside of those provided in the ordinance. No additional techniques were known to them at this time. The ordinance conditionally allows up to a 25% reduction in buffer width. DOE suggested the following information would be needed to determine if the buffer size could be reduced:

- Confirm the wetlands boundaries;
- Characterize and map the plant communities within 200 feet of the wetland boundaries; and
- Determine the wildlife use of the wetland areas.

These points are detailed in the attached letter from Andy McMillan.

We have since had additional discussions with DOE managers and staff regarding our desire to further explore whether there is a technically sound basis for allowing more flexibility based on performance criteria. DOE agreed to join us in working with you on a "prototype" project along those lines. We will share that further information with you at our Monday meeting.

Sincerely,

Linda

Linda M. Donaldson
Associate Planner

49:lb

Attachments:

Letter:	October 20, 1992, From Thomas Mark to Linda Donaldson regarding shorelands jurisdiction
Letter:	October 1, 1992, From Andy McMillan to Linda Donaldson regarding wetlands buffers
Map:	Elevations and Invert Elevations of Culverts

cc: Harold Robertson
Pete Swensson
Matt Mathes
Sandie Mackie
Tom Mark
Roger Giebelhaus
Dave Hanna
Paula Ehlers
Cindy Wilson
Andy McMillan
Peggy Clifford

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

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...IONAL
PLANNING COUNCIL

October 20, 1992

Ms. Linda Donaldson
Thurston County Regional Planning
2000 Lakeridge Drive Southwest
Olympia, WA 98502

Dear Ms. Donaldson:

Re: Youell Property on Grass Lake

Based on the new information you have provided concerning the location and elevations of culverts beneath Mud Bay Road and the utility service road that lies just north of the Youell property, we have concluded that as long as these culverts are operational, it is probable that the area labeled wetland area #1 in our letter of September 16 no longer falls within the ordinary high water mark of Grass Lake.

The primary basis for this conclusion is the difference in elevation between the two twelve-inch diameter culverts under the service road and the thirty-six inch diameter culvert beneath Mud Bay Road. The elevation of the service road culverts is higher than that of the one under Mud Bay Road. It is very likely that opening these culverts will lower the water level in area #1 to the point that it can no longer be considered contiguous with the rest of Grass Lake. The area remains an associated wetland of the lake even if it is no longer within the ordinary high water mark.

This conclusion is provisional. Opening the culverts has changed the conditions under which the Department's previous ordinary high water mark determinations were made. We will be gathering new information this winter to determine whether or not field conditions support our analysis. We will let you know when our staff plans to be on site and will provide you with the results of their observations.

If you have any questions, please call me at 459-6764.

Sincerely,

Thomas Mark, A.I.C.P.
Management Section Supervisor
Shorelands and Coastal Zone
Management Program

TM:JS:dh

cc: Mary Ann Swain

Linda

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OCT 7 1992
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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

October 1, 1992

Ms. Linda Donaldson
Thurston Regional Planning
2404 B Heritage Court SW
Olympia, WA 98502

Dear Ms. Donaldson:

I am writing as a follow-up to our meeting of September 24, 1992, regarding buffers around the Grass Lake wetlands. I appreciated the opportunity to provide assistance to the City of Olympia on this matter. In order for the City to make informed decisions on the appropriate buffer widths (i.e. buffer enhancement, reductions and buffer averaging) for the wetland areas on the Youell property, I believe several pieces of information are needed.

1) The wetland boundaries on the Youell property need to be confirmed. I recommend that the wetland boundary be flagged by a qualified wetland consultant, field verified by the Department of Ecology wetlands staff, and surveyed. It would be best to perform all three of these tasks as close together as possible to reduce the potential for flagging being removed.

2) The areas within 200 feet of the wetland edge should be characterized by plant communities and mapped. This should include information on dominant plant species and species densities.

3) The wildlife use of the wetland areas also needs to be determined. I recommend as a first step compiling existing information that has been previously prepared as part of the original Grass Lake Environmental Impact Statement or any other documentation on wildlife use of Grass Lake. The Department of Ecology wetlands staff will be glad to work with Department of Wildlife staff to review this information and make recommendations as to its adequacy and whether any further studies are needed.

Once these steps have been completed we will be happy to work with city staff to revisit the issue of what constitutes adequate buffers on this site. If you have any questions or comments please call Bill Leonard at (206) 438-7161. Bill will be the lead contact on this project for the Department of Ecology.

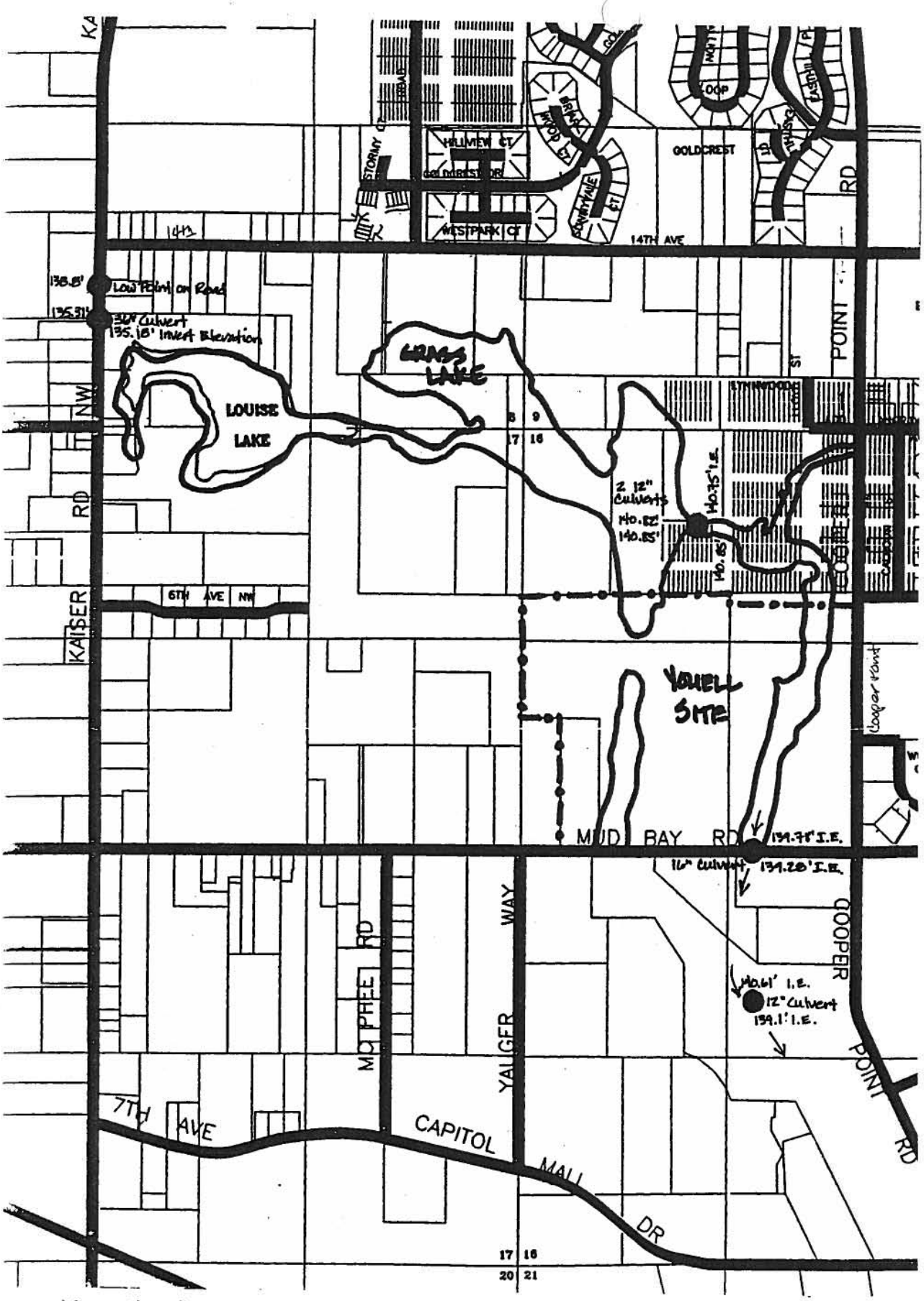
Sincerely,

Andy McMillan

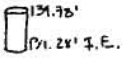
Andy McMillan
Technical Unit Supervisor
Wetlands Section
Shorelands and Coastal Zone
Management Program

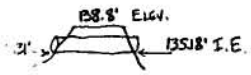
AM:dg
DG-L1-18

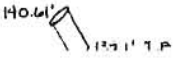
cc: Bill Leonard, Department of Ecology
Matthew S. Mathes, Richard Carothers Associates



KING MAP - NOT OFFICIAL
9/21/92







STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

March 19, 1997

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MAR 24 1997
COMMUNITY PLANNING &
DEVELOPMENT DEPT.

Mr. Todd Stamm
City of Olympia
Community Planning and Development
P.O. Box 1967
Olympia, WA 98507-1967

Dear Mr. Stamm:

This letter is a response to your request of the Department of Ecology (Ecology) to reevaluate a portion of Grass Lake as to its jurisdictional status under the state Shoreline Management Act (SMA). Specifically, you asked Ecology to review an SMA determination made in 1989 and 1992 regarding the ordinary high water mark (OHWM) of Grass Lake and its relation to that portion of the Lake which extends south to Mud Bay Road, along Cooper Point Road.

Ecology staff have made careful observations of Grass Lake regarding the OHWM since 1986. In 1989, Ecology determined that the Grass Lake system was greater than 20 acres and, therefore, a "shoreline of the state." In 1991, further field work was done specifically looking at the area in question. Based on the presence of standing water, changes in the vegetation community, and the mapped hydric soils, it was determined that this wetland area was within the OHWM of Grass Lake. Based on a review of these earlier determinations and an extensive analysis of existing conditions, it is my opinion also that this portion of Grass Lake still falls within its OHWM. The OHWM of Grass Lake extends to the south at least as far as Mud Bay Road.

The OHWM is defined in the SMA as:

> "that mark that will be found by examining the bed and banks and ascertaining where <u>the presence and action of waters</u> are so <u>common and usual</u>, and so <u>long continued in all ordinary years</u>, as to mark upon the soil a character <u>distinct from that of the abutting upland</u>, in respect to <u>vegetation</u> 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 a local government or the department..." (emphasis added)

I made numerous visits to the site from January through March, 1997 to evaluate the presence, extent, and depth of water. Several other people accompanied me on these visits including yourself; the applicant's representatives, Rich Medved and Andy Castelle; and several other Ecology staff, Kim Van Zwalenburg (Shorelands specialist), Andy McMillan (wetlands ecologist), Bill Leonard (wetlands ecologist), and Al Wald (hydrogeologist). In making this evaluation, I worked closely with Andy McMillan, Al Wald, Bill Leonard, and Mary Burg all of whom have extensive experience with this site.

We monitored the water level closely through the season using staff gauges located at Mud Bay Road and at the culverts under the sewer access road northwest of the site. Based on observations of water levels at the staff gauge at Mud Bay Road, the water depths ranged from a low of a little under two feet on January 14, 1997 to a high of slightly over three feet on January 19 and 21. From January 22 to March 11, the water level had fluctuated around two feet, nine inches. The water level in Grass Lake showed fluctuations as much as 6 inches (up and down) in 48 hours.

On every visit I made, there was continuous standing water extending throughout the site. These observations are consistent with those made by Mary Burg and Al Wald from 1986 to 1989 and by Bill Leonard in 1991. They are also similar to records kept by the City of Olympia (Andy Haub) from November, 1995 through March, 1996, also from the staff gauges. While it is true that 1997 has begun as a very wet year, my observations show that the present conditions at Grass Lake are the result of a long-term trend, which includes several drier than normal years since 1980, and not simply the effect of one or two wet seasons.

At the observed water levels (2.2 - 2.9 feet), the area of standing water closely coincided with the observed vegetation communities. In the areas of standing water, the vegetation consisted of an overstory of Oregon ash, willow sp., black cottonwood, and quaking aspen. The shrubs consisted of willow sp., Pacific ninebark, and Douglas spirea. I also noted slough sedge throughout the area; however, most herbaceous vegetation is not observable at the time of year we were out there. On the adjacent uplands, the vegetation is predominately a Douglas-fir/salal community. In many places around the perimeter of the site, the change in vegetation community type from wetland to upland was quite abrupt and, again, was generally associated with the presence or absence of standing water. This dramatic change from one mature vegetation community to another is an indication of the long-term influence of water, and would not be expected to occur without frequent and prolonged inundation.

The soils on the site are mapped as McKenna gravely silt loam, a hydric soil (SCS Soil Survey of Thurston County, Washington, 1990). Surrounding the site, the soils are mapped as Alderwood gravely sandy loam, a nonhydric soil. The soil survey indicates that there may be inclusions of Alderwood and other soils within the McKenna series. This seems consistent with the soil characteristics found on site (e.g., plot #5, Adolfson Delineation, September, 1996). Based on the prolonged period of inundation, these otherwise nonhydric inclusions would be considered hydric based on the Natural Resource Conservation Service (NRCS) criteria.

To summarize, the findings from my recent investigations are consistent with the previous work done on this site and throughout Grass Lake. The area in question falls within the Ordinary High Water Mark of Grass Lake. This determination does create some inconsistencies with the Adolfson delineation, specifically regarding the presence of a upland break in the wetland at the northern end of this site.

Please let me know if you have any questions about this determination or would like additional about this site (407-7260). I would also be willing to assist you in further evaluating the delineation or other site review work which may be necessary.

Sincerely,

Perry J. Lund
Wetlands/Shorelands Specialist
Shorelands and Water
Resources Program

PL:cl

cc: Rich Medved, CP Associates
Kim Van Zwalenburg, Ecology
Mitchell Johnson, Safeway Inc.
Susan Rauts, P.W.
Wally Trace, Video Update
Pete Swenssen, TRPC, adv. Plng

Annotated Bibliography

Sources were cited in the best manner possible; not all information was available for every document. Many of the documents without URL links are hard copies that are located in-house at Thurston Regional Planning Council. Any Department of Ecology documents without links can be accessed at their website, www.ecy.wa.gov. Many TRPC documents are available at our website, www.trpc.org.

Aaland, N. 1990. Shoreline Master Program for the Thurston Region. Thurston Regional Planning Council, Olympia, WA.

Current Shoreline Master Program for the cities of Lacey, Olympia, Tumwater and unincorporated with Thurston County.

Aaland, N. 1987. Wetland and Stream Corridors – Phase II. Thurston Regional Planning Council, Olympia, WA.

Continuation of policy document regarding the adoption of stream and wetland regulations for the cities of Lacey, Olympia, Tumwater and unincorporated with Thurston County.
Has been replaced by local critical area ordinances.

Aaland, N. 1986. Wetland and Stream Corridors – Phase I. Thurston Regional Planning Council, Olympia, WA.

Policy document regarding the adoption of stream and wetland regulations for the cities of Lacey, Olympia, Tumwater and unincorporated with Thurston County.
Evaluated stream and wetland mapping abilities.

Anchors Environmental, LLC. 2008. Final Deschutes River Watershed Recovery Plan: Effects of Watershed Habitat Conditions on Coho Salmon Production.

Model simulations of future Coho runs in the Deschutes River, based on various habitat recovery options.

Andrews, S. et al. 2003. Natural Hazards Mitigation Plan for the Thurston Region. Thurston Regional Planning Council for Thurston County Emergency Management Council. Olympia, WA.

Is the adopted Natural Hazard Mitigation Plan for fifteen local and state governmental entities.
Includes the cities of Lacey, Olympia, Tumwater and unincorporated with Thurston County.
Each entity provides a list of "Mitigation Initiatives" (recommendations) that they will seek to implement by *Hazard* (earthquake, flood, landslide, storm and multiple) and by *Category* (public information, plan coordination and implementation, data collection and mapping, development regulations, hazard preparedness, hazard damage reduction, and critical facilities replacement and retrofit).

Bahls, P., C. Kindberg, M. Wait & J. Glasgow. 2006. Error in State Shoreline Designation for Lakes of Washington. Northwest Watershed Institute and Washington Trout, Port Townsend, WA.

Documents possible errors associated with the delineation of ordinary high watermark (OHWM) for lakes under the State Shoreline Management Act.
Suggests ways of reducing errors to OHWM
The report recommends each jurisdiction review its lakes to update those waterbodies that qualify for Shoreline designation.

Benson, B., E. Gower, L. Cowan, G. Johnson & J. Lenzi. 1996. Thurston County Barrier Culvert Inventory. WA Department of Fish and Wildlife, Olympia, WA.

- Baseline inventory of publicly owned culverts within Thurston County.
- Provides an evaluation of probable fish passage and priority for those with the highest degree of blockage.
- The report by SPSSEG is now likely more comprehensive.

Brennen, J. & H. Culverwell. 2005. Marine Riparian: An Assessment of Riparian Functions in Marine Ecosystems. Washington Sea Grant Program, Seattle, WA.

- Assessment of values and the known riparian functions along Puget Sound.
- Referenced by the Olympia critical area ordinance update in 2006.

Bonneville Power Administration, Fort Lewis Military Reservation, Nisqually Indian Tribe, Bureau of Indian Affairs. 2004. Nisqually Transmission Line Relocation Project-Preliminary Environmental Assessment. Web URL: http://www.efw.bpa.gov/environmental_services/Document_Library/Nisqually/PEA1485web.pdf. Accessed online 9 January 2008.

- Lists species of concern (both state and federal) that are found in Thurston County.

Carrasasquero-Verde, J., T. Abbe, G. Ward, W. Trial Jr., S. Tonkin & D. McCormack. 2005. Marine Shoreline Sediment Survey and Assessment – Thurston County, Washington. Herrera Environmental Consultants, Inc. Seattle, WA.

- Baseline report along the Puget Sound shoreline of Thurston County, which includes the City of Olympia and Lacey marine shorelines.
- Marine bulkheads in Olympia were included into the county GIS data layer
- Filed reconnaissance of 36 pairs of armored and unarmored beach samples
- Contains maps which document forage fish habitat and utilization, the extent of shoreline armoring (as of 2003).
- Maps shoreline reaches as to those which need to be restored or preserved based upon forage fish habitat and geomorphic conditions.

Cascade Economics LLC; Northern Economics, Inc., and Spatial Informatics Group LLC. 2007. Deschutes Estuary Feasibility Study: Net Social and Economic Benefit Analysis. Washougal, WA.

- Part of the Deschutes Estuary Feasibility Study – CLAMP Management Objective #2.
- Provided an evaluation of social and economic benefits for the estuary study.

- Utilized community values input from the WDFW (2006) Stakeholder Report.
- Describe benefits as qualitative change from the existing lake baseline.
- Applies to Capitol Lake and Budd Inlet.

Castro, J.M. & P.L. Jackson. 2001. Bankfull discharge recurrence intervals and regional hydraulic geometry relationships: patterns in the Pacific Northwest, USA. *Journal of the American Water Resources Association*. 37(5): 1249-1262.

- Relates regional characteristics of Pacific Northwestern ecoregions to bankfull discharge events in streams.

Cederholm, C. J., D.H. Johnson, R.E. Bilby, L.G. Dominguez, A.M. Garrett, W.H. Graeber, E.L. Greda, M.D. Kunze, B.G. Marcot, J.F. Palmisano, R.W. Plotnikoff, W.G. Pearcy, C.A. Simenstad & P.C. Trotter. 2000. Pacific Salmon and Wildlife-Ecological Contexts, Relationships, and Implications for Management. WA Department of Fish and Wildlife, Olympia, WA.

- Baseline report on the ecological relationship of salmon to other species.
- Contains an annotated bibliography of these ecological relationships..
- Referenced by the Olympia critical area ordinance update (2004 & 2006).

City of Bellingham, WA. 2004. Inventory and Characterization Report for Shoreline Master Program Update.

- Like the new Jefferson County Shoreline Master Program (see ESA Adolfson, et al. 2007), the Inventory and Characterization Report for Bellingham's SMP update provides a useful format that could be adopted for use for Thurston County's SMP.

City of Olympia, WA. 2007. Chambers Basin Moratorium Evaluation Report. Web URL: http://www.ci.olympia.wa.us/newsfaqs/newsletters_and_reports/chamberslake.htm#Draft%20Chambers. Accessed online 9 January 2008.

- Study of development options for the Chambers Basin area.
- Includes recommendations for management.
- Gives a background of the area and land use, discusses challenges to development.

City of Olympia, WA. 2006. Percival Landing Concept Plan.

- Discusses proposed improvements and alterations to Percival Landing area.
- Includes plans for habitat enhancement and sustainable environmental design.

City of Olympia, WA. 2002. Low-Impact Development Strategy for Green Cove Basin: A Case Study in Regulatory Protection of Aquatic Habitat in Urbanizing Watersheds. Web URL: http://www.psat.wa.gov/Programs/LID/Green_Cove.pdf. Accessed online 9 January 2008.

- Discusses low impact development plans for Green Cove Basin.

City of Olympia, WA. 2002. Olympia's Parks, Arts & Recreation Plan.

- Plan for management of Olympia's parks, arts and recreation facilities.
- Has some information about waterfront access in Olympia.

City of Olympia, WA. 1999. Olympia Woodland Trail Master Plan.

- Trail master plan
- Western terminus is in the south basin of Capitol Lake

City of Olympia, WA. 1997. Grass Lake Refuge Final Master Plan.

- Master plan for Grass Lake Refuge.
- Describes Grass Lake area, including hydrology, habitats, topography, etc.

City of Olympia, WA, and Thurston County Public Works Departments. 1993. Indian/Moxlie Creek Comprehensive Drainage Basin Plan. Web URL: http://www.co.thurston.wa.us/wwm/basin%20planning/Indian_Moxlie/indian_moxlie_basinplan.htm. Accessed online 16 January 2008.

City of Olympia, WA, Public Works Department, City of Tumwater, WA, Thurston County, WA. 1993. Percival Creek Comprehensive Drainage Basin Plan. Web URL: http://www.co.thurston.wa.us/wwm/basin%20planning/Percival%20Creek/Percival_Creek_Plan.htm. Accessed online 16 January 2008.

City of Tumwater, WA. 2007. Tumwater, Washington Park Recreation & Open Space Plan (Draft).

- Describes choices that are available for managing Tumwater's parks, recreation and open areas.
- Lists attributes of existing recreational facilities (including shoreline uses), contains aerial maps of parks, conservancies, water access, etc.

City of Tumwater. 2007. Barnes Lake Management District—Integrated Aquatic Vegetation Management Plan. Web URL: http://www.ci.tumwater.wa.us/BLMD/BLMD%20Aquatic%20Veg%20Mgmt%20Plan.pdf. Accessed online 19 February 2008.

Collins, B. 1994. Channel Erosion along the Deschutes River. Seattle, WA.

- Baseline report on sediment supply for the Deschutes River.
- Evaluated the sediment supply and erosion conditions from Tumwater Falls to Deschutes Falls by reaches.
- The geography includes Tumwater its urban growth area.

Coots, R. 2005. Investigation of Petroleum Products in Black Lake Sediment and Surface Water Adjacent to an Underground Storage Tank Site. Washington State Department of Ecology. Publication No. #05-03-030. Olympia, WA. Web URL: http://www.ecy.wa.gov/pubs/0503030.pdf. Accessed online 28 January 2008.

- Investigation of whether petroleum pollution has reached Black Lake from an adjacent grocery store.
- Results indicate that at this time, the pollution has not reached Black Lake.
- PAHs detected, but have other sources (i.e. combustion).

Craig, D & C. Wells. 1994. Impervious Surface Reduction Study – Technical and Policy Analysis Final Report. City of Olympia Pubic Works Department, Olympia, WA.

Cramer, T & K. Bates. 2003. Integrated Streambank Protection Guidelines. WA Departments of Ecology, Fish and Wildlife, and Transportation and the U.S. Army Corps of Engineers. Olympia, WA.

- State guidance for construction within or along riparian areas.
- Default standard for riparian areas in the City of Olympia critical area ordinance update 2006.

Cramer, D.D. 1993. A River Runs Through It: An Analysis of Alternatives for Reducing Flooding and Erosion Hazards for the Cougar Mountain Camp Residential Community. Deschutes River Basin, Thurston County, WA.

Davis, S., M. Turner & H. Saunders. 1993. Budd Inlet – Deschutes River Watershed Characterization: Part I Watershed Characterization. Thurston County Environmental Health Department and Thurston Regional Planning Council. Olympia, WA.

- Background data report a non-point pollution watershed action plan.
- Describes watershed conditions within the Deschutes Watershed and Budd Inlet.
- Includes water quality and land use description of these areas for the late 1980s and early 1990s.
- Geography includes Thurston County and the cities of Lacey, Olympia, and Tumwater and their urban growth areas.

Drost, B.W., G.L. Turney, N.P. Dion, and M.A. Jones. 1998. Hydrology and quality of ground water in northern Thurston County, Washington. U.S. Geological Survey, in cooperation with Thurston County Health Department.

ENTRANCO. 2000. Capitol Lake Adaptive Management Plan – Phase One - Task 11 Sediment Management: Answers to Technical Questions. Bellevue, WA.

- Report to provide more detail on sediment than was provided by the CLAMP EIS.

- Provided pros and cons to a variety of dredging techniques, on-shore handling techniques, and disposal techniques.
- Provided a recommended protocol and a preliminary cost estimate per unit of volume.
- Applies only to Capitol Lake.

ENTRANCO. 1998. Draft Environmental Impact Statement - Capitol Lake Adaptive Management Plan. Bellevue, WA.

- Draft EIS of six scenarios for managing Capitol Lake.
- Included four lake alternatives, two estuary alternatives, and a no action alternative.
- Applies only to Capitol Lake.

ENTRANCO. 1997. Technical Memorandum – 1991 to 1996 Capitol Lake Survey – Sediment Volume Calculations. Bellevue, WA.

- Technical Memorandum to GA regarding the sediment assumption used in the CLAMP DEIS.
- Applies only to Capitol Lake.

ENTRANCO. 1996. Draft Environmental Impact Statement - Capitol Lake Restoration and Recreation Plan: Revised Maintenance Sediment Removal Plan. Bellevue, WA.

- Draft EIS for dredging the Middle Basin of Capitol Lake.
- No Final EIS was prepared.
- Applies only to Capitol Lake.

ESA Adolfson, et al. 2007. Final Shoreline Inventory and Characterization Report of the Jefferson County Shoreline Master Program Update Project. Web URL: http://www.co.jefferson.wa.us/commdevelopment/ShorelineInventory.htm#2005_Inventory_Maps.

- Example of Shoreline Inventory and Characterization Report for Jefferson County
- Contains several useful sources and restoration examples that may apply to southern Puget Sound.

Federal Emergency Management Agency. 1984. Flood Insurance Study – City of Tumwater, Washington - Thurston County. Washington, D.C.

Federal Emergency Management Agency. 1982a. Flood Insurance Study – City of Olympia, Washington - Thurston County. Washington, D.C.

Federal Emergency Management Agency. 1982b. Flood Insurance Study – Unincorporated Thurston County, Washington. Washington, D.C.

Federal Emergency Management Agency. 1980. Flood Insurance Study – City of Lacey, Washington - Thurston County. Washington, D.C.

FishPro, Inc. Master Plan for the Deschutes Watershed Center. Washington State Department of Fish and Wildlife & City of Tumwater. Olympia, WA.

- Master plan for a fish hatchery at Pioneer Park in Tumwater
- Located along the Deschutes River

Garono, R., Thompson, E., Koehler, M. 2006. Deschutes River Estuary Restoration Study Biological Conditions Report. Earth Design Consultants, Inc. Corvallis, OR

- Part of the Deschutes Estuary Feasibility Study – CLAMP Management Objective #2.
- Evaluated five estuaries within Southern Puget Sound to determine the range of reference values for Capitol Lake.
- Samples collected from 90 sites within the five reference estuaries.
- Principle Component Analysis found little correlation between sampling sites.
- Utilized the future lake basin bathymetry and salinity values suggested by George, et. al. (2006).
- Suggested what the future estuarine conditions would be like in Capitol Lake.
- Applies to Capitol Lake and Budd Inlet.

Garono, R., Thompson, E., Koehler, M. 2007. Addendum to the Deschutes River Estuary Restoration Study Biological Conditions Report. Earth Design Consultants, Inc. Corvallis, OR

- Part of the Deschutes Estuary Feasibility Study – CLAMP Management Objective #2.
- Added analysis of reference estuary soil conditions.
- Additional data did not provide any better fit using Principle Component Analysis
- Applies to Capitol Lake and Budd Inlet.

Geoengineers, Inc. 2000. Report: Hydrogeologic Assessment: Proposed Smith Lake Village Residential Development, Thurston County, WA.

- Report discusses the impacts of the proposed Smith Lake Village Development.
- No substantial impacts to groundwater were found.
- Gives general site overview.

George, D., Gelfenbaum, G., Lesser, G., and Stevens, A. 2006. Deschutes Estuary Feasibility Study - Hydrodynamics and Sediment Transport Modeling. (Open File Report 2006-1318) U.S. Department of the Interior - U.S. Geological Survey. Menlo Park, CA.

- Part of the Deschutes Estuary Feasibility Study – CLAMP Management Objective #2.
- Undertook detailed sediment modeling for the Capitol Lake basin.
- Evaluated four estuary scenarios for the basin using the calibrated model.
- Documented what changes has happened to the volume of water and its depth since the construction of the Capitol Lake dam.
- Provided a highly accurate bathymetry of lake and lower Budd Inlet for 2004.

- Provided estimated ranges of sediment mobilization over time and within the lake and in southern Budd Inlet.
- Applies to Capitol Lake and Budd Inlet.

Gilbert, H. & V. Tabbutt. 2000. Regional Benchmarks for Thurston County. Thurston Regional Planning Council. Olympia, WA.

Granger, T., T. Hruby, A. McMillan, D. Peters, J. Rubey, D. Sheldon, S. Stanley & E. Stockdale. 2005. Wetlands in Washington State – Volume 2: Guidance for Protecting and Managing Wetlands. WA Department of Ecology, Olympia, WA.

- Volume 2 or 2 of state guidance for wetland regulations for Western Washington
- Referenced and utilized by the cities of Lacey, Olympia, and Tumwater when their critical area ordinances were updated

Hamann, R. & J. Wade. 1990. Ordinary High Water Line Determination: Legal Issues; Section IV: Procedures for Establishing OHWL. *Florida Law Review*. 42(2): 389-397.

- Discusses various cases where OHWL has been disputed in Florida.
- Provides general guidelines on determining OHWL when litigation is likely.

Harrington, D. & J. Knovosky. 1999. Salmon Habitat Limiting Factors Final Report – Water Resource Inventory Area 13. Thurston Conservation District Lead Entity, Olympia, WA.

- Baseline assessment of those factors which would limit salmon habitat within the Deschutes Water Resource Inventory Area (WRIA) #13.
- The geography includes all the streams and lakes within the cities of Lacey, Olympia and Tumwater most of their urban growth area.
- Provides known characteristics of salmonid populations naturally occurring in WRIA 13.
- References section lists several key studies conducted on Shoreline waterbodies by various jurisdictions in Thurston County.

Hatch-Winnica, A. 2006. Water Resource Inventory Area 13 Freshwater and Nearshore Implementation Priorities – 2006 to 2009. Thurston Conservation District Lead Entity, Olympia, WA.

- Current three-year salmon recovery strategy for the Deschutes Water Resource Inventory Area (WRIA) #13.
- Contains a range of recovery strategies from culvert replacements to habitat protection though land purchases.
- Include priorities for marine and fresh water systems.
- The geography includes the cities of Lacey, Olympia and Tumwater most of their urban growth area.

Hatch-Winnica, A. 2005. Salmon Habitat Protection and Restoration Plan for Water Resource Area 13, Deschutes. Thurston Conservation District Lead Entity, Olympia, WA.

- Baseline summary of the Deschutes Water Resource Inventory Area (WRIA) #13 for salmon habitat.
- Includes data on those lakes, streams and marine shorelines which provide habitat for the various types of salmon.
- Relies on Harrington & Knovosky (1999) to describe the various limiting factors and suggests corrective measures.
- The geography includes the cities of Lacey, Olympia and Tumwater most of their urban growth area.

Hatton, Steve of Hatton Godat Pantier, Inc. 2003. Letter to Thurston County Roads and Transportation Department regarding Smith Lake Village Plat.

- Letter lists elevation of groundwater in the area of Smith Lake.
- Describes stormwater management for subdivision.

Herrera Environmental Consultants. 2000. Capitol Lake Adaptive Management Plan – Sediment Characterization Report. Seattle, WA.

Herrera Environmental Consultants. 2000. Capitol Lake Adaptive Management Plan – Sediment Sampling and Analysis Plan and Quality Assurance Plan. Seattle, WA.

- Reports to provide more detail on sediment quality than was provided by the CLAMP EIS.
- Evaluated two sediment cores taken at the Middle Basin sediment trap (just north of I-5 bridge).
- Found no sediment quality issues which would prohibit dredging at that location.
- Did not test for heavy metals or other exotic toxic or hazardous chemicals.
- Applies only to Capitol Lake.

Hruby, T. 2004. Washington State Wetland Rating System for Western Washington – Revised. WA State Department of Ecology. Olympia, WA.

- The WDOE guidance for rating wetlands in Western Washington.
- Reference in the adoption of local critical area ordinances for the cities of Lacey, Olympia and Tumwater.

IES Associates. 1989. Wetland Delineation, Evaluation, and General Biological Overview: Cooper Point Grove. Olympia, WA.

Isley, B. 1995. New Market Historic District Master Plan. Hewitt & Isley, Seattle, WA.

- Land Use Master Plan for the Tumwater Historic District (part of Capitol Lake).
- Provides policies for the redevelopment of the Old Brewhouse in Tumwater.

James, C. 2007. Nisqually River Basin Fecal Coliform Bacteria and Dissolved Oxygen Total Maximum Daily Load: Water Quality Implementation Plan. Washington State Department of Ecology. Publication No. #07-10-016. Olympia, WA. Web URL: http://www.ecy.wa.gov/pubs/0710016.pdf. Accessed online 28 January 2008.

- Water quality information for Nisqually Reach.
- Gives information on plans to improve water quality.

Keany, J. and S. Rozenbaum. 1992. Thurston Regional Wetland and Stream Corridor Inventory – Final Report. Shapiro and Associates, Seattle, WA.

- Wetland mapping for 260 square miles of Northern Thurston County.
- Mapping delineated from a variety of best available sources, including 1992 color infrared aerial photography at the scale of 1" = 1,000' and 1" = 500' in the urban growth area.
- Included a limited amount of field reconnaissance at between 5 to 10 percent of the aerial coverage.
- GIS wetland data layer and section maps created by Thurston Regional Planning Council.
- The geography includes the cities of Lacey, Olympia and Tumwater all of their urban growth area.

Kettman, J. & S. Morrison. 1993. Inventory and Characterization of Shoreline Armoring: Thurston County, WA 1977-1993. Thurston Regional Planning Council, Olympia, WA.

- Baseline study regarding the location of shoreline armoring (e.g. bulkheading, rip rap, etc.) along the marine shoreline of Thurston County.
- Documented permits for armoring from 1984 to 1992.
- Field reconnaissance undertaken by the American Littoral Society.
- GIS data layer created by parcel of shoreline armoring conditions.
- Geography included Thurston County shoreline, not including Budd Inlet within the City of Olympia (that was inventoried by Carrasasquero-Verde et. al., 2005).

Kliem, J. 2006. Chinook & Bull Trout Recovery Approach for the South Puget Sound Nearshore. Draft Version II. Prepared by the South Puget Sound Salmon Recovery Group.

Kunze, L. 1994. Preliminary Classification of Native, Low Elevation, Freshwater Wetland Vegetation In Western Washington. Natural Heritage Program, WA Department of Natural Resources. Olympia, WA.

- Indicates those wetland of exceptional quality
- Those identified within the region included Gull Harbor on Budd Inlet.

Knutson, K.L. & V.L. Naef. 1997. Management Recommendations for Washington's Priority Habitats: Riparian. WA Department of Fish and Wildlife, Olympia, WA.

- Baseline report by WDFW regarding riparian habitats.
- Referenced by the cities of Lacey, Olympia, and Tumwater in their critical area ordinance updates

Lichvar, R.W., D.C. Finnegan, M.P. Ericsson & W. Ochs. 2006. Distribution of ordinary high water mark indicators and their reliability in identifying the limits of "waters of the United States" in arid Southwestern channels. Cold Regions Research and Engineering Laboratory.

- Discusses OHWM indicators in the Southwest, concluding that in "flashy" discharge areas, the varying discharge pattern causes random distribution of OHWM indicators.

Logan, R.L., T.J. Walsh, H.W. Schasse, and M. Polenz. 2003. Geologic Map of the Lacey 7.5-minute Quadrangle, Thurston County, Washington. Washington State Department of Natural Resources. Web URL: http://www.dnr.wa.gov/geology/pdf/ofr03-9.pdf. Accessed online 5 February 2008.

LOTT Alliance. 2007. State of the Utility Report. Web URL: http://www.lottonline.org/pdf/sur07.pdf. Accessed online 9 January 2008.

- Gives a list of efforts made to improve habitat and water quality in the area.
- Also provides an updated overview of LOTT operations.

LOTT Alliance. 2000. Budd Inlet Scientific Study: An Overview of Findings.

- Researchers found that additional winter discharge to Budd Inlet will not cause harm.
- LOTT discharges may have little impact on shellfish harvest.
- LOTT is a much smaller contributor of nutrient to Budd Inlet than Puget Sound or Deschutes River/Capitol Lake.

Lundgen, J. 2004. WRIA 13: Deschutes Watershed Salmon Passage Inventory. South Sound Salmon Enhancement Group, Olympia, WA.

- Update of the year WDFW culvert inventory within Water Resource Inventory Area (WRIA) #13 – Deschutes.
- Also included culverts on private property and along the marine shoreline.
- Geography includes the cities of Lacey, Olympia, and Tumwater and their urban growth areas.

MAKERS & Mark, T., P. Skowlund, B. Wenger & N. Jewett. 1990. Shoreline Management Guidebook. MAKERS & WA Department of Ecology, Olympia, WA.

Manashe, E. 1993. Vegetation Management: A Guide For Puget Sound Bluff Property Owners. WA Department of Ecology, Olympia, WA.

May, C.W., E.B. Welch, R.R. Horner, J.R. Karr & B.W. Mar. 1997. Quality Indices For Urbanization Effects On Puget Sound Lowland Streams. Civil Engineering Department, University of Washington, Seattle, WA.

McNicholas, R. 1984. Stream Corridor Management Plan for the Deschutes River. Thurston County Conservation District.

- Delineation of erosion sites along the mainstem of the Deschutes River and Black Lake Drainage Ditch and Percival Creek

Melvin, D.J. 2007. Washington State Department of Health-Office of Shellfish and Water Protection. Annual Growing Area Review of Eld Inlet. Web URL: http://www.doh.wa.gov/ehp/sf/Pubs/gareports/eld.pdf. Accessed online 9 January 2008.

- Shellfish water quality information for Eld Inlet.

Melvin, D.J. 2007. Washington State Department of Health-Office of Shellfish and Water Protection. Annual Growing Area Review of Henderson Inlet. Web URL: http://www.doh.wa.gov/ehp/sf/Pubs/gareports/hendersoninlet.pdf. Accessed online 9 January 2008.

- Shellfish water quality information for Henderson Inlet.

Melvin, D.J. 2007. Washington State Department of Health-Office of Shellfish and Water Protection. Annual Growing Area Review of Nisqually Reach. Web URL: http://www.doh.wa.gov/ehp/sf/Pubs/gareports/nisqually.pdf. Accessed online 9 January 2008.

- Shellfish water quality information for Nisqually Reach.

Melvin, D.J. 2007. Washington State Department of Health-Office of Shellfish and Water Protection. Annual Growing Area Review of Totten Inlet. Web URL: http://www.doh.wa.gov/ehp/sf/Pubs/gareports/totten.pdf. Accessed online 9 January 2008.

- Shellfish water quality information for Totten Inlet.

Moffat & Nichol. 2007. Deschutes Estuary Feasibility Study – Engineering Design and Cost Estimates. Seattle, WA.

- Part of the Deschutes Estuary Feasibility Study – CLAMP Management Objective #2.
- Provided a preliminary design of for three of the four estuary alternatives.
- Provided a cost estimate for three of the four estuary alternatives.
- Utilized the future lake basin bathymetry suggested by George, et. al. (2006).

- Suggested a pre-dredge mitigation approach to lessen stored sediment impacts to lower Budd Inlet.
- Applies to Capitol Lake and Budd Inlet.

Morrison, S. 2004. Wetland Mapping for the Thurston Region. Thurston Regional Planning Council, Olympia, WA. Web URL: http://www.trpc.org/programs/environment/water/thurston+county+wetlands+mapping.htm.

- Description of the mapping wetlands within Thurston County from 1993 to 2002.
- Summarizes the sources and mapping techniques used to map 615 sq miles.
- Highlight problems and correction for false positives.
- Summarize changes in cost and resources over time.
- Geography includes the cities of Lacey, Olympia, and Tumwater and Thurston County.
- Mapping does not include long-term forestry areas and military reservations.

Morrison, S. 1993. Thurston Regional Wetland and Stream Corridor Inventory: Phase 2 Northern Thurston County. Thurston Regional Planning Council, Olympia, WA.

- Overview of wetland conditions found in Northern Thurston County.
- Summarizes the mapping protocol used in Keany and Rozenbaum (1992).
- Include GIS wetland section maps for 260 square miles.
- The geography includes the cities of Lacey, Olympia and Tumwater all of their urban growth area.

Morrison, S. 1999. Thurston County Flood Hazard Management Plan. Thurston Regional Planning Council for Thurston County, Olympia, WA.

- Comprehensive Flood Hazard Management Plan for unincorporated Thurston County, and was adopted by WDOE.
- Summarizes the historical flood events and evaluated Thurston County land use policies and land use regulations regarding flooding.
- Summaries Thurston County's proposed Capitol Facilities Plan projects within designated floodplains.
- Summarizes the meander belt mapping done on the Deschutes River.
- Establish flood plan objectives
- Contains a list of recommendations for reducing flood hazards, which was integrated into Andrews, et al. 2003.

Morrison, S. 1991. Thurston Regional Wetland Pilot Project. Thurston Regional Planning Council. Olympia, WA.

- Conceptual design and a small scale test of mapping wetlands using color infrared aerial photography.

- Test geography of 21 square miles in three strips, each in part of Lacey, Olympia and Tumwater.
- Established the wetland mapping protocol that was late used to map wetlands in Thurston County (Keany & Rozenbaum 1992).

Morrison, S & T. Julius. 2001. Tracking Development on Streams and Wetlands. Thurston Regional Planning Council for Thurston County. Olympia, WA.

- Performance evaluation of 100 constructed development project on streams and wetlands.
- Utilized a series of "Benchmarks" to evaluate land use policy, critical area ordinance permit review, and field verification of required buffers or mitigation measures.
- Report was utilized during the critical areas ordinance update for the cities of Lacey, Olympia, and Tumwater.
- Coverage includes the cities of Lacey, Olympia, and Tumwater and Thurston County.

Morrison, S. 1999. Capitol Lake Adaptive Management Plan: 1999 – 2001. Thurston Regional Planning Council for WA Department of General Administration. Olympia, WA.

- Interim management plan for Capitol Lake.
- Recommended for adoption by the Capitol Lake Adaptive Management Plan (CLAMP) Steering Committee.
- The CLAMP Steering Committee represents the State Departments of General Administration, Ecology, Fish and Wildlife, and Natural Resources, Squaxin Island Tribe, Cities of Olympia and Tumwater, Thurston County and the Port of Olympia.
- The geography includes the cities of Olympia and Tumwater.

Morrison, S. 1986. Shoreline Master Program for the Thurston Region. Thurston Regional Planning Council. Olympia, WA.

Previous Shoreline Master Program for the cities of Lacey, Olympia, Tumwater and unincorporated with Thurston County.
Undated by Aaland, 1990 and subsequent special management area plans.

Morrison, S. 1985. Percival Creek Corridor Plan – Vol. 1: Canyon and Middle Reaches. Thurston Regional Planning Council. Olympia, WA.

- Special Management Area Plan adopted as an amendment to the *Shoreline Master Program for the Thurston Region* (Morrison, 1986).
- Includes complementary local land use regulations beyond SMA jurisdiction.
- Geography covers Percival Creek in the City of Olympia and Tumwater.

Morrison, S. 1986. Percival Creek Corridor Plan – Vol. 2: Upper Reach. Thurston Regional Planning Council. Olympia, WA.

- Special Management Area Plan adopted as an amendment to the *Shoreline Master Program for the Thurston Region* (Morrison, 1986).

- Documentation provided for including the Black Lake Drainage Ditch as shoreline jurisdiction.
- Associated wetland along the Black Lake Drainage Ditch mapped based upon (then available) wetland science.
- Includes complementary local land use regulations beyond SMA jurisdiction.
- Geography covers Percival Creek and the Black Lake Drainage Ditch in Olympia, Tumwater and Thurston County.

Morrison, S. 1995. Budd Inlet – Deschutes River Watershed Action Plan. Thurston Regional Planning Council. Olympia, WA.

- Non-point pollution watershed action plan for the Deschutes Watershed and Budd Inlet.
- Contains a series of action recommendations to reduce non-point pollution within the watershed and inlet.
- Geography includes Thurston County and the cities of Lacey, Olympia, and Tumwater and their urban growth areas.

Morrison, S. 1996. Thurston County Water Resource Profile. Thurston Regional Planning Council. Olympia, WA.

- Background report on all types of water resources reports within Thurston County.
- Summary of water related reports by river watershed.
- Provides a methodology for rating water quality in fresh and salt water systems.
- Water quality map of Thurston County utilized all available data within the preceding five years.

Newton, J.A., S.L. Albertson, K. Van Voorhis, C. Maloy & E. Siegel. 2002. Washington State Marine Water Quality, 1998 through 2000. Washington State Department of Ecology. Publication #02-03-056. Olympia, WA. Web URL: www.ecy.wa.gov/biblio/0703033.html. Accessed online 7 January 2008.

- Contains water quality information for Budd Inlet for the years 1998-2000.

Northwest Aquatic Eco-systems. 2007. Barnes Lake Floating Plant Control 2007 Year End Report. Web URL: http://www.ci.tumwater.wa.us/BLMD/Barnes%20LMD%20Year%20End%20Report%202007-Final.pdf. Accessed online 19 February 2008.

O'Neal, R.A., et al. 1975. Shoreline Inventory for Thurston County. Thurston Regional Planning Council. Olympia, WA.

- Original shoreline inventory for all of the Thurston Region.
- Includes description of existing conditions (assumed date 1974-75).
- Shoreline conditions mapped on large scale (1"= 2,000') USGS quad maps.
- Provided the basis for adopting the original *Shoreline Master Program for the Thurston Region* (O'Neal, 1976).

O'Neal, R.A., et al. 1976. Shoreline Master Program for the Thurston Region. Thurston Regional Planning Council. Olympia, WA.

- Original *Shoreline Master Program for the Thurston Region.*
- Geography the cities of Lacey, Olympia, and Tumwater and Thurston County.

Philip Williams & Associates, Ltd. 2007. Deschutes Estuary Feasibility Study – Independent Technical Review. San Francisco, CA.

- Part of the Deschutes Estuary Feasibility Study – CLAMP Management Objective #2.

Puget Sound Action Team. Web URL: http://www.psat.wa.gov/Publications/ Pub_Master.htm. Accessed online 19 December 2007.

- Contains reports on Puget Sound topics, including fish/shellfish, shorelines, and pollution.

Puget Sound Action Team. 2007. 2007 Puget Sound Update: Ninth Report of the Puget Sound Assessment and Monitoring Program. Puget Sound Action Team. Olympia, WA. 260 pp. Web URL: http://www.psat.wa.gov/Publications/update_07/2007_PS_Update.pdf. Accessed online 7 January 2008.

- Provides water quality information for Budd Inlet and Nisqually Reach.
- Discusses species of concern and nuisance species, including aquatic vegetation.
- General information about the Puget Sound environment.

Puget Sound Action Team, Office of the Washington State Governor & Thurston Regional Planning Council. 2006. South Puget Sound Forum—Indicators Report. Web URL: http://www.trpc.org/resources/southpugetsoundindicatorsreport_july06.pdf. Accessed online 9 January 2008.

- Discusses environmental indicators and what they are communicating about the current status and recent trends of South Puget Sound.
- Includes information about population, land cover, shoreline armoring, shellfish water quality, freshwater quality and marine water quality.
- Provides future projections for some of these indicators.
- Has some land use and water quality information about Percival and Woodland Creeks.

Raines, M. 2007. Deschutes River Mainstem Bank Erosion: 1991 to 2003. Squaxin Island Tribe and Washington State Department of Ecology. Shelton, WA.

- Update of previous work by Collins, 1995 and McNicholas, 1984.
- Used 2002 LiDAR to remap erosion sites along the river.
- Provides an estimate of sedimentation along the Deschutes River
- Cover the timeframe of 1991 to 2003

Rapp, C. F. & T.B. Abbe. 2003. A Framework for Delineating Channel Migration Zones. Washington State Department of Ecology and Transportation. Publication #03-06-027. Olympia, WA.

- The WDOE guidance for delineating channel migration zones (CMZs).
- CMZ normally associated with large river systems.

Revised Code of Washington 90.58. 1971. Shoreline Management Act of 1971.

Richter, J.E. 1995. East Bay Habitat Enhancement Plan. Water Resources Program, Olympia Public works Department. Olympia, WA.

- Shoreline habitat plan proposed for the east Bay of Budd Inlet.
- Recommendation included habitat enhancements.
- Located within the City of Olympia.

Roberts, M. & G. Pelletier. 2007. Interim Results from the Budd Inlet, Capitol Lake, and Deschutes River Dissolved Oxygen and Nutrient Study. Washington State Department of Ecology. Web URL: http://www.ecy.wa.gov/programs/wq/tmdl/ deschutes/technical_reports/budd-deschutes_nutrstudy2007.pdf. Accessed online 21 December 2007.

- Contains water quality information for the Deschutes River, Capitol Lake and Budd Inlet.
- Reference section lists other water quality studies of the South Puget Sound region.

Roberts, M., B. Zalewsky, T. Swanson, L. Sullivan, K. Sinclair, and M. LeMoine. 2004. Quality Assurance Project Plan—Deschutes River, Capitol Lake, and Budd Inlet Temperature, Fecal Coliform Bacteria, Dissolved Oxygen, pH, and Fine Sediment Total Maximum Daily Load Study. Washington State Department of Ecology. Publication #04-03-103. Olympia, WA. Web URL: http://www.ecy.wa.gov/biblio/0403103.html. Accessed online 21 December 2007.

- Describes the technical study that will evaluate pollutants in these impaired waterbodies.
- Gives overall description of region, including land use, geology, development, etc.
- Gives some information about watershed processes and anthropogenic influences on waterbodies.
- Lists point sources of pollution in the Thurston region.

Sargeant, D., B. Carey, M. Roberts, and S. Brock. 2006. Henderson Inlet Watershed Fecal Coliform Bacteria, Dissolved Oxygen, pH, and Temperature Total Maximum Daily Load Study. Washington State Department of Ecology. Publication #06-03-012. Olympia, WA. Web URL: http://www.ecy.wa.gov/pubs/0603012.pdf. Accessed online 21 December 2007.

- Contains water quality information on Woodland Creek and Henderson Inlet, also general information about these water bodies.
- Contains geologic and hydrogeologic surveys of the area, Resources section lists other studies that contain similar information.

Sargeant, D., M. Roberts, and B. Carey. 2005. Nisqually River Basin Fecal Coliform and Dissolved Oxygen Total Maximum Daily Load Study. Washington State Department of Ecology. Publication #05-03-002. Olympia, WA. Web URL: http://www.ecy.wa.gov/pubs/0503002.pdf. Accessed online 21 December 2007.

- Contains general and water quality information for the Nisqually Reach.

Schilperoort, D. & S. Morrison. 2002. Capitol Lake Adaptive Management Plan – A Vision for the Next Ten Years: 2003-2013. Thurston Regional Planning Council & WA Department of General Administration. Olympia, WA.

- Current management plan for Capitol Lake.
- Recommended for adoption by the Capitol Lake Adaptive Management Plan (CLAMP) Steering Committee.
- The CLAMP Steering Committee represents the State Departments of General Administration, Ecology, Fish and Wildlife, and Natural Resources, Squaxin Island Tribe, Cities of Olympia and Tumwater, Thurston County and the Port of Olympia.
- Contains 14 management objectives and suggested actions for each over the next ten years.
- Adopted by the State Capitol Committee as a part of the Washington State Capitol Campus.
- The geography includes the cities of Olympia and Tumwater.

Science Applications International Corporation. 2007 Sediment Characterization Study Budd Inlet, WA. Washington State Department of Ecology, Olympia, WA.

- Study of dioxins and furan in lower Budd Inlet and Capitol Lake
- Included analysis of sediment cores and biologic indicators

Shreffler, D.K., R.M. Thom & K.B. MacDonald. 1994. Shoreline Armoring Effects on Biological Resources and Coastal Ecology in Puget Sound.

Sheldon, D., T. Hruby, P. Johnson, K. Harper, A. McMillian, T. Granger, S. Stanley & E. Stockdale. 2005. Final Freshwater Wetlands in Washington State – Volume 1: A Synthesis of Science. WA Department of Ecology. Olympia, WA.

- Volume 1 or 2 of state guidance for wetland regulations for Western Washington.
- Summarized the known values and functions of wetland systems.
- Referenced and utilized by the cities of Lacey, Olympia, and Tumwater when their critical area ordinances were updated

Shipman, H. 2001. Coastal Landsliding on Puget Sound: A review of landslides occurring between 1996 and 1999, Publication #01-06-019, Shorelands and Environmental Assistance Program, Washington Department of Ecology, Olympia. Web URL: http://www.ecy.wa.gov/pubs/0106019.pdf. Accessed online 7 January 2008.

- Provides information about geologic hazards and historic landslide along Puget Sound

Shoreline Management Act of 1971. 1971. Revised Code of Washington 90.58.

Shoreline Management Act—Streams and Rivers Constituting Shorelines of the State. Washington Administrative Code 173-18. Web URL: http://apps.leg.wa.gov/WAC/default.aspx?cite=173-18.

Shoreline Management Act—Lakes Constituting Shorelines of the State. Washington Administrative Code 173-20. Web URL: http://apps.leg.wa.gov/WAC/default.aspx?cite=173-20.

Simenstad, C. A., K. L. Fresh, and E. O. Salo. 1982. The role of Puget Sound and Washington coastal estuaries in the life history of Pacific salmon: An unappreciated function. Pp. 343-364 *in* **V. S. Kennedy (ed.) Estuarine Comparisons. Academic Press, New York. 709 pp.**

Sinclair, K. & D. Bilhimer. 2007. Assessment of Surface Water/Groundwater Interactions and Associated Nutrient Fluxes in the Deschutes River and Percival Creek Watersheds, Thurston County. Washington State Department of Ecology. Publication #07-03-002. Olympia, WA. Web URL: http://www.ecy.wa.gov/pubs/0703002.pdf. Accessed online 21 December 2007.

- Describes hydrogeologic study undertaken on Percival Creek and the Deschutes River watersheds.
- Document crafted to support a TMDL evaluation of these watersheds.
- Contains water quality information, Reference section includes other studies and information about the region, including geologic history.

South Puget Sound Salmon Recovery Group. 2006. Chinook and Bull Trout Recovery Approach for South Puget Sound Nearshore. Squaxin Island Tribe, Shelton, WA.

- Current strategy for recovering Chinook salmon and Bull Trout in southern Puget Sound.
- Plan focuses on the Nisqually River freshwater system and the marine shorelines in southern Puget Sound.
- Contains a list and maps of shoreline stressors and habitat values by marine shoreline segments.

- Provides recommendations for restoration or preservation actions for marine shorelines based upon salmon usage and identified stressors.
- The geography includes the marine shorelines for Olympia, Lacey and Thurston County.
- Referenced by the Olympia critical area ordinance update (2006) and the adoption of "Important Riparian Areas" tied to the report recommendations.

South Puget Sound's Best Places for Bird Watching. Web URL: http://blackhillsaudubon.com/bestplaces/index.html. Accessed online March 2008.

- Provides a map of bird watching areas in Thurston County.
- Describes what species are found at each site and lists access points.

Spence, B.C., G.A. Lomnicky, R.M. Hughes & R.P. Novitzki. 1996. An Ecosystem Approach to Salmonid Conservation. ManTech Environmental Research Services Corporation.

- Baseline report on the salmon habitat, needs and conservation.
- Referenced by the Olympia critical area ordinance update (2006).

SSOE, Inc. 1998. Rite Aid Store No. 5278, Cooper Point & Mud Bay, Olympia, Washington; Preliminary Storm Drainage Report.

- Discusses flooding and erosion control for development project at Cooper Point Road and Harrison Blvd.
- Includes results from simulated flooding events in Appendix B.
- Appended materials give extensive background information on the wetlands adjacent to Grass Lake.
- Conclusions state that Cooper Point Village project should not impact wetlands.

Stamm, T. 1992. Deschutes River Special Area Management Plan for the Tumwater Valley. Thurston Regional Planning Council for the City of Tumwater, Olympia, WA.

- Special Management Area Plan adopted as an amendment to the *Shoreline Master Program for the Thurston Region* (Aaland, 1990).
- Covers the Deschutes River floodplain in the City of Tumwater.

Stanley, S., J. Brown, and S. Grigsby. 2005. Protecting Aquatic Ecosystems: A Guide for Puget Sound Planners to Understand Watershed Processes. Washington State Department of Ecology. Publication #05-06-027. Olympia, WA. Web URL: http://www.ecy.wa.gov/biblio/0506027.html. Accessed online 21 December 2007.

- Provides information on how to better protect aquatic ecosystems by including information about watershed processes in resource management plans and regulatory actions.

- Can help identify areas appropriate for restoration and protection as part of the restoration plan element, and to develop site-level restoration and protection plans.
- Provides detailed information on the following watershed processes: water, sediment, phosphorus and toxins, nitrogen, pathogens, large woody debris.
- Bibliography provides many sources that deal with aquatic and marine habitat restoration.

Susskind, M. 1996. A Spatial and Temporal Analysis of Seawall Installation: Thurston County, Washington. Masters Thesis for Western Washington University, Bellingham, WA.

- Analysis of various cultural and shoreline factors which may be effecting the construction of pattern of bulkheads in southern Puget Sound.
- Area of analysis included the Nisqually Reach within unincorporated Thurston County.

Swan Resource Co. 1998. Wetland Report for the Smith Lake Property: Thurston County, WA.

- Provides wetland delineation for Smith Lake. Discusses various features of the wetland.

Tabbutt, V. 2001. Land Cover Mapping of Thurston County – Methodology and Applications. Thurston Regional Planning Council, Olympia, WA.

Tabbutt, V. 2003. The Relationship of Land Cover to Total and Effective Impervious Area. Web URL: http://www.trpc.org/resources/relationshiplandcovertotalimpreviousarea.pdf

Tabbutt, V. 2007. Memo. Completion of the Future Impervious Model Update. Web URL: http://www.trpc.org/resources/memojan2007.pdf

Talasaea Consultants, LLC. 2003. Detailed Conceptual Wetland Buffer Enhancement Plan: Smith Lake Village, Thurston County, WA.

- Reevaluates and confirms delineation of the Smith Lake wetland system discussed by Swan Resource Co. in 1998.
- Discusses impacts of proposed housing development, Smith Lake Village. Also lays out mitigation plans.

Thurston Conservation District. 2004. Salmon Habitat Protection and Restoration Plan for Water Resources Inventory Area 13, Deschutes. Web URL: http://www.rco.wa.gov/documents/srfb/Lead_Entities/Thurston/Strategy.pdf.

- Has general information about several Shoreline-designated waterbodies.
- Gives behavioral profile and other statistics of locally occurring salmonid species.

Thurston Conservation District. 2000. Identification of Salmon Habitat Refugia for

Protection in WRIA 13.

Thurston Conservation District. 2000. Private Land Culverts in WRIA 13.

Thurston County. WRIA 13 Watershed Assessment. Web URL: http://www.co.thurston.wa.us/wwm/basin%20planning/wria%2013/wria%2013_home.htm. Accessed online 9 January 2008.

- Many data sets end at 2000 or 2001.
- Lists plans for and studies of WRIA 13, including those dealing with stormwater, wastewater and other water quality issues.
- Lists available water resources data.
- Documents which agencies have data for WRIA 13 waterbodies.
- Discusses land cover across WRIA 13, by basin and in principal streams; also gives future projections.
- Discusses basin characteristics, gives flow data.

Thurston County, WA and the City of Olympia, WA. 1998. Green Cove Creek Comprehensive Drainage Basin Plan. Web URL: http://www.co.thurston.wa.us/wwm/basin%20planning/Green%20Cove%20Creek/green_cove.htm. Accessed online 16 January 2008.

Thurston County Department of Water and Waste Management. 2004. 2003 Aquatic Plant Survey of Selected Lakes in Thurston County. Web URL: http://www.co.thurston.wa.us/wwm/Lakes/General%20Lake/Aquatic%20Plant%20Survey/Final%20TC%20Survey%202003.pdf. Accessed online 9 January 2008.

- Lists non-native plants found in various lakes in Thurston County, including several Shoreline-designated waterbodies.
- Gives general information about waterbodies and their shorelines.

Thurston County Department of Water and Waste Management. 2004. Salmon Creek Comprehensive Drainage Basin Plan. Phase II: Alternatives, Analysis and Recommendations.

Thurston County Department of Water and Waste Management. Thurston County Streamflow and Temperature Monitoring Data. Web URL: http://www.co.thurston.wa.us/monitoring/index.htm.

- Site contains flow and temperature data for Black Lake Ditch, Percival Creek, Upper Deschutes River and Woodland Creek.

Thurston County Department of Water and Waste Management, Storm and Surface Water Program. 1995. Chambers/Ward/Hewitt Comprehensive Drainage Basin Plan. Web URL: http://www.co.thurston.wa.us/wwm/basin%20planning/Chambers_Ward_Hewitt/Chambers_Ward_Hewitt.htm. Accessed online 16 January 2008.

Thurston County Department of Water and Waste Management, Storm and Surface Water Program. 1995. Woodland and Woodard Creek Comprehensive Drainage Basin Plan. Web URL: http://www.co.thurston.wa.us/wwm/basin%20planning/Chambers_Ward_Hewitt/Chambers_Ward_Hewitt.htm. Accessed online 16 January 2008.

Thurston County Department of Water and Waste Management, Storm and Surface Water Program. 1994. McAllister/Eaton Creek Comprehensive Drainage Basin Plan.

Thurston County Health Department. 1992. Northern Thurston County Ground Water Management Plan.

Thurston County Public Health and Social Services Department, Environmental Health Division and Thurston County Water and Waste Management Department. 2006. Thurston County Water Resources Monitoring Report—2003-2004 Water Year, 2004-2005 Water Year. Web URL: http://www.co.thurston.wa.us/health/ehrp/ pdf/AR03-05.pdf. Accessed online 21 December 2007.

- Contains water quality data, continuous stream flow records, lake level data, and precipitation records for 2003-2004 and 2004-2005 water years.
- Also contains general information about several water bodies in WRIA 13, including land use, topography, shorelines, etc.

Thurston County Public Health and Social Services Department. Recreational swimming beaches data for Thurston County. Web URL: http://www.co.thurston.wa.us/health/ehadm/swimming/swimming_index.html#beaches. Accessed online 06 February 2008.

Thurston County Water and Waste Management Department, Storm and Surface Water Program. 1996. Thurston County Water Resources Profile—1985-1995. Prepared by Thurston County Advance Planning and Historic Preservation. (Hard Copy)

- Contains historic water quality information about WRIA 13.
- Provides general descriptions of the Thurston region, including climate, physiography, surface and ground waters.

Thurston Regional Planning Council. 2007. The Profile—25th Edition.

- Contains general information about Thurston County.
- Provides public access data for various water resources in the major jurisdictions of Thurston County.

Thurston Regional Planning Council. 2007. Thurston Regional Trails Plan.

Thurston Regional Planning Council. 2002. Final Report of the West Bay Habitat Assessment. Conducted by the R.W. Morse Company. Web URL: http://www.trpc.org/resources/westbayhabitatassess061502.pdf. Accessed online 7 January 2008.

- Describes the habits of waterfowl in the West Bay area of Budd Inlet before and during the construction of the Fourth Avenue Bridge.
- Also lists species found in the area during the time of study.

Thurston Regional Planning Council. 1999. Final Environmental Impact Statement – Capitol Lake Adaptive Management Plan. Olympia WA.

- Final EIS of six scenarios for managing Capitol Lake.
- Includes public an agency comments on the DEIS.
- Applies only to Capitol Lake.

Thurston Regional Planning Council. 1991. Shoreline Public Access Inventory.

Tumwater Planning and Facilities Department. Deschutes River Riparian Habitat Plan. Tumwater, WA. 1993.

- A riparian planting plan adopted as a part of *Deschutes River Special Area Management Plan for the Tumwater Valley* (Stamm, 1992).
- Adopted as an amendment to the *Shoreline Master Program for the Thurston Region* (Aaland, 1990).

United States Department of Agriculture. 1990. Soil Survey of Thurston County, Washington. USDA Soil Conservation Service in cooperation with Washington State Department of Natural Resources and Washington State University, Agriculture Research Center.

- Describes in detail the soil types found in Thurston County.
- Soil types are superimposed on aerial photographs, allowing for analyses of which soil type(s) are associated with a given water body, property, city block, etc.
- Also describes vegetation found throughout the county, and shows its distribution.

United States Fish & Wildlife Service. YEAR? USFWS Threatened and Endangered Species System. Web URL: http://ecos.fws.gov/tess_public/StateListing.do?status= listed&state=WA. Accessed online 19 December 2007.

- Lists federally recognized threatened and endangered species that are found in Washington State.

University of Washington. Key to the Fishes of Puget Sound. Web URL: http://artedi.fish.washington.edu/FishKey/. Accessed online March 2008.

- Lists the 71 families of fishes that have been recorded in Puget Sound.

URS & Dewberry. 2003. Capitol Lake Floodplain Analysis. Federal Emergency Management Agency – Region X, Bothell, WA.

- Analysis of the risk of flooding for Capitol Lake, WA.
- Resulted in a new Federal Emergency Management Agency (FEMA) one hundred year floodplain elevation for the lake.
- Integrated into the CLAMP 10 Year Plan (Skilperoort and Morrison, 2002)
- The geography includes the cities of Olympia and Tumwater.

Walsh, T.J., and R.L. Logan. 2005. Geologic Map of the East Olympia 7.5-minute Quadrangle, Thurston County, Washington. Washington State Department of Natural Resources. Web URL: http://www.dnr.wa.gov/geology/pdf/gm56.pdf. Accessed online 5 February 2008.

Walsh, T.J., R.L. Logan, H.W. Schasse, and M. Polenz. 2003. Geologic Map of the Tumwater 7.5-minute Quadrangle, Thurston County, Washington. Washington State Department of Natural Resources. Web URL: http://www.dnr.wa.gov/geology/pdf/ofr03-25.pdf. Accessed online 5 February 2008.

Walton, J. 1993. Olympia Urban Waterfront Plan. Thurston Regional Planning Council for the City of Olympia, Olympia, WA.

- Special Management Area Plan adopted as an amendment to the Thurston Regional Shoreline Master Program - Aaland (1990).
- Title is somewhat misleading, and only applies to the over-the-water portion of the City of Olympia marine shoreline.
- Plan recommends preparation of a "Comprehensive Habitat Plan for Budd Inlet". This should be prepared by a habitat task force.
- Plan recommends the creation of a Habitat Advisory Committee to review habitat and mitigation and enhancement plans.

Washington Lakes. 2007. Featured Lake Index. Web URL: http://www.washingtonlakes.com/FeaturedLakes.aspx. Accessed online 11 February 2008.

- Describes fish found in select Thurston County lakes.
- Lists public access points.
- Includes photos and schematic drawings of each featured water body.

Washington Sea Grant Program. 2005. Marine Riparian Areas: These Important Nearshore Environments Offer a Wealth of Functions and Benefits. Washington Sea Grant Program. Seattle, WA.

- Summary flyer of the known values and functions of marine riparian areas along Puget Sound.
- Referenced by the Olympia critical area ordinance update in 2006.

Washington State Department of Ecology. 2008. Surface Water Quality Standards page. Web URL: http://www.ecy.wa.gov/programs/wq/swqs/index.html. Accessed online February 2008.

- Gives a general overview of Washington's surface water quality standards, including a link to the WACs.

Washington State Department of Ecology. ISIS Report for Thurston County. Provided by Jean Rakestraw & Carol Dorn February 2008.

Washington State Department of Ecology. 2008. Leaking Underground Storage Tanks List for Thurston County. Integrated Site Information System (Web Reporting). Web URL: https://fortress.wa.gov/ecy/tcpwebreporting/reports.aspx. Accessed online 4 March 2008.

Washington State Department of Ecology. 2008. Confirmed and Suspected Contaminated Sites. Integrated Site Information System (Web Reporting). Web URL: https://fortress.wa.gov/ecy/tcpwebreporting/reports.aspx. Accessed online 4 March 2008.

Washington State Department of Ecology. 2007. Determining an Ordinary High Water Mark on Shorelines of the State. PowerPoint Presentation 16-17 May 2007.

- Describes how to locate OHWMs in the field, in various marine and freshwater environments.
- Also reviews office methods.
- Includes guide to riparian plants in western Washington.

Washington State Department of Ecology. 2005a. 2004 Integrated Water Quality Assessment—2004 Water Quality Listings by Category. Web URL: http://www.ecy.wa.gov/programs/wq/303d/2002/2004_documents/2004_wq_assessment_cats.html. Accessed online 19 December 2007.

- Lists impaired waterbodies by category, including parameters and media.

Washington State Department of Ecology. 2005b. 2004 Integrated Water Quality Assessment—2004 Contaminated Sediment Listings by Category. Web URL: http://www.ecy.wa.gov/programs/wq/303d/2002/2004_documents/seds_listings-cat.html. Accessed online 19 December 2007.

- Lists impaired sediments by category, including parameters.

Washington State Department of Ecology. 1980. Coastal Zone Atlas of Washington; Volume 8, Thurston County.

- Baseline conditions of the Thurston County marine shoreline printed in a large, color map folio.
- Contains a variety of data collected from the late 1970s including: geology, fisheries habitat, shoreline armoring, land use, and shellfish aquaculture use.

Washington State Department of Fish and Wildlife. 2007. Fishing in Washington—Sport Fishing Rules. 2007/2008 pamphlet edition. Web URL: http://wdfw.wa.gov/fish/regs/2007/2007sportregs.pdf. Accessed online February 2008.

- Provides sport fishing regulations for Washington State for fish and shellfish, effective from 5/1/2007-4/30/2008.

Washington State Department of Fish and Wildlife. 2006. Deschutes Estuary Feasibility Study: Net Benefit Analysis – Stakeholder Involvement. Olympia, WA.

- Part of the Deschutes Estuary Feasibility Study – CLAMP Management Objective #2.
- Summarized the community values about the Capitol Lake basin.
- Applies to Capitol Lake and Budd Inlet.

Washington State Department of Fish and Wildlife. 2006. Geographic Information System Digital Data Documentation.

- Describes digital fish, wildlife and habitat data available from WDFW.
- General background information on data compilation methods, organization, structure, details on using digital data.

Washington State Department of Fish and Wildlife. 1997. Salmonid Screening, Habitat Enhancement and Restoration Division-Lands and Restoration Services Program. Web URL: http://wdfw.wa.gov/hab/tapps/reports/1997sshear.pdf. Accessed online 8 January 2008.

- Provides limited information on fish barriers in Thurston County.

Washington State Department of Health—Office of Shellfish and Water Protection. 2007a. 2006 Annual Inventory of Commercial and Recreational Shellfish Areas in Washington State. Web URL: http://www.doh.wa.gov/ehp/sf/Pubs/annual-inventory.pdf. Accessed online 9 January 2008.

Discusses threatened shellfish growing areas, and the status and trends of fecal coliform in commercial shellfish beds.

Describes what various water quality classifications mean, as they pertain to shellfish growing.

Washington State Department of Health—Office of Shellfish and Water Protection. 2007b. Atlas of Fecal Coliform Pollution in Puget Sound: Year 2005—A Report for the Puget Sound Assessment and Monitoring Program. Web URL:

http://www.doh.wa.gov/ehp/sf/Pubs/fecalreport.pdf. Accessed online 9 January 2008.

Contains fecal pollution summaries for Henderson Inlet, Nisqually Reach and Eld Inlet.

Williams, G. & R. Thom. 2001. White Paper: Marine and Estuarine Modification Issues. Battelle Marine Science Laboratories, Sequim, WA.

Williams, M. et. al. 1995. Thurston Regional Wetland and Stream Corridor Inventory: Phase III – Deschutes River Middle Reach. Michael P Williams Consulting, Inc., Seattle, WA.

- Wetland mapping of approximately 100 square miles within the Deschutes River watershed.
- Delineates the data sources, protocol, and results of the project.
- Included a limited amount of field reconnaissance.
- GIS wetland data layer and section maps created by Thurston Regional Planning Council.
- The geography included unincorporated Thurston County.

Zalewsky, B. 2002. Quality Assurance Project Plan: Woodland Creek Temperature TMDL. Washington State Department of Ecology. Publication No. #02-03-077. Olympia, WA. Web URL: http://www.ecy.wa.gov/pubs/0203077.pdf. Accessed online 28 January 2008.

- Discusses sources of thermal pollution in Woodland Creek

CITY OF LACEY SHORELINE MASTER PROGRAM

APPENDIX 5

~~DRAFT~~

CUMULATIVE IMPACTS ANALYSIS

June 2010

Photo on front:
Flooding of 32nd Avenue in unincorporated Thurston County, in Lacey's UGA.

The flooding in this picture was caused by a failure of a culvert under 32nd Avenue to handle the volume of water from the head waters of eagle Creek during a severe storm event. The cumulative impacts of urbanization upland of 32nd Avenue has created this problem by creating impervious surfaces covering area that historically served as storage during storm events (typically low grade wetland areas). The flooding is not only a concern for functioning of road infrastructure, as the road closure sign demonstrates, but also for less obvious environmental impacts. Eagle Creek is a tributary to Woodland Creek (that supports salmon) and uncontrolled runoff will carry pollutants and sediment that can have serious impacts to salmon rearing stream beds.

Photograph taken by Doug Christenson, a Water Resources Engineer for the City of Lacey.

LACEY CITY COUNCIL

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LACEY CITY MANAGER

Scott Spence

LACEY COMMUNITY DEVELOPMENT DEPARTMENT

Rick Walk, AICP, Community Development Director
David R. Burns, AICP, Principal Planner, lead staff on update
Ryan Andrews, Associate Planner
Sarah Schelling, Associate Planner
Samra Seymour, Associate Planner
Jolene Hempel, Permit Technician
Leah Bender, Permit Technician

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Steve Morrison, Senior Planner and Project Manager
Veena Tabbutt, Senior Planner
Andrew Deffobis, Assistant Planner
Sarah Morley, Administrative Assistant
Toni Tringolo, Office Specialist II

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Jan Weydemeyer, Senior Planner for Olympia
Cindy Wilson, Senior Planner for Thurston County
Molly Levitt, Associate Planner Thurston County

Photographs taken by David R. Burns, AICP, Principal Planner, unless noted otherwise.

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I. Introduction

A. Background

This report is the final proposed cumulative impacts analysis for the City of Lacey and its urban growth area (UGA). The report has been created as part of the Shoreline Master Program for the City and added to the Lacey Master Program as Appendix 5.

Local master programs are required to evaluate and consider cumulative impacts of reasonably foreseeable future development on shoreline ecological functions. While some impacts are immediate and can be directly addressed through avoidance and mitigation, other impacts are cumulative in nature. Individually, the action may not result in a significant impact, but the composite of many similar actions over time may lead to a significant cumulative impact to the ecosystem. Examples of this may be shoreline bulkheads or docks.

Under the SMP Guidelines, the evaluation of cumulative impacts should consider (WAC 173-26-186(8)(d)):

- Current circumstances affecting the shorelines and relevant natural processes
- Reasonably foreseeable future development and use of the shoreline
- Beneficial effects of any established regulatory programs under other local, state, and federal laws

A cumulative impacts analysis is required to assess the effects of actions allowed under the proposed policies and regulations. The guidelines state that: "*To comply with the general obligation to assure no net loss of shoreline ecological function, the process of developing the policies and regulations of a shoreline master program requires assessment of how proposed policies and regulations cause and avoid such cumulative impacts.*"

B. Timeline

A timeline for the complete Shoreline Master Program update (a multi-year program) is below:

TABLE 1: TIMELINE FOR THE SHORELINE MASTER PROGRAM UPDATE FOR THE CITY OF LACEY

Phase	Update Schedule	Timeline
1	A. Determine what shorelines are regulated under the act B. Conduct an inventory of all existing and available data for shorelines C. Public Open Houses	**Timeline** Winter 2008. Accomplished under Regional contract with DOE
2	A. Analyze and characterize shoreline conditions	Spring 2008. Accomplished under Regional contract with DOE
3	A. Categorize each shoreline segment into a designation such as urban, suburban, or rural. Each will have a different set of rules. B. Develop draft rules and policies C. Public meetings	Fall 2008 Winter-Spring 2009. Draft accomplished under Regional contract with DOE
4	A. Analyze the cumulative impacts of expected shoreline development or redevelopment B. Develop a restoration (and preservation) plan, including public access	Winter-Spring 2009. Accomplished under Regional contract with DOE and refined by Lacey early 2010
5	A. Public hearings B. Planning Commission recommendations C. City Council approval D. State approval	In process. Expected completion date is July 2010

C. Methods and Sources of Information

This cumulative impacts analysis is built upon the assessment of current circumstances affecting the shorelines and relevant natural processes as identified in the Shoreline Inventory and Analysis (Phase 1).

In Lacey, the assessment of reasonably foreseeable future development and use of the shoreline can be described as a comprehensive process involving both a focus on micro (site or project specific type issues) as well as macro or bigger picture concerns. Micro focus issues include things such as impacts from a typical development project and details of how the mechanics would work with administration of permits and customer service at the counter. Basically, where the rubber meets the road and where you have to figure out how your strategies for environmental protection, restoration, etc. will actually work on the ground.

Macro (bigger picture) considerations will involve concepts that are harder to define and predict, but are nevertheless important because they will have an impact on the context the community will find itself in at some future point. These considerations include such things as expected community demographics, market conditions, and the expected likely development scenarios and land use expectations and the requirements of GMA.

The process for development of this plan and its results is summarized in the following bulleted discussion points:

- This review necessarily requires a project level analysis, not only of known projects but a consideration of "typical" site specific projects and impacts that have historically occurred and could be expected to occur given market conditions, demographics and different regulatory scenarios under GMA. It includes consideration of real projects listed in Lacey's Capital Facilities Plan and plans and projects that could occur.
- After Regional Planning's original development of the first cumulative impacts draft, this analysis was coordinated by Lacey staff as a regular part of agenda discussions during the Planning Commission's update of the SMP.
- Major conclusions of the cumulative impacts assessment and strategy to deal with the issues it presents were largely identified, developed and refined through extensive discussion and examination of issues, problems, solutions and expectations during the nine months the Planning Commission spent on the SMP update effort.
- Planning Commission agendas included participation and the specialized knowledge base and values brought to the table by state resource agencies, interested citizens, land owners and members of the development community.
- As a result of this project level review, specific projects with known impact and situations considered "typical" and "most likely to occur" based upon historical application and counter experience were emphasized and given priority for development of protection and restoration strategies.
- To craft strategies for protection and restoration of shoreline resources, staff and the Planning Commission discussed identified issues and ideas with resource agencies and utilized material provided by resource agencies. This discussion and analysis

resulted in development of goals, policies and standards for sections of the SMP dealing with the respective topic areas.

- This effort took place in the context of the bigger picture the Planning Commission and staff are always required to work within: considering a big picture assessment of past development activity and trends, expectations for the City's future and the overall vision for the Lacey community that gets articulated in the Comprehensive Land Use Plan and its many specialized elements.
- The SMP update and consideration of expected outcomes (cumulative impacts) is folded within this scope of work as the specialized element that requires the protection, wise management and utilization of Lacey's shoreline resources to meet the needs of state law as well as its local citizens. All of this is part of the visioning process that will guide the City as it develops and evolves under GMA.
- As part of the bigger picture assessment and cumulative impacts, consideration is given to environmental legislation Lacey currently has on the books to implement GMA concepts and requirements as well as new policies and standards for regulating shoreline development.
- To assess likely long term impacts to shoreline resources, this level of analysis necessarily includes the beneficial results from implementation of new strategies identified at the project level considering the emphasis and expectation of no net loss of function and value.
- Beneficial effects of any established regulatory programs under other local, state, and federal laws is also derived from an evaluation of the proposed regulations and policies to ensure *no net loss of ecological function*.

D. Regulatory Framework

As discussed above considering the context of the "bigger picture," the Shoreline Master Program is one element under the City's GMA Comprehensive Land Use Plan. Development activity in Lacey and the unincorporated urban growth area in Thurston County is regulated under a joint Comprehensive Land Use Plan and Zoning Code and separate critical area regulations. The SMP is the element that regulates activity within shorelines jurisdiction.

There are other state and federal regulations that also may apply to shoreline development activities.

E. Shorelines

Table 2 lists the shorelines identified in the Shoreline Inventory for Lacey and its Urban Growth Area (UGA), classified into functional systems.

TABLE 2: SMA SHORELINES AND FUNCTIONAL SYSTEMS FOR LACEY, OLYMPIA, TUMWATER AND UGAS.

Type	Area	System
Marine Waters		
Nisqually Reach	Lacey & UGA	Nearshore/Marine
Rivers/Streams		
Woodland Creek	Lacey & UGA	Woodland Creek System
Lakes		
Chambers Lake	Lacey & Olympia	Freshwater Lake
Hicks Lake	Lacey	Woodland Creek System
Long Lake	Lacey & UGA	Woodland Creek System
Pattison Lake	Lacey & UGA	Woodland Creek System
Southwick Lake	Lacey & UGA	Freshwater Lake

II. Current Circumstances and Ecological Functions

Current shoreline circumstances and relevant natural processes were documented in Phase 1 of the Shoreline Master Program update in the Shoreline Inventory for the Cities of Lacey, Olympia, and Tumwater and their Urban Growth Areas and the Lacey, Olympia, and Tumwater Shoreline Analysis and Characterization Report.

These evaluations led to the development of draft Shoreline Environment Designations (SEDs) for each shoreline reach. This evaluation was continued as part of Lacey's review during the Planning Commission's consideration of specific projects and specific sites considered priority for environmental protection. At this point, reach conditions, restoration issues and potential opportunities associated with various scenarios were discussed to determine the best strategies and techniques for protection and achieving the objective of no net loss.

For Lacey, ecological functions expected to be at risk from increased urbanization were initially evaluated by consultants during the analysis and characterization phase and later by the Lacey staff and Planning Commission during Lacey's SMP update process. The Planning Commission's involvement focused on development activity expected under the City's Comprehensive Land Use Plan and expectations of the Growth Management Act (GMA) and the best land use strategies to achieve no net loss of the functions and values of Lacey's shoreline resources. Scenarios, land use strategies and likely outcomes were considered and discussed and specific land use goals, policies and standards were developed for the SMP dealing with the following shoreline systems:

- Nearshore/Marine Environment – Nisqually Reach
- Woodland Creek System – Woodland Creek, Long Lake, Pattison Lake, and Hicks Lake
- Other Freshwater Lakes – Southwick and Chambers Lake

Lacey's shorelines and their current level of alteration are summarized in Tables 3-5 below. These tables also include discussions of the potential for risk to ecological function from foreseeable future development and an assessment of ability of the policies and regulations in this SMP to offset or mitigate for impacts from such development. This assessment covers shorelines both within the City and shorelines in the urban growth area (UGA) in unincorporated Thurston County. Discussion of areas in the County is considered important, particularly where designations and anticipated development could impact areas within Lacey. However, it should be noted that area within Lacey's UGA, in unincorporated Thurston County, is not under the regulatory purview of this SMP. Discussion of the UGA is included here for the purposes of joint planning and interagency coordination of restoration activity, and to assess how the City's SMP would achieve no net loss if these areas were annexed and regulated under the City's SMP.

TABLE 3: PROCESSES, FUNCTIONS, AND LEVEL OF ALTERATION FOR THE NEARSHORE/MARINE ENVIRONMENT.

Nearshore/Marine Environment –Nisqually Reach				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
Habitat: Pocket estuarine habitat; subtidal and intertidal provide transition habitat between fresh and salt water environments.	**Nisqually 1 – Extremely Low** The Butterball Cove area and the marine shoreline within Lacey to the east of Butterball Cove are substantially unaltered. The only alteration is a historical pier (Atlas Powder Wharf) that exists east of Butterball Cove. The pier was associated with DuPont dynamite operations in the 1940s. However, it is nonfunctional today. An existing access to this area is provided by the Hawks Prairie Planned Community. It includes an outlook overlooking the beach and a pedestrian beach access trail. The access has had little impact to the overall shoreline structure or processes.	**Nisqually 1 – Extremely Low** The majority of this area is currently designated as open space in the Hawks Prairie Planned Community. No impacts are predicted. The existing access to the beach is at the site of the historical pier. Thought has been given to opportunity for public access and use of the pier for fishing or other recreation opportunities. Establishing this type of public use would be expected to have the potential for impact. However, the pier would require significant repair or replacement for safety. If modification ever were proposed, mitigation and no net loss standards would be applied to any such project. It is also noted that access is owned by the HPPC HOA and while access is not restricted to HOA members it is not formally open to the general public. As such, any project for access and use of the pier is speculative and not planned at this time.	**Nisqually 1 –** the following provisions are applicable: 1. Designation as Natural: The proposed SMA designation of Natural and its associated restrictions on the types of use and development is expected to preserve functions within this reach; shoreline map designation and Tables 3, 4 and 5. 2. Marine Riparian Habitat Requirements: Criteria for development are designed to protect the Natural designation; SMP Sections 17.35.030-17.35.036. Any repair of the existing pier or new modifications would be subject to no net loss standards and criteria cited above. **3.** Master Plan and Plat Requirements: Designation of the area as open space in the Hawks Prairie Master Planned Community restricts use to activity appropriate to this reach; Master Plan Approval HPPC and subdivision requirements of LMC 15.	**Nisqually 1** Work with Hawks Prairie Planned Community HOAs to help maintain existing access and provide environmentally friendly improvements. Discuss potential Lacey ownership with HOA for maintenance issues.

Nearshore/Marine Environment –Nisqually Reach				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
	Nisqually 2A and 2B - Moderate The Beachcrest marina in reach 2A and access road in reach Nisqually 2B has had an impact. The shoreline is armored and the pocket estuary had already been altered by installation of a standpipe that eliminated tidal influence and restricted access by salmon.	**Nisqually 2A and B – Low** Shoreline modifications in this area are expected to persist over the long term to provide for established access and recreational use. Maintenance activities will continue and need to be properly designed. Opportunities may come available for restoration as maintenance takes place.	**Nisqually 2A and B –** SMP policies and incentives focused on restoration are expected to incrementally move improvements in a positive direction to achieve restoration objectives Specific provisions that apply are as follows: • Policies Section 17.49.010, policies 1 and 2. • Standards Section 17.49.020, Beachcrest marina standard 2.	**Nisqually 2A and B** Work with the Beachcrest HOA to craft incentives for restoration and improvements to vegetation management through education. The South Sound Salmon Enhancement Group (SSSEG) recently completed a salmon recovery project along this reach, which will improve habitat and reverse a trend existing for the proceeding 50+ year period.
Hydrology: Attenuation of wave energy.	**Nisqually 1 – Extremely Low** No modifications have been made to this area of shoreline under Lacey jurisdiction. See discussion above dealing with existing conditions.	**Nisqually 1 – Extremely Low** The proposed designation of Natural and restrictions on development are expected to protect this reach. New modifications would be subject to marine riparian habitat and no net loss provisions. There are no structures on this shoreline that would justify a modification. Improvement of the one historical modification (pier) would require City ownership and compliance with no net loss policy.	**Nisqually 1** – The following provisions are applicable: 1. Designation as Natural: The proposed SMA designation of Natural and its associated restrictions on the types of use and development would not permit new modifications; shoreline map designation, Tables 3, 4 and 5. 2. Marine Riparian Habitat Requirements: Associated criteria for development are designed to protect the Natural designation;	**Nisqually 1** Work with Hawks Prairie Planned Community HOAs to help maintain existing access and provide environmentally friendly improvements. Discuss potential Lacey ownership with HOA, for maintenance issues. **Nisqually 2A and B** Work with the Beachcrest HOA and County in joint planning to craft incentives for restoration.

Nearshore/Marine Environment –Nisqually Reach				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
	Nisqually 2A and B – Moderate to High Armoring of marina area and access road has changed tidal and wave energy dynamics in this area.	**Nisqually 2A and B – Moderate to Low** Maintenance activities associated with existing modifications will continue over the long term, however little new development is anticipated. Opportunity may exist for additional restoration as maintenance activities take place.	Sections 17.35.030-17.35.036. **3.** Master Plan and Plat Requirements: Designation of the area as open space in the Hawks Prairie Master Planned Community restricts use to activity appropriate to this reach; Master Plan Approval HPPC and subdivision requirements of LMC 15. 4. Armoring provisions in Section 17.45.000-.015 allow new hard shoreline stabilization structures only where necessary. **Nisqually 2A and B** Policy and incentives focused on restoration are expected to incrementally achieve restoration objectives. Policies applicable to maintenance of modifications are expected to achieve objectives over time; Section 17.49.020 relating to Beachcrest, standard 2.	
Sediment Generation and Transport: Sediment delivery from coastal bluffs	**Nisqually 1 – Extremely Low** Natural processes have been maintained in this area. The current open space designation and plat limitation have	**Nisqually 1 – Extremely Low** No new activities in shorelines jurisdiction expected. New upland development is limited to areas outside critical area buffers and likely	**Nisqually 1 –** The following provisions are applicable: 1. Designation as Natural: The proposed SMA designation of Natural and its associated	

Nearshore/Marine Environment –Nisqually Reach				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
and streams.	protected this area. The City's Critical Area Ordinances have protected the streams feeding pocket estuaries.	even outside shoreline jurisdiction, requires tree protection and must meet new drainage manual requirements.	restrictions on the types of use and development would protect this area; shoreline map designation, Tables 3, 4 and 5. 2. Marine Riparian Habitat Requirements: Associated criteria for development are designed to protect the Natural designation; Sections 17.35.030-17.35.035. **3.** Master Plan and Plat Requirements: Designation of the area as open space in the Hawks Prairie Master Planned Community restricts use to activity appropriate to this reach. Upland development is restricted to areas outside critical area and buffers and outside area designated as open space in the planned community (which includes the bluff areas); Master Plan Approval HPPC and subdivision requirements of LMC 15. 4. Armoring provisions in Section 17.45.000-.015 allow new hard shoreline stabilization structures only where necessary. 5. Lacey's critical area provisions, as incorporated into this SMP in	

Nearshore/Marine Environment –Nisqually Reach				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
	Nisqually 2A and B – Moderate Armoring of shoreline for the marina and access road would be expected to have changed longshore drift dynamics. The standpipe may have affected sediment delivery to the drift cell.	**Nisqually 2A and B – Low** Maintenance of existing modifications will continue. New development is not anticipated. No net loss standards will be required for any maintenance and repair. Incentives will be offered to the HOA to further restoration objectives.	Section 17.35.020, will continue to protect the sediment sources and delivery routes in these streams and bluffs. **Nisqually 2A and B** Policy and incentives focused on restoration are expected to incrementally move improvements in a positive direction to achieve restoration. Improvements will likely be incremental and will take time. See discussion above regarding references to SMP criteria and standards and other applicable environmental legislation.	**Nisqually 2A and B** See discussion of recent restoration above. In addition, work with the HOA will be ongoing.
Water Quality: Wetland removal of pollutants through sedimentation and adsorption.	**Nisqually 1 – Extremely Low** Lacey's wetland protection regulations and tree protection regulations that predated GMA requirements have effectively preserved and protected associated upland wetlands and estuarine wetlands.	**Nisqually 1 – Extremely Low** Wetlands primarily associated with the marine shoreline have not experienced pressure for urbanization until recently. Upland property in the HPPC was "reserved" for future development in the early Master Planned Community and was never developed. After Lacey annexed the area and became responsible for regulation of development, wetland regulations have been applied in planning undeveloped portions of the	**Nisqually 1** The proposed designation of Natural and restrictions on upland development and preservation of wetland areas and buffers are expected to protect this function; see SMP sections cited above and requirements of LMC Chapter 14.28 Wetland Protection and 14.32 Tree Protection as incorporated into this SMP.	

Nearshore/Marine Environment –Nisqually Reach				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
	Nisqually 2A and B – Moderate Wetland areas would not have had protection when the majority of upland area development took place in this area and natural functions that existed are lost. Upland development dating back from the late 1940s throughout 1990s has had impact to this area. Streams running to pocket estuaries and Mallard Cove have likely resulted in nutrient loading from Beachcrest septic tank drainfield systems and residential activities and drainage. Estuarine wetlands may have been lost due to installation of the standpipe.	Planned Community. Regulations essentially prohibit development in these critical areas. This situation will continue into the future resulting in protection of wetland functions. **Nisqually 2A and B – Low** Upland wetland restoration opportunities are not available. No improvement to water quality is expected from restoration of wetlands lost during original development. Use and maintenance of existing uses will continue to have an impact. However, new development, replacement and maintenance of septic systems will improve existing conditions considering nutrient load.	**Nisqually 2A and B** Upland wetland restoration in this area is not available as an option. Uses contributing to the source of pollution are expected to continue over the long term. Major public investment would be needed to provide sewer services to this area. Major work would be required to mitigate drainage impacts from existing homes. While the situation is not expected to be allowed to get worse, restoration and mitigation for lost upland wetland and stream function is expected to be problematic.	**Nisqually 2A and B** Potential to work with HOAs to improve vegetation management through education and to reduce pollutant loads from non-septic sources. The SSSEG restoration project may help estuarine wetlands reestablish.

Nearshore/Marine Environment –Nisqually Reach				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
Water Quality: Delivery, movement, and loss or removal of nutrients, pathogens, and toxicants; storage of phosphorus and removal of nitrogen and toxins through sedimentation and adsorption.	**Nisqually 1 – Extremely Low** See description above under water quality. There are no sources, with the possible exception of treated pilings at the Atlas Powder Pier. Pathways for movement and removal have not been altered. **Nisqually 2A and B – Moderate** Impacts from existing upland development have occurred; see discussion under water quality above.	**Nisqually 1 – Extremely Low** See description above under water quality. No increase in sources or change to delivery/loss/movement processes is anticipated, because no development is anticipated. **Nisqually 2A and B – Moderate** Impacts are expected to continue from existing upland development. No opportunity is expected for restoration of developed upland areas in terms of recovery of streams or upland wetlands. See discussion above. Maintenance and replacement of drainage facilities and septic systems may present opportunity for new mitigation in water quality. This would be expected to result in an incremental improvement in water quality over the long term.	**Nisqually 1** See discussion above under water quality. Water quality standards in Section 17.70.000-.010 will also ensure introduction and movement of these types of toxins is minimized. Vegetation management standards in Section 17.41.015-.020 will protect existing vegetation in this reach and the water quality functions it provides in this context. **Nisqually 2A and B** New upland development is expected to be minimal; repair and improvement of existing septic systems should incrementally move this area is a positive direction for water quality. See discussion above and discussion and provisions in Section 17.70 (Water Quality) of the SMP. Vegetation management standards in Section 17.41.015-.020 will protect existing vegetation in this reach and the water quality functions it provides in this context.	Work with the HOA to reduce pollutant loads from non-septic sources.

Nearshore/Marine Environment –Nisqually Reach				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
Habitat: Shoreline habitat for wildlife; vegetation provides structure for invertebrates, birds, amphibians, reptiles, and mammals.	**Nisqually 1 – Extremely Low** See descriptions of existing conditions above. Overall both the shoreline area and immediately adjacent upland area is substantially unaltered. **Nisqually 2A – Moderate** There has been some reduction in vegetation with development	**Nisqually 1 – Extremely Low** See description of expectations above. **Nisqually 2A – Low** Existing levels of impacts from existing upland development are expected to continue. No new	**Nisqually 1** See descriptions of protection requirements and existing level of function above. The following sections are applicable: 1. Natural Designation: SMP map and criteria and standards of Sections 17.35.030-17.35.035. 2. Planned Community Restrictions: Designation of open space and Master Planned Community conditions; LMC Chapter 15 (Plat requirements for open space). 3. Wetland Protection: LMC Chapter 14.28 as incorporated into this SMP. **4.** Tree Protection Regulations: LMC Chapter 14.32, as incorporated into this SMP. 5. Vegetation management standards in Section 17.41.015-.020 will protect existing vegetation in this reach. **Nisqually 2A** Policy and incentives focused on restoration are expected to incrementally move improvements in a positive direction to achieve	

Nearshore/Marine Environment –Nisqually Reach				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
	of the marina and upland development to the southeast. **Nisqually 2B – High** Shoreline habitat was modified by placement of the access road to the marina and a culvert system that restricted tidal exchange and salmon access to a pocket estuary. Upland tree removal for residential development.	development or expansion of the marina facility is expected. **Nisqually 2B – Low** No new development is anticipated. Maintenance and repair of existing structures and modifications may occur.	restoration objectives in that area subject to Lacey jurisdiction. Vegetative restoration is expected to occur under Section 17.49.010-.020 (boating facilities) with normal repair and maintenance at the marina. Vegetation will be protected under Section 17.41.015-020. **Nisqually 2B** Policy and incentives focused on restoration are expected to incrementally move improvements in a positive direction to achieve restoration objectives in that area subject to Lacey jurisdiction. Vegetation will be protected and maintained, and possibly obtained, under Section 17.41.015-.020.	Recently a salmon restoration project occurred at this site, which was supported and permitted by the Beachcrest HOA. The HOA has demonstrated a willingness to pursue restoration actions. Lacey is proposing incentives to encourage the continuation of this trend.
Habitat: Source and delivery of LWD.	**Nisqually 1 – Extremely Low** Lacey has had an Urban Forest Management Plan and tree protection regulations for over four decades that have controlled the cutting of trees and prohibited cutting within sensitive areas and their buffers. Regulations have been applied to the Planned Community which has	**Nisqually 1 – Extremely Low** No new impacts are expected.	**Nisqually 1** No change expected in Lacey. Regulations for the SMP Natural designation, plat restrictions, wetland protection and tree protection will continue to protect ecological function in this reach. This should continue to have positive impacts on habitat and LWD delivery. The following provisions are applicable:	

Nearshore/Marine Environment –Nisqually Reach				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
	preserved critical forested habitat.		**1.** Natural Designation: SMP map and criteria and standards of Sections 17.35.030-17.35.036. **2.** Marine riparian habitat will be protected in Section 17.35.031-.032 **3.** Vegetation management areas have been established in Section 17.41.020. 4. Tree Protection: • Goals and policies of Lacey Urban Forest Management Plan (Chapter 1, Section 2 of the Environmental Protection and Resource Conservation Plan). • Tree protection requirements in LMC 14.32, as incorporated into this SMP.	
	Nisqually 2A and B – Moderate Upland residential development in Beachcrest has impacted natural LWD processes (there are fewer sources).	**Nisqually 2A and B – Low** Upland development is established and this use is expected to continue over the long term. Continued removal of riparian trees associated with existing development makes restoration of LWD processes problematic.	**Nisqually 2A and B** The following provisions are applicable to areas in Lacey: 1. Marine Riparian Habitat will be protected in Section 17.35.031-.032. 2. Vegetation management areas have been established Section 17.41.020.	**Nisqually 2A and B** Work with the HOA on tree protection.

Nearshore/Marine Environment –Nisqually Reach				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
			3. Tree Protection: • Goals and policies of Lacey Urban Forest Management Plan (Chapter 1, Section 2 of the Environmental Protection and Resource Conservation Plan). • Tree protection requirements in LMC 14.32, as incorporated into this SMP.	

Table 4: Processes, functions, and level of alteration for the Woodland Creek System.

Woodland Creek System - Woodland Creek, Long Lake, Pattison Lake, and Hicks Lake				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
Hydrology: Channel and floodplain connection.	**Moderate** Infrastructure such as railroad crossings and roads over the last century has impacted the historical Woodland Creek channel. However, the channel is naturally well defined and there is no significant meandering or floodplain associated with this creek. Associated wetlands in this system for flood absorption have been well protected and preserved.	**Very Low** New roads, road extensions for connections or widening could have impacts if not properly planned and mitigated. However, transportation policies require consideration of ecological functions and mitigation of identified impacts. No development will be allowed in Woodland Creek's floodway and the creek has sensitive area buffers of 200 feet prohibiting development within protected areas. Wetland regulations and the Natural designation will prohibit development in the large wetland complex associated with this system and ensure these areas continue to be protected.	The following provisions are applicable: 1. SMP Transportation Section 17.68: Requires consideration of ecological function, mitigation sequencing, and design for least impact to shoreline resources. 2. SMP Minimum Setbacks Section 17.24.015 Table 4: Requires minimum setbacks and location of infrastructure outside shoreline jurisdiction where feasible. 3. Flood Hazard Ordinance LMC 14.34, as incorporated into this SMP : Prohibits development in a designated floodway. 4. Woodland Creek Sensitive Area Buffers: 200 foot buffer requirement for all development LMC 14.33.117, as incorporated into this SMP. 5. Wetland Ordinance LMC 14.28, as incorporated into this SMP: Prohibits development in wetlands. 6. Armoring provisions in Section 17.45.000-.015 prohibit armoring unless these connections are maintained. In addition, hydrologic connections in these systems have been given a protective Natural designation. 7. Critical freshwater habitat regulations	

Woodland Creek System - Woodland Creek, Long Lake, Pattison Lake, and Hicks Lake				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
			in Section 17.35.039 prohibit structures, uses and modifications that are not water dependent from location in these areas. 8. Policies, development standards and setbacks for trails in Table 4 and sections 17.62.000-.030 will ensure water oriented trails do not negatively affect this function.	
Hydrology: Summer low flows.	**High** Generally, upstream land uses and development in urbanized areas have resulted in less water flowing in urban streams. Woodland Creek is no exception during the summer low-flow periods. Impervious surfaces have replaced native soils whereby water could infiltrate and was held to support summer base flows. Runoff rates are also increased by impervious surfaces, which results in water moving more quickly through the hydrologic cycle. Because this is a relatively small drainage system, retention time is already low.	**Low** Preservation of wetlands and headwater lakes will help maintain base flows to Woodland Creek. New development in the basin will primarily be located outside of shoreline jurisdiction. Impacts will not be allowed to increase and mitigation is expected to result in no net loss for this function. Use of stormwater management practices with new development or redevelopment that encourage low impact development may minimize or reduce impervious surfaces in the basin over the long term. It should be noted, that established uses that have contributed to the existing impacts are expected to be there over the long term and retrofitting developments will be problematic and incremental under the	New development or residential densification within shoreline jurisdiction is not anticipated. There are very few vacant, developable lots on shorelines in this system. Residential redevelopment in the form of additions or remodels may occur. The following provisions are applicable: 1. Stormwater Manual: Promotes low impact development techniques. 2. Vegetation Management Requirements SMP 17.41.020 and 17.41.021: New impervious surface or the addition of square footage may trigger requirements for vegetation along lakefront lots if such is lacking. Vegetation management areas will also be established to protect existing vegetation, soils, and recharge functions. 3. Wetland Protection Requirements of LMC 14.28, as incorporated into this SMP: Prohibit development in	The following provisions are applicable: 1. Drainage Manual Design: Incentives built into the new drainage manual that encourage and enable the development community to use low impact development techniques. **2.** Public Education, SMP new goals and policies Section 17.41.015 goal 2 and 3 and associated policies: Use of public education to inform lakefront lot owners of proper

Woodland Creek System - Woodland Creek, Long Lake, Pattison Lake, and Hicks Lake				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
		best of conditions	wetlands to maintaining the hydrologic (recharge) functions of these areas. **4.** The water quality section of the SMP (17.70) establishes a preference for LID, which will help maintain groundwater recharge and the maintenance of base flows. **5.** Section 17.54 (fill and grading) limits grading/fill and resulting compaction to the minimum necessary. This will help avoid disturving native soils where not necessary for the authorized use. Section 17.41 requires revegetation of disturbed areas, which will help maintia the hydrologic cycle and retention time in the Woodland Creek system.	vegetation management techniques.
Hydrology: Flood flow retention.	**Extremely Low** As noted above, wetland systems have been preserved providing natural storage capacity. Tree protection city wide has promoted drainage control functions as a product of Lacey's urban forest management. Some areas of high groundwater and the potential for groundwater flooding naturally exist in Lacey.	**Extremely Low** Wetland systems have been preserved providing natural storage capacity. This will continue to provide a level of natural function. New drainage manual requirements will promote the concept of low impact development and will result in design of new systems expected to maintain functions that exist today. There is minimal risk of overland flooding in this system because there are no rain on snow areas and it is a low gradient system.	The following provisions are applicable: 1. Stormwater Manual: Promotes low impact development techniques. 2. Vegetation Management Requirements SMP 17.41.020 and .021: New impervious surface or the addition of square footage may trigger requirements for vegetation along lakefront lots if such is lacking. 3. Wetland Protection Requirements of LMC 14.28 as incorporated into this SMP: Prohibit development in wetlands, maintaining the hydrologic functions of these areas. **4.** Tree Protection Ordinance LMC 14.32	

Woodland Creek System - Woodland Creek, Long Lake, Pattison Lake, and Hicks Lake				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
			as incorporated into this SMP: Tree retention and minimum tree requirements for each developed lot promotes retention of drainage on site throughout the City. **5.** LMC 14.34 as incorporated into this SMP requires compensatory flood storage mitigation if structures are permitted in the floodplain. **6.** The water quality section of the SMP (17.70) establishes a preference for LID, which will help maintain the natural hydrologic cycle and retain any overland flows within the system. **7.** The SMP contains provisions for structural setbacks in Table 4, which ensure that flood storage capacity of lakes in particular where there is high groundwater, is not diminished by encroaching structures.	
Sediment Generation and Transport: Upland sediment generation.	**Moderate** Fine sediment loading has increased due to build-up and wash-off from urban land uses.	**Low** As outlined above, new development or redevelopment that increases the intensity of existing uses is not anticipated. When new development or redevelopment does occur, drainage manual requirements will promote the concept of low impact development and will result in design of new systems expected to maintain functions that exist today. This will	The following provisions are applicable: 1. Stormwater Manual: Promotes low impact development techniques. 2. Vegetation Management Requirements SMP 17.40.020and .021: New impervious surface or the addition of square footage may trigger requirements for vegetation along lakefront lots if such is lacking. 3. Wetland Protection Requirements of LMC 14.28 as incorporated into this	Best Management Practice (BMP) Applied to Retrofits for Existing Drainage Systems: Implementation and retrofit of water quality BMPs to the existing stormwater systems can reduce fine sediment loading.

Woodland Creek System - Woodland Creek, Long Lake, Pattison Lake, and Hicks Lake				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
		eliminate the potential for new uses contributing additional flow or sediment generation from development. Intact buffers along Woodland Creek eliminate the potential for runoff impacts and provide area for cleansing of stormwater. Existing City stormwater systems are being retrofitting utilizing Best Management Practice (BMP) as part of normal maintenance and repair.	SMP: Prohibit development in wetlands and buffers maintaining the hydrologic functions of these areas. 4. Tree Protection Ordinance LMC 14.32 as incorporated into this SMP: Tree retention and minimum tree requirements for each developed lot promotes retention of drainage on site throughout the City.	
Water Quality: Wetland removal of pollutants through sedimentation and adsorption.	**Low** Protection of the large complex of wetland area under Lacey's sensitive area ordinances has maintained this function in Lacey. Some lake fringe wetlands may have been impacted in the past as development occurred, affecting this removal function at a smaller scale.	**Low** Protection of large wetland complexes under Lacey's sensitive area ordinances has maintained this function in Lacey. This situation is expected to protect wetland functions over the long term. New development will be expected to protect and possibly enhance this function.	The following provisions are applicable: 1. Wetland Protection Requirements of LMC 14.28 as incorporated into this SMP: Prohibit development in wetlands maintaining wetland functions. **2.** Chapter 17.41 of the SMP incentivizes a reduced dependency on fertilizers when Vegetation Management Plans are required. The Water Quality section of the SMP (17.70) requires minimization of fertilizer use and may even restrict it in the case of new developments requiring Codes, Covenants, and Restrictions (CC and R's) or Homeowners Associations. **3.** Protection of the large wetland system with the natural designation. **4.** Vegetation Management Requirements	Resident Education, Wetland Protection Ordinance LMC 14.28: Protective covenants applied to HOAs informing residents adjacent to wetlands of proper vegetation and fertilization practices to protect wetland functions. Resident Education, SMP 17.41.015 (2) and (3): Educational programs and information for residents within shoreline jurisdiction regarding vegetation requirements that will promote the

Woodland Creek System - Woodland Creek, Long Lake, Pattison Lake, and Hicks Lake				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
			SMP 17.40.020: Vegetation management areas and landscaping along lakefront lots will promote cleansing of stormwater before it enters the lakes.	health of shoreline areas and promote natural functions.
Water Quality: Delivery, movement, and loss or removal of nutrients, pathogens and toxicants; storage of phosphorus and removal of nitrogen and toxins through sedimentation and adsorption.	**High to Moderate** The delivery, transport, and disposition of nutrients, pathogens and toxins have been significantly altered from the pre-disturbance condition. Upland sources of these pollutants have increased significantly as a result of urban land uses within and near the shoreline. Contaminants from adjacent residential uses, septic tanks, fertilization, etc. have contributed to water quality issues. Delivery and storage have been altered through installation of impervious surfaces.	**Moderate to Low** The development of the TDML for Woodland Creek has highlighted potential sources of point-source pollution and flow reduction. Significant source control and remediation efforts are currently underway to remove and avoid pollutant discharge to the riverine environment. • Little new development is anticipated; that which does occur will be addressed under the provisions outlined in the column to the right.	The following provisions are applicable: 1. Stormwater Manual: Promotes low impact development techniques. 2. Vegetation Management Requirements SMP 17.40.020: Vegetation management areas and landscaping along lakefront lots will promote cleansing of stormwater before it enters the lakes. 3. SMP Water Quality Standards Section 17.70.010: Includes sewering of shoreline areas to reduce impact from septic tanks, BMPs for stormwater management, establishment of buffers and vegetation requirements. 4. Wetland Protection Requirements of LMC 14.28 as incorporated into this SMP: Prohibit development in wetlands maintaining the functions of these areas including natural cleansing action through absorption and nutrient uptake. **5.** Tree Protection Ordinance LMC 14.32 as incorporated into this SMP: Tree retention and minimum tree requirements for each developed lot promotes retention and cleansing of	Significant opportunity exists to reduce septic tank drainfield contamination by sewer or corrective actions for failing septic tank systems.

Woodland Creek System - Woodland Creek, Long Lake, Pattison Lake, and Hicks Lake				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
			stormwater on site throughout the City. **6.** Chapter 17.41 of the SMP incentivizes a reduced dependency on fertilizers when Vegetation Management Plans are required. The water quality section of the SMP (17.70) requires minimization of fertilizer use and may even restrict it in the case of new developments requiring Codes, Covenants and Restrictions (CC and Rs) or Homeowners Associations. **7.** Table 5 limits the amount of impervious surfaces on lots within shoreline jurisdiction.	
Habitat: Shoreline habitat for wildlife; vegetation provides structure for invertebrates, birds, amphibians, reptiles and mammals.	**Woodland Creek – Low** Native riparian vegetation has been protected under Lacey's sensitive area requirements. The portion of the Woodland Creek corridor in Lacey retains natural riparian vegetation. **Lake Areas – Moderate** Area surrounding lakes that have sensitive areas have been well protected under Lacey's sensitive areas ordinances and the tree and vegetation protection ordinance. However, area not associated with wetlands or habitat has	**Woodland Creek – Low** Buffers and critical area legislation is expected to continue protection of this Woodland Creek corridor. **Lake Areas – Low** Very little new development is anticipated, as Lacey's lake shorelines are predominantly built out. Requirements for the protection and installation of vegetation, particularly trees, with new development and redevelopment may improve the baseline.	The following provisions are applicable: 1. Wetland Protection Requirements of LMC 14.28 as incorporated into this SMP: Prohibits development in wetlands and regulates protection of buffers, maintaining wetland habitat functions. 2. Tree Protection Ordinance LMC 14.32 as incorporated into this SMP: Tree protection within wetland buffer areas, along lakefronts and within designated stream corridor buffers protects and promotes the natural functions of these shoreline resources. **3.** Habitat Protection Ordinance LMC 14.33 as incorporated into this SMP: Protection of Woodland Creek riparian	

Woodland Creek System - Woodland Creek, Long Lake, Pattison Lake, and Hicks Lake				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
	generally developed with impacts typical of residential development.		habitat by application of 200 foot buffer that prohibits development within that area. **4.** Vegetation management policies and standards in Section 17.41 will protect existing shoreline vegetation and habitat, and may in some cases represent an improvement in the baseline. **5.** Critical freshwater habitat regulations in Section 17.35.039 prohibit structures, uses and modifications that are not water dependent from location in these areas. **6.** Section 17.30.047 of this SMP incentivizes the removal of bulkheads when repairs or maintenance that equate to 50% of the value of such structure is necessary.	
Habitat: Source and delivery of LWD.	**Woodland Creek – Low** Tree protection regulations in Lacey along with prohibition on tree removal within a 200 foot buffer of the creek have maintained this function. **Lake Areas – Moderate** Tree protection regulations in Lacey along with prohibition on tree removal in designated sensitive areas along portions	**Low** Very little new development is anticipated; Lacey's lake shorelines are predominantly built out. The Woodland Creek corridor is protected with a 200 foot buffer. Requirements for the protection and installation of vegetation, particularly trees, with new development and redevelopment may improve the baseline.	The following provisions are applicable: 1. Tree Protection Ordinance LMC 14.32 as incorporated into this SMP: Tree protection within wetland buffer areas, along lakefronts and within designated stream corridor buffers protects and promotes the natural functions of these shoreline resources and the introduction and delivery of LMD. **2.** Habitat Protection Ordinance LMC 14.33 as incorporated into this SMP: Protection of Woodland Creek riparian	

Woodland Creek System - Woodland Creek, Long Lake, Pattison Lake, and Hicks Lake				
Process: Function	**Level of Existing Alteration**	**Potential Future Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
	of the lakes has maintained this function; note is made of the example in the picture on the front cover of the SMP. However, many developed areas in shoreline jurisdiction along the lakes consist of manicured lawn and non-native landscaping.		habitat by application of 200 foot buffer. The buffer prohibits development and preserves natural vegetation. This will continue to promote introduction and delivery of LWD.	

TABLE 5: PROCESSES, FUNCTIONS, AND LEVEL OF ALTERATION FOR OTHER FRESHWATER LAKES.

Other Freshwater Lakes				
Process: Function	**Level of Existing Alteration**	**Potential Future Alteration Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
Hydrology: Groundwater recharge.	**Moderate** The basins around Lacey's freshwater lakes are developed at urban densities and are characterized by moderate percentages of impervious surface. In addition, water levels in Chambers Lake are managed, which may reduce groundwater recharge through reducing retention time in the lake basin.	**Low** See discussion above under Woodland Creek and Lacey's main lakes; little development is anticipated within shoreline jurisdiction on these lakes because they are built out. Any development would represent a very small scale change in the basin. Development outside of shoreline jurisdiction will also affect groundwater recharge in the lake basins.	The following provisions are applicable: 1. Stormwater Manual: Promotes low impact development techniques providing groundwater recharge. 2. Vegetation Management Area Requirements SMP 17.40.020 and 021: Protection and installation of native species along lakefront lots may facilitate groundwater recharge by slowing runoff. 3. Wetland Protection Requirements of LMC 14.28 as incorporated into this SMP: Prohibit development in wetlands and buffers maintaining the hydrologic functions of these areas. 4. Tree Protection Ordinance LMC 14.32 as incorporated into this SMP: Tree retention and minimum tree requirements for each developed lot promotes retention of drainage on site throughout the City. **5.** Table 5 limits the amount of impervious surface on lots within shoreline jurisdiction.	The following provisions are applicable: 1. Drainage Manual Design: Incentives built into the new drainage manual that encourage and enable the development community to use low impact development techniques. This will promote year round onsite infiltration for more natural ground water recharge. 2. Public Education, SMP New Goals and Policies Section 17.41.015 Goal 2 and 3 and Associated Policies: Use of public education to inform lakefront lot owners of proper vegetation management techniques. This will encourage onsite retention and infiltration leading to more natural recharge.
Hydrology: Flood flow retention.	**Moderate** Chambers Lake and Southwick Lake do not have inlets, so function less to provide	**Low** See discussion above regarding lack of anticipated development, and fact that	The following provisions are applicable: 1. Stormwater Manual: Promotes low impact development	

Other Freshwater Lakes				
Process: Function	**Level of Existing Alteration**	**Potential Future Alteration Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
	overland flood flow retention although they do capture surface water runoff. Water levels in Chambers Lake are actively managed for flood control.	without inlets, the primary risk of flooding in these lakes will be from expressions of high groundwater.	techniques. 2. Vegetation Management Requirements SMP 17.40.020 .021: New impervious surface or the addition of square footage may trigger requirements for vegetation along lakefront lots if such is lacking. 3. Wetland Protection Requirements of LMC 14.28 as incorporated into this SMP: Prohibit development in wetlands and buffers maintaining the hydrologic functions of these areas. **4.** Tree Protection Ordinance LMC 14.32 as incorporated into this SMP: Tree retention and minimum tree requirements for each developed lot promotes retention of drainage on site throughout the City. **5.** LMC 14.3 as incorporated into this SMP requires compensatory flood storage mitigation if structures are permitted in the floodplain. **6.** The water quality section of the SMP (17.70) establishes a preference for LID, which will help maintain the natural hydrologic cycle and retain any overland flows within the system. **7.** The SMP contains provisions for structural setbacks in Table 4, which will ensure that flood storage capacity of lakes and streams, and lakes in particular where there is high groundwater, is not	

Other Freshwater Lakes				
Process: Function	**Level of Existing Alteration**	**Potential Future Alteration Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
			diminished by encroaching structures.	
Sediment Generation and Transport: Upland sediment generation.	**Moderate to High** Anthropogenic fine sediment loading to the lakes has increased as a result of build-up and wash off of sediments from impervious surfaces.	**Low** Implementation and retrofit of water quality BMPs to the existing stormwater systems can reduce fine sediment loading. Little if any development is anticipated within these shoreline reaches. If new development or redevelopment does occur, the standards in the column to the right will apply.	The following provisions are applicable: 1. Stormwater Manual: Promotes low impact development techniques. 2. Vegetation Management Area Requirements in the SMP, 17.40.020 and .021: Vegetation management areas and landscaping along lakefront lots will help trap sediment that is generated on uplands. 3. Wetland Protection Requirements of LMC 14.28 as incorporated into this SMP: Prohibits development in wetlands maintaining the hydrologic functions of these areas. 4. Tree Protection Ordinance LMC 14.32 as incorporated into this SMP: Tree retention and minimum tree requirements for each developed lot promotes retention of drainage on site throughout the City. **5.** Sections 17.54.020 and 17.70.010 of the SMP require that material movement and erosion/sedimentation be prevented, minimized and controlled during and after construction. **6.** Various sections of the SMP and LMC require that any disturbed areas not subsequently built upon be replanted with native vegetation.	Best Management Practice (BMP) Applied to Retrofits for Existing Drainage Systems: Implementation and retrofit of water quality BMPs to the existing stormwater systems can reduce fine sediment loading.

Other Freshwater Lakes				
Process: Function	**Level of Existing Alteration**	**Potential Future Alteration Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
Water Quality: Lake trophic status/overall water quality.	**High** The delivery, transport, and deposition of nutrients, pathogens, and toxins have been significantly altered from the pre-disturbance condition. Upland sources of these pollutants have increased significantly as a result of urban land uses within and near the shoreline. Contaminants from adjacent residential uses, septic tanks, fertilization, etc. have contributed to water quality issues. Potential storage has decreased through installation of impervious surfaces. The presence of relatively high permeability surficial geology deposits can increase the potential for upland land uses to influence lake water quality.	**Low** Little if any development is anticipated within these shoreline reaches. If new development or redevelopment does occur, the standards in the column to the right will apply.	The following provisions are applicable: 1. Stormwater Manual: Promotes low impact development techniques. 2. Vegetation Management Area Requirements in the SMP, 17.40.020 and .021: Vegetation management areas and landscaping along lakefront lots will help keep pollutants generated on uplands from entering water bodies. 3. Wetland Protection Requirements of LMC 14.28 as incorporated into this SMP: Prohibit development in wetlands maintaining the hydrologic functions of these areas. **4.** Tree Protection Ordinance LMC 14.32 as incorporated into this SMP: Tree retention and minimum tree requirements for each developed lot promotes retention of drainage on site throughout the City. **5.** SMP Water Quality Standards 17.70.010: Includes sewering of shoreline areas to reduce impact from septic tanks and BMPs for stormwater management. **6.** Chapter 17.41 of the SMP incentivizes a reduced dependency on fertilizers when Vegetation Management Plans are required. The water quality section of the SMP (17.70) requires minimization	Resident Education Wetland Protection Ordinance LMC 14.28: Protective covenants applied to HOAs informing residents adjacent to wetlands of proper vegetation and fertilization practices to protect wetland functions. Resident Education SMP 17.41.015 (2) and (3): Educational programs and information for residents within shoreline jurisdiction regarding vegetation requirements that will promote the health of shoreline areas and promote natural functions.

Other Freshwater Lakes				
Process: Function	**Level of Existing Alteration**	**Potential Future Alteration Impacts and Potential Risk**	**Proposed Restoration/Protection Measures; Draft SMP Policies/Regulations and other Environmental Codes**	**Non-Regulatory Measures**
			of fertilizer use and may even restrict it in the case of new developments requiring Codes, Covenants and Restrictions (CC and Rs) or Homeowners Associations.	

III. Proposed Regulations

An evaluation of the proposed policies and regulations in the Shoreline Master Program above shows that it will maintain ecological function at existing levels and may have beneficial effects on the level of shoreline ecological function. The following are some of the major elements:

A. Environmental Designations

Environmental designations in the Shoreline Master Program are based upon the inventory and characterization report and identified ecological functions and values. With implementation of this SMP all of Lacey's reaches will have designations as a strategy to achieve no net loss of function or value for these important resources. Designations are highlighted below.

Natural:

The Natural designation is being applied to those areas with wetlands that are currently designated Open Space Institutional (OSI) in Lacey's zoning code. It should be noted that the OSI zone has rigorous standards prohibiting development within designated sensitive areas. It has been used by Lacey for nearly two decades to protect and preserve sensitive areas like wetlands.

The designation of OSI zoned areas as Natural compliments the emphasis on protection and preservation Lacey's GMA Plan and zoning code has required for these areas. This designation is a long overdue improvement to the SMP that will finally bring its environmental protection requirements for sensitive areas into consistency with Lacey's existing GMA Plans and implementing environmental legislation.

The Natural designation is also being applied to all of Lacey's marine shoreline, with the exception of portions of Mallard Cove that have been developed and used for a private marina since the late 1940s. The Planning Commission determined that portion of Mallard Cove used for a marina does not meet the classification criteria for a Natural designation given its existing development and long term use as a marina.

Of note here is that the environmentally sensitive estuary with significant ecological function and value that wraps around the Beachcrest marina in Mallard Cove has remained untouched and retains its same form it had before establishment of the marina nearly 60 years ago. This area was included in the Natural designation.

Urban Conservancy:

The Urban Conservancy designation has been applied to areas within the City and in the UGA where development can be compatible with maintaining or restoring ecological function. This designation is intended to protect and allow for the restoration of open spaces, floodplains and other sensitive lands where they exist in urban and developed settings.

The Urban Conservancy designation has been applied at the north end of Long Lake. This designation has been applied to portions of Woodland Creek without extensive wetlands but where development has occurred, and along the south end of Chambers Lake where there are

extensive wetland resources. It has also been applied around Southwick Lake, which is relatively undeveloped compared to the other lakes in the vicinity and has extensive areas of wetland, as well as to the west shoreline of Hicks Lake where densities are low and wetlands exist. This designation will provide protection for ecological function where some development has occurred and will continue to occur but where sensitive resources exist and require protection.

Shoreline Residential:

Shoreline areas designated under the Shoreline Residential classification meet the criteria outlined for this designation and can generally be described as urbanized with typical impacts to ecological function resulting from human disturbance. Impacts have typically included removal of a portion of the native vegetation, construction of residential structures, impervious surfacing, installation of septic tank drain field systems for areas without sewer with associated impacts to water quality, and modifications such as bulkheads, docks and floats.

While much of the lakeshore areas are urbanized and have experienced impacts to the shoreline's natural function and values, it should be noted that urbanization of Lacey's lake areas has generally been less intense than that experienced by adjacent jurisdictions with similar lake shoreline resources. However, there are few critical or sensitive areas and the shorelines are predominantly built out. The Shoreline Residential designation will serve to protect functions that may occur in these shoreline areas, while providing flexibility to accommodate residential development where development has traditionally occurred and where services and infrastructure or plans for infrastructure (sewer) can support residential development.

B. Residential Setbacks

Setbacks are used in association with complementary vegetation management areas and residential design standards that are expected to achieve objectives described in the SMP. Setbacks are proportionate to the need identified by the environment designation. They provide area to accommodate buffers where necessary to protect habitat functions, help mitigation pollution from stormwater runoff and provide area for vegetation management that supports these functions. In addition, design requirements will be applied to development that requires layout of land divisions to design with nature to make protective modifications unnecessary. In Lacey, residential remodels and additions will be by far the most common development occurring in shoreline jurisdiction. The vast majority of lakefront lots are developed, and there are no commercial or industrial uses on Lacey's shorelines.

In summary, these changes are expected to have the following effects:

- New homes will be placed further back from the shoreline and "designed with nature." Although there are very few undeveloped lots in Lacey's shoreline areas, this may apply if smaller waterfront homes are town down to be replaced with new,

larger structures. Design must show respect and protect identified natural processes and functions. This negates the need for protective structures like bulkheads to prevent erosion. Instead design allows the natural processes to occur.

- Existing structures within the setback will be labeled "conforming, expansion limited". While they can still be altered an increase in the degree of nonconformity will not be allowed and the mitigation sequence will ensure that additions or expansions result in no net loss of ecological function.
- The setback will provide an area to practice protective vegetation management, with the benefits discussed below.

C. Shoreline Vegetation Landscaping and Restoration

This SMP includes requirements for vegetation conservation. Existing vegetation must be retained and maintained and planting will be required if there are direct impacts from development to vegetation or where needed to mitigate indirect impacts. The hope is to incrementally restore shorelines with native vegetation as shoreline properties develop or redevelop.

Vegetation management standards apply to all uses and development in shoreline jurisdiction. New vegetation may be required on parcels with waterfront access when:

- A new structure is constructed.
- Impervious surfaces increase.
- An existing structure is remodeled and square footage is added.
- An accessory structure (such as a garage, deck, or patio) is added.

The SMP includes a sliding scale for how much vegetation/mitigation is required proportionate to the impact of the project triggering the permit.

Please see Table 1 of Section 17.41.021.

D. Other Shoreline Development Actions

Other development actions that require review under the SMP will require meeting shoreline vegetation standards. In order to encourage removal of hard armored bulkheads and replacement with soft shorelines, development that boosts shoreline ecological function by removing hard structures can qualify for reduced vegetative mitigation requirements. In addition, lots where an existing buffer or qualified vegetation exists can be considered exempt from additional vegetative requirements.

All uses and developments within shoreline jurisdiction are required to adhere to the mitigation sequence in Section 17.40.000 of this SMP.

E. Docks and Piers

Docks and piers have been permitted on all lakes, and these shorelines are currently altered. Under the proposed regulations, altered shorelines are assigned an environmental designation of Shoreline Residential and in some cases Urban Conservancy, depending on the nature of the upland alteration.

In the Shoreline Residential designation, docks and piers that are shared between two or more adjacent land owners will require a less stringent permitting process than docks that only support one home. This is to encourage fewer docks on the shorelines for ecological, navigational, and aesthetic reasons. Docks and piers will be limited to the size necessary and will be grated as they are replaced to allow for light penetration.

F. Bulkheads, Shoreline Stabilization and Other Modifications

Bulkheads to protect single family residences from damage from erosion are still allowed.

The intent is to encourage shoreline bank stabilization with non-structural alternatives where it is feasible.

Normal maintenance and repair to shoreline modifications has traditionally been allowed under a shoreline exemption. However, to incentivize incremental improvements in shoreline function over the long term modifications will still be authorized under an exemption for normal repair and maintenance if the value of the maintenance or repair is less than 50% of the value of replacement new structure. If the 50% threshold is exceeded, the repair is defined as replacement and requires a conditional use permit. The CUP process will necessarily require an analysis of the need and environmentally sensitive alternatives that may meet the same protection objectives.

This process is expected to improve the overall functions of the lake ecology over the long term by a continual evaluation of existing modifications as they require major repair efforts and the requirement for moving to acceptable more naturalized concepts for beach stabilization.

As a general requirement, mitigation sequencing is required for all modifications to ensure it is needed, there are no other alternatives to achieve the intended objective and mitigation is applied to ensure no net loss.

The CUP process is also used as a process of review for unidentified uses that might be proposed. This process gives Lacey the flexibility to review unforeseen uses and activities and apply appropriate conditions to ensure no net loss or deny the use if necessary.

G. Other Goals for Shoreline Use

The SMP includes sections or provisions that address the full range of public use and interest of shoreline resources. This includes such topics as recreation, access, navigation, historical and archeological, scientific and educational. Each of these uses has particular needs related to design and location for functionality. Each also has particular demands on shoreline areas.

At the same time, each reach of shoreline has specific functions and values with particular needs for protection. Generally a reach is not compatible with every use and careful attention is needed to successfully match a reach with a category of uses it can successfully accommodate without impact to its natural processes and functions.

The SMP addresses the status, function and values associated with each shoreline reach and the types of use that are appropriate considering its specific needs for protection. The protection needs of a reach will generally be reflected by the reaches' environmental designation.

In addition, the SMP identifies the public use and interest needs associated with shoreline resources such as recreation and navigation and specific conditions necessary for each use to be successfully integrated into the shoreline without a net loss of the shoreline functions and value.

Of particular note is public access. A whole new public access plan has been developed as Appendix 1 of the SMP. This plan identifies public interest and need for shoreline areas, identifies existing public access opportunities and provides an analysis of unmet need. The plan also identifies specific sites likely to develop and specific strategies for providing public access to the benefit of developing properties and future residents as well as the public at large. The plan outlines specific steps and processes Lacey will implement to achieve these objectives. These include both regulatory and incentive tools.

Finally, specific standards related to the functionality of the use and protection of the shoreline natural processes and functions are provided. The plan is expected to be a guidepost for Lacey's public access efforts that will balance public need for access with shoreline protection strategies. The plan will help Lacey define and achieve public access goals with no net loss of shoreline resources, functions or values over the long term.

Similar methodology was used for other uses by creating separate sections in the SMP dealing with specific topic areas. These sections provide a goal and policy basis for the use/activity and a set of standards to ensure functionality of the use and no net loss of ecological function or value for the shoreline resources; see Part 3 of the SMP.

IV. Foreseeable Development in Shoreline Environments

Foreseeable types of development listed in Tables 7-9 (Foreseeable Development of Shorelines) below have been derived from the following sources:

- Anticipated population forecasts developed as a function of work required under the state Growth Management Act (GMA).
- Buildable land studies accomplished as a requirement of GMA analyzing the probable distribution of population forecasts, given vacant land resources available to the City.
- Goals and policies of the Comprehensive Land Use Plan prepared under GMA.
- Local Capital Facilities Plan.
- Comprehensive Plan for Outdoor Recreation.
- Thurston Regional Trails Plan.
- Known development plans for shoreline parcels.
- Past trends in development.
- Planning Commission discussion, including real estate, Master Builders and other members of the development community related to trends, development expectations and market issues.

TABLE 7: FORESEEABLE DEVELOPMENT FOR SHORELINES – MARINE REACHES.

Marine Reach	Proposed Designation	Existing Designation	Foreseeable Development
NISQUALLY REACH			
NIS-1 *Butterball Cove & Jubilee Beach*	Natural	Rural	None anticipated. The only improvements we might expect in this area would be City improvement of the existing historic pier in association with public access. Any project associated with this structure would require compliance with goals of the City Comprehensive Plan for Outdoor Recreation, the City Restoration Plan and requirements for no net loss.
NIS-2A *Mallard Cove, mini-marina* **NIS-2B** *Beachcrest*	Natural for estuary south of marina; Urban Conservancy for shoreline in marina Urban Conservancy	Conservancy	Bulkhead repairs and replacement at the marina. Lacey will apply mitigation to ensure no net loss conditions to any replacement of a modification in this area. In addition, incentives are being offered for efforts to upgrade existing modifications with improved naturalized concepts or preferred options. Residential repairs and remodels are also expected in the upland Beachcrest development. This area is under jurisdiction of Thurston County.

TABLE 8: FORESEEABLE DEVELOPMENT FOR SHORELINES – RIVERS AND STREAMS.

River/Stream Reach	Proposed Designation	Existing Designation	Foreseeable Development
WOODLAND CREEK			
WOOD-1A	Natural	Conservancy	Interstate 5 widening project (State)
WOOD-1B	Urban Conservancy	Conservancy	Interstate 5 widening project (State) Draham Road widening and improvement project (Thurston County) Residential repairs and remodels
WOOD-2	Natural	Conservancy	None anticipated Pleasant Glade Park is located along Woodland Creek in this reach; however, plans for the park are not final and the Action Program in the Parks Plan indicates that development of the park(s) would not occur until the land is annexed into the City.

TABLE 9: FORESEEABLE DEVELOPMENT FOR SHORELINES – LAKES.

Lake Reach	Proposed Designation	Existing Designation	Foreseeable Development
CHAMBERS LAKE			
CHAM-1A *NE Basin (Lcy)*	Shoreline Residential	Urban	Residential repairs and remodels
CHAM-1B *SE Basin (Lcy)*	Urban Conservancy	Conservancy	None anticipated
CHAM-2 *South (Oly/Lacey)*	Urban Conservancy	Conservancy	Recreation/park development including trails, trailheads, parking
CHAM-3 *W Basin (Lcy)*	Shoreline Residential	Urban	Residential repairs and remodels Possibly some residential vacant buildable lots
HICKS LAKE			
HICKS-1	Natural	Conservancy	Potential water line connection around 37th to 33rd Avenues
HICKS-2A	Urban Conservancy	Urban	Residential repairs and remodels Recreation/park activities
HICKS-2B	Shoreline Residential	Urban	Residential repairs and remodels
LONG LAKE			
LONG-3A	Natural	Conservancy	None anticipated
LONG-3C	Natural	Conservancy	None anticipated
LONG-4	Shoreline Residential	Rural	Residential repairs and remodels
LONG-5	Shoreline Residential	Rural	Residential repairs and remodels
LONG-6	Urban Conservancy	Conservancy	14th Avenue extension/connection to Union Mills Road (City of Lacey and Thurston County) In 2005, the Long Lake Retirement Cottages project was approved in this reach consisting of 45 residential lots and associated improvements. A 50' shoreline setback was applied to the residential structures and portions of the access road, community clubhouse and parking area would be located within the shoreline setback. A dock with a pergola is proposed along the shoreline, and 30' of the 50' buffer along the shoreline is proposed for enhancement where such would not conflict with proposed improvements. Due to the time that has passed since this project was approved (permit expirations) and current economic conditions, it does not appear likely

Lake Reach	Proposed Designation	Existing Designation	Foreseeable Development
			that this project will be built. According to the Action Program in the Parks Plan, at the time the rail line in this reach is abandoned (currently used by BNSF) the City will seek to extend Woodland Trail east through this reach. Woodland Creek Community Park may also expand or add facilities such as trail connections, parking, etc. Residents have requested the City review the suitability of the site for an off-leash dog park.
PATTISON LAKE			
PAT-1	Shoreline Residential	Rural	Mullen Road widening project (Thurston County) Residential repairs and remodels A landowner along this reach has discussed remodeling his multi-family apartment building with the City; however, no concrete plans are known and no official application has been received.
SOUTHWICK LAKE			
SOUTH-1	Urban Conservancy	Urban Conservancy	Residential repairs and remodels A property owner at the SE corner of the lake has requested annexation into the City. It is anticipated that if annexation is approved, an application for residential development will be submitted. The site is encumbered by wetlands and development potential is limited.

V. Summary Assessment of Cumulative Impacts

A. Marine Reaches

1. Nisqually Reach

Along Nisqually Reach and within the urban growth area, little development or redevelopment is expected. In general, ecological functions will improve through:

- Designation of properties meeting qualifying criteria as Natural under the environment designation for shoreline areas.
- Application of buffers and vegetation management standards supporting each environmental designation's specific needs and when sensitive areas are present.
- Requiring soft armoring as opposed to bulkheads where it can achieve the same objectives and only where it can be demonstrated that it is necessary to protect an existing structure.
- Stormwater management in uplands.
- Continuation of tree protection strategies of Lacey's Urban Forest Management Plan in upland areas.

B. Rivers and Streams

1. Woodland Creek

Very little development is anticipated along this shoreline. It is expected that there will be general improvement of ecological function through the following:

- Prohibiting development in riparian buffer areas.
- Avoidance, minimization, and revegetation of shoreline if development occurs and/or results in impacts.
- Prohibiting new development on septic tanks .

C. Lakes

It is anticipated that there will be general improvement in the ecological function of the lakes for the following reasons:

- Critical wetland systems linking lakes in the Woodland Creek system will have increased protected by application of the Natural designation in addition to the wetland protection ordinance.
- There are very few undeveloped single-family residential lake shoreline lots in Lacey. If any lots do develop, new development or redevelopment will be designed, located and constructed to avoid impacts to vegetation, and avoid the

need for bulkheads or other modifications for protection. Shoreline vegetation will be conserved and replanting may be required.

- New standards for vegetation management areas are expected to slowly improve the existing situation.
- New residential land divisions with five or more new lots may include a wide range of design and form to best integrate with the shoreline environment and meet development objectives. This is expected to include specific conditions for each individual land division necessary to best meet the concept of no net loss and achieve other community objectives.
- Stormwater management according to new drainage manual requirements is expected to improve stormwater runoff impacts from upland areas through encouraging low impact development. This should continue to improve water quality issues associated with stormwater runoff.
- Prohibiting new development on septic tanks.

VI. Summary

When considering current conditions, the regulatory framework, and the foreseeable development along shorelines, it is anticipated that there will be no net loss of ecological function under the proposed Shoreline Master Program for Lacey. Shoreline ecological functions and conditions are expected to make a general improvement, as a result of both the proposed regulations, and other regulations such as those pertaining to stormwater management, wetland protection and tree protection in the upland areas. Other policies, such as extending sewer service to urbanized areas on septic tank drainfields should also have a positive effect on shoreline functions and conditions.

VII. Resources

City of Lacey, 2008. *Lacey Comprehensive Plan, (including Capital Facilities Chapter).*

City of Lacey, 2004. *Lacey Comprehensive Plan for Outdoor Recreation.*

Thurston Regional Planning Council, 2008. *Draft Shoreline Inventory for the Cities of Lacey, Olympia, and Tumwater and their UGAs.*

ESA Adolfson, 2009. *Lacey, Olympia, and Tumwater - Shoreline Analysis & Characterization Report*, prepared for Thurston Regional Planning Council.

Haring, D. and Konovsky, J., 1999. *Washington State Conservation Commission: Salmon Habitat Limiting Factors Final Report, Water Resource Inventory Area 13*. 118 pp.

Thurston County, 2008. *Thurston County Comprehensive Plan (including Capital Facilities Chapter).*

Thurston Regional Planning Council, 2007. *Thurston Regional Trails Plan.*

January 2010

Shoreline Master Program Update - Appendix 6 Environmental Designations

Shoreline Environmental Designations for the Cities of Lacey, Olympia, and Tumwater and their Urban Growth Areas

Thurston Regional Planning Council

2424 Heritage Ct. S.W. Suite A

Olympia, WA 98502

www.trpc.org

Photos on cover: Top – Chambers Lake, Olympia.
Bottom – Long Lake, Lacey.

THURSTON REGIONAL PLANNING COUNCIL (TRPC) is a 22-member intergovernmental board made up of local governmental jurisdictions within Thurston County, plus the Confederated Tribes of the Chehalis Reservation and the Nisqually Indian Tribe. The Council was established in 1967 under RCW 36.70.060, which authorized creation of regional planning councils.

TRPC's mission is to **"Provide Visionary Leadership on Regional Plans, Policies, and Issues."** The primary functions of TRPC are to develop regional plans and policies for **transportation** [as the federally recognized Metropolitan Planning Organization (MPO) and state recognized Regional Transportation Planning Organization (RTPO)], **growth management, environmental quality**, and other topics determined by the Council; provide **data and analysis to support local and regional decision making;** act as a "**convener**" to build **community consensus** on regional issues through information and citizen involvement; build **intergovernmental consensus** on regional plans, policies, and issues, and advocate local implementation; and provide **planning, historic preservation, and technical services** on a contractual basis.

2009 MEMBERSHIP OF THURSTON REGIONAL PLANNING COUNCIL

Governmental Jurisdiction	Name of 2009 Representative
City of Lacey	**Virgil Clarkson,** Councilmember
City of Olympia	**Joan Machlis,** Councilmember
City of Rainier	**Dennis McVey,** Councilmember
City of Tenino	**Ken Jones,** Mayor
City of Tumwater	**Ed Stanley,** Councilmember
City of Yelm	**Robert Isom,** Councilmember
Town of Bucoda	**Kathy Martin,** Mayor
Thurston County	**Cathy Wolfe,** County Commissioner
Intercity Transit	**Sandra Romero,** Transit Authority Board Member
LOTT Alliance	**Graeme Sackrison,** Board Member
Thurston PUD	**Paul Pickett,** PUD Commissioner
North Thurston Public Schools	**Chuck Namit,** School Board Member
Olympia School District	**Frank Wilson,** School Board Member
Confederated Tribes of the Chehalis Reservation	**Lennea Magnus,** Planning Director
Nisqually Indian Tribe	**Francine Lester,** Tribal Councilmember
Associate Members	
CAPCOM	**Jeff Kingsbury,** Board Chairman
Economic Development Council of Thurston County	**Joseph Beaulieu,** EDC President
Lacey Fire District #3	**Frank Kirkbride,** Commissioner
Olympic Region Clean Air Agency	**Ann Burgman,** Board Member
Puget Sound Regional Council	**Norman Abbott,** Director
Timberland Regional Library	**Dick Nichols,** Library Board Member
The Evergreen State College	**Paul Smith,** Director of Facilities Services

Chair	Vice Chair	Secretary
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Lon D. Wyrick, Executive Director

Thurston Regional Planning Council Staff

Veena Tabbutt	Senior Planner
Steven W. Morrison	Senior Planner
Andrew Deffobis	Assistant Planner
Scott Carte	GIS Manager
Paul Brewster	Associate Planner
Rosalie Bostwick	Office Manager
Toni Tringolo	Office Specialist II
Lon Wyrick	Executive Director
Susan Andrews	Assistant Director

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About This Report

Consistent with Governor Gregoire's Plain Talk Executive Order 05-03 (2005), this report is written in a manner that is brief and to-the-point, uses non-bureaucratic language and features a clean design that promotes fast scanning and reading.

Scientific and legal references are kept to a minimum, replaced by a full list of sources in the report appendix.

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I. Introduction

A. Background

After completion of the Shoreline Inventory and Analysis, shorelines were classified into preliminary Shoreline Environment Designations (SEDs) based on their physical, biological and development characteristics.

After public review, formal boundaries are established for each environment designation and policies and regulations prepared specific to that environment. These policies and regulations will apply to all uses allowed with the environment.

The classification of shorelines into SEDs is part of Phase 3 of the Shoreline Master Program Update.

B. Timeline

A timeline for the complete Shoreline Master Program update (a multi-year program) is below:

TABLE 1: TIMELINE FOR THE SHORELINE MASTER PROGRAM UPDATE FOR THE CITIES OF LACEY, OLYMPIA, AND TUMWATER

Phase	Update Schedule	Timeline
1	• Determine what shorelines are regulated under the act • Conduct an inventory of all existing and available data for shorelines • Public Open Houses	Winter 2008
2	• Analyze and characterize shoreline conditions	Spring 2008
3	• Categorize each shoreline segment into a designation such as urban, suburban, or rural. Each will have a different set of rules. • Develop draft rules and policies • Public meetings	Fall 2008 Winter-Spring 2009
4	• Analyze the cumulative impacts of expected shoreline development or redevelopment • Develop a restoration (and preservation) plan, including public access	Winter-Spring 2009
5	• Public hearings • Planning Commission recommendations • City Council approval • State approval	Late 2009-2011

II. Shoreline Environmental Designations

Shoreline Environmental Designations (SEDs) are similar to zoning districts for areas under shoreline jurisdiction. The purpose of the environmental designations is to encourage uses that protect or enhance the current or desired character of shoreline.

In the cities of Lacey, Olympia, and Tumwater and their associated urban growth areas the current Shoreline Master Program uses five designations: Aquatic, Natural, Conservancy, Rural and Urban, and has identified two special management areas – Percival and Deschutes. The State Department of Ecology's 2003 guidelines recommend that the updated Master Program consider using six designations: Aquatic, Natural, Urban Conservancy, Rural, Conservancy, Shoreline Residential, and High Intensity. The policies and regulations for each designation should reflect the purpose and intent of each environment.

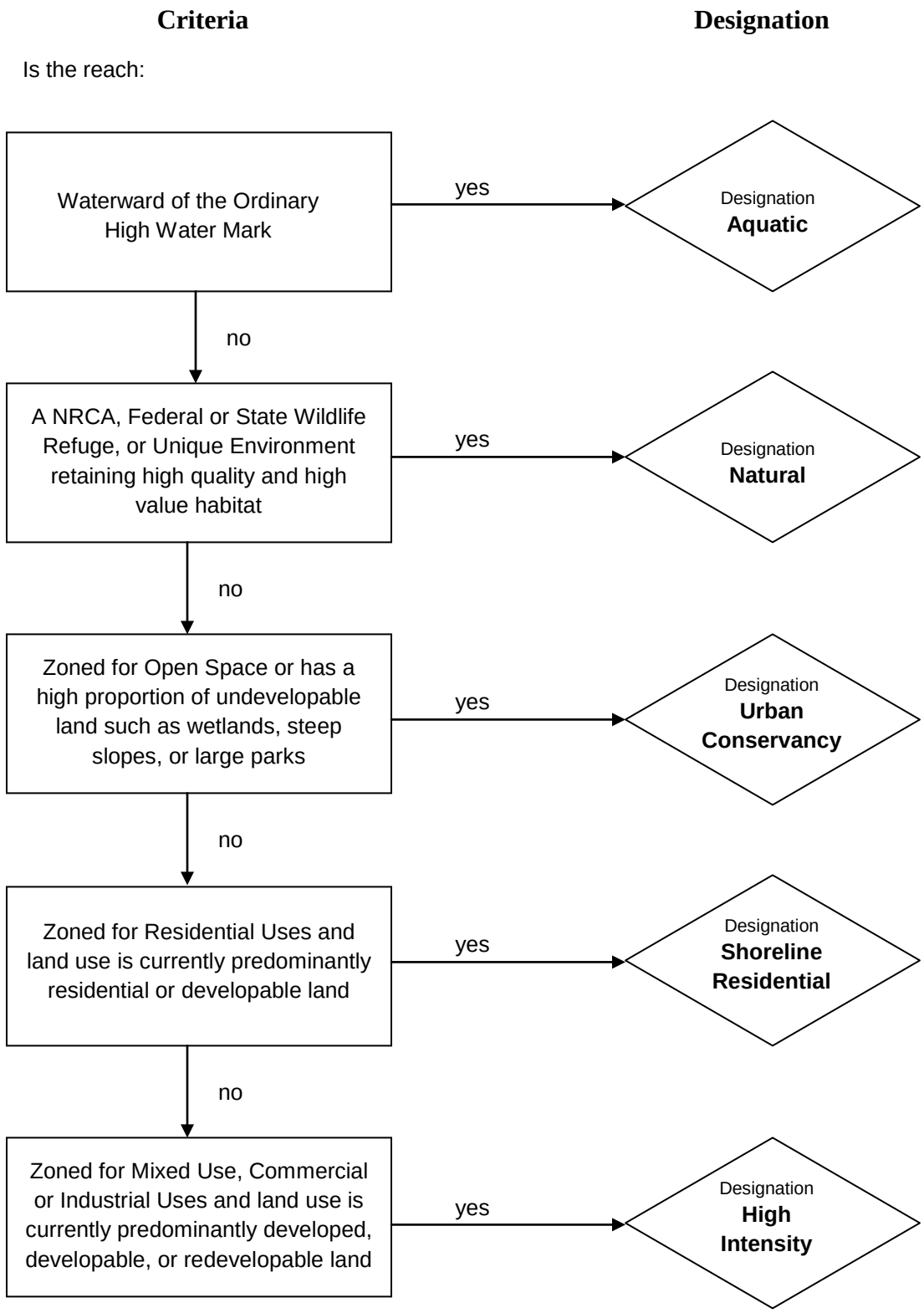
Future development locating within shoreline jurisdiction needs to be consistent with the rules and policies within the environment designation, as well as local government zoning and critical area regulations. Ecology guidelines require critical area protection within shoreline jurisdiction to be - at a minimum - equal to that under local critical area regulations.

The cities of Lacey, Olympia, and Tumwater are considering adopting five of the six recommended SEDs – with the Rural Conservancy designation not being applicable to the urban areas. The purpose of each of the five designations is as follows:

> *Aquatic: The purpose of the aquatic environment is to protect, restore, and manage the unique characteristics of the areas waterward of the ordinary high water mark.*
>
> *Natural: The purpose of the natural environment is to protect those shoreline areas relatively free of human influence or that include intact or minimally degraded shoreline functions intolerant of human use. These systems require that only very low intensity uses be allowed in order to maintain the ecological function and ecosystem-wide processes. Consistent with the policies of the designation, local government should include planning for restoration of degraded environment within this environment.*
>
> *Urban Conservancy: The purpose of the urban conservancy environment is to protect and restore ecological functions of open space, flood plain, and other sensitive land where they exist in urban and developed settings, while allowing a variety of compatible uses.*
>
> *Shoreline Residential: The purpose of the shoreline residential environment is to accommodate residential development and appurtenant structures and to provide for public access and recreational uses.*
>
> *High Intensity: The purpose of the high intensity environment 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.*

III. Designation Criteria

The flow chart below shows the criteria used to determine the SEDs for individual reaches.



IV. Residential Setbacks

The following table shows proposed setbacks for the Shoreline Residential environment designation. With the exception of Munn Lake and the LONG-3B reach, setbacks have either increased or stayed the same for water bodies that were previously included in the Shoreline Master Program (1990).

This table identifies the wide range of existing setback distances, and illustrates why a "one size fits all" setback would not be feasible. So to reduce the potential number of non-conforming structures, three setbacks were established within the Shoreline Residential designation. The setbacks are twenty-five (25), fifty (50), and seventy-five (75) feet. Also, the setback is used to modify the SED designation, such as: SR 25', SR 50', and SR 75'.

TABLE 2: EXISTING AND PROPOSED RESIDENTIAL SETBACKS, AND NUMBER OF NON-CONFORMING STRUCTURES ANTICIPATED.

Water Body Reach		Existing Residential Homes Setback from Shoreline (feet) 0-25	25-50	50-75	75-100	100+	Total	Current Desig.	Current Setback	Homes Currently Non-conforming	Proposed Setback	Non-conforming Under Proposal
Barnes Lake												
BAR-1A	Num.	1	2	7	16	24	50	Not in SMP	None	n/a	75'	10
	%	2%	4%	14%	32%	48%	100%			n/a		20%
Black Lake												
BLK-2	Num.	0	18	16	11	65	110	Rural	50'	18	50'	18
	%	0%	16%	15%	10%	59%	100%			16%		16%
Chambers Lake												
CHAM-1A	Num.	0	0	1	10	16	27	Urban	10'	0	75'	1
	%	0%	0%	4%	37%	59%	100%			0%		4%
CHAM-3	Num.	0	1	6	8	49	64	Urban	10'	0	75'	7
	%	0%	2%	9%	13%	77%	100%			0%		11%
Hewitt Lake												
HEWITT-1	Num.	0	0	3	3	33	39	Rural	50'	0	75'	3
	%	0%	0%	8%	8%	85%	100%			0%		8%
Hicks Lake												
HICKS-2B	Num.	5	22	30	27	17	101	Urban	10'	0	50'	27
	%	5%	22%	30%	27%	17%	100%			0%		27%
Ken Lake												
KEN-1	Num.	7	19	22	4	13	65	Urban	10'	0	25'	7
	%	11%	29%	34%	6%	20%	100%			0%		11%
Long Lake												
LONG-1	Num.	2	6	11	5	3	27	Rural	50'	8	50'	8
	%	7%	22%	41%	19%	11%	100%			29%		29%
LONG-2	Num.	2	13	22	7	14	58	Rural	50'	15	50'	15
	%	3%	22%	38%	12%	24%	100%			25%		25%
LONG-3B	Num.	1	13	12	2	4	32	Conser.	100'	28	50'	14
	%	3%	41%	38%	6%	13%	100%			88%		44%
LONG-4	Num.	0	11	16	9	10	46	Rural	50'	11	50'	11
	%	0%	24%	35%	20%	22%	100%			24%		24%
LONG-5	Num.	8	43	57	17	25	150	Rural	50'	51	50'	51
	%	5%	29%	38%	11%	17%	100%			34%		34%
Munn Lake												
MUNN-1	Num.	0	0	1	2	3	6	Res.	100'	3	75'	1
	%	0%	0%	17%	33%	50%	100%			50%		17%
MUNN-2	Num.	0	0	1	2	5	8	Res.	100'	5	75'	1
	%	0%	0%	12%	25%	63%	100%			63%		12%
MUNN-3	Num.	2	6	6	2	14	30	Res.	100'	14	50'	8
	%	7%	20%	20%	7%	46%	100%			46%		27%
Pattison Lake												
PAT-1	Num.	0	19	28	16	16	79	Rural	50'	19	50'	19
	%	0%	24%	35%	20%	20%	100%			24%		24%
PAT-2	Num.	0	1	14	16	28	59	Rural	50'	1	75'	15
	%	0%	2%	24%	27%	47%	100%			2%		26%
PAT-3B	Num.	0	0	4	2	5	11	Rural	50'	0	75'	4
	%	0%	0%	36%	18%	45%	100%			0%		36%
PAT-4A	Num.	0	1	3	6	3	13	Rural	50'	1	75'	4
	%	0%	8%	23%	46%	23%	100%			8%		31%
PAT-4C	Num.	6	12	8	0	7	33	Rural	50'	18	50'	18
	%	18%	36%	24%	0%	21%	100%			54%		54%
Ward Lake												
WARD-1	Num.	0	2	6	7	36	51	Rural	50'	2	75'	8
	%	0%	4%	12%	14%	71%	100%			4%		16%
Budd Inlet												
BUDD-6B U, 7	Num.	12	23	6	6	1	48	Urban	10'	0	25'	12
	%	25%	48%	13%	13%	2%	100%			0%		25%

V. Reach Level Shoreline Environmental Designations

Applying the criteria, the following Shoreline Environmental Designations are recommended for specific reaches:

TABLE 3: SHORELINE ENVIRONMENTAL DESIGNATIONS FOR AREAS WATERWARD OF ORDINARY HIGH WATER MARK.

Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
Waterward of the Ordinary High Water Mark	Various	n/a	n/a	n/a	n/a	n/a	Waterward of the *Ordinary High Water Mark*		Aquatic

TABLE 4: SHORELINE ENVIRONMENTAL DESIGNATIONS FOR MARINE REACHES.

Marine Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
Budd Inlet	**BUDD-1**	Medium – alterations low, few sediments or habitat important areas	No	-	Yes	Some Steep slopes Important Riparian Area (*Oly UGA)*	This shoreline is predominately residential Some riparian features are still intact	Rural	Urban Conservancy
	BUDD-2	Medium – alterations low, few sediments or habitat important areas	No	-	Yes	Some Steep Slopes Important Riparian Area (*Oly & UGA)*	This shoreline is predominately residential Some riparian features are still intact.	Rural	Urban Conservancy
	BUDD-3A *Marina, BMT*	Low – high level of alteration due to fill and marina	Yes	-	No (Mixed-use)	No	This shoreline is highly modified This shoreline is predominately commercial, industrial, and high density residential and contains some water dependant uses	Urban	High Intensity
	BUDD-3B *West Bay Park, Lagoon*	Low – high level of alteration due to fill and marina; key habitat: Port Lagoon	Yes	-	No (Mixed-use) but purchased for a park	Port Lagoon: Important Riparian Area (*Oly)*	This portion of the shoreline will be restored and is now a city park	Urban	Urban Conservancy
	BUDD-3C	Low – high level of alteration due to fill	Yes	-	No (Mixed-use)	No	This shoreline is highly modified	Urban	High Intensity
	BUDD-4 *5th Ave & Cap Lake Dam*	Low – high level of alteration due to Capitol Lake dam; no key habitats	Yes	-	No	No	This shoreline is highly modified This shoreline is predominately commercial	Urban	High Intensity
	BUDD-5 *Marinas, Port of Olympia & Cascade Pole*	Low – high level of alteration due to fill and industrial use; no key habitats	Yes	-	No	No	This shoreline is highly modified with many water dependent uses This shoreline is predominately commercial, industrial, and high density residential	Urban	High Intensity
	BUDD-6A	Low – high level of alteration due to fill and industrial use; no key habitats	Yes	-	No	No	This shoreline is highly modified.	Urban	High Intensity

Marine Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
	BUDD-6B U (upland)[3]	Low – high level of alteration due to fill, no key habitats	No	-	Yes	No	This upland portion of this shoreline is residential	Urban	Shoreline Residential (SR-25')
	BUDD-6B S (shoreline)[1]	Low – high level of alteration due to fill; restoration of shoreline is underway	No	-	Yes but west of East Bay Drive is open space	Yes – west of East bay drive	This shoreline is open space and is being restored	Urban	Urban conservancy
	BUDD-7	Low – high level of alteration due to residential development; only forage fish spawning habitat	No	-	Yes	No	This shoreline is predominately residential	Urban	Shoreline Residential (SR-25')
	BUDD-8A *Priest Point Park – park area*	High – Low level of alteration (part of Priest Point Park)	No – however passive park activities are in this section including trails and a parking lot	High value marine environment	No	Yes High value marine environment Intact riparian area Important Riparian Area (*Oly)*	Intact riparian area and pocket estuary High quality marine environment Park uses in this section of the reach including trails and parking lot	Conservancy	Urban Conservancy
	BUDD-8B *Priest Point Park – natural area*	High – Low level of alteration (part of Priest Point Park)	No	High value marine environment	No	Yes High value marine environment Intact riparian area Important Riparian Area (*Oly)*	Intact riparian area and pocket estuary High quality marine environment	Conservancy	Natural (may require modification of DNR's harbor zones)
Nisqually Reach	**NIS-1** *Butterball Cove & Jubilee Beach*	High – low level of alteration; several key habitats	No	*Shoreline of state wide significance*	No Upland area will be developed for residential subdivision	Yes Open Space, Steep Slopes with project specific CAO setbacks	Intact riparian area and pocket estuary	Rural	Natural

[3] The centerline of East Bay Drive shall be used to denote Budd 6B U (upland) from Budd 6B S (shoreline).

Marine Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
	NIS-2 *Mallard Cove, mini-marina & Beachcrest*	Medium – medium level of alteration; several key sediment and habitats	No	*Shoreline of state wide significance*	Yes	Some Steep slopes & stream	Altered shoreline at base of steep slope and across stream Partially modified pocket estuary This shoreline is predominately residential	Rural	Urban Conservancy

TABLE 5: SHORELINE ENVIRONMENTAL DESIGNATIONS FOR RIVERS AND STREAMS.

River Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
Black Lake Drainage Ditch	**BLDD-1** *Black Lake Meadows SW Facility*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No In adjacent uplands	-	No	Yes Extensive Wetlands	Predominantly critical areas – wetlands, floodplain & stream Proposes future arterial crossing at approximately 34th Avenue	Percival SMA	Urban Conservancy
	BLDD-2 *Mottman Rd to I-5*	Importance: Medium 2 - High Alteration: Medium 2 - High Combination: Restoration	Yes Outside of Canyon but within shoreline jurisdiction	-	No	Yes Within the canyon	Predominantly critical areas – stream in the canyon Relatively intact riparian vegetation within canyon	Percival SMA	High Intensity
Chambers Creek	**CHAMCRK-1**	Importance: Medium 2 - High Alteration: Medium 1/2 Combination: Restoration – Protection/Restoration	Limited in upland areas	-	Some	Yes Some wetlands & riparian areas	Predominantly critical areas – wetlands, & stream with Deschutes River floodplain Relatively intact riparian vegetation	Not in the SMP	Urban Conservancy
Deschutes River	**DES-1** *Left Bank*	Importance: High Alteration: Medium 2 Combination: Restoration	No	-	No In adjacent uplands	Yes Floodplain & channel migration zone	Relatively intact riparian vegetation Predominantly open space or critical areas - floodplain & CMZ	Conservancy	Natural
	DES-2 *Left Bank*	Importance: High Alteration: Medium 2 Combination: Restoration	No In adjacent uplands	-	Limited	Yes Floodplain & channel migration zone Largely undeveloped valley floor	Relatively intact riparian shoreline Predominantly open space or critical areas – floodplain, CMZ and stream	Conservancy	Natural
	DES-3 *Left Bank*	Importance: High Alteration: Medium 1 Combination: Protection/Restoration	No	-	Limited	Yes Floodplain & channel migration zone Largely undeveloped valley floor	Relatively intact riparian shoreline Predominantly open space or critical areas – floodplain, CMZ and stream	Conservancy	Natural

River Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
	DES-3 *Right Bank* Part within the UGA boundary	Importance: High Alteration: Medium 1 Combination: Protection/Restoration	No	-	Limited	Yes Floodplain & channel migration zone Largely undeveloped valley floor	Relatively intact riparian shoreline Predominantly open space or critical areas – floodplain, CMZ and stream	Conservancy	Natural
	DES-4 *Left Bank*	Importance: High Alteration: Medium 1/2 Combination: Restoration – Protection/Restoration	No	-	Some In upland areas	Yes Floodplain & CMZ	Predominantly critical areas – floodplain, CMZ and stream	Rural & Conservancy	Urban Conservancy
	DES-4 *Right Bank* *Pioneer Park*	Importance: High Alteration: Medium 1/2 Combination: Restoration – Protection/Restoration	No	-	No	Yes Floodplain & channel migration zone	Predominantly open space or critical areas – floodplain, CMZ and stream Public park with passive and active areas	Deschutes SMA & Conservancy	Urban Conservancy
	DES-5 *Left Bank* *Tumwater Valley Golf Course*	Importance: High Alteration: High Combination: Restoration	No	-	No	Yes Tumwater Valley Golf Course	Highly modified shoreline with high intensity recreation Predominantly open space or critical areas – floodplain, CMZ and stream	Deschutes SMA	Urban Conservancy
	DES-5 *Right Bank* *Tumwater Valley Golf Course*	Importance: High Alteration: Medium 2 Combination: Restoration	No	-	No	Yes Tumwater Valley Golf Course	Highly modified shoreline with high intensity recreation Predominantly open space or critical areas – floodplain, CMZ and stream	Deschutes SMA	Urban Conservancy
	DES-6 *Left Bank* *Small part of Tumwater Falls Park*	Importance: High Alteration: High Combination: Restoration	Yes	-	No	Fringe	Highly modified shoreline with high intensity land use and zoning Predominantly critical areas – floodplain, CMZ and stream	Deschutes SMA	Urban Conservancy
	DES-6 *Right Bank* *Former Brewery*	Importance: High Alteration: Medium 2 Combination: Restoration	Yes	-	No	No	Highly modified shoreline with industrial land use and zoning Predominantly critical areas – floodplain, CMZ and strea	Deschutes SMA	High Intensity

River Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
	DES-7 *Left Bank* *Tumwater Falls Park;Deschutes Way/ Falls Terrace*	Importance: High – Medium 2 Alteration: High - Medium 2 Combination: Restoration	Limited *(Historical Commercial)*	-	No	No Tumwater Falls Canyon	Area of high historical significance. Private park with trails, dam, fish ladder & hatchery.	Deschutes SMA	Urban Conservancy
	DES-7 *Right Bank* *Tumwater Falls Park; Former Brewery*	Importance: High – Medium 2 Alteration: High - Medium 2 Combination: Restoration	Limited *(Historical Commercial)*		No	No Tumwater Falls Canyon	Area of high historical significance. Private park with trails.	Deschutes SMA	High Intensity
Percival Creek	**PERC-1A**	Importance: Medium 2 - High Alteration: Medium 2 - High Combination: Restoration	Some In adjacent uplands	-	No In adjacent uplands	Yes *(Tum)* Percival Creek Canyon	Predominantly critical areas – steep slopes & riparian in Canyon, with industrial park in uplands, plus interstate crossing.	Percival SMA	High Intensity
	PERC-1B	Importance: Medium 2 - High Alteration: Medium 2 - High Combination: Restoration	No	-	No In adjacent uplands	Yes *(Tum)* Percival Creek Canyon	Predominantly critical areas – steep slopes & riparian Wide stream canyon	Percival SMA	Urban Conservancy
Woodland Creek	**WOOD-1A**		No In adjacent uplands	Wetland system in open space protection	No	Yes Wetland system south of I-5 and riparian areas	Predominantly critical areas - floodplain & riparian	Conservancy	Natural
	WOOD-1B		No In adjacent uplands	-	Some	Yes Wetland system south of I-5 and riparian areas	Predominantly critical areas - floodplain & riparian Some residential development	Conservancy	Urban Conservancy
	WOOD-2		No	Intact Riparian Corridor	No In adjacent uplands	Riparian areas	Predominantly critical areas - floodplain & riparian	Conservancy	Natural

TABLE 6: SHORELINE ENVIRONMENTAL DESIGNATIONS FOR LAKE WATERBODIES.

Lake Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
Barnes Lake	**BAR-1A**	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes	Yes	This shoreline is predominately residential	Not in the SMP	Shoreline Residential (SR-75')
	BAR-1B	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	Yes – commercial site	-	No	No	Commercial at south end of lake	Not in the SMP	High Intensity
Bigelow Lake	**BIG-1**	Importance: High Alteration: Medium 2 Combination: Restoration	No	-	Some but limited	Extensive high quality wetlands surround the lake	Largely intact riparian vegetation High quality wetland surrounds most of the lake Some residential development has occurred along the eastern shore	Not in the SMP	Urban Conservancy
Black Lake	**BLK-1A**	Importance: High Alteration: Medium 1 Combination: Protection/Restoration	No	Yes Wetlands to south, part of proposed Black River National Wildlife Refuge.	Some	Yes Extensive high quality wetlands at south end of lake	High quality wetlands part of a national wildlife refuge	Natural	Natural
	BLK-1B	Importance: High Alteration: Medium 1 Combination: Protection/Restoration	No	-	Some	Yes Some other wetlands present	Mix of wetlands with limited residential development	Conservancy	Urban Conservancy
	BLK-2	Importance: High Alteration: Medium 1 Combination: Protection/Restoration	No	-	Yes	No	This shoreline is predominately residential	Rural	Shoreline Residential (SR-50')
Capitol Lake	**CAP-1** *(So Basin)* *Oly & Tum* *Old Brewhouse*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	Limited *(Tum)* *(Historical Commercial)*	-	Yes	High quality intact riparian shoreline with steep slopes and floodplain Important Riparian Area (*Oly)*	Intact wetland and riparian vegetation with steep slopes Limited future development due to CAO regulations *(Oly)* Area of high historical significance	Deschutes SMA & Conservancy	Urban Conservancy

Lake Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
	CAP-2 *(So Basin)* *Tumwater* *Tumwater Historical Park*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	Limited *(Tum)* *(Historical Commercial)*	-	No	Some wetlands, floodplain and riparian areas Altered shoreline has Tumwater Historical Park	Some intact wetland and shoreline vegetation Public park with active and passive areas, and a boat launch	Deschutes SMA	Urban Conservancy
	CAP-3A *Middle Basin (Oly)* *South Capitol Neighborhood*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes In upland areas	High quality intact riparian shoreline with steep slopes Important Riparian Area (*Oly)*	Largely intact riparian area with steep slopes Limited future development due to CAO regulations (Oly)	Conservancy	Urban Conservancy
	CAP-3B *Middle Basin (Oly)* *Part of State Capitol Campus – Steam plant*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	Yes On Capitol Campus	-	No	High quality intact riparian shoreline with steep slopes Important Riparian Area (*Oly)*	Steam plant is an urban use	Conservancy	High Intensity
	CAP-4 *Middle Basin (Oly & Tum)* *State Capitol Campus with the Interpretative Site & Mitigation Ponds*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	Yes In upland areas	-	No	Yes *(Tum)* Highly altered shoreline has Capitol Lake Interpretative Site & Deschutes Parkway Wetland mitigation ponds, park-like vegetation, and upland steep slopes	Highly modified shoreline, mitigation ponds, park–like vegetation, roadway, and riparian fringe	Conservancy	Urban Conservancy
	CAP-5 *Percival Cove* *State Capitol Campus*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes In upland areas	Hi quality intact riparian shoreline with steep slopes Important Riparian Area (*Oly)* Highly altered eastern shoreline has Deschutes Parkway	Intact wetland and riparian vegetation with steep slopes Highly modified shoreline, park–like vegetation, roadway, and riparian fringe	Conservancy	Urban Conservancy

Lake Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
	CAP-6 *North Basin* *State Capitol Campus with Capitol Lake dam & Heritage Park*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	Yes On Capitol Campus	-	No	No Highly altered eastern shoreline has Heritage Park	Highly modified shoreline, park–like vegetation, roadway and a concrete bulkhead	Urban & Conservancy	High Intensity
	CAP-7 *North Basin* *State Capitol Campus with Marathon Park*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Some	No Highly altered shoreline has Marathon Park	Highly modified shoreline, park–like vegetation, roadway and riparian fringe	Conservancy	Urban Conservancy
Chambers Lake	**CHAM-1A** *NE Basin (Lcy)*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes North section	No	Residential in nature	Urban	Shoreline Residential (SR-75')
	CHAM-1B *SE Basin (Lcy)*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	No	Yes On wetlands at south end of lake	Mix of wetlands along one portion	Conservancy	Urban Conservancy
	CHAM-2 *South (Oly/Lacey)*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Some	Some wetlands & high ground water flooding	High ground water flooding concerns in the upland area	Conservancy	Urban Conservancy
	CHAM-3 *W Basin (Lcy)*	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes	Fringe	This shoreline is predominately single-family and multi-family residential	Urban	Shoreline Residential (SR-75')
Grass Lake	**GRASS-1**	Importance: Medium 2 Alteration: Medium 1 Combination: Protection/Restoration	No On adjacent lands	Parts are within the Grass Lake Refuge - *Olympia*	Some On adjacent lands	Extensive high quality wetlands around lake Part of the Green Cove Creek Basin	High quality wetlands & city refuge Low intensity development watershed designation	Rural	Urban Conservancy

Lake Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
Hewitt Lake	**HEWITT-1**	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes	No	This shoreline is predominately residential	Rural	Shoreline Residential (SR-75')
Hicks Lake	**HICKS-1**	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	City has zoned high quality wetlands as open space for protection	No	Yes Extensive high quality wetlands	This shoreline is characterized by wetlands	Conservancy	Natural
	HICKS-2A	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes	Yes City park and Church camp	This shoreline is predominately undeveloped	Urban	Urban Conservancy
	HICKS-2B	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes	No	This shoreline is predominately residential	Urban	Shoreline Residential (SR-50')
Ken Lake	**KEN-1**	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes	No	This shoreline is predominately residential	Urban	Shoreline Residential (SR-25')
Lake Susan/ Munn Lake	**MUNN-1**	Importance: Medium 2 Alteration: Medium 1 Combination: Protection/Restoration	No	-	Yes	Lake edge somewhat undeveloped Wetlands to south	Shoreline is residential with larger setbacks	Conservancy	Shoreline Residential (SR-75')
	MUNN-2	Importance: Medium 2 Alteration: Medium 1 Combination: Protection/Restoration	No	-	Yes	Some wetlands	Shoreline is residential with larger setbacks	Conservancy	Shoreline Residential (SR-75')
	MUNN-3	Importance: Medium 2 Alteration: Medium 1 Combination: Protection/Restoration	No	-	Yes	Some wetlands	Shoreline is residential with larger setbacks	Conservancy	Shoreline Residential (SR-50')
Long Lake	**LONG-1**	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes	No	This shoreline is predominately residential	Rural	Shoreline Residential (SR-50')

Lake Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
	LONG-2	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes	No	This shoreline is predominately residential	Rural	Shoreline Residential (SR-50')
	LONG-3A	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	High quality wetlands protected as open space	No	Yes Extensive high quality wetlands	This shoreline is characterized by wetlands	Conservancy	Natural
	LONG-3B	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes		This shoreline is predominately residential	Conservancy	Shoreline Residential (SR-50')
	LONG-3C	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	High quality wetlands protected as open space	No	Yes Extensive high quality wetlands	This shoreline is characterized by wetlands	Conservancy	Natural
	LONG-4	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes	No	This shoreline is predominately residential	Rural	Shoreline Residential (SR-50')
	LONG-5	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes	No	This shoreline is predominately residential	Rural	Shoreline Residential (SR-50')
	LONG-6	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Some	Yes Extensive high quality wetlands	This shoreline is characterized by wetlands	Conservancy	Urban Conservancy
Pattison Lake	**PAT-1**	Importance: Medium 2 Alteration: Medium 1 Combination: Protection/Restoration	No	-	Yes	No	This shoreline is predominately residential	Rural	Shoreline Residential (SR-50')
	PAT-2	Importance: Medium 2 Alteration: Medium 1 Combination: Protection/Restoration	No	-	Yes	No	This shoreline is predominately residential	Rural	Shoreline Residential (SR-75')

Lake Waterbody	Reach	Ecosystem Analysis (Condition and Importance)	Land Use and Zoning encourage high-intensity commercial, mixed-use or industrial uses	A NRCA, Federal or State Wildlife Refuge or Unique Environment retaining high quality and high value habitat	Currently residential in character, or zoned for future residential development	Open space, flood plains, wetlands, steep slopes and other sensitive lands that are found within the urban areas	Rationale for Designation	Current Designation	Draft Designations
	PAT-3A	Importance: Medium 2 Alteration: Medium 1 Combination: Protection/Restoration	No	High quality wetlands protected as open space	No	Extensive high quality wetlands	Extensive high quality wetlands	Conservancy	Natural
	PAT-3B	Importance: Medium 2 Alteration: Medium 1 Combination: Protection/Restoration	No	-	No	No	This shoreline is predominately residential	Rural	Shoreline Residential (SR-75')
	PAT-4A	Importance: Medium 2 Alteration: Medium 1 Combination: Protection/Restoration	No	-	Yes	No	This shoreline is predominately residential	Rural	Shoreline Residential (SR-75')
	PAT-4B	Importance: Medium 2 Alteration: Medium 1 Combination: Protection/Restoration	No	High quality wetlands protected as open space	No	Extensive high quality wetlands	Extensive high quality wetlands	Conservancy	Natural
	PAT-4C	Importance: Medium 2 Alteration: Medium 1 Combination: Protection/Restoration	No	-	Yes	No	This shoreline is predominately residential	Rural	Shoreline Residential (SR-50')
Southwick Lake	**SOUTH-1**	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Some	Fringe Relatively intact shoreline	Relatively intact shoreline vegetation This shoreline is characterized by some wetlands with residential	Conservancy	Urban Conservancy
Trosper Lake	**TROS-1**	Importance: HIgh Alteration: Medium 2 Combination: Restoration	No	-	No On adjacent lands	Yes Wetlands surround the lake	This shoreline is characterized by wetlands	Conservancy	Urban Conservancy
Ward Lake	**WARD-1**	Importance: Medium 2 Alteration: Medium 2 Combination: Restoration	No	-	Yes	Some wetlands	This shoreline is characterized by residential with a large setbacks, some intact riparian vegetation, and some wetlands	Rural	Shoreline Residential (SR-75')

VI. Shoreline Reach Endpoints

Below are GPS endpoint descriptions for the applicable shoreline reaches. The coordinates are in NAD83 HARN, Lambert Conic Conformal, WA State Plane – South, Feet.

Note – Those water bodies which contain a single shoreline environment designation are not included.

TABLE 7: SHORELINE REACH ENDPOINTS

Marine Waterbody	Reach	Starting Point X Coordinate	Starting Point Y Coordinate	Ending Point X Coordinate	Ending Point Y Coordinate
Budd Inlet	**BUDD-1**	1036138.48	644816.6938	1033288.621	646314.2285
	BUDD-2	1037789.412	641611.2948	1036138.48	644816.6938
	BUDD-3A *Marina, BMT*	1039141.685	637128.7866	1037789.412	641611.2948
	BUDD-3B *West Bay Park, Lagoon*	1039286.668	634753.517	1039141.685	637128.7866
	BUDD-3C	1039577.072	633306.3998	1039286.668	634753.517
	BUDD-4 *5th Ave &* *Cap Lake Dam*	1040221.758	633498.331	1039577.072	633306.3998
	BUDD-5 *Marinas, Port of Olympia & Cascade Pole*	1043250.491	635540.1731	1040221.758	633498.331
	BUDD-6A	1043803.104	634074.949	1043250.491	635540.1731
	BUDD-6B ***(upland)***[1]	1043823.018	636906.1223	1043803.104	634074.949
	BUDD-6B ***(shoreline)***[1]	1043899.404	636955.5148	1043921.211	634074.9493
	BUDD-7	1043114.021	641374.322	1043823.018	636906.1223
	BUDD-8A *Priest Point Park – park area*	1043091.583	642810.6673	1043114.021	641374.322
	BUDD-8B *Priest Point Park – natural area*	1041438.789	644483.9302	1043091.583	642810.6673

Marine Waterbody	Reach	Starting Point X Coordinate	Starting Point Y Coordinate	Ending Point X Coordinate	Ending Point Y Coordinate
Nisqually Reach	**NIS-1** *Butterball Cove & Jubilee Beach*	1079088.907	656755.8287	1077277.079	659222.5152
	NIS-2 *Mallard Cove, mini-marina & Beachcrest*	1080768.951	655787.8924	1079088.907	656755.8287

[1] The centerline of East Bay Drive shall be used to denote Budd 6B (upland) from Budd 6B (shoreline).

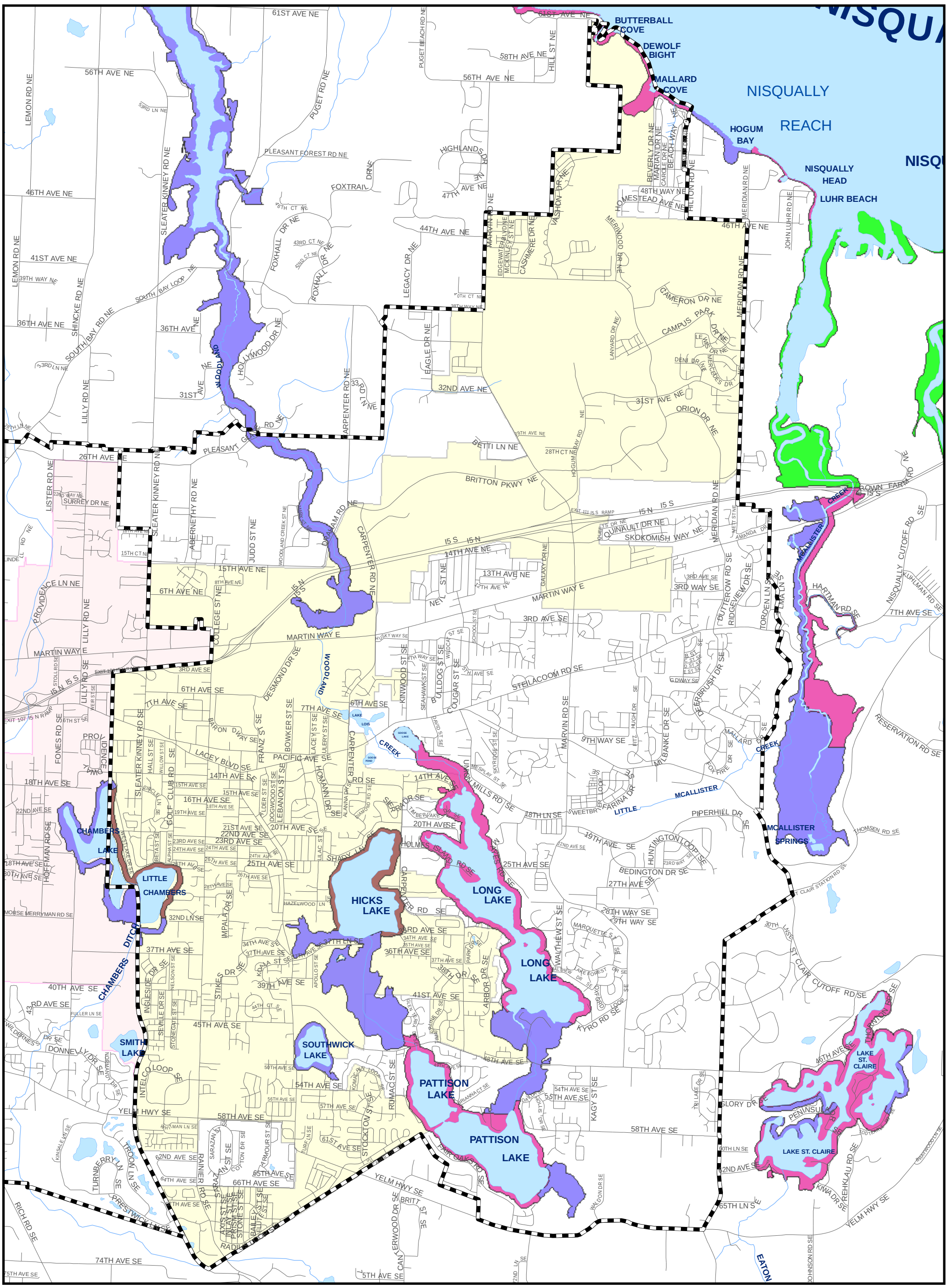
River Waterbody	Reach	Starting Point X Coordinate	Starting Point Y Coordinate	Ending Point X Coordinate	Ending Point Y Coordinate
Black Lake Drainage Ditch	**BLDD-1** *Black Lake Meadows SW Facility*	1025587.323	620982.064	1032160.44	627153.511
	BLDD-2 *Mottman Rd to I-5*	1032160.44	627153.511	1033751.571	627023.581
Chambers Creek	**CHAMCRK-1**	1053988.778	612139.6547	1048466.977	615498.4743
Deschutes River	**DES-1** *Left Bank*	1051093.718	599292.9597	1049393.47	600679.6091
	DES-2 *Left Bank*	1049393.47	600679.6091	1049929.943	608842.0652
	DES-3 *Left Bank and Portion of Right Bank that is within the UGA boundary*	1049619.792	612662.9075	1047366.192	615236.098
	DES-4 *Pioneer Park*	1047243.463	615187.8404	1043904.199	615540.6725
	DES-5 *Tumwater Valley Golf Course*	1043904.199	615540.6725	1041198.186	619459.3805
	DES-6 *Small part of Tumwater Falls Park; Former Brewery*	1041198.186	619459.3805	1040805.9	622428.4001
	DES-7 *Tumwater Falls Park; Deschutes Way/ Falls Terrace; Former Brewery*	1040805.9	622428.4001	1040916.712	623604.7237
Percival Creek	**PERC-1A**	1033751.571	627023.581	1034553.351	627143.1179
	PERC-1B	1034553.351	627143.1179	1038594.294	630039.2632
Woodland Creek	**WOOD-1A**	Associated Wetland			
	WOOD-1B	1066734.323	637053.6615	1065543.307	641163.1619
	WOOD-2	1065543.307	641163.1619	1062931.21	642801.6149

Lake Waterbody	Reach	Starting Point X Coordinate	Starting Point Y Coordinate	Ending Point X Coordinate	Ending Point Y Coordinate
Barnes Lake	**BAR-1A**	1037683.639	617848.8858	1038489.342	617973.5397
	BAR-1B	1038489.342	617973.5397	1037683.639	617848.8858
Black Lake	**BLK-1A**	1021039.171	608460.6322	1021823.934	609265.1242
	BLK-1B	1021823.934	609265.1242	1022999.477	612514.8727
	BLK-2	1022999.477	612514.8727	1025587.323	620982.064
Capitol Lake	**CAP-1** *(So Basin)* *Oly & Tum* *Old Brewhouse*	1041308.459	625538.9121	1040916.712	623604.7237
	CAP-2 *(So Basin)* *Tumwater* *Tumwater Historical Park*	1040879.661	623618.6151	1041153.499	625470.4155
	CAP-3A *Middle Basin (Oly)* *South Capitol Neighborhood*	1040020.249	630041.2661	1041308.459	625538.9121
	CAP-3B *Middle Basin (Oly)* *Part of State Capitol Campus – Steam plant*	1039873.741	630635.2984	1040020.249	630041.2661
	CAP-4 *Middle Basin (Oly & Tum)* *State Capitol Campus with the Interpretative Site* *& Mitigation Ponds*	1041153.499	625470.4155	1039126.441	629995.8329
	CAP-5 *Percival Cove* *State Capitol Campus*	1039398.615	628541.8404	1038703.865	630547.3073
	CAP-6 *North Basin* *State Capitol Campus with Capitol Lake dam & Heritage Park*	1039856.396	632821.2829	1039873.741	630635.2984
	CAP-7	1039064.629	630264.148	1039856.396	632821.2829

Lake Waterbody	Reach	Starting Point X Coordinate	Starting Point Y Coordinate	Ending Point X Coordinate	Ending Point Y Coordinate
	North Basin *State Capitol Campus with Marathon Park*				
Chambers Lake	**CHAM-1A** *NE Basin (Lcy)*	1058295.74	624341.7594	1059277.815	623222.5785
	CHAM-1B *SE Basin (Lcy)*	1059277.815	623222.5785	1058315.82	624207.4245
	CHAM-2 *South (Oly/Lacey)*	1058315.82	624207.4245	1057236.788	628329.5784
	CHAM-3 *W Basin (Lcy)*	1057236.788	628329.5784	1058295.74	624341.7594
Hicks Lake	**HICKS-1**	1067971.831	622425.3677	1066498.433	622896.5968
	HICKS-2A	1066498.433	622896.5968	1066315.826	624781.2053
	HICKS-2B	1066315.826	624781.2053	1067971.831	622425.3677
Lake Susan/ Munn Lake	**MUNN-1**	1046776.494	612401.0615	1046286.625	610237.6296
	MUNN-2	1046286.625	610237.6296	1046776.494	612401.0615
Long Lake	**LONG-1**	1072155.408	626455.54	1073686.871	622580.178
	LONG-2	1073686.871	622580.178	1075831.506	618895.7379
	LONG-3A	1075831.506	618895.7379	1075250.393	618778.0223
	LONG-3B	1075250.393	618778.0223	1074022.246	618593.3193
	LONG-3C	1074022.246	618593.3193	1073288.877	619453.2279
	LONG-4	1073288.877	619453.2279	1073476.068	622399.0506
	LONG-5	1073476.068	622399.0506	1070995.681	627885.7387
	LONG-6	1070995.681	627885.7387	1072155.408	626455.54
Pattison Lake	**PAT-1**	1070755.575	614759.2944	1070788.432	614788.4139
	PAT-2	1074608.962	611961.8648	1070755.575	614759.2944
	PAT-3A	1074905.118	612900.2809	1074608.962	611961.8648

Lake Waterbody	Reach	Starting Point X Coordinate	Starting Point Y Coordinate	Ending Point X Coordinate	Ending Point Y Coordinate
	PAT-3B	1074303.911	614117.0059	1074905.118	612900.2809
	PAT-4A	1073565.532	615242.9048	1074303.911	614117.0059
	PAT-4B	1073227.368	614497.0324	1073565.532	615242.9048
	PAT-4C	1070788.432	614788.4139	1073227.368	614497.0324

VII. Maps



Shoreline Master Program - Lacey

Existing Shoreline Environmental Designations

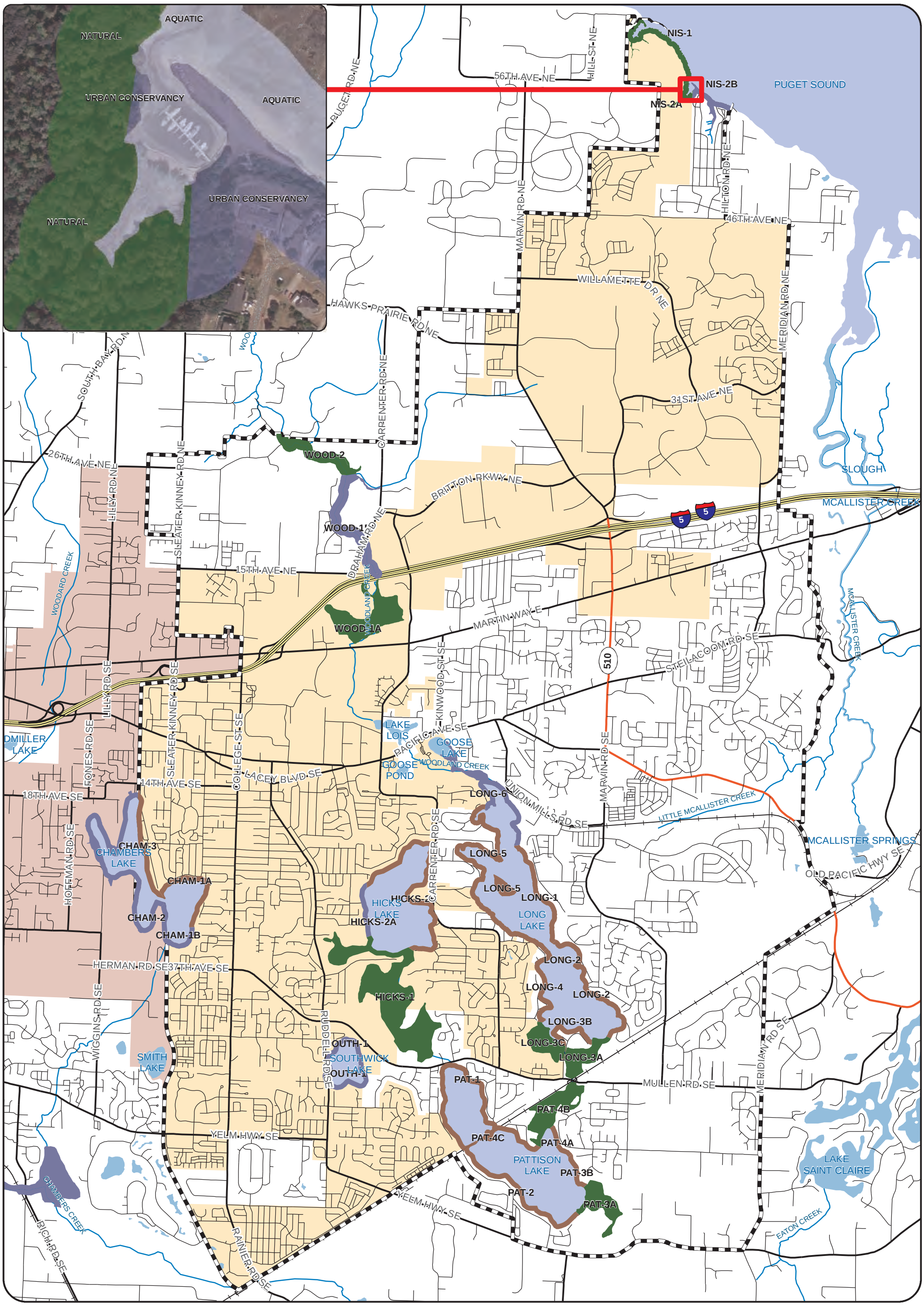
Natural
Conservancy
Rural
Urban
Percival SMA
Deschutes SMA
Lacey
Olympia
Tumwater
Urban Growth Boundary
Roads

0 0.5 1 Miles

Printing Date: March 18, 2008
File: P:\ThurstonCounty\smp_update\maps_images\existing_smp_lacey.mxd

DISCLAIMER:
This map is for general planning purposes only. Thurston Regional Planning Council makes no representations as to accuracy or fitness of this information for a particular purpose.

MAP 1 - Lacey



Lacey Shoreline Master Program

Draft Proposed Shoreline Environment Designations

AQUATIC
NATURAL
URBAN CONSERVANCY
SHORELINE RESIDENTIAL
Interstate 5
US/State Routes
Major Roads
Minor Roads
Rail Road
Lakes and Ponds
Puget Sound
Streams
City of Lacey
Lacey Urban Growth Area
City of Olympia

0 0.5 1 Miles

November 12, 2010

N W E S

References

City of Lacey Comprehensive Plan (including Capital Facilities Chapter)

City of Lacey Comprehensive Plan for Outdoor Recreation (2004)

City of Olympia Comprehensive Plan (including Capital Facilities Chapter)

City of Olympia Parks, Arts, and Recreation Plan (2002)

City of Tumwater Comprehensive Plan (including Capital Facilities Chapter)

City of Tumwater Parks, Recreation and Open Space Plan, Draft, November 2007

Draft Shoreline Inventory and Analysis for the Cities of Lacey, Olympia, and Tumwater and their UGAs

Port of Olympia website - http://www.portolympia.com/

Thurston County Comprehensive Plan (including Capital Facilities Chapter)

Thurston Regional Trails Plan, Thurston Regional Planning Council 2007

APPENDIX 7

REFERENCED CITY OF LACEY ORDINANCES USED IN THIS DOCUMENT

APPENDIX 7

REFERENCED CITY OF LACEY ORDINANCES USED IN THIS DOCUMENT

ORDINANCE NO. 1208

CITY OF LACEY

AN ORDINANCE ADOPTING THE INTERNATIONAL BUILDING CODE AND IN FURTHERANCE THEREOF, REPEALING CHAPTERS 12.11, 14.03, 14.10, AND 14.17 AND SECTIONS 14.04.025, 14.05.025, 14.07.017, 14.07.018, 14.07.021, 14.07.030, 14.07.040, 14.07.045, 14.07.050, 14.07.060, 14.07.070, 14.07.080, 14.07.085, 16.43.120, AND 16.81.020 OF THE LACEY MUNICIPAL CODE, AMENDING THE TITLES TO CHAPTERS 14.04, 14.05, 14.07, 14.15, 14.16, AND 14.18 OF THE LACEY MUNICIPAL CODE, AMENDING SECTIONS 2.30.010, 2.30.090, 12.04.050, 12.24.030, 12.28.010, 13.08.070, 13.32.010, 14.04.010, 14.04.015, 14.04.020, 14.05.010, 14.05.015, 14.05.020, 14.06.010, 14.07.010, 14.07.015, 14.07.020, 14.13.010, 14.13.020, 14.13.030, 14.15.010, 14.15.020, 14.16.020, 14.18.010, 14.18.020, 14.18.030, 14.20.020, 14.23.086, 14.24.160, 14.32.069, 14.36.215, 14.37.030, 14.37.180, 16.03.050, 16.06.315, 16.25.090, 16.41.070, 16.43.050, 16.53.070, 16.60.130, 16.61.050, 16.68.027, 16.70.040, 16.75.040, 16.80.090, AND 16.84.010 OF THE LACEY MUNICIPAL CODE, ADDING NEW CHAPTER 14.03 AND NEW SECTIONS 14.04.016 AND 14.14.050 TO THE LACEY MUNICIPAL CODE, AND APPROVING A SUMMARY FOR PUBLICATION.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LACEY,

WASHINGTON, as follows:

Section 1: Section 2.30.010 of the Lacey Municipal Code is hereby amended to read as follows:

2.30.010 Creation of land use hearings examiner. Pursuant to RCW Chapter 35A.63, the office of land use hearings examiner, hereinafter referred to as "examiner," is created. The examiner shall interpret, review and implement land use regulations as provided in this chapter or by other ordinance. In addition, the examiner shall hear appeals relating to the city's ~~uniform~~ construction codes as described in Section 14.18.030 of this code. Unless the context requires otherwise, the term examiner, as used in this chapter, shall include deputy examiner and examiners pro tem.

Section 2: Section 2.30.090 of the Lacey Municipal Code is hereby amended to read as follows:

2.30.090 Powers of the examiner. The examiner shall receive and examine all available information, conduct public hearings and prepare a record thereof and enter decisions as provided for herein:

A. The decision of the hearings examiner on the following matters shall be final unless such decision is appealed to the city council pursuant to Section 2.30.160 of the Lacey Municipal Code:

1. Appeals of decisions made pursuant to limited administrative review as defined in Section 1.030 of the City of Lacey Development Guidelines and Public Works Standards;

2. Appeals of decisions made pursuant to full administrative review as defined in Section 1.030 of the City of Lacey Development Guidelines and Public Works Standards;

3. Variance requests;

4. Preliminary plat approval extension requests;

B. The decision of the hearings examiner on the following matters shall constitute a recommendation to the city council:

1. Preliminary plat applications;

2. Preliminary plat modification requests;

3. Shoreline substantial development, shoreline variance and shoreline conditional use permits and permit recisions;

4. Planned residential development applications;

5. Conditional use permit applications.

C. The decision of the hearings examiner on any matters relating to the duties described in 14.18.030 for the building construction and life safety codes shall be final. Appeals of violation determinations by the city hearings examiner shall be appealable to Thurston County Superior Court. An appeal of the hearings examiner decision must be filed with Thurston County Superior Court within twenty calendar days from the date the hearings examiner decision was mailed to the person to whom the Notice of Civil Penalty was directed.

Section 3: Section 12.04.050 of the Lacey Municipal Code is hereby amended to read as follows:

12.04.050 Grid numbering system.

A. One Hundred Grid Block. The one hundred block for street naming and house numbering shall be determined by consulting the official grid map. Grid maps indicating the location of one-hundred block grid lines shall be prepared on one inch equals four hundred feet scale map and made available for use at a later date.

B. Numbering Interval.

1. The assignment of a number to a specific property location shall be determined by measuring distances from the one-hundred block grid lines.

2. A number shall be assigned each space of twenty feet, as measured from the one-hundred block grid line.

3. Measurements shall be taken from the grid line to the main entrance of the building or property for the purpose of assigning numbers.

C. Number Assignment. Number assignment shall be as follows:

1. Even numbers shall be assigned to north and east sides of streets; odd numbers shall be assigned to south and west sides of streets. Determination of street direction, north-south or east-west, can be decided by observing the overall length of a street and noting its general direction. The even and odd numbers shall be assigned consecutively and opposite one another wherever possible. Neither numeric fractions nor alphabetical letters shall be assigned as part of the unique address for stand-alone structures. All quadrant directionals (NW, SW, NE, SE) shall appear only after the street name. There will be no double directionals (e.g., E. Main Street NE). Where a street is prevented from being continuous by a natural barrier the addressing will be broken off at the barrier and continued again at the other side of the barrier consistent with the appropriate 100 grid block on the official grid map as described in Section 12.04.050.

2. Short loops and cul-de-sacs shall be numbered consecutively from that point where they originate and proceeding progressively around the loop or cul-de-sac.

3. Multi-family developments will have each building assigned a numbered address taken from the street each building fronts. Interior streets within multi-family developments will be named and such names will be approved as defined in Section 12.04.040. If the interior street is to remain private then the name will be qualified by designating that street as a Lane as specified in Section 12.04.040.I. Each of the multi-family buildings fronting that interior street will be numbered from said street. Each unit within a multi-family building will also be identified (e.g., 3515 Private Lane SE Unit #101). The unit numbering will be from left to right as seen from facing the building. The first digit of each unit number will indicate on which floor of the building each unit is located (i.e., #101 first floor, #201 second floor, etc.) ~~All such interior streets, whether public or private shall be provided with street signs complying with city standards prior to occupancy of the structures.~~

4. In large commercial development projects with a single access from a main street and a shared parking lot each building will be individually numbered from the main street. For those projects fronting on intersecting streets each building will be individually numbered from the intersecting street of which it fronts. Each tenant suite within a commercial building will also be identified (e.g., 3515 Main St SE Suite #201). The suite numbering will be from left to right as seen from facing the building. The first digit of each suite number will indicate on which floor of the building each suite is located (i.e., #101 first floor, #201 second floor, etc.)

D. Extension of Grid System. The grid system shall be extended at the rate of ten blocks per mile, or as determined by the grid pattern as shown on the official map. The grid shall increase by one-thousand at section lines, or as shown on the official map.

Section 4: Chapter 12.11 of the Lacey Municipal Code is hereby repealed.

Section 5: Section 12.24.030 of the Lacey Municipal Code is hereby amended to read as follows:

12.24.030 Submission of plans. Plans for the construction of sidewalks or sidewalks and curbs and gutters required by Sections 12.24.010 and 12.24.020 shall be submitted to the

department of public works ~~as part of the plans submitted for obtaining a building permit~~. The fee to be paid to the city by the applicant for reviewing the plans and inspecting the construction shall be charged at rates established by resolution of the city council. ~~No certificate of occupancy under Chapter 14.04 of this code shall be issued until the improvements required by Sections 12.24.010 and 12.24.020 are completed or a performance bond with a surety qualified to do business in this state, a cash deposit, an assigned savings account or other security acceptable to the city, in an amount equal to one hundred fifty percent of the cost of the work is posted with the city.~~

Section 6: Section 12.28.010 of the Lacey Municipal Code is hereby amended to read as follows:

12.28.010 Adopted. Those certain guidelines and standards entitled "Development Guidelines and Public Works Standards" for the City of Lacey and first published in 1990 as the same have been or are in the future amended by specific action of the city council, shall constitute the official development guidelines and public works standards for use on all development projects within the city and on all development projects located within the city service areas, annexation areas or planning areas to the extent that the city has the authority to require such guidelines and standards. ~~In case of conflict between the Development Guidelines and Public Works Standards and other duly adopted ordinances, resolutions or policies of the city, the provisions of the Development Guidelines and Public Works Standards adopted by the ordinance codified in this section shall prevail.~~

Section 7: Section 13.08.070 of the Lacey Municipal Code is hereby amended to read as follows:

13.08.070 Private sewage disposal system--Connection to public sewer. Whenever a direct connection shall be made to the public sewer in compliance with this chapter, and any septic tanks, cesspools, and similar private sewage disposal facilities shall be disconnected and abandoned. Inlets to abandoned facilities shall be sealed. This section shall control notwithstanding the provisions ~~of Section 1119~~ of the ~~Uniform~~ City's adopted Plumbing Code.

Section 8: Section 13.32.010 of the Lacey Municipal Code is hereby amended to read as follows:

13.32.010 Standard service connection.

A. The construction of a standard new service connection by the city for water shall include all labor, pipe and fittings up to the property line. The charges for the labor and materials, including the meter and its installation, shall be established by resolution of the city council.

B. No water connection shall be made until the person desiring the same has signed an application at the office of the city water department, and paid the charges imposed. The

payment of such connection charges shall be in accordance with Lacey Municipal Code Chapter 13.02.

C. As a condition of service, all service lines from the building to the water meter shall be inspected by the ~~city~~ building department to insure compliance with all the requirements of the ~~Uniform~~ Plumbing Code as adopted in Chapter 14.08 of this code, or Chapter 19.27 Revised Code of Washington, if not within the city limits. No part of the water piping shall be covered, concealed or water meter installed until it has been tested, inspected and accepted.

Section 9: Chapter 14.03 of the Lacey Municipal Code is hereby repealed.

Section 10: A new Chapter 14.03 of the Lacey Municipal Code is hereby adopted to read as follows:

Chapter 14.03 ICC Performance Code for Buildings and Facilities

14.03.010 Adopted. There is adopted and by this reference made a part of this chapter as though fully set forth herein, at length, that certain code known as the International Code Council Performance Code for Buildings and Facilities, 2003 Edition, published by the International Code Council, as the performance code for the city, regulating and governing the performance-based design, construction, and quality of materials.

14.03.020 Violation deemed misdemeanor. Any violation of the provisions of the International Code Council Performance Code for Buildings and Facilities as herein adopted is a misdemeanor.

Section 11: The title of Chapter 14.04 of the Lacey Municipal Code is hereby amended to read as follows:

INTERNATIONAL ~~UNIFORM~~ BUILDING AND INTERNATIONAL RESIDENTIAL CODE

Section 12: Section 14.04.010 of the Lacey Municipal Code is hereby amended to read as follows:

14.04.010 Adopted. There is adopted and by this reference made a part of this chapter as though fully set forth herein, at length, that certain code, known as the International ~~Uniform~~ Building Code, 2003 ~~1997~~ Edition, ~~Volumes 1, 2, and 3 i~~innccluding the Appendix Chapters ~~3, Divisions I and II, and IV, 4, Div II; 9; 12, Division II; 15; 16 Div. I and II; 18; 29; 31, Div. I, II and III; 33~~E, F, G, I and J therein, and the International Residential Code, 2003 Edition, including Appendices A, B, C, D, G, H, J, K and L, as the Building Code and Standards of the city; provided that those sections of the International ~~Uniform~~ Building Code set forth in Section 14.04.015, and those sections of the International Residential Code set forth in Section 14.04.016 are amended to read as set forth in said section

Section 13: Section 14.04.015 of the Lacey Municipal Code is hereby amended to read as follows:

14.04.015 Amendments--*Addition*. The following sections of the International ~~Uniform~~ Building Code as adopted in Section 14.04.010 are amended to read as follows:

Section 101.1 These regulations shall be known as the *Building Code* of the City of Lacey, Washington, hereinafter referred to as "this code."

Section 101.2 Scope, Exception 1, amended as follows:

Detached one- through four-unit dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures shall comply with the *International Residential Code.*

Section 101.4.1. Electrical. The provisions of the City of Lacey Electrical Code as adopted in Lacey Municipal Code Chapter 14.13 shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

Section 101.4.4. Plumbing. The provisions of the City of Lacey Plumbing Code as adopted by Lacey Municipal Code Chapter 14.06 shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. The provisions of the State of Washington requirements for private sewage disposal shall apply to private sewage disposal systems.

Section 101.4.5 Property Maintenance. The provisions of the City of Lacey Property Maintenance Code adopted by Lacey Municipal Code Chapter 14.16 shall apply to existing structures and premises; equipment and facilities; light, ventilation, space heating, sanitation, life and fire safety hazards, responsibilities of owners, operators and occupants; and occupancy of existing premises and structures.

Section 101.4.7. Energy. The provisions of the State of Washington Energy Code adopted by Lacey Municipal Code Chapter 14.09 and the State of Washington Ventilation and Indoor Air Quality Code adopted by Lacey Municipal Code Chapter 14.08 shall apply to all matters governing the design and construction of buildings for energy efficiency.

Section 104.1 General, is amended to read: The building official is hereby authorized and directed to enforce the provisions of this code, including any requirements or regulations imposed on a project as a condition of a land use approval process, as those conditions relate to permit issuance as required in Section 105.3.1.1 and issuance of a certificate of occupancy as required in Section 110.2.1. The building official shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies

and procedures shall not have the effect of waiving requirements specifically provided for in this code.

Section 105.2, item 2 is amended to read:

Fences not over 6 feet (1829 mm) high, except fencing regulated by Section 419, subsection 3, Fencing.

Section 105.2, item 4 is amended to read:

Retaining walls which are not over 4 feet (1219mm) in height measured from the bottom of the footing to the top of the wall, provided the wall is set back from any adjacent property lines or structures a distance at least equal to the height of the wall and the material retained slopes 1 vertical to 2 horizontal (or less) up and away from the wall unless supporting a surcharge or impounding Class I, II or IIIA liquids.

Section 105.2, item 11 is amended to read:

11. Swings and other playground equipment ~~accessory to detached one- and two-family dwellings.~~

Section 105.3. Application for Permit. amended as follows:

Section 105.3 is hereby amended to read as follows:

105.3 Application for permit. To obtain a permit, the applicant shall first file a fully completed application therefore in writing on a form furnished by the City of Lacey building official for that purpose. To be considered as fully completed, every such application shall:

A. Include the property owner's name, address and phone number.

B. Include the prime contractor's business name, address, phone number, current state contractor registration number, including a copy of the valid contractor's registration.

C. Identify and describe the work to be covered by the permit for which application is made.

D. Describe the land on which the proposed work is to be done by legal description, the tax parcel number assigned pursuant to Chapter 84.40.160 of the Revised Code of Washington, street address and any additional description that will readily identify and definitely locate the proposed building or work.

E. Indicate the use or occupancy for which the proposed work is intended.

F. Be accompanied by plans, diagrams, computations and specifications, and other data as required in Section 302.2.

G. State the valuation of any new building or structure or any addition, remodeling or alteration to an existing building.

H. Include either:

1. The name, address, and phone number of the office of the lender administering the interim construction financing, if any; or

2. The name and address of the firm that has issued a payment bond, if any, on behalf of the prime contractor for the protection of the owner, if the bond is for an amount not less than fifty percent of the total amount of the construction project.

I. Be signed by the applicant, or the applicant's authorized agent.

J. Give such other data and information as may be required by the building official.

105.3.1 Action on application, amended to read: The building official shall examine or cause to be examined applications for permits and amendments thereto within a reasonable time after filing.

If the application or the construction documents do not conform to the requirements of pertinent laws, the building official shall reject such application in writing, stating the reasons therefor. If the building official is satisfied that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto as required in Section 105.3.1.1 and that the fees specified have been paid, the building official shall issue a permit therefor as soon as practicable.

105.3.1.1 Prerequisites for issuance of permit: The building official shall determine whether the following requirements have been met prior to issuance of a permit:

1. Any requirements or regulations imposed on a project as a condition of a land use approval process;
2. The Site Plan Review Committee has approved the site plan;
3. The landscaping plans have been approved;
4. The required fire apparatus access roads are installed and approved;
5. Water supplies for fire protection are installed and made serviceable;
6. Address(es) are assigned in accordance with LMC 12.04;
7. Plans for the construction of sidewalks; or sidewalks, curbs and gutters have been submitted to the department of public works;
8. Public works construction improvements are completed, or a performance bond is posted with the city;
9. If direct traffic mitigation is required, approved financial security is posted with the city;
10. Any transportation mitigation fees are paid;
11. Approval of design review as required by Lacey Municipal Code Chapter 14.23;
12. Compliance with the state environmental policy act, as adopted by Lacey Municipal Code Chapter 14.24;
13. Compliance with the flood management requirements as adopted by Lacey Municipal Code Chapter 14.34;

14. Compliance with the geologically sensitive areas protection requirements as required by Lacey Municipal Code Chapter 14.37;

15. Compliance with all requirements for final plat as required by Lacey Municipal Code Chapters 15.16.060 C., and 15.28.050;

16. In Planned Residential Developments, construction of at least 50% of the residences in the PRD have been built before any permits can be issued for any commercial uses;

17. For wireless communication facilities (towers), approval of a lease agreement that (a) allows the landholder to enter into leases with other providers and, (b) specifies that if the provider fails to remove the facility upon eighteen months of its discontinued use, the responsibility for removal falls with the landholder;

Section 106.1 shall have a new sentence added to the end of the paragraph as follows:

All plans for construction, erection, enlargement, alteration or repairs of building or structures 4,000 square feet or over shall be designed, prepared and stamped by an architect licensed by the state of Washington.

Section 108.3 shall have a new sentence added to the end of the paragraph as follows:

The value for commonly built structures shall be determined by using the valuation table adopted by the Building Official by policy.

Section **110.2 Certificate issued, amended to read:**

When the building and project site are completed as required in Sections 109.3.10 and 110.2.1, the permittee or authorized agent shall request a final inspection and issuance of the certificate of occupancy. This request shall be on a form provided by the building official. The form shall state that the building owner, building contractor, and where applicable, the building developer certify that "for the benefit of all users and occupants of this building, the building or portion for which this certificate of occupancy request applies meets all applicable codes and regulations of the City of Lacey. Such inspection request form, when submitted to the city, shall include the signatures of both the building owner and building contractor. After the building official inspects the building or structure and project site and finds no violations of the provisions of this code or other laws which are enforced by the code enforcement agency, including any other development regulation adopted by and contained within the Lacey Municipal Code either in whole or by reference, the building official shall issue a certificate of occupancy which shall contain the following:

1. The building permit number.
2. The address of the structure.
3. The name and address of the owner.
4. A description of that portion of the structure for which the certificate is issued.
5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
6. The name of the building official.

7. The edition of the code under which the permit was issued.
8. The use and occupancy, in accordance with the provisions of Chapter 3.
9. The type of construction as defined in Chapter 6.
10. The design occupant load.
11. If an automatic sprinkler system is provided, whether the sprinkler system is required.
12. Any special stipulations and conditions of the building permit.

New Section 110.2.1 **Prerequisites for issuance of certificate of occupancy:** The building official shall determine whether the following requirements have been met, as verified by the appropriate department director or designee, prior to issuance of a certificate of occupancy:

1. All provisions of the codes as noted in Section 110.2.1
2. In multifamily developments, all street signs for all interior streets, whether public or private, complying with city standards, have been installed;
3. All improvements required in Lacey Municipal Code Sections 12.24.010 and 12.24.020, for sidewalk, curb and gutter construction are completed or an instrument of financial security acceptable to the City has been posted with the City;
4. If a property containing five or more dwelling units within the same complex, the property is registered in the Residential Building Rental Registration Program as detailed in Lacey Municipal Code Chapter 14.02;
5. All public works improvements are completed and approved, unless otherwise allowed by the director of public works;
6. All required landscaping improvements are completed or an acceptable instrument of financial security has been posted with the city;
7. If the permitted work is a townhouse development regulated by Lacey Municipal Code Chapter 16.61, final plat or final short plat approval has been completed;
8. All specific project conditions have been completed in accordance with the land use approval.

New Section 110.2.1.1 Financial Security. Financial Security means a method of providing surety of financial performance and may include provision of a bond, assignment of savings, letter of credit or other financial guarantee acceptable to the City. The financial security shall be in the amount equal to 150 percent of the estimated costs for completion of the work covered by the security. All such secured work shall be completed within six months of the date of the issuance of the certificate of occupancy. One six month extension may be granted by the enforcing officer if necessary to complete the work.

Section 110.3, amended as follows:

110.3 Partial Certificate. If the building official finds that substantial hazard will not result from occupancy of a building or portion thereof before the entire building is completed, a partial certificate of occupancy for the use of a portion or portions of a building or structure may be issued prior to the completion of the entire building or structure. The partial certificate of occupancy shall not be issued unless all site

conditions imposed by an official land use approval process are complete and approved as required in Section 110.2.1 and all fire protection and life safety features are operational and approved.

110.6 Violation of requirements for certificate of occupancy. The City Council affirms that the issuance of any certificate of occupancy is of vital importance in the safeguarding of life safety, property safety and health of occupants of any structure; and further, that the enforcement of all city development regulations is of vital importance to the city's economic vitality and the public good. Any person allowing a building to be occupied without a certificate of occupancy first being issued as required by this Chapter shall be subject to the civil penalty provisions of Section 110.6 and is subject to be ordered abated in accordance with the abatement procedures specified in Lacey Municipal Code Chapter 14, including posting to prevent occupancy.

110.6.1 Notice of civil penalty--certificate of occupancy violation.

110.6.1.1. Issuance.

1. When the building official determines that a violation of the certificate of occupancy requirements specified in Chapter 14.03, LMC has occurred or is occurring, the building official shall issue a Notice of Civil Violation to the person responsible for the violation. The "person responsible" can be the property owner, project developer, project superintendent, business owner, corporate owner, an agent of any of those persons, or any other person responsible for the control of the building or structure. Any one or combination of those persons may be cited, either separately or jointly.

110.6.1.2. Content. The Notice of Civil Violation shall include the following information:

1. The name and address of the person responsible for the violation; and
2. The street address or a description sufficient for identification of the building, structure, premises, or land upon or within which the violation has occurred or is occurring; and
3. A description of the violation and a reference to Section 110 as amended herein; and
4. The required date and time by which the conditions preventing the issuance of a certificate of occupancy must be completed after which the city may order the building or structure vacated in accordance with the abatement procedure specified in Chapter 14.16, Lacey Municipal Code; and
5. A statement that the costs and expenses of abatement incurred by the city pursuant to Section 14.40.060(D) and a monetary penalty in an amount per day for each violation as specified in Section 110.6.1.5 may be assessed against the person to whom the Notice of Civil Violation is directed as specified and ordered by the building official.

110.6.1.3. Service of Notice. The building official shall serve the Notice of Civil Violation upon the person to whom it is directed, either personally or by mailing a copy of the Notice of Civil Violation to such person at their last known address. If the person to whom it is directed cannot after due diligence be personally served within Thurston County and if an address for mailed service cannot after due diligence be ascertained, notice shall be served by posting a copy of the Notice of Civil Violation conspicuously on the affected property or structure. Proof of service shall be made by a written declaration under penalty of perjury executed by the person effecting the service, declaring the time and date of service, the manner by which the service was made, and if by posting the facts showing that due diligence was used in attempting to serve the person personally or by mail.

110.6.1.4. Extension. No extension of the time specified in the Notice of Civil Violation for correction of the violation may be granted, except by order of the hearings examiner.

110.6.1.5. Monetary Penalty. The monetary penalty for each separate violation shall be 1% of the permit value of the building or structure, with a minimum of $500.00.

110.6.1.6. Continued Duty to Correct. Payment of the monetary penalty does not relieve the person to whom the Notice of Civil Violation was issued of the duty to correct the violation.

110.6.1.7. Collection of Monetary Penalty.

1. The monetary penalty constitutes a personal obligation of the person to whom the Notice of Civil Violation is directed. Any monetary penalty assessed must be paid to the city of Lacey at the department of community development within ten calendar days from the date of notice from the city that penalties are due.

2. The city shall contract with a collection agency in order to collect monetary penalties from individuals who do not pay within ten calendar days as specified above, or within ten days of the appeal hearing, if such hearing is held.

110.6.1.8. Civil penalties imposed under this chapter shall be paid to the city for deposit in the abatement fund established by LMC Chapter 14.16.

110.6.1.9. The notice of the civil penalty shall be a final order of the city unless, within five days after the notice is received, the person incurring the penalty appeals the penalty by filing a notice of appeal with the department of community development. If a notice of appeal is filed in a timely manner, a hearing shall be conducted by the hearings examiner. Such hearing shall be conducted in accordance with chapters 34.05 and 34.12 RCW, and Section 1D.010 of the Development Guidelines and Public Works Standards. At the conclusion of the hearing, the Hearings Examiner shall determine whether the penalty should be affirmed, reduced, or not imposed and shall issue a final order setting forth the civil penalty assessed, if any. The order issued by the Hearings Examiner may be appealed to superior court.

110.6.1.10. Failure to Appear. If the person to whom the Notice of Civil Penalty was issued fails to appear at the scheduled hearing, the examiner will enter an order finding that the violation occurred and assessing the appropriate monetary penalty. The city will carry out the hearings examiner's order and recover all related expenses, plus the cost of the hearing and any monetary penalty from that person.

110.6.1.11. Appeal to Superior Court. An appeal of the hearings examiner's decision must be filed with the Thurston County Superior Court within twenty calendar days from the date the final appeal decision was mailed to the person to whom the Notice of Civil Penalty was directed, or is thereafter barred.

Add new definition to Section 202: **FAMILY CHILD DAY CARE HOME,** is a child day care facility, licensed by the state, located in the family abode of the person or persons under whose direct care and supervision the child is placed, for the care of twelve or fewer children, including children who reside at the home.

Section 310.1, R-3, amended: Residential occupancies where the occupants are primarily permanent in nature and not classified as R-1, R-2, R-4 or I and where buildings do not contain more than two dwelling units as applicable in Section 101.2, adult family homes, or adult or family child day care homes or facilities that provide accommodations to five or fewer adults or twelve of fewer children for less than 24 hours. Adult and child care facilities that are within a single-family home are permitted to comply with the *International Residential Code* in accordance with Section 101.2.

Add new section 310.3, as follows: Adult Family Homes.

310.3.1 General. This section shall apply to all newly constructed adult family homes and all existing single family homes being converted to adult family homes. This section shall not apply to those adult family homes licensed by the State of Washington Department of Social and Health Services prior to July 1, 2001.

310.3.2 Submittal Standards. In addition to those requirements in Section 106, the submittal shall identify the project as a Group R, Division 3 Adult Family Home Occupancy. A floor plan shall be submitted identifying the means of egress and the components in the means of egress such as stairs, ramps, platform lifts and elevators. The plans shall indicate the rooms used for clients and the sleeping room classification of each room.

310.3.3 Sleeping Room Classification. Each sleeping room in an adult family home shall be classified as:

1. Type S - where the means of egress contains stairs, elevators or platform lifts.

2. Type NS1 - where one means of egress is at grade level or a ramp- constructed in accordance with Chapter 11 is provided.

3. Type NS2 - where two means of egress are at grade level or ramps constructed in accordance with Chapter 11 are provided.

310.3.4 Types of Locking Devices. All bedroom and bathroom doors shall be openable from the outside when locked.

Every closet shall be readily openable from the inside.

310.3.5 Smoke Alarm Requirements. All adult family homes shall be equipped with smoke alarms installed as required for all R-3 occupancies. Alarms shall be installed in such a manner so that the fire warning may be audible in all parts of the dwelling upon activation of a single device.

310.3.6 Escape Windows and Doors. Every sleeping room shall be provided with emergency escape and rescue windows as required for R-3 occupancies.

310.3.7 Fire Apparatus Access Roads and Water Supply for Fire Protection. Adult family homes shall be served by fire apparatus access roads and water supplies meeting the requirements Chapter 5 of the Fire Code for new construction.

Add new Section 313. as follows:

SECTION 313 - REQUIREMENTS FOR GROUP LC OCCUPANCIES

313.1 Group LC Occupancies Defined. Group LC Occupancies shall include buildings, structures, or portions thereof, used for the business of providing licensed care to clients in one of the following categories regulated by either the Washington Department of Health or the Department of Social and Health Services:

1. Adult residential rehabilitation facility.
2. Alcoholism intensive inpatient treatment service.
3. Alcoholism detoxification service.
4. Alcoholism long term treatment service.
5. Alcoholism recovery house service.
6. Boarding home.
7. Group care facility.
8. Group care facility for severely and multiple handicapped children.
9. Residential treatment facility for psychiatrically impaired children and youth.

EXCEPTION: Where the care provided at an alcoholism detoxification service is acute care similar to that provided in a hospital, the facility shall be classified as a Group I, Division 1.1 hospital.

313.2 Construction, Height and Allowable Area.

313.2.1 General. Buildings or parts of buildings classed in Group LC because of the use or character of the occupancy shall be limited to the types of construction set forth in this section.

313.2.1.1 Type of construction. Except as provided herein, LC Occupancy buildings may be of any construction type allowed in this code and shall not exceed the limits specified in Sections 504, 505 and 506.

Group LC Occupancies which are licensed for more than six clients and which are more than two stories in height or which have more than 3,000 square feet (279 m^2) above the first story shall not be less than one-hour fire-resistive construction throughout.

EXCEPTION: Buildings which are licensed for not more than 16 clients may be of Type V-B construction provided:

1. The entire building has an interior wall and ceiling covering consisting of 1/2 inch gypsum wall board or an approved equal installed in accordance with Section 2508; and,

2. An approved smoke-detection system, supervised by an approved central, proprietary or remote station service, is installed throughout the entire structure and is interconnected with any required sprinkler system.

For attic space partitions and draft stops, see Section 717.

313.2.1.2 Area and height. Buildings classified as Group LC Occupancy shall not exceed, in area or height, the limitations set forth in Table 503 for Group R, Division 2 Occupancies.

EXCEPTION: LC Occupancies licensed for six or fewer clients may be of unlimited area provided they are limited to 3 stories or less.

313.2.1.3 Mixed Occupancies. Group LC Occupancies shall be separated from Group H Occupancies by a four-hour fire-resistive occupancy separation and shall be separated from all other occupancies by a one-hour fire-resistive assembly.

EXCEPTIONS: 1. An occupancy separation need not be provided between a Group LC Occupancy licensed for 16 or fewer clients and a carport having no enclosed use above, provided the carport is entirely open on two or more sides.

2. In a Group LC Occupancy licensed or 16 or fewer clients, the one-hour occupancy separation between a Group LC Occupancy and a Group U, Division 1 Occupancy, may be limited to the installation of materials approved for one- hour fire-resistive construction on the garage side and a self-closing, tight-fitting solid-wood door 1 3/8 inches (35 mm) in thickness, or a self-closing tight-fitting door having a fire-protection rating of not less than 20 minutes when tested in accordance with NFPA 252 or UL 10C, without the hose stream test, is permitted in lieu of a one-hour fire assembly. Fire dampers need not be installed in air ducts passing through the wall, floor or ceiling separating a Group LC Occupancy from a Group U Occupancy, provided such ducts within the Group U Occupancy are constructed of

steel having a thickness not less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) and having no openings into the Group U Occupancy.

3. An occupancy separation need not be provided between a Group LC, Boarding Home Occupancy and a Group R, Division 2 Occupancy.

313.3 Location on Property. For fire-resistive protection of exterior walls and openings, as determined by location on property, see Section 503 and Chapter 6. For the purpose of this determination, LC Occupancies licensed for six or fewer clients shall comply with provisions for Group R, Division 3 Occupancies; and all other LC Occupancies shall comply with provisions for Group R, Division 2 Occupancies.

313.4 Access, Means of Egress, and Emergency Escape.

313.4.1 Evacuation capability. Evacuation capability is the ability of the clients of a licensed care facility to respond to an emergency situation and either evacuate a building or move to a point of safety. Clients shall be classified in one of the following levels:

I – persons physically and mentally capable of walking or traversing a normal path to safety, including the ascent and descent of stairs, and capable of self-preservation, without the physical assistance of another person.

II – persons physically and mentally capable of traversing a normal path to safety with the use of mobility aids, but unable to ascend or descend stairs without the physical assistance of another person.

III – persons physically or mentally unable to walk or traverse a normal path to safety without the physical assistance of another person.

313.4.2 Means of egress. Means of egress shall be provided as specified in Chapter 10. For the purpose of determining egress requirements, Group LC Occupancies shall be considered to have an occupant load factor of 300. At least two means of egress shall be required when the number of occupants (clients and staff) is 10 or more. For all other requirements of Chapter 10, Group LC Occupancies licensed for six or fewer clients shall comply with provisions for Group R, Division 3 Occupancies; and all other Group LC Occupancies shall comply with provisions for Group R, Division 2 Occupancies.

EXCEPTIONS: 1. Means of egress illumination required by Section 1006 need not be provided in any Group LC Occupancy licensed for six or fewer clients.

2. In LC Occupancies with an approved automatic fire sprinkler system and approved automatic fire alarm system, waiting and resting areas may be open to the corridor provided:

2.1 Each rest area does not exceed 150 square feet, excluding the corridor width; and

2.2 Walls defining the space shall continue the construction of the corridor's wall; and

2.3 The floor on which the rest area or areas are located is divided into at least two compartments by smoke barrier walls of not less than one-hour fire-resistive construction meeting the requirements of Chapter 7; and

2.4 Combustible furnishings located within the rest area are flame resistant as defined by International Fire Code Section: and

2.5 Emergency means of egress lighting is provided as required by Section 1006 to illuminate the area.

313.4.3 Accessibility. In new construction. Group LC Occupancies regardless of the number of clients shall comply with accessibility standards for Group R. Division 2 apartment buildings or congregate residences as specified in Chapter 11.

Where a Group LC Occupancy is being established by change of occupancy in an existing building, the building shall be altered to comply with apartment building or congregate residence provisions of Chapter 11 if any client is a person with disability. The alterations shall provide the minimum necessary access appropriate for the disabilities of clients. Any alteration, whether to accommodate a client with disability or for another purpose, shall comply with Part III of Chapter 11.

313.4.4 Emergency escape.

313.4.4.1 Location of sleeping rooms. In every licensed care facility, all sleeping rooms occupied by clients with an evacuation capability of II or III shall be located on a grade level floor which provides not less than two means of egress which do not require clients to use stairs, elevator, or platform lift to exit the facility.

EXCEPTIONS: 1. In a Group LC Occupancy licensed to provide care to two or fewer clients with an evacuation capability of II or III and six or fewer total clients, only one means of egress which does not require clients to use stairs, elevator or platform lift to exit the facility need be provided.

2. Sleeping rooms for clients with an evacuation capability of II or III may be located on floors other than at grade level, provided the facility is divided into at least two compartments by smoke barriers of not less than one-hour fire-resistance meeting the requirements of Chapter 7.

313.4.4.2 Escape windows and doors. Every sleeping room below the fourth story (including basements) shall have at least one operable window or door approved for emergency escape or rescue which shall open directly into a public street, public alley, yard or exit court. The emergency window shall be operable from the inside to provide a full, clear opening without the use of separate tools.

EXCEPTION: The window or door may open into an atrium complying with Section 404 provided the window or door opens onto an exit access balcony and the sleeping room has an exit or exit-access doorway which does not open into the atrium.

Escape or rescue windows shall have a minimum net clear openable area of 5.7 square feet (0.53 m^2). The minimum net clear openable height dimension shall be 24 inches (610 mm). The minimum net clear openable width dimension shall be 20 inches (508 mm). When windows are provided as a means of escape or rescue, they shall have a finished sill height not more than 44 inches (1118 mm) above the floor.

Escape and rescue windows with a finished sill height below the adjacent ground elevation shall have a window well. Window wells at escape and rescue windows shall comply with the following:

1. The clear horizontal dimension shall allow the window to be fully opened and provide a minimum accessible net clear opening of 9 square feet (0.84 m^2), with a minimum dimension of 36 inches (914 mm).

2. Window wells with a vertical depth of more than 44 inches (1118 mm) shall be equipped with an approved permanently affixed ladder or stairs that are accessible with the window in the fully open position. The ladder or stairs shall not encroach into the required dimensions of the window well by more than 6 inches (152 mm).

Bars, grilles, grates or similar devices may be installed on emergency escape windows, doors or window wells, provided:

1. The devices are equipped with approved release mechanisms which are operable from the inside without the use of a key or special knowledge or effort; and

2. The building is equipped with smoke detectors installed in accordance with Section 313.8.

313.5 Light, Ventilation and Sanitation.

313.5.1 General. For the purpose of determining the light and ventilation for Group LC Occupancies required by this section, any room may be considered as a portion of an adjoining room when one half of the area of the common wall is open and unobstructed and provides an opening of not less than one tenth of the floor area of the interior room or 25 square feet (2.3 m^2), whichever is greater.

Exterior openings for natural light or ventilation required by this section shall open directly onto a public way or a yard or court as set forth in Section 313.5.4.

EXCEPTIONS: 1. Required exterior openings may open into a roofed porch where the porch:

1.1 Abuts a public way, yard or court; and

1.2 Has a ceiling height of not less than 7 feet (2134 mm); and

1.3 Has a longer side at least 65 percent open and unobstructed.

2. Skylights.

313.5.2 Light. Sleeping rooms and habitable rooms within Group LC Occupancies shall be provided with natural light by means of exterior glazed openings with an area not less than one tenth of the floor area of such rooms with a minimum of 10 square feet (0.93 m^2).

EXCEPTION: Kitchens may be provided with artificial light.

313.5.3 Ventilation. Group LC Occupancies shall comply with provisions for Group R Occupancies as provided in the Washington State Ventilation and Indoor Air Quality Code (Chapter 51-13 of the Washington Administrative Code).

313.5.4 Yards and Courts.

313.5.4.1 General. This section shall apply to yards and courts adjacent to exterior openings that provide required light or ventilation. Such yards and courts shall be on the same property as the building.

313.5.4.2 Yards. Yards shall not be less than 3 feet (914 mm) in width for one-story and two-story buildings. For buildings more than two stories in height, the minimum width of the yard shall be increased at the rate of 1 foot (305 mm) for each additional story. For buildings exceeding 14 stories in height, the required width of the yard shall be computed on the basis of 14 stories.

313.5.4.3 Courts. Courts shall not be less than 3 feet (914 mm) in width. Courts having windows opening on opposite sides shall not be less than 6 feet (1829 mm) in width. Courts bounded on three or more sides by the walls of the building shall not be less than 10 feet (3048 mm) in length unless bounded on one end by a public way or yard. For buildings more than two stories in height, the court shall be increased 1 foot (305 mm) in width and 2 feet (610 mm) in length for each additional story. For buildings exceeding 14 stories in height, the required dimensions shall be computed on the basis of 14 stories.

Adequate access shall be provided to the bottom of all courts for cleaning purposes. Every court more than two stories in height shall be provided with a horizontal air intake at the bottom not less than 10 square feet (0.93 m^2) in area and leading to the exterior of the building unless abutting a yard or a public way. The construction of the air intake shall be as required for the court walls of the building but in no case less than one-hour fire resistive.

313.5.4.4 Eaves. Eaves over required windows shall extend no closer than 30 inches (762 mm) from the side and rear property lines.

313.5.5 Sanitation.

313.5.5.1 General. Sanitation facilities shall comply with Chapter 29 and the provisions of this section. Any room in which a water closet is located shall be separated from food preparation or storage rooms by a self-closing tight-fitting door.

313.5.5.2 Group LC Occupancies with six or fewer clients. Group LC Occupancies licensed for six or fewer clients shall be provided with not less than one water closet, one lavatory and one bathtub or shower.

313.5.5.3 Group LC Occupancies with more than six clients. Group LC Occupancies licensed for more than six clients shall provide not less than one water closet for each 10 male clients, or fractional part thereof, and not less than one water closet for each 8 female clients, or fractional part thereof.

In addition, not less than one lavatory shall be provided for each 12 male clients, or fractional part thereof, and not less than one lavatory for each 12 female clients, or fractional part thereof. Where the number of clients of either sex exceeds 12, one lavatory shall be added for each additional 20 males, or fractional part thereof, and one lavatory shall be added for each additional 15 females, or fractional part thereof.

In addition, not less than one bathtub or shower shall be provided for every eight clients, or fractional part thereof. Where there are female clients, one additional bathtub or shower shall be provided for each 30 female clients, or fractional part thereof. Where the number of total clients exceeds 150, one bathtub or shower shall be provided for each 20 clients, or fractional part thereof, over 150 clients.

313.6 Room Dimensions.

313.6.1 Ceiling heights. Habitable rooms, hallways, corridors, bathrooms, toilet rooms, laundry rooms and basements shall have a ceiling height of not less than 7 feet (2134 mm). The required height shall be measured from the finished floor to the lowest projection from the ceiling.

EXCEPTIONS: 1. Beams and girders spaced not less than 4 feet (1219 mm) on center may project not more than 6 inches (153 mm) below the required ceiling height.

2. Ceilings in basements without habitable spaces may project to within 6 feet 8 inches (2032 mm) of the finished floor, and beams, girders, ducts or other obstructions may project to within 6 feet 4 inches (1931 mm) of the finished floor.

3. Not more than 50 percent of the required floor area of a room or space is permitted to have a sloped ceiling less than 7 feet (2134 mm) in height, with no portion of the required floor area less than 5 feet 91524 mm) in height.

313.6.2 Floor area. Group LC Occupancies shall have at least one room which shall have not less than 120 square feet (11.2 m^2) of floor area. Other habitable rooms except kitchens shall have an area of not less than 70 square feet (6.5 m^2).

Portions of a room with a sloped ceiling measuring less than 5 feet (1524 mm) or a flat ceiling measuring less than 7 feet (2134 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum habitable area for that room.

313.6.3 Width. Habitable rooms other than kitchens shall not be less than 7 feet (2134 mm) in any dimension.

313.7 Shaft and Exit Enclosures. Exits shall be enclosed as specified in Chapter 10.

Elevator shafts, vent shafts, dumbwaiter shafts, clothes chutes and other vertical openings shall be enclosed and the enclosure shall be as specified in Chapter 7.

313.8 Smoke Detectors and Sprinkler Systems.

313.8.1 Smoke detectors.

313.8.1.1 General. Rooms within Group LC Occupancies that are used for sleeping purposes shall be provided with smoke detectors. Detectors shall be installed in accordance with the approved manufacturer's instructions.

313.8.1.2 Additions, alterations or repairs. When the valuation of an addition, alteration or repair to a Group LC Occupancy exceeds $1,000 and a permit is required, or when one or more sleeping rooms is added or created in an existing Group LC Occupancy, smoke detectors shall be installed in accordance with Sections 313.8.1.3 and 313.8.1.4 of this section.

EXCEPTION: Repairs to the exterior surfaces are exempt from the requirements of this section.

313.8.1.3 Power source. In new construction, required smoke detectors shall receive their primary power from the building wiring when such wiring is served from a commercial source and shall be equipped with a battery backup. The detector shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke detectors may be solely battery operated when installed in existing buildings; or in buildings without commercial power; or in buildings which undergo alterations, repairs or additions regulated by Section 313.8.1.2.

313.8.1.4 Location. A detector shall be installed in each sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area. When the Group LC Occupancy has more than one story or in facilities with basements, a detector shall be installed on each story and in the basement. Where a story or basement is split into two or more levels, the smoke detector shall be installed on the upper level, except that when the lower level contains a sleeping area, a detector shall be installed on each level. When sleeping rooms are on an upper level, the detector shall be placed at the ceiling of the upper level in close proximity to the stairway. Where the ceiling height of a room open to a hallway serving the bedrooms exceeds that of the hallway by 24 inches (610 mm) or more, smoke detectors shall be installed in the hallway and in the adjacent

room. Detectors shall sound an alarm audible in all sleeping areas of the Group LC Occupancy in which they are located.

313.8.2 Sprinkler and standpipe systems.

313.8.2.1 Sprinkler Systems. An automatic sprinkler system shall be installed throughout every Group LC Occupancy three or more stories in height or licensed for more than 16 clients. Group LC Occupancies with 16 or fewer clients, licensed to provide care for more than two clients who have an evacuation capability of II or III, shall be provided with an automatic sprinkler system throughout the facility.

EXCEPTION: An automatic sprinkler system need not be installed in any Group LC Occupancy licensed for six or fewer clients regardless of the level of evacuation capability.

Where a sprinkler system is required, a system complying with NFPA 13 shall be installed.

EXCEPTIONS: 1. An automatic sprinkler system complying with NFPA 13-R may be installed in buildings of four stories or less.

2. Where a Group LC Occupancy is being established by change of occupancy in an existing building not protected by a sprinkler system as is required above for buildings of new construction, an automatic sprinkler system complying with NFPA Standard 13d may be installed provided the care facility is licensed for not more than 16 clients.

Residential or quick-response heads shall be used in all sprinkler systems.

313.8.2.2 Standpipe systems. Standpipe systems shall be provided where required by Section 905.

313.9 Fire Alarm Systems. Group LC Occupancies licensed for more than 16 clients shall be provided with an approved manual and automatic fire alarm system. The local alarm shall provide an alarm signal with a sound pressure level of 15 dBA above the average ambient sound level in every occupied space within the building. The minimum sound pressure level shall be 70 dBA. The maximum sound pressure level shall not exceed 110 dBA at the minimum hearing distance from the audible appliance.

313.10 Heating. Group LC Occupancies shall be provided with heating facilities capable of maintaining a room temperature of 70°F (21°C) at a point 3 feet (914 mm) above the floor in all habitable rooms.

313.11 Special Hazards. Chimneys and heating apparatus shall conform to the requirements of Chapter 31 and the Mechanical Code.

In Group LC Occupancies licensed for more than six clients, the storage, use and handling of flammable and combustible liquids shall be in accordance with the Fire Code.

In such facilities, doors leading into rooms in which Class I flammable liquids are stored or used shall be protected by a fire assembly having a one-hour fire-protection rating. Such fire assembly shall be self-closing and shall be posted with a sign on each side of the door in 1-inch (25.4 mm) block letters stating: FIRE DOOR—KEEP CLOSED.

In Group LC Occupancies licensed for more than 16 clients, rooms containing a boiler, central heating plant or hot-water supply boiler shall be separated from the rest of the building by not less than a one-hour occupancy separation.

Add new Section 419, Minimum Crime Prevention Elements.

Section 419 . In all Group R, Division 2 Occupancies consisting of five or more dwelling units, each unit shall be provided with the following crime prevention devices and design considerations:

1. Security locking devices:

   a. Single-cylinder deadbolt locks on all exterior hinged doors;

   b. A reinforced 4-inch strike-plate attached to the wood framing by not less than two No. 8 by 3-inch screws;

   c. A door viewer having a field of vision of not less than 180 degrees;

   d. Secondary security locking device on all sliding doors in addition to the factory-provided door locking device;

   e. Secondary security locking device on all sliding windows in addition to the factory-installed sash-type lock;

   f. Secondary security locking device on all crank-type or jalousie windows separate from the factory-installed crank device.

   All secondary security locks must meet the requirements of Section 310.4, to be openable without keys, any special knowledge or effort..

2. Lighting:

   a. All walkways, hallways, stairwells and entry areas shall be provided with lighting that provides a minimum illumination at floor/ground level of one foot-candle.

   b. All entrance foyers and entryway areas shall be provided with lighting that provides a minimum illumination of three foot-candles at the floor level.

   c. All parking lot lighting shall be provided with timers or photo-electric switching that turns the lighting on automatically at dusk.

3. Fences:

   All fences constructed must be constructed to provide through-visibility. Sight-obscuring fencing is not permitted. Fences in Group R, Division ~~1~~2 Occupancies are not exempt from building permit requirements.

4. Signs:

a. Address numbers shall be provided for all buildings in such a position as to be plainly visible and legible from the street or road fronting the property.

b. One sign, located at an approved location at the entrance to the property shall be provided for a map of the entire complex. This site map shall include the roadway layout, building locations, building addresses.

c. Warning Signs: Each complex shall install a sign, located at an approved location at the entrance to the property containing the words: "No Trespassing On This Property. LMC 9.28.080 – .090."

Section 403.1 Scope. The provisions of this section shall apply to all buildings having occupied floors located more than fifty feet ~~75 feet (22 860 mm)~~ above the lowest level of fire department vehicle access. Such buildings shall be provided with an approved automatic sprinkler system throughout in accordance with Section 403.2.

~~Add new Section 503.3.~~

~~503.3.1 Party walls. Any wall located on a property line between adjacent buildings which is used or adapted for joint service between the two buildings, shall be constructed as a fire wall in accordance with this section, without openings and shall create separate buildings.~~

~~503.3.1.1 General. Each portion of a building separated by one or more fire walls that comply with the provisions of this section shall be considered a separate building. The extent and location of such fire walls shall provide a complete separation. Where a fire wall also separates groups that are required to be separated by a fire barrier wall, the most restrictive requirements of each separation shall apply. Fire walls located on property lines shall also comply with this section. Such fire walls (party walls) shall be constructed without openings.~~

~~503.3.2 Structural stability. Fire walls shall have sufficient structural stability under fire conditions to allow collapse of construction on either side without collapse of the wall for the duration of time indicated by the required fire-resistance rating.~~

~~503.3.3 Materials. Fire walls shall be of any approved non-combustible materials.~~

~~Exception: Buildings of Type V construction.~~

~~503.3.4 Fire-resistance rating. The walls shall have a fire-resistance rating of not less than that required by Table 503.3.4.~~ ~~***(See Table 14T-17)***~~

~~503.3.5 Horizontal continuity. Fire walls shall be continuous from exterior wall to exterior wall and shall extend at least eighteen inches (457 mm) beyond the exterior surface of exterior walls.~~

~~Exceptions:~~

~~1. Fire walls shall be permitted to terminate at the interior surface of combustible exterior sheathing or siding provided the exterior wall has a fire-resistance rating of at least one hour for a horizontal distance of at least four feet (1220 mm) on~~

~~both sides of the fire wall. Openings within such exterior walls shall be protected by fire assemblies having a fire protection rating of not less than ¾ hour.~~

~~2. Fire walls shall be permitted to terminate at the interior surface of noncombustible exterior sheathing, exterior siding or other noncombustible exterior finishes provided the sheathing, siding, or other exterior noncombustible finish extends a horizontal distance of at least four feet (1220 mm) on both sides of the fire wall.~~

~~3. Fire walls shall be permitted to terminate at the interior surface of noncombustible exterior sheathing where the building on each side of the fire wall is protected by an automatic sprinkler system installed in accordance with Section 904.1.2.~~

~~503.3.5.1 Exterior walls. Where the fire wall intersects the exterior walls, the fire-resistance rating for the exterior walls on both sides of the fire wall shall have a one hour fire resistance rating with ¾ hour opening protection where opening protection is required. The fire resistance rating of the exterior wall shall extend a minimum of four feet (1220 mm) on each side of the intersection of the fire wall to exterior wall. Exterior wall intersections at fire walls that form an angle equal to or greater than one hundred eighty degrees (3.14 rad) do not need exterior wall protection.~~

~~503.3.5.2 Horizontal projecting elements. Fire walls shall extend to the outer edge of horizontal projecting elements such as balconies, roof overhangs, canopies, marquees and architectural projections that are within four feet (1220 mm) of the fire wall.~~

~~Exceptions:~~

~~1. Horizontal projecting elements without concealed spaces provided the exterior wall behind and below the projecting element has not less than one hour fire-resistance rated construction for a distance not less than the depth of the projecting element on both sides of the fire wall. Openings within such exterior walls shall be protected by fire assemblies having a fire protection rating of not less than ¾ hour.~~

~~2. Noncombustible horizontal projecting elements with concealed spaces provided a minimum one hour fire resistance rated wall extends through the concealed space. The projecting element shall be separated from the building by a minimum of one hour fire resistance rated construction for a distance on each side of the fire wall equal to the depth of the projecting element. The wall is not required to extend under the projecting element where the building exterior wall is not less than one hour fire resistance rated for a distance on each side of the fire wall equal to the depth of the projecting element. Openings within such exterior walls shall be protected by fire assemblies having a fire protection rating of not less than ¾ hour.~~

~~3. For combustible horizontal projecting elements with concealed spaces, the fire wall need only extend through the concealed space to the outer edges of the projecting elements. The exterior wall behind and below the projecting element shall be of not less than one hour fire-resistance rated construction for a distance not less than the depth of the projecting elements on both sides of the fire wall. Openings within such exterior walls shall be protected by fire assemblies having a fire protection rating of not less than ¾ hour.~~

~~503.3.6 Vertical continuity. Fire walls shall extend from the foundation to a termination point at least thirty inches (762 mm) above both adjacent roofs.~~

~~Exceptions:~~

~~1. Stepped buildings in accordance with Section 503.3.6.1.~~

~~2. Two hour walls shall be permitted to terminate at the underside of the roof sheathing, deck, or slab provided:~~

~~2.1 The lower roof assembly within four feet (1220 mm) of the wall has not less than a one hour fire-resistance rating and the entire length and span of supporting elements for a fire-resistance rating of not less than one hour.~~

~~2.2 Openings in the roof shall not be located within four feet (1220 mm) of the fire wall.~~

~~2.3 Each building shall be provided with not less than a Class B roof covering.~~

~~3. In buildings of Type I or II construction, walls shall be permitted to terminate at the underside of noncombustible roof sheathing, deck, or slabs where both buildings are provided with not less than a Class B roof covering. Openings in the roof shall not be located within four feet (1220 mm) of the fire wall.~~

~~4. In buildings of Type III, IV, and V construction, walls shall be permitted to terminate at the underside of noncombustible roof sheathing, or decks where both buildings are provided with not less than a Class B roof covering. Openings in the roof shall not be located within four feet (1220 mm) of the fire wall.~~

~~5. In buildings of Type III, IV, and V construction, walls shall be permitted to terminate at the underside of fire-retardant-treated wood within four feet (1220 mm) of each side of the fire wall where both buildings are provided with not less than a Class B roof covering. Openings in the roof shall not be located within four feet (1220 mm) of the fire wall.~~

~~6. In Group R-3, walls shall be permitted to terminate at the roof sheathing or deck in Types III, IV and V construction provided:~~

~~6.1 The roof sheathing or deck is constructed of approved noncombustible materials or of fire-retardant-treated wood for a distance of four feet (1220 mm) on both sides of the wall, or~~

~~6.2 The roof is protected with 5/8 inch (15.9 mm) Type X gypsum board directly beneath the underside of the roof sheathing or deck, supported by a minimum of two inch (51 mm) ledgers attached to the sides of the roof framing members, for a minimum distance of four feet (1220 mm) on both sides of the fire wall, and~~

~~6.3 Openings in the roof shall not be located within four feet (1220 mm) of the fire wall, and~~

~~6.4 The roof is covered with a minimum Class C roof covering.~~

~~503.3.6.1 Stepped buildings. Where a fire wall serves as an exterior wall for a building and separates buildings having different roof levels, such wall shall terminate at a point not less than thirty inches (762 mm) above the lower roof level, provided the exterior wall for a height of fifteen feet (4572 mm) above the lower roof is not less than one hour fire-resistance rated construction from both sides with openings protected by assemblies having a ¾ hour fire protection rating.~~

~~Exception: Where the fire wall terminates at the underside of the roof sheathing, deck or slab of the lower roof, provided:~~

~~1. The lower roof assembly within ten feet (3048 mm) of the wall has not less than a one hour fire-resistance rating and the entire length and span of supporting elements for the rated roof assembly has a fire-resistance rating of not less than one hour.~~

~~2. Openings in the lower roof shall not be located within ten feet (3048 mm) of the fire wall.~~

~~503.3.7 Combustible framing in fire walls. Adjacent combustible members entering into a concrete or masonry fire wall from opposite sides shall not have less than a four inch (102 mm) distance between embedded ends. Where combustible members frame into hollow walls or walls of hollow units, hollow spaces shall be solidly filled for the full thickness of the wall and for a distance not less than four inches (102 mm) above, below and between the structural members, with noncombustible materials approved for fireblocking.~~

~~503.3.8 Penetrations. Penetrations through fire walls shall comply with Section 709.~~

~~503.3.9 Joints. Joints made in or between fire walls shall comply with Section 706.~~

~~503.3.10 Ducts and air transfer openings. Ducts and air transfer openings shall not penetrate party walls.~~

~~Section 904.2.4.1 is replaced by Washington Administrative Code 51-40-904.2.4.1.~~

~~Sections 1004.1, 1004.2, 1004.8, 1004.9, 1006.7, 1006.9, 1006.16, 1007.4, 1007.5, 1014.5 and 1014.6.2 are replaced by WAC 51-30 sections 1004.1, 1004.2, 1004.8, 1004.9, 1006.7, 1006.9, 1006.16, 1007.4, 1007.5, 1014.5 and 1014.6.2.~~

Chapter 11. Accessibility is replaced by Chapter 51-40-1100 of the Washington Administrative Code.

~~Section 904~~3.~~2~~6 ~~Subsection 904.2.9~~3.6 ~~is added to read as follows:~~

~~Notwithstanding any less restrictive provision of this section, this code, or any other adopted code, standard automatic sprinkler systems shall be installed throughout all buildings thirty-five or more feet in height, or ten thousand or more square feet in gross floor area, provided, that one four-hour fire area separation~~a ~~fire~~ ~~wall with no openings and provided with a thirty-inch parapet as defined by Uniform Fire Code Appendix III-A, Division III~~as defined by IBC Section 705~~, number 4(b), may be used to maintain the maximum gross floor area stated herein.~~

~~Table 9-A is amended to remove all references to fire hose, and delete references to Class II standpipes and change to Class I. (Ord. 1014 §3, 1995; Ord. 947 §1 (part), 1992; Ord. 875 §3 (part), 1990).~~

~~Section 105.3, Application for Permit, amended as follows:~~

~~Section 105.3 is hereby amended to read as follows:~~

~~105.3 Application for permit. To obtain a permit, the applicant shall first file a fully completed application therefore in writing on a form furnished by the City of Lacey Building division for that purpose. To be considered as fully completed, every such application shall:~~

~~A. Include the property owner's name, address and phone number.~~

~~B. Include the prime contractor's business name, address, phone number, current state contractor registration number, including a copy of the valid contractor's registration.~~

~~C. Identify and describe the work to be covered by the permit for which application is made.~~

~~D. Describe the land on which the proposed work is to be done by legal description, the tax parcel number assigned pursuant to the Revised Code of Washington 84.40.160, street address and any additional description that will readily identify and definitely locate the proposed building or work.~~

~~E. Indicate the use or occupancy for which the proposed work is intended.~~

~~F. Be accompanied by plans, diagrams, computations and specifications, and other data as required in Section 302.2.~~

~~G. State the valuation of any new building or structure or any addition, remodeling or alternation to an existing building.~~

~~H. Include either:~~

~~1. The name, address, and phone number of the office of the lender administering the interim construction financing, if any; or~~

~~2. The name and address of the firm that has issued a payment bond, if any, on behalf of the prime contractor for the protection of the owner, if the bond is for an amount not less than fifty percent of the total amount of the construction project.~~

~~I. Be signed by the applicant, or the applicant's authorized agent.~~

~~J. Give such other data and information as may be required by the building official.~~

~~Section 110.3, amended as follows:~~

~~110.3 Partial Certificate. If the building official finds that substantial hazard will not result from occupancy of a building or portion thereof before the entire building is completed, a partial certificate of occupancy for the use of a portion or portions of a building or structure may be issued prior to the completion of the entire building or~~

~~structure. The partial certificate of occupancy shall not be issued unless all site conditions imposed by an official land use approval process are complete and approved and all fire protection and life safety features are operational and approved~~

~~Section 109.1 Amended. The exception to Section 109.1 reads as follows: Exception: Group U Occupancies.~~

~~Section 1003.3.3.3 amended. Rise and run. The rise of steps and stairs shall not be less than 4 inches (102mm) nor more than 7 inches (178mm). Except as permitted in Sections 1003.3.3.8.1, 1003.3.3.8.2, and 1003.3.3.8.3, the run shall not be less than 11 inches (279mm) as measured horizontally between the vertical planes of the furthermost projection of adjacent treads or nosings. (Ord. 1166 §1, 2001; Ord. 1128 §1, 2000; Ord. 1097 §13, 1999).~~

Section 14: A new section 14.04.016 is hereby added to the Lacey Municipal Code to read as follows"

14.04.016 Amendments--*Addition*. The following sections of the International Residential Code as adopted in Section 14.04.010 are amended to read as follows:

Section R101.1 Title, amended to read as follows: These provisions shall be known as the *Residential Code for One- through Four-Unit Dwellings* of the City of Lacey, and shall be cited as such and will be referred to as "this code."

Section R101.2 Scope, amended as follows: The provisions of the *International Residential Code for One- through Four-Unit Dwellings* shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- through four-unit dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with a separate means of egress and their accessory structures.

Table R301.2(a), Climatic and Geographic Design Criteria, to be filled-in as follows:

Ground Snow Load:	20 psf	
Wind Speed (mph):	85	
Seismic Design Category:	D1	
Subject to Damage From		
Weathering:	Moderate	
Frost Line Depth:	12"	
Termite:		Slight to Moderate
Decay:		Slight to Moderate
Winter Design Temp.:	17° F	
Ice Shield Underlayment Req.:	No	
Air Freezing Index:	N/A	
Mean Annual Temperature:	50° F	

Section 15: Section 14.04.020 of the Lacey Municipal Code is hereby amended to read as follows:

14.04.020 Violation deemed misdemeanor. Any violation of the provisions of the International ~~Uniform~~ Building Code or International Residential Code as herein adopted is a misdemeanor.

Section 16: Section 14.04.025 of the Lacey Municipal Code is hereby repealed.

Section 17: The title of Chapter 14.05 of the Lacey Municipal Code is hereby amended to read as follows:

~~UNIFORM~~ INTERNATIONAL **MECHANICAL CODE**

Section 18: Section 14.05.010 of the Lacey Municipal Code is hereby amended to read as follows:

14.05.010 Adopted. There is adopted by this reference and made a part of this chapter as though fully set forth herein, at length, that certain code, known as the International ~~Uniform~~ Mechanical Code, 2003 ~~1997~~ Edition, published by the International ~~Conference of Building Officials~~Code Council, and the International Fuel Gas Code, 2003 Edition, except that the standards for liquified petroleum gas installations shall be NFPA 58 (Storage and Handling of Liquified Petroleum Gases) and ANSI Z223.1/NFPA 54 (National Fuel Gas Code)~~;~~ ~~as amended by Washington Administrative Code 51-42~~ as the mechanical code of the city; provided that those sections of the International ~~Uniform~~ Mechanical Code set forth in Section 14.05.015 are amended or deleted as set forth in said section.

Section 19: Section 14.05.015 of the Lacey Municipal Code is hereby amended to read as follows:

14.05.015 Amendment. **Section 202** Unusually Tight Construction, is amended to add a new subsection 4.: Buildings built in compliance with the 1986 or later editions of the Washington State Energy Code, Northwest Energy Code, or Super Good Cents weatherization standards or equivalent.

~~Section 509.3 is amended to read:~~

- ~~509.3 Type of System. The system used for the protection of commercial cooking equipment shall be a system complying with UL Standard 300.~~
- ~~Systems shall be installed in accordance with this code, their listing and the manufacturer's installation instructions.~~

~~Section 509.4.2 and Section 509.5.2 are hereby deleted from this adoption. (Ord. 1097 §15, 1999).~~

Add new subsection, as follows: **901.5 HEATING**

901.5.1 Definitions. For the purposes of this section only, the following definitions apply.

DESIGNATED AREAS are those areas designated by a county to be an urban growth area in Chapter 36.70A of the Revised Code of Washington and those areas designated by the US Environmental Protection Agency as being in nonattainment for particulate matter.

SUBSTANTIALLY REMODELED means any alteration or restoration of a building exceeding 60 percent of the appraised value of such building within a 12 month period.

901.5.2 Primary Heating Source. Primary heating sources in all new and substantially remodeled buildings in designated areas, shall not be dependent upon wood stoves.

901.5.3 Solid Fuel Burning Devices. No used solid fuel burning device shall be installed in new or existing buildings unless such device is United States Environmental Protection Agency certified or a pellet stove either certified or exempt from certification by the United States Environmental Protection Agency.

EXCEPTION: Antique wood cook stoves and heaters manufactured prior to 1940.

Sections 1004, 1005, 1006, 1007, 1008, 1009, 1010 and 1011 relating to boilers and pressure vessels are not adopted. Boilers and pressure vessels are regulated by Chapter 70.79 of the Revised Code of Washington and chapter 296-104 of the Washington Administrative Code.

Section 20: Section 14.05.020 of the Lacey Municipal Code is hereby amended to read as follows:

14.05.020 Violation deemed misdemeanor. Any violations of the provisions of the International ~~Uniform~~ Mechanical Code as herein adopted constitute a misdemeanor.

Section 21: Section 14.05.025 of the Lacey Municipal Code is hereby repealed.

Section 22: Section 14.06.010 of the Lacey Municipal Code is hereby amended to read as follows:

14.06.010 Adopted. The Uniform Plumbing Code, 2000~~1997~~ Edition, published by the International Association of Plumbing and Mechanical Officials, as amended by the Washington Administrative Code 51-46, including Appendix M as amended. PROVIDED, That any provisions of such code affecting fuel gas piping are not adopted, is adopted as the plumbing code for the city, ~~provided that Chapters 11 and 12 are not adopted: proved further that those requirements relating to venting and combustion of air of fuel fired appliances as found in Chapter 5 are not adopted~~. All requirements of the Uniform Plumbing Code relating to building sewers are adopted.

Section 23: The title of chapter 14.07 of the Lacey Municipal Code is hereby amended to read as follows:

~~UNIFORM~~ INTERNATIONAL **FIRE CODE**

Section 24: Section 14.07.010 of the Lacey Municipal Code is hereby amended to read as follows:

14.07.010 Adopted. There is adopted, except as amended in this chapter, that certain code known as the ~~Uniform~~International Fire Code, ~~1997~~2003 Edition, ~~Volumes I, and II, as amended by the Washington Administrative Code 51-11~~including those standards of the National Fire Protection Association specifically referenced in the International Fire Code: PROVIDED, That, notwithstanding any wording in this code, participants in religious ceremonies shall not be precluded from carrying hand-held candles. Sections ~~901.2.2.1~~ 503 Fire ~~A~~apparatus ~~A~~access ~~R~~roads~~; and 902.2 Fire Apparatus Access Roads, through 902.2.4.1 Obstruction and control of fire apparatus access roads are~~ is also adopted. ~~Section 1003.3.1 and Section 1007 of said code are not adopted.~~ Finally, such adoption shall include Appendices ~~I-C Stairway Identification; II-B, Protection of Flammable and Combustible Liquid Tanks in Locations Subject to Flooding, II-C, Marinas; II-D, Rifle Ranges; II-E, Hazardous Materials Management Plans and Hazardous Materials Inventory Statements; II-F, Protected Aboveground Tanks for Motor Vehicle Fuel-dispensing Stations Outside Buildings; II-G, Secondary Containment for Underground Tank Systems Containing Flammable or Combustible Liquid Tank Leaks; II-J Storage of Flammable and Combustible Liquids in Tanks Located with Belowgrade Vaults; III-A, Fire Flow Requirements for Buildings; III-C, Inspection, Testing and Maintenance of Water-based Fire protection Systems; III-D, Basement Pipe Inlets; IV-A, Interior Floor Finish; IV-B, Hazard Ranking; VI-C Emergency Relief Venting for Fire Exposure for Aboveground Tanks; VI-E, Reference Tables from the Uniform Building Code; VI-F, Recommended Separation Distances for Explosive Materials; VI-G, Cryogenic Fluids Weight and Volume Equivalents; VI-H, Refrigerant Groups and Properties and VI-I, Unit Conversion Tables~~A, B, D, E, F, G.

Section 25: Section 14.07.015 of the Lacey Municipal Code is hereby amended to read as follows:

14.07.015 ~~Definitions.~~Amendments---Additions

~~A. Wherever the word "jurisdiction" is used in the Uniform Fire Code, it means the city of Lacey.~~

~~B. Wherever the term "corporate counsel" is used in the Uniform Fire Code, it means the attorney for the city.~~

~~C. "Fire department" means Thurston County Fire Protection District No. 3, a municipal corporation, which agency is under contract to provide fire protection, inspection, and other related services to the city.~~

~~D. "Fire chief" means the fire chief of Thurston County Fire Protection District No. 3.~~

~~(Ord. 947 §1 (part), 1992; Ord. 875 §6 (part), 1990).~~

Section 101.1 Title. [Amended section] These regulations shall be known as the Fire Code of the City of Lacey, hereinafter referred to as "this code."

A. Wherever the word "jurisdiction" is used in the International Fire Code, it means the City of Lacey

B. Wherever the term "corporate counsel" is used in the International Fire Code, it means the attorney for the City.

C. "Fire Department" means Thurston County Fire Protection District No. 3, a municipal corporation, which agency is under contract to provide related services to the City.

D. "Fire Chief", for the purpose of Section 104.11 means the fire chief of Thurston County Fire Protection District No. 3. For all other purposes in the code, "fire chief" means the fire code official.

Section 103.1 General. [Amended section] The department of fire prevention, also known as the Fire Marshal Office, is established within the jurisdiction under the direction of the fire code official. The function of the department shall be the implementation, administration and enforcement of the provisions of this code.

Section 105.1.1 Permits required. [Amend section] Permits required by this code shall be obtained from the Lacey Community Development, Building Department. Permit fees, if any, shall be paid prior to issuance of the permit. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the fire code official and the building code official.

Section 105.4.1 Submittals. [Amend section] Submittals shall be made to the Lacey Community Development, Building Department. Construction documents shall be submitted in one or more sets and in such form and detail as required by the fire code official. More specifically, for fire alarm systems three sets are required and for automatic sprinkler systems four sets are required. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed and have licenses and credentials as required by the State of Washington. All companies installing fire protection systems within the City of Lacey shall have a City of Lacey business license.

In addition to the requirements of this section fire alarm equipment shall be installed and maintained by individuals who are in compliance with RCW 19.28 and WAC 296-401-060 as approved by the electrical authority having jurisdiction. All companies installing fire alarm systems shall have a state electrical contractor's license.

Section 105.7.3 Fire alarm and detection systems and related equipment. [amend section] A construction permit is required for installation of or modification to fire alarm and detection systems and related equipment.

Exception: Household fire warning equipment installed in Group Use R-3 occupancies.

Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

Section 202 GENERAL DEFINITIONS. [Add the following definition:]

FIRE APPARATUS. See Section 502.1.

FIRE CODE OFFICIAL. The designated authority charge with the administration of the code, or a duly authorized representative.

Section 501.4 Timing of Installation. [Amended section] When fire apparatus access roads or a water supply for fire protection is required to be installed, such protection shall be installed and made serviceable prior to issuance of any building permit for the project, except grading permits, and during the time of construction except when approved alternative methods of protection are provided. Temporary street signs shall be installed at each street intersection when construction of new roadways allow passage by vehicles in accordance with Section 505.2.

Section 502.1 Definitions. [Add the following definition:]

FIRE APPARATUS. Fire apparatus is a vehicle such as a fire pumper, aerial ladder truck, fire tender, elevated platform, rescue squad, fire ground support vehicle or similar firefighting or reserve equipment, including emergency medical response vehicles.

Section 503.1.1 Buildings and facilities. [Amend section] Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45.72 m) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

> **Exception:** The fire code official is authorized to increase the dimensions of 150 feet (45.72 m) where:
>
> 1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.
> 2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.
> 3. There are not more than two Group R-3 or Group U occupancies. This exception does not apply to Adult Family Homes.

In addition to the provision of Exception "3" of this section, adult family homes shall be served by fire apparatus access roads as if new construction.

Section 503.1.4 Obstruction prohibited. [Add new section] Parking of motor vehicles or otherwise obstructing marked fire lanes is prohibited and the violation of the prohibition constitutes a misdemeanor.

Section 503.2.8 Distance from Structures. [Add new section] Fire apparatus access roadways shall be a minimum of 10 feet away from the exterior wall of structures, or as otherwise required due to construction type.

Section 503.6 Security gates. [Amend section] The installation of security gates across a fire apparatus access road shall be approved by the code official. Where security gates are installed, they shall have an approved means of emergency operation:

All residential, commercial, or industrial developments which are to be constructed with their access points containing locking gates shall be constructed in a manner which includes the installation of an emergency vehicle preemption system to open all such gates to allow for immediate entry of emergency vehicles into the development. Such system shall be a priority control system that employs data-encoded infrared communication to identify the emergency response vehicle. The type of system to be installed must be compatible with the traffic signal priority control system used by the City of Lacey. The design and final installation of the system must be approved by the City of Lacey. Further, such system must be maintained in proper working order by the owners of the development or the proper homeowners or business owners association, whichever shall be the case.

The security gates and the emergency operation shall be maintained operational at all times.

Section 503.7 Enforcement. [Add new section] Enforcement of Section 503.1.4 of the International Fire Code shall be the responsibility of the city police department which shall have the authority to impound or otherwise cause such obstruction to be removed, and said remedies shall be in addition to the criminal penalties provided by the Lacey Municipal Code.

Section 508.5.1 Where required. [Amend section] Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.

Exceptions:

1. For Group R-3 and Group U occupancies, the distance requirement shall be 600 feet. (183 m) and need only provide water supply in accordance with this section when required as a condition of a modification or installation of a public water system, or a condition of platting and/or other land use approval.
2. For buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 the distance requirement shall be 600 feet (183 m).

Adult family homes shall be provided with fire flow as if new construction for a Group R-3 occupancy.

Section 508.5.7 Fire hydrant locations and distribution. [Add new section] Public and private fire hydrants shall be provided as required in Sections 508.5.7.1 through 508.5.7.8. Fire hydrants shall be placed in locations approved by the code official and along fire apparatus access roads and adjacent public streets.

508.5.7.1 Spacing on public and private roads. Fire hydrants shall be placed on public and private roads every 330 feet when serving all occupancies other than Group Use R-3 and U. For Group Use R-3 and U occupancies fire hydrants shall be placed every 660 feet.

508.5.7.2 At intersections. Fire hydrants shall be placed at all intersections of public and private roads.

Exception: A fire hydrant may be omitted at the discretion of the code official from an intersection where there is an adjacent intersection with a hydrant that is separated by not more than one residential lot.

508.5.7.3 Minimum number of hydrants. There shall never be less than two fire hydrants available for any occupancy other than Group R-3 and U occupancies, larger than five hundred square feet of ground floor area. Where water supply for fire protection is required the minimum number of fire hydrants shall be determined by a ratio of one fire hydrant per each 1,000-gpm water flow or fraction thereof.

508.5.7.4 Fire Department Connections. A fire hydrant shall be located within 40 feet of a fire department connection.

508.5.7.5 Distance from buildings. Fire hydrants shall be placed no closer than 40 feet from the building or structure protected.

508.5.7.6 On-site hydrants. Buildings or structures having a water flow requirement of 2,500 gpm or more shall be protected by hydrants spaced an average of 300 feet and supplied by looped 8 inch or larger water mains around the building.

508.5.7.7 Arterial Roads. In no case shall hydrants which are located across any roadway designated as an arterial by the Department of Public Works be considered available.

508.5.7.8 Existing fire hydrants. Existing fire hydrants on public streets are allowed to be considered as available. Existing fire hydrants on adjacent properties shall not be considered available unless fire apparatus access roads extend between properties and easements are established to prevent obstruction of such roads.

Section 903.2 Where required. [Amend section] Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.

Exception: Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided those spaces or areas are equipped throughout with an automatic fire alarm system and are separated from the remainder of the building by a wall with a fire-resistance rating of not less than 1 hour and a floor/ceiling assembly with a fire-resistance rating of not less than 2 hours.

Notwithstanding any less restrictive provision of this section, this code, or any other adopted code, standard automatic sprinkler systems shall be installed throughout all buildings thirty-five or more feet in height, or ten thousand or more square feet in gross floor area, provided, that one four-hour fire resistive fire wall without openings as

defined in Section B104.2 of Appendix B may be used to maintain the maximum gross floor area stated herein.

Section 903.2.2 Group E [Amend section] Notwithstanding any other requirements of this section, an automatic fire-extinguishing system shall be installed in all newly constructed buildings classified as Group E Occupancies used for educational purposes through the 12th grade by 50 or more persons for more than 12 hours per week or four hours in any one day.

For the purpose of this section, additions exceeding 60 percent of the value of such building or structure, or alterations and repairs to any portion of a building or structure within a twelve-month period that exceeds 100 percent of the value of such building or structure shall be considered new construction. In the case of additions, area separation walls shall define separate buildings.

Exception: Portable school classrooms, provided:

1. Aggregate area of clusters of portable school classrooms does not exceed 5,000 square feet (1465 m^2); and
2. Clusters of portable school classrooms shall be separated as required in the International Building Code.

When not required by other provisions of this chapter, a fire-extinguishing system installed in accordance with NFPA 13 may be used for increases and substitutions allowed in Sections 504, 506 and 507 of the International Building Code.

Section 903.2.14 Group LC occupancies [Add new section] An automatic sprinkler system shall be installed throughout every Group LC Occupancy three or more stories in height or licensed for more than 16 clients. Group LC Occupancies with 16 or fewer clients, licensed to provide care for more than two clients who have an evacuation capability of II or III, shall be provided with an automatic sprinkler system throughout the facility.

Exception: An automatic sprinkler system need not be installed in any Group LC Occupancy licensed for six or fewer clients regardless of the level of evacuation capability.

Where a sprinkler system is required, a system complying with NFPA 13 shall be installed.

Exceptions:

1. An automatic sprinkler system complying with NFPA 13-R may be installed in buildings of four stories or less.
2. Where a Group LC Occupancy is being established by change of occupancy in an existing building not protected by a sprinkler system as is required above for buildings of new construction, an automatic sprinkler system complying with NFPA Standard 13D may be installed provided the care facility is licensed for not more than 16 clients.

Residential or quick-response heads shall be used in all sprinkler systems.

Section 903.3.7 Fire department connections. [Amend section] The location of fire department connections shall be approved by the fire code official. A fire department connection shall be located within 40 feet of a fire hydrant.

Section 903.4.1 Signals. [Amend section] Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved central station. with central station service ~~remote supervising station or proprietary supervising station~~ as defined NFPA 72.

Exceptions:

1. Underground key or hub valves in roadway boxes provided by the municipality or public utility are not required to be monitored.
2. Backflow prevention device test valves, located in limited area sprinkler system supply piping, shall be locked in the open position. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.

Section 905.3 Required installations. [Amend section] Standpipe systems shall be installed where required by Sections 905.3.1 through 905.3.6 and in the locations indicated in Sections 905.4, 905.5 and 905.6. Standpipe systems shall be combined with automatic sprinkler systems and each standpipe connection or station shall be provided with the greater of the flow requirements as stipulated in NFPA 13 and NFPA 14.

Exception: Standpipe systems are not required in Group R-3 occupancies.

Section 906.2 General requirements. [Amend section] Fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10.

Exceptions:

1. The travel distance to reach an extinguisher shall not apply to the spectator seating portions of Group A-5 occupancies.
2. In addition to the maintenance requirements of NFPA 10, all portable fire extinguishers shall be subject to internal maintenance at least annually and at such additional times as shall be indicated by an inspection. However, internal maintenance is not required on portable CO_2 fire extinguishers provided that they are maintained per the NFPA 10.

Section 907.1.2 Equipment. [Amend section] Systems and their components shall be listed and approved for the purpose for which they are installed.

The fire alarm control panel, remote annunciator panel and access keys to locked fire alarm equipment shall be installed and maintained in locations approved by the fire code official.

Section 907.2 Where required – new buildings and structures. [Amend section] An approved manual, automatic, or manual and automatic fire alarm system shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.24.

Fire alarm systems required by Sections 907.2.1 through 907.2.24 shall be of an addressable type.

Exception: Group R-3 occupancies.

Where automatic sprinkler protection is installed in accordance with Section 903.3.1.1 or 903.3.1.2 is provided and connected to the building fire alarm system, automatic heat detection required by this section shall not be required. Automatic sprinkler protection installed in accordance with Section 903.1.1 or 903.3.1.2 shall be ~~provided with~~ monitored by central station, with central station service ~~remote supervising station or proprietary supervising station monitoring service~~ as defined in NFPA 72.

In addition to the requirements of this section an approved addressable fire alarm system shall be provided in all buildings containing 7,500 square feet of gross floor area or greater.

Exception: Group U occupancies.

An approved automatic fire detection system shall be installed in accordance with the provisions of this code and NFPA 72. Devices, combinations of devices, appliances and equipment shall comply with Section 907.1.2. The automatic fire detectors shall be smoke detectors, except that an approved alternative type of detector shall be installed in spaces such as boiler rooms where, during normal operation, products of combustion are present in sufficient quantity to actuate a smoke detector.

[The remainder of this section is as printed in the International Fire Code and as amended by Chapter 14.07 of the Lacey Municipal Code.]

Section 907.2.10.1.2 Groups R-2, R-3, R-4, I-1 and Adult Family Homes. [Amend section] Single or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-3, R-4, I-1 and Adult Family Homes regardless of occupant load at all of the following locations:

1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms.
2. In each room used for sleeping purposes.
3. In each story within a dwelling unit, including basements but not including crawl spaces and uninhabitable attics. In dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

In addition to the above requirements Adult Family Home alarms shall be installed in such a manner so that the fire warning may be audible in all parts of the dwelling upon activation of a single device.

Section 907.2.24 LC occupancies. [New section] Notwithstanding other requirements of Section 907 the following applies to LC occupancies:

Section 907.2.24.1 Smoke detectors. Smoke detectors shall be provided as required in sections 907.2.24.1.1 through 907.2.24.1.4.

Section 907.2.24.1.1 General. Rooms within Group LC Occupancies that are used for sleeping purposes shall be provided with smoke detectors. Detectors shall be installed in accordance with the approved manufacturer's instructions.

Section 907.2.24.1.2 Additions, alterations or repairs. When the valuation of an addition, alteration or repair to a Group LC Occupancy exceeds $1,000 and a permit is required, or when one or more sleeping rooms is added or created in an existing Group LC Occupancy, smoke detectors shall be installed in accordance with Section 907.2.24.1.3 and 907.2.23.1.4 of this section.

Section 907.2.24.1.3 Power source. In new construction, required smoke detectors shall receive their primary power from the building wiring when such wiring is served from a commercial source and shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke detectors may be solely battery operated when installed in existing buildings; or in buildings without commercial power; or in buildings which undergo alterations, repairs or additions regulated by Section 907.2.24.1.2.

Section 907.2.24.1.4 Location. A detector shall be installed in each sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area. When the Group LC Occupancy has more than one story or in facilities with basements, a detector shall be installed on each story and in the basement. Where a story or basement is split into two or more levels, the smoke detector shall be installed on the upper level, except that when the lower level contains a sleeping area, a detector shall be installed on each level. When sleeping rooms are on a upper level, the detector shall be placed at the ceiling of the upper level in close proximity to the stairway. Where the ceiling height of a room open to a hallway serving the bedrooms exceeds that of the hallway by 24 inches (610 mm) or more, smoke detectors shall be installed in the hallway and in the adjacent room. Detectors shall sound an alarm audible in all sleeping areas of the Group LC Occupancy in which they are located.

Section 907.2.24.2 Fire alarm systems. Group LC Occupancies licensed for more than 16 clients shall be provided with an approved manual and automatic fire alarm system. The local alarm shall provide an alarm signal with a sound pressure level of 15 dBA above the average ambient sound level in every occupied space within the building. The minimum sound pressure level shall not exceed 110 dBA at the minimum hearing distance from the audible appliance.

Section 907.3 Where required – retroactive in existing buildings and structures. [Amend section] An approved manual, automatic or manual and automatic fire alarm system shall be installed in existing buildings and structures in accordance with Sections 907.3.1 through 907.3.1.8. Where automatic sprinkler protection is provided in accordance with Section 903.3.1.1 or 903.3.1.2 and connected to the building fire alarm system, automatic heat detection required by this section shall not be required.

Buildings with fire alarm systems that were required by previously adopted editions of the Lacey Fire Alarm Code shall continue to operate and maintain such fire alarm

systems in accordance with the authorized Lacey Fire Alarm Code edition, this code, NFPA 72 and nationally recognized standards.

An approved automatic fire detection system shall be installed in accordance with the provisions of this code and NFPA 72. Devices, combinations of devices, appliances and equipment shall be approved. The automatic fire detectors shall be smoke detectors, except an approved alternative type of detector shall be installed in spaces such as boiler rooms where, during normal operation, products of combustion are present in sufficient quantity to actuate a smoke detector.

Automatic sprinkler protection shall be ~~provided with~~ monitored by central station, with central station service ~~remote supervising station or proprietary supervising station monitoring service~~ as defined in NFPA 72.

[The remainder of this section is as printed in the International Fire Code.]

Section 907.9.2 Separate Zones. [Amend section] In buildings that have floors located above or below the lowest level of fire department vehicle access that are occupied for human occupancy, a separate zone by floor shall be provided for all of the following types of alarm-initiating devices where provided:

1. Smoke detectors.
2. Sprinkler water-flow devices.
3. Manual fire alarm boxes.
4. Other approved types of automatic fire detection devices or suppression systems.

Section 907.10.1.5 Accessibility. [New section] Notwithstanding the requirements of Section 907.10 additional visual alarm devices shall be provided in locations as required by the Washington State Building Code requirements for accessibility by persons with disabilities.

Section 907.15 Monitoring. [Amend section] Where required by this chapter or by the International Building Code, an approved central station, with central station monitoring ~~remote supervising station or proprietary supervising station~~ in accordance with NFPA 72 shall monitor fire alarm systems.

Exception: Supervisory service is not required for:

1. Single- and multiple-station smoke alarms required by Section 907.2.10.
2. Smoke detectors in Group I-3 occupancies.
3. Automatic sprinkler systems in one- and two-family dwellings.

A copy of the monitoring contact agreement between companies that provide central or remote supervising services and the protected premise, shall be provided to the fire code official prior to the issuance of a Certificate of Occupancy. Any change in the service agreement shall be provided to the Fire Code Official within 10 working days.

Section 907.20.5 Maintenance, inspection and testing. [Amend section] The building owner shall be responsible for insuring that the fire and life safety systems are maintained

in an operable condition at all times. Service personnel shall meet the qualification requirements of NFPA 72 for maintaining, inspecting and testing such systems. A written record shall be maintained and shall be made submitted, within two weeks, to the fire code official.

New and existing fire alarm systems in the City of Lacey shall have a maintenance contract in effect with a fire alarm company or qualified person(s) approved by the fire code official. Maintenance contracts shall specify all required inspections/tests and shall specify that fire alarm repairs be made within 24 hours of a notification trouble signal. A copy of the maintenance contract and testing agreement, signed by the building owner, shall be on record with the fire code official prior to scheduling of final acceptance testing.

Section 907.21 False alarms. [New section] For any fire alarm system having two false alarms occurring within and one calendar year starting January 1st and ending December 31st, a response fee of $50.00 (fifty dollars) shall be charged for the second false alarm. With the invoice of the response fee for the second false alarm, the fire code official shall notify the responsible party in writing that they will be held responsible for the actual fire department response cost for any subsequent false alarms occurring within that same calendar year. The cost to respond shall be based on the fee schedule established by Lacey Fire District Three. All fees shall be payable to the responding fire department authority.

Section 907.22 Areas of evacuation assistance. [New section] A telephone with controlled access to the fire alarm control system for two-way communications shall be provided between each area for evacuation assistance and the fire alarm monitoring center. The telephone or other two-way communication system shall be located within the reach ranges as specified in the Washington State Building Code requirements for accessibility by persons with disabilities. The emergency communication system must be visible when the telephone is activated. This non-verbal means must enable the fire alarm monitoring center to determine the area or areas of evacuation assistance.

Section 912 Location. [Amend section] With respect to hydrants, driveways, buildings and landscaping, fire department connections shall be so located that fire apparatus and hose connected to supply the system will not obstruct access to the building for other fire apparatus. The location of the fire department connection shall be approved and shall not be greater than 40 feet from a fire hydrant.

[The remainder of this section is as printed in the International Fire Code.]

Section 3404.2.9.5.1 Locations where above-ground tanks are prohibited. [Clarification of section] The limits referred to in Section 3404.2.9.5.1 of the International Fire Code in which storage of Class I and Class II liquids outside in aboveground storage tanks is prohibited are established as all areas of the City, except for tanks that comply with Section 3404.2.8 Vaults.

Section 3404.3.4.5 LC occupancies. [New section] In Group LC Occupancies licensed for more than six clients, the storage, use and handling of flammable and combustible liquids shall be in accordance with the this code. In such facilities, doors leading into rooms in which Class I flammable liquids are stored or used shall be protected by a fire

assembly having a one-hour fire protection rating. Such fire assembly shall be self-closing and shall be posted with a sign on each side of the door in 1-inch (25.4 mm) block letters stating: FIRE DOOR – KEEP CLOSED.

Section 3804.2 Maximum capacity within established limits. [Clarification of section] The limits referred to in Section 3804.2 of the International Fire Code in which liquefied petroleum gas is restricted are established as all areas of the City with the zoning designation other than that of light industrial when referring to above-ground containers.

Section B105.1 One- and two-family dwellings. [Amend section] The minimum fire-flow requirements for one- and two-family dwellings having a fire-flow calculation area which does not exceed 3,600 square feet (344.5 M^2) shall be 750 gallons per minute for each hydrant providing fire flow. Fire flow and flow duration for dwellings having a fire-flow calculation area in excess of 3,600 (344.5 M^2) square feet shall not be less than that specified in Table B105.1.

Section B105.2 Buildings other than one- and two-family dwellings. [Amend section] The minimum fire flow and flow duration for buildings other than one- and two-family dwellings shall be as specified in Table B105.1.

Exception:

1. A reduction in required fire flow of up to 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the International Fire Code. Where buildings are also of Type I or II construction and are a light-hazard occupancy as defined by NFPA 13, or where buildings are also provided with quick response sprinkler heads throughout, the reduction may be up to 75 percent. The resulting fire flow shall not be less than 1,500 gallon per minute (5678 l/min) for the prescribed duration as specified in Table B105.1.

2. For buildings not equipped with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the International Fire Code throughout the minimum fire flow obtained in Table B105.1 shall be further modified by Table B 105.2. The resulting fire flow shall not be less than 1,500 gallon per minute (5678 l/min) for the prescribed duration as specified in Table B105.1.

TABLE B105.2

OCCUPANCY FIRE FLOW MODIFIERS

Percentage of Base Fire Flow	Occupancy Groups
Credits	
-25%	I-1, I-2, I-3, R-1[1], R-2[1], R-3[1] (> 3,600 Sq. Ft.)

-20%	A-1, A-3, A-4, A-5, I-4
-15%	A-2, E
-10%	B, F-2
0%	H-4, M

Surcharges:

+10%	(High Piled Stock), F-1, S-2
+15%	S-1
+20%	H-3
+25%	H-1, H-2, H-5

(1) The 25% reduction for Use Group R occupancies is the same reduction per footnote "a." of Table B105.1. The 25% reduction may only be used once.

Section D103.6 amended as follows:

Signs. Where required by the fire code official, fire apparatus access roads shall be marked with permanent NO PARKING – FIRE LANE—TOW AWAY ZONE signs complying with Figure D 103.6, with the additional words "Tow Away Zone." [remainder of section unchanged.]

Section D103 amended by adding a new Section D103.7 Curbs and Striping, as follows:

Where required by the fire code official, curbs along fire apparatus access roads shall be painted red, with the words "No Parking—Fire Lane—Tow Away Zone" stenciled in 4-inch tall letters in white. Such curb painting shall be provided at the beginning and end of the fire land as determined by the fire code official. Where no curb is provided, the traffic surface may be painted with high-visibility red diagonal striping of not less than 4-inches in width with an unpainted clear space of 12-inches between the painted stripes. High visibility white painted words indicating "No Parking—Fire Lane—Tow Away Zone" shall be painted within the striped area as determined by the fire code official.

Section 26: Section 14.07.017 of the Lacey Municipal Code is hereby repealed.

Section 27: Section 14.07.018 of the Lacey Municipal Code is hereby repealed.

Section 28: Section 14.07.020 of the Lacey Municipal Code is hereby amended to read as follows:

14.07.020 ~~**Section 1002--Portable fire extinguishers, amended.** There is added to Section 1002 of the Uniform Fire Code adopted by this chapter, Section 1002.3 to read as follows:~~

~~In addition to the maintenance requirements of Section 1002.1, all portable fire extinguishers shall be subject to internal maintenance at least annually and at such additional times as shall be indicated by an inspection. However, internal maintenance is not required on portable CO_2 fire extinguishers provided that they are maintained per Uniform Fire Code Standard 10-1, as adopted by this code.~~

Violation--Misdemeanor. Any person who violates any of the provisions of this chapter or the International Fire Code adopted herein or fails to comply therewith, or who violates or fails to comply with any order made thereunder, or who builds in violation of any detailed statement of specifications or plans submitted and approved thereunder, or any certificate or permit issued thereunder, and from which no appeal has been taken, or who fails to comply with such an order as affirmed or modified by the city council, or by a court of competent jurisdiction, within the time fixed therein, is for each and every violation or failure to comply, guilty of a misdemeanor. The imposition of a criminal penalty shall not excuse the violation or permit it to continue and shall not be held to prevent the enforced removal of prohibited conditions.

Section 29: Section 14.07.021 of the Lacey Municipal Code is hereby repealed.

Section 30: Section 14.07.030 of the Lacey Municipal Code is hereby repealed.

Section 31: Section 14.07.040 of the Lacey Municipal Code is hereby repealed.

Section 32: Section 14.07.045 of the Lacey Municipal Code is hereby repealed.

Section 33: Section 14.07.050 of the Lacey Municipal Code is hereby repealed.

Section 34: Section 14.07.060 of the Lacey Municipal Code is hereby repealed.

Section 35: Section 14.07.070 of the Lacey Municipal Code is hereby repealed.

Section 36: Section 14.07.080 of the Lacey Municipal Code is hereby repealed.

Section 37: Section 14.07.085 of the Lacey Municipal Code is hereby repealed.

Section 38: Chapter 14.10 of the Lacey Municipal Code is hereby repealed.

Section 39: Section 14.13.010 of the Lacey Municipal Code is hereby amended to read as follows:

14.13.010 Adopted. Those certain National and State Electrical Codes and Standards adopted by ~~RCW~~ Chapter 19.28.010 of the Revised Code of Washington as modified and supplemented by the rules and regulations of the State Department of Labor and Industries and as further supplemented in this chapter are adopted as the electrical code of the city of Lacey.

Section 40: Section 14.13.020 of the Lacey Municipal Code is hereby amended to read as follows:

14.13.020 Appointment of inspector--Powers and duties. The building official ~~city manager~~ shall appoint an electrical inspector and such assistant inspectors as shall be deemed necessary, all meeting the qualifications set forth in ~~RCW~~ Chapter -19.28.070 of the Revised Code of Washington, and upon such appointment being made, the inspector or inspectors appointed shall have full power and authority to issue permits and make such inspections as are called for in this chapter and the codes and standards adopted by this chapter.

Section 41: Section 14.13.030 of the Lacey Municipal Code is hereby amended to read as follows:

14.13.030 Right of entry. The building official, inspector, or authorized designee or an authorized member of the fire prevention bureau as outlined in Section 2.107 of the ~~Uniform~~International Fire Code adopted by Chapter 14.08 shall have the same right of entry to any building to enforce or inspect pursuant to this chapter as is set forth for the building official in Section 202(c) of the ~~Uniform~~International Building Code adopted in Chapter 14.04 of this code.

Section 42: A new section 14.14.050 is hereby added to the Lacey Municipal Code to read as follows:

14.14.050 Violation deemed misdemeanor. Any violation of this chapter or the codes or standards adopted herein shall constitute a misdemeanor.

Section 43: The title of chapter 14.15 of the Lacey Municipal Code is amended to read as follows:

INTERNATIONAL EXISTING BUILDING CODE~~UNIFORM CODE FOR BUILDING CONSERVATION~~

Section 44: Section 14.15.010 of the Lacey Municipal Code is hereby amended to read as follows:

14.15.010 Adopted. There is adopted and by its reference made a part of this chapter as though fully set forth herein, at length, that certain code known as the ~~Uniform Code for Building Conservation, 1997~~International Existing Building Code, 2003 Edition, published by the International ~~Conference of Building Officials~~Code Council.

Section 45: Section 14.15.020 of the Lacey Municipal Code is hereby amended to read as follows:

14.15.020 Violations deemed misdemeanor. Any violations of the provisions of the International Existing Building Code ~~Uniform Code for Building Conservation~~ as herein adopted constitute a misdemeanor.

Section 46: The title of Chapter 14.16 of the Lacey Municipal Code is hereby amended to read as follows:

PROPERTY MAINTENANCE CODE ~~MINIMUM BUILDING AND STRUCTURES CODE~~

Section 47: Section 14.16.020 of the Lacey Municipal Code is hereby amended to read as follows:

14.16.020 Violations deemed misdemeanor. Unless otherwise provided in the City of Lacey Maintenance Code, any ~~violations of the provisions of the City of Lacey Property Maintenance Code as herein adopted constitutes~~violations of the provisions of the City of Lacey Property Maintenance Code as herein adopted constitute a misdemeanor.

Section 48: Chapter 14.17 of the Lacey Municipal Code is hereby repealed.

Section 49: The title of Chapter 14.18 of the Lacey Municipal Code is hereby amended to read as follows:

BUILDING CONSTRUCTION AND LIFE SAFETY ~~UNIFORM~~ CODES GENERALLY

Section 50: Section 14.18.010 of the Lacey Municipal Code is hereby amended to read as follows:

14.18.010 Conflict of building construction and life safety ~~uniform~~ codes. If there exists or should arise a conflict between the provisions or interpretations of the various construction and life safety ~~uniform~~ codes adopted in those chapters of this title preceding this chapter, the provisions of Chapter 14.04 shall prevail, and any sections or provisions of other codes in conflict therewith shall be considered to be amended to be in conformity with Chapter 14.04, provided, however, that in case of conflict between the ventilation requirements of Chapter 12 of the ~~Uniform~~International Building Code and the ventilation requirements of the city's energy code contained in Chapter 14.09, said Chapter 14.09 shall govern and in case of conflict between the duct insulation requirements of Section 605 of the ~~Uniform~~International Mechanical Code and the duct insulation requirements of Chapter 14.09, the provisions of Chapter 14.09 shall govern.

Section 51: Section 14.18.020 of the Lacey Municipal Code is hereby amended to read as follows:

14.18.020 Permits--Term--Extension. Every permit issued under the provisions of the codes adopted by those chapters of this title preceding this chapter, shall expire and

become null and void if the building or work authorized by such permit is not commenced within one hundred eighty days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work has commenced for a period of one hundred eighty days. For the purposes of this section, the one hundred eighty days will be deemed to have expired if no inspections have been called for within one hundred eighty days of the date of permit issuance or within one hundred eighty days after a validly called inspection. For an inspection to be a validly called inspection, for the purposes of this section, the work being inspected must be complete, ready for the inspection, and noted "approved" by the building official. Before such work can be recommenced, a new permit shall first be obtained and the fee therefor shall be one-half of the amount required for a new permit for such work provided no changes have been made or will be made in the original plans and specifications for such work and, provided further, that such suspension or abandonment has not exceeded one year. Any permittee holding an unexpired permit may apply for an extension of time within which he may commence work under that permit, when he is unable to commence work within the time required by this section for good and satisfactory reasons satisfactory to the building official. The building official, for all permits authorized by prior chapters of this title except Chapter 14.07, Fire Code, or the fire code official. ~~chief.~~ for all fire code permits authorized by Chapter 14.07 of this code, may extend the time for action by the permittee for a period not exceeding one hundred eighty days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. No permit shall be extended more than once. The permittee shall pay a new full permit fee except for such fire code permits for which no fee is charged. All permits expire after eighteen months and must be renewed if the work is not yet completed.

Section 52: Section 14.18.030 of the Lacey Municipal Code is hereby amended to read as follows:

14.18.030 Hearings examiner--Powers and duties. All appeals authorized by those codes adopted by chapters of this title, preceding this chapter as to the suitability of alternate materials and methods of construction and from other rulings, interpretations or enforcement actions of those officials charged with enforcing said codes shall be to the city's hearings examiner pursuant to the provisions of Chapter 2.30 of this code. The hearings examiner shall serve in lieu of all boards of appeals mentioned or described in the ~~uniform~~ codes adopted by this title and said codes are hereby amended to the extent necessary to provide for such substitution.

Section 53: Section 14.20.020 of the Lacey Municipal Code is hereby amended to read as follows:

14.20.020 Performance bond required. Plans submitted to the public works department for review and approval, for the construction of any public works improvements, shall comply with the specifications in Section 14.20.010. The fee to be paid to the city by the applicant for reviewing the plans and inspecting the construction shall be charged at rates established by resolution of the city council. ~~No building permit shall be issued until the~~

~~improvements are completed or, with the approval of the director of public works, a performance bond with a surety qualified to do business in this state, a cash deposit, assigned savings account or other security acceptable to the city, in an amount equal to one hundred fifty percent of the cost of the public works improvements is posted with the city. No certificate of occupancy shall be issued until all public works improvements are completed and approved unless otherwise allowed by the director of public works.~~

Section 54: Section 14.23.086 of the Lacey Municipal Code is hereby amended to read as follows:

14.23.086 Design requirements for zones with pedestrian emphasis and key multimodal corridors and intersections. A major emphasis of the comprehensive plan is to create more opportunities for pedestrians and multimodal transportation. Key multimodal corridors and intersections designated in the comprehensive plan and zoning map will be the heart of the city's circulation system. If the city's goals of a more pedestrian-friendly city are to be realized, these multimodal corridors and intersections and surrounding road networks must develop with amenities and designs that will entice pedestrians, bicyclists and transit riders.

A. Applicability. Standards listed under Chapter 14.23.086(B) and (C)below apply to all zones with pedestrian emphasis. Standards for circulation and design for multimodal corridors and key pedestrian intersections apply to all zones along such corridors and at key pedestrian intersections. Provided multifamily condominium and townhouse development with less than 5 units and all single family short plats and permits for individual single family detached homes and accessory uses shall be exempt.

B. General Requirements

1. Increase pedestrian amenities and function along key multimodal corridors, at intersections, and in pedestrian-oriented zones.

2. Provide a network of comfortable and interesting pedestrian streets which link residential areas with commercial zones throughout the growth area.

3. Reduce dependence on the automobile in zones with pedestrian emphasis by providing increased emphasis on other modes of transportation, such as walking, bicycling and transit through the provision of pedestrian-oriented, multimodal streets.

4. Provide a high quality, compact pedestrian-oriented street environment that is easily and pleasantly traversed on foot.

5. Increase architectural continuity and compatibility within and between zones.

6. Encourage business and pedestrian areas and spaces that are active throughout the day and evening.

7. Improve sidewalk and building integration, which increases human comfort and activity.

8. Incorporate "human-scaled" elements into building design.

9. Provide direct visual contact between activities occurring inside buildings and the street environment. (See also Chapter 14.23.086 C (4) blank wall limitation.)

C. Specific Pedestrian Requirements

1. Reduced Setbacks. Placement of building walls shall be such that they enclose and define the street space. The location, height, and massing of walls shall provide human-scaled street enclosure and building edge continuity on pedestrian-oriented streets (multimodal corridors). To provide a more continuous building edge, buildings shall be placed forward on lots adjacent to designated multimodal corridors. Street wall location adjacent to the sidewalk shall bring building activities into physical and visual contact with the sidewalk environment and increase the liveliness of the street.

a. Key commercial designations with pedestrian emphasis (central business districts, neighborhood commercial and mixed use corridors) have maximum front yard setbacks of fifteen feet and allow zero feet. Residential zones allowing moderate to high densities also provide for reduced setbacks.

b. Exceptions to Reduced Setbacks. The street wall may be set back to provide transition to residential neighborhoods, to provide more separation of public and private space in residential development, to meet centerline setback requirements, for building entrances, for pedestrian plazas, and to allow existing setback buildings as conforming uses.

(1) Building Entrances Allowance. Large entryways which are integral to a building design may be set back more than 15 feet.

(2) Pedestrian Plazas

2. Pedestrian Plazas. Pedestrian plazas are intended to be open to the public (but are not required to be). They are spaces which people will use along intensively developed streets (multimodal corridors) and in some commercial and all mixed use corridors. Facilities and buildings can be grouped around small pedestrian plazas to create places where people may congregate.

All commercial subdivisions or binding site plans in mixed use zones or zones with pedestrian emphasis are expected to provide plazas unless the city determines the provision of such is not consistent with the intent of this chapter due to special circumstances of the site or project. Commercial or multifamily building projects in the mixed moderate or high density corridors may provide plazas to obtain bonus building or development coverage. Pedestrian plaza designs must meet the following criteria:

a. Size and dimension. The maximum width of the pedestrian plaza shall normally be sixty feet. (See Table 14T-13.)

b. Access. The surface of all pedestrian plazas must be visually and physically accessible from the public right-of-way. Allowances may be made for sites with steep topography.

c. Surface. Paved walking surfaces must be provided.

d. Landscaping.

(1) At least ten percent of the plaza area must be landscaped with living plants.

(2) The landscaping must be planted and maintained according to Chapter 16.80.

(3) Landscaping shall not block visual access to the pedestrian plaza.

e. Seating.

(1) Seating shall be provided in all pedestrian plazas.

(2) Tops of walls and steps may be considered seating if designed to accommodate this function.

f. Exposure to sunlight. (See Table 14T-13.)

(1) Southern locations are encouraged to allow direct sunlight to enter the space and strike the plaza floor.

(2) Pedestrian plazas shall be designed to allow some direct sunlight to enter the plaza.

(3) Pedestrian plaza landscaping shall be designed in a manner that does not block the entrance of direct sunlight.

g. Plaza edges.

(1) Plaza enclosure. All pedestrian plazas must be enclosed on at least two sides by a structure or by landscaping which creates a wall-like effect.

(2) Prohibited Edge Conditions.

(a) Unscreened parking lots, chain link fences and other inhibiting conditions are prohibited adjacent to pedestrian plazas.

(b) Blank walls in pedestrian plazas are subject to the blank wall limitation standards of subsection 4 below.

h. Uses in pedestrian plazas.

(1) Permitted uses: playground equipment, fountains, waterfalls, pools, sculptures, works of art, arbors, trellises, benches, trees, planting beds, trash receptacles, drinking fountains, bicycle racks, open air cafes, kiosks, vending carts, outdoor furniture, lighting, flagpoles, public telephones, temporary exhibits, canopies, awnings, and similar uses which encourage pedestrian use of these spaces.

(2) Allowed motor vehicle use. Motor vehicle use of pedestrian plazas for passenger drop off and pick up at plaza edge. All other loading or motor vehicle access is prohibited.

i. Exceptions. The site plan review committee may grant exceptions to the Pedestrian Plaza Standards if the proposed design meets the intent of this chapter.

3. Awnings, Marquees and Arcades. Continuous canopies, awnings, marquees, and arcades keep pedestrians out of the rain and contribute to overall integration of individual buildings within the streetscape. This pedestrian weather protection also helps define the pedestrian zone on the sidewalk.

a. Requirements.

(1) All commercial uses in zones with pedestrian emphasis shall provide some weather protection for their patrons.

(2) Awnings, marquees, and arcades must meet ~~Uniform~~ City's adopted Building Code requirements.

(3) Awnings, marquees, and arcades are encouraged along the street wall, or that portion of the street wall that abuts or is parallel to the sidewalk. The maximum depth (projection

from street wall) is regulated in the applicable section of the ~~Uniform~~ City's adopted Building Code.

(4) The lower edge of all awnings, marquees, and arcades must be between the heights of eight and twelve feet above finished grade. Awnings on a given block shall be the same or similar height.

(5) Canopies, awnings, marquees and arcades may project into the public right-of-way with approval of the site plan review committee.

4. Blank Wall Limitation. A successful pedestrian environment will provide varied, pedestrian-friendly building facades and sidewalk activities. Blank walls and dull building facades can degrade a pedestrian streetscape and the business environment as they deaden the surrounding space and break the continuity of the building edge. Therefore, the construction of blank walls shall be limited to prevent the disruption of existing building patterns and to avoid an uninviting street environment. The regulations in this section are intended to reduce blank wall impacts on the pedestrian and business environment.

a. Blank Wall Limitation Requirements.

(1) All commercial ground level walls within fifty feet of a street or pedestrian area shall feature pedestrian-friendly facades. Sixty percent of the street wall facade within fifty feet of the street or pedestrian area is regulated between two and eight feet in height. (See Table 14T-14.) This dimension applies to all options for blank wall treatments (transparent windows, art and architectural treatment, and trellis and planting techniques).

(2) At least sixty percent of a wall facing a street shall consist of transparent window area or display windows which provide visibility into building interiors. Maximum wall coverage with windows is recommended.

(3) In addition to 14.23.086C(4)a(1and 2), two or more of the following techniques shall be employed to provide interest on non-window areas.

(a) Sculpture, mosaic, glass block opaque art glass, as relief artwork, or similar features of visual interest which are incorporated into the street wall or blank building wall. Structural architectural elements may be acceptable if the design meets the intent of this section.

(b) Installation of a permanent vertical trellis in front of the wall with climbing plants or plant materials.

(c) Pedestrian plazas may meet this requirement if the design complies with the intent of this section.

(d) Any other architectural techniques that meet the intent of Chapter 14.23.086 to provide a pedestrian-friendly, comfortable street environment with architectural interest.

b. Retaining walls. Retaining walls on pedestrian streets are considered blank walls and are subject to the regulations in Chapter 14.23.086 with the exception of 14.23.086 (4)(a)(2). Retaining wall treatment may include a stone wall, landscaping treatment, special texture or design. Blank concrete is prohibited.

c. Exceptions. Where this section is in conflict with the ~~Uniform~~ City's adopted Fire Code, the ~~Uniform~~ Fire Code shall govern.

5. Primary Building Entrance. Primary building entrances are required on the street or pedestrian and transit access from street to allow people to arrive by foot, by transit, or by other means (in addition to the car), and to increase pedestrian and street activity. For buildings adjacent to a sidewalk entrances shall meet the following minimum requirements:

a. The primary entrance to all buildings shall face the street or central pedestrian plaza.

b. All primary building entrances shall be clearly visible from the sidewalk or pedestrian plaza.

c. Direct access shall be provided either

(1) from the sidewalk if the building facade is adjacent to the sidewalk, or

(2) from a pedestrian plaza if the building facade is not directly adjacent to the sidewalk. (See Table 14T-13.)

D. Circulation and design for multimodal corridors and key pedestrian intersections.

1. Multimodal corridors and key pedestrian intersections are intended to provide a focus for multimodal activity in each neighborhood. The corridor shall provide an area of convergence for the pedestrian sidewalk network that interconnects all dwelling units with other units, non-residential uses, common open space, bus stops and sensitive area tracts. Mid-block crossings shall be utilized where necessary to promote more efficient or strategic interconnections with pedestrian corridors or trail systems. Sidewalk systems shall be separate and distinct from motor vehicle circulation to the greatest extent possible, provide a pleasant route for users, promote enjoyment of the development, and encourage incidental social interaction among pedestrians. Sidewalks shall be of barrier-free design.

The pedestrian circulation system shall include gathering/sitting areas and provide benches, landscaping, and other street furniture where appropriate. Sidewalks along the corridors and at key intersections shall promote pedestrian activity.

2. Sidewalks shall be a minimum of six feet in width, expanding to eight feet or more along major pedestrian routes. Sidewalks in commercial areas shall normally be ten to fifteen feet in width depending upon location of major pedestrian routes and significance of the sidewalk for pedestrian use. The specified sidewalk dimensions shall be in addition to land area used for street functions or the placement of objects in the sidewalk area.

Standard material for sidewalk construction is acceptable, provided however, key pedestrian intersections shall use special materials. See Section 14.23.086D(5).

3. Bikeways shall be provided to link key components of each neighborhood with the corridor. Bikeways do not have to be marked on local residential streets with low average daily traffic. Bikeways are required on portions of multimodal corridor designations, collectors and arterials. The width of bikeways shall be in accordance with the minimum dimensions specified for class 1,2, and 3 bikeways as defined in the Regional Transportation Program and the Lacey Urban Transportation Plan. Bikeways may use

asphalt paving or other approved surface. Bike racks shall be provided at strategic destination locations along the corridors such as commercial areas, open spaces and other neighborhood focus points.

4. Key pedestrian intersections shall be located at the focal point of neighborhoods as shown on the Lacey Comprehensive Plan Land Use Map. All key pedestrian intersections shall have street furniture as well as other significant pedestrian areas along the corridor.

Elements of street furniture, such as benches, waste containers, drinking fountains, planters, phone booth, bus shelters, bicycle racks, and bollards should be carefully selected to ensure compatibility with the architecture of surrounding buildings, the character of the area, and with other elements of street furniture. Consistency in the selection and location of the various elements of street furniture is critical for maximum effect and functional usage. Street furniture shall meet all city guidelines for strength, durability, maintenance and safety.

5. At key pedestrian intersections and other areas of special significance to pedestrians along corridors, sidewalks shall be constructed of brick, colored/textured concrete pavers, concrete containing accents of brick, colored stamped concrete or some combination thereof that is compatible with the style, materials, colors and details of the surrounding buildings and neighborhood. The functional, visual, and tactile properties of the paving materials shall be appropriate to the proposed functions of pedestrian circulation in the immediate area. Such techniques are also recommended for public or semi-public plazas, courtyards, or open spaces along the corridor.

6. Bus stops shall be located along collectors and arterials on the corridor in consultation with Intercity Transit and North Thurston School District and shall be integrated as part of the pedestrian network. Bus stops may also be provided along strategic sections of local access streets if the City of Lacey, North Thurston School District and Intercity Transit determine such location will provide the most convenient coverage for residents. Locations for bus stops shall be designed to make transit services accessible to all residents of the neighborhood.

7. Transit passenger pads and shelters may be provided at focal points in the neighborhood along corridors, such as commercial areas and key pedestrian intersections, if deemed necessary by the city in consultation with Intercity Transit and North Thurston School District. Design and size of shelters and pads will be determined in consultation with Intercity Transit.

8. Bus stops shall be illuminated at night to enhance passengers' safety and sense of security.

9. Decorative human scale lighting is recommended on all local access streets, pedestrian walkways, sidewalks, courtyards, community greens internal open spaces and along corridors at intervals adequate to provide pedestrians with safe and comfortable lighting. Light poles may use a staggered pattern when measured and spaced using both sides of the street. Lighting fixtures and poles shall generally be between 12-24 feet in height and constructed from steel, cast iron, or aluminum, with poles and fixtures complementing the human scale and architectural character of the neighborhood.

10. Street lights should be decorative and blend with the architectural style of the plat or development project. (See Design Vocabulary in Table 14T-10.)

Section 55: Section 14.24.160 of the Lacey Municipal Code is hereby amended to read as follows:

14.24.160 Substantive authority.

A. The policies and goals set forth in this chapter are supplementary to those in the existing authorization of the city.

B. The city may attach conditions to a permit or approval for a proposal so long as:

1. Such conditions are necessary to mitigate specific probably significant adverse environmental impacts identified in environmental documents prepared pursuant to this chapter;

2. Such conditions are in writing;

3. The mitigation measures included in such conditions are reasonable and capable of being accomplished;

4. The city has considered whether other local, state or federal mitigation measures applied to the proposal are sufficient to mitigate the identified impacts;

5. Such conditions are based on one or more policies in subsection 14.24.160(D) and cited in the license or other decision document.

C. The city may deny a permit or approval for a proposal on the basis of SEPA so long as:

1. A finding is made that approving the proposal would result in probably significant adverse environmental impacts that are identified in a final EIS or final supplemental EIS prepared pursuant to this chapter;

2. A finding is made that there are no reasonable mitigation measures capable of being accomplished that are sufficient to mitigate the identified impact;

3. The denial is based on one or more policies identified in subsection 14.24.160(D) and identified in writing in the decision document.

D. The city designates and adopts by reference the following policies as the basis for the city's exercise of authority pursuant to this section:

1. The city shall use all practicable means, consistent with other essential considerations of state policy, to improve and coordinate plans, functions, programs, and resources to the end that the state and its citizens may:

a. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

b. Assure for all people of Washington safe, healthful, productive, and aesthetically and culturally pleasing surroundings;

c. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

d. Preserve important historic, cultural, and natural aspects of our national heritage;

e. Maintain, wherever possible, an environment which supports diversity and variety of individual choice;

f. Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities;

g. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

2. The city recognizes that each person has a fundamental and inalienable right to a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

3. The city adopts by reference the policies in the following city codes, ordinances and plans:

a. Lacey zoning ordinance;

b. Lacey comprehensive plan and associated elements;

c. Lacey platting and subdivision ordinance;

d. Six-year street plan;

e. Shoreline master program for the Thurston region;

f. Transportation system plan for the Thurston metropolitan area;

g. ~~Uniform~~ The Building Code (as adopted by the city);

h. Lacey bikeway plan;

i. Comprehensive plan for outdoor recreation;

j. Land clearing code (Chapter 14.32 of Lacey Municipal Code);

k. Wetlands protection ordinance (Chapter 14.28 of Lacey Municipal Code).

4. The city establishes the following additional policies: The city may apply any mitigation conditions necessary to properly mitigate identified adverse environmental impacts associated with license or permit applications. In implementation of this policy for each individual license application the city shall review all of the elements of the environment listed in WAC 197-11-444 and shall attempt to apply conditions as appropriate to mitigate identified adverse environmental impacts under all elements of the environment. Mitigation conditions may include but shall not be limited to: timing and scheduling of construction and operation, modification of site design, project design or location, modification of the physical environment, installation of physical and vegetative improvements, mitigation of pollution sources, installation of pollution abatement equipment or safety equipment or improvements, providing of or upgrading of on and offsite infrastructure improvements, preservation or protection of specified habitat and species of flora and fauna, provision for buffers and open spaces, layout and design of open space including centralization and consolidation, provision of safe and attractive pedestrian improvements, provision of bus stop improvements to Intercity Transit and North Thurston School District Standards, site restoration and improvements after surface

mining or mineral extraction or other activity, provision for lot owners or homeowners maintenance associations, and requiring of conditions identified in a wetlands mitigation plan or report for protection of wetlands or wetland buffers.

E. The legislative appeals authorized by RCW 43.21C.060 are eliminated from this chapter.

Section 56: Section 14.32.069 of the Lacey Municipal Code is hereby amended to read as follows:

14.32.069 Revegetation option. Based upon recommendations in a report by the city's tree protection professional, removal of areas of vegetation that might normally be saved may be permitted if extensive revegetation is accomplished. Such alternative may be desirable for sites with significant physical limitations such as topography, soil type or proposed small lot sizes. Additionally, limitations of existing trees such as particular species or deteriorated health of a particular tree stand may make such options desirable.

On a site with documented special circumstances, an alternative allowing removal of vegetation normally saved may be approved with a comprehensive revegetation plan developed by the city's tree protection professional. At a minimum, the plan shall include:

A. Information required under Section 14.32.060 of this chapter;

B. Consideration of the standards provided in Section 14.32.065 of this chapter;

C. An evaluation of what circumstances are present in specific areas of the site to make incorporation of topography and existing vegetation undesirable and recommendations on what areas if any can be designed to accommodate existing vegetation;

D. Consideration of overstory and understory vegetative species to provide wildlife habitat and meet specific purposes important to the neighborhood environment and project design such as buffers, green belts, open spaces, street trees, urban beautification, solar access, and other functions and purposes deemed desirable and appropriate to the anticipated use;

E. A comprehensive map showing location, number, types of species and size of planned vegetative improvements;

F. A time line for completion of improvements;

G. An estimate of the value of vegetation that would normally be saved but that is being removed under this option. Said estimate must be accomplished pursuant to the most recent guidelines established by the International Society of Arboriculture in its "Guide to the Professional Evaluation of Landscape Trees, Specimen Shrubs, and Evergreens".

H. Said plan shall provide for a commensurate value of vegetation to be installed as is to be taken out under this option. Said amount shall be above and beyond what is normally required for landscaping in the projects not utilizing this option. The calculated value of the revegetation shall include only vegetative material and shall not include the applicant's administrative or labor costs, or the costs of the city's tree protection professional;

I. A maintenance plan including provision for an irrigation system, and a grass, shrub and tree maintenance program;

J. If any existing vegetation is to be saved, a plan shall be provided for the protection of said vegetation during construction activity, including fencing and other protective measures deemed necessary by the city's tree protection professional.

K. If the project involves a subdivision of property or a binding site plan, the landscaping plan should include a comprehensive treatment of open space areas, green belt areas, buffers, common areas, and street frontages (street trees and parkways). All common improvements shall be completed prior to final plat approval or financial security provided to the city in a form acceptable to the city in the amount of one hundred fifty percent of the estimated costs including two years maintenance and twenty percent replacement.

If a developer desires to clear individual lots within the subdivision or binding site plan at the same time as road areas, this may be done if it is consistent with the approved plans and the following conditions are satisfied:

1. An average valuation of vegetation on individual lots shall be provided with a conceptual plan of typical yard landscaping of equal value. Such conceptual plan shall contain specific guidelines for revegetation of individual lots and said guidelines shall be incorporated into protective covenants and lot owner's association articles of incorporation;

2. Financial security is provided to the city in a form acceptable to the city at one hundred fifty percent of the estimated costs of improvements of individual lots based upon the conceptual typical yard landscaping plan;

~~3. Prior to building permits being issued on individual lots, a specific landscaping plan shall be prepared for each lot and submitted to the city at the time of building permit application. The specific plan shall follow the general parameters of the required conceptual yard landscaping plan. All improvements shall be completed prior to occupancy or in accordance with financial security agreements provided under herein.~~

~~L. If the lot or parcel is not associated with a subdivision or binding site plan approved under subsection 14.32.069(K), no clearing or brushing of lots shall take place under this option until a specific lot landscaping plan has been approved and a building permit issued. Improvements shall be completed prior to occupancy or financial security provided to the city in a form acceptable to the city in the amount of one hundred fifty percent of the estimated costs of improvements.~~

Section 57: Section 14.36.215 of the Lacey Municipal Code is hereby amended to read as follows:

14.36.215 Wellhead protection area standards for new uses.

A. The following uses shall be prohibited within the designated one-year time of travel zone:

1. Land spreading disposal facilities (as defined by Washington Administrative Code 13-304 and Washington Administrative Code 173-308 disposed above agronomic rates);

2. Animal operations with over 200 animal units. For purposes of this section, one animal unit is the equivalent number of livestock and/or poultry as defined by the U.S. Department of Agriculture Natural Resource Conservation Service Animal Waste Field Handbook;

3. Gas Stations, petroleum products refinement, reprocessing, and storage (except underground storage of heating oil or agricultural fueling in quantities less than 1,100 gallons for consumptive use on the parcel where stored), and liquid petroleum products pipelines;

4. Automobile wrecking yards;

5. Wood waste landfills; and

6. Dry cleaners, excluding drop-off only facilities.

B. The following uses shall be prohibited within the designated one, five and ten-year time of travel zones;

1. Landfills (municipal sanitary solid waste and hazardous waste);

2. Hazardous waste transfer, storage and disposal facilities;

3. Wood and wood products preserving; and

4. Chemical manufacturing.

C. For any use proposed within the designated one, five and ten-year time of travel zone which uses, stores, handles or disposes of hazardous materials above the minimum quantities listed below, the applicant shall submit for review and approval documentation that AKART are proposed to be used to prevent impact to the source water. The health officer, in consultation with the water purveyor, will review this documentation to determine whether the application shall be approved, denied or approved with conditions to ensure adequate protection of the source water supply.

Notwithstanding the minimum quantity thresholds listed below, the health officer may, at the health officer's discretion and with reasonable expectation of risk to ground water, require pollution prevention plans and MPCs on any use proposed within the one, five, and ten-year time of travel zones.

1. Types of chemical substances regulated by the Hazardous Materials provisions of the City's adopted ~~in Table 8001.15-a.b.c.d. of the Uniform~~ Fire Code, and as subsequently amended. Minimum cumulative quantity; 60 pounds (or the equivalent 20 gallons).

2. Cleaning substances for janitorial use or retail sale present in the same size, packaging, and concentrations as a product packaged for use by the general public. Chlorinated solvents and no n-chlorinated solvents which are derived from petroleum or coal tar will not be considered a cleaning substance under this subsection, but rather a chemical substance under subsection 14.36.215.C.1. above. Minimum cumulative quantity: 800 pounds (or the equivalent 100 gallons, not to exceed 55 gallons for any single package).

3. Businesses which use, store, handle or dispose of chemicals listed in Washington Administrative Code 173-303-9903 as "P" chemicals. Minimum cumulative quantity: 2.2 pounds.

Section 58: Section 14.37.030 of the Lacey Municipal Code is hereby amended to read as follows:

14.37.030 Definitions. For the purposes of this chapter, the following definitions shall apply:

A. "Applicant" means a person who files an application for approval under this chapter and who is either the owner of the land on which that proposed activity would be located, a contract vendee, a lessee of the land, the person who would actually control and direct the proposed activity, or the authorized agent of such a person.

B. "Artificially created hazard area" means artificially created areas of potential hazard such as fills and steep cuts. Such areas are reviewed during application for building permits or excavation and grading permits through a process provided in the Grading Chapter ~~70~~ of the City's adopted~~Uniform~~ Building Code, which allows application of specific conditions to insure the public health, safety and welfare. Such areas are not subject to review under this chapter.

C. "Bluff" means a steeply rising, near vertical slope which abuts and rises from Puget Sound. Bluffs occur in the area at the extreme north end of Lacey's long term growth area north of the Beachcrest area. The toe of a bluff is the beach of Puget Sound. The top of a bluff is typically a distinct line where the slope abruptly levels out. Where there is no distinct break in slope, the top is either the line of vegetation separating the unvegetated steep slope from the vegetated uplands plateau or, when the bluff is vegetated, the point where the bluff slope diminishes to less than fifteen percent.

D. "Buffer" means an area adjacent to hillsides which provides the margin of safety through protection of slope stability, attenuation of surface water flows and landslide, seismic, and erosion hazards reasonably necessary to minimize risk to the public from loss of life, well-being or property damage resulting from natural disasters.

E. "Clearing" means the destruction and removal of vegetation by burning, mechanical, or chemical methods.

F. "Director" means the director of community development or his/her designee.

G. "Erosion hazard area" means an area designated by the city of Lacey Environmental Protection and Resources Conservation Plan which, according to the United States Department of Agriculture Soil Conservation Service Soil Survey of Thurston County, Washington, have severe erosion hazard potential. These soil map units are described in Table 11 of the Environmental Protection and Resource Conservation Plan.

H. "Financial security" means a method of providing surety of financial performance and may include provision of a bond, assignment of savings, letter of credit or other financial guarantee approved by the city attorney.

I. "Geologically sensitive area" means an area that because of its susceptibility to erosion, sliding, earthquake or other geological events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns. Geologically sensitive areas do not include artificially created hazard areas.

J. "Hillsides" means geological features of the landscape having slopes of fifteen percent and greater. To differentiate between levels of hillside protection and the application of development standards, the city of Lacey categorizes hillsides into four groups: hillsides of at least fifteen percent but less than twenty-five percent slope; hillsides of twenty-five percent but less than forty percent slope; hillsides of forty percent slope and greater; and hillsides which are defined as ravine sidewalls or bluffs.

K. "Landslide" means an episodic downslope movement of a mass of soil or rock that includes but is not limited to rockfalls, slumps, mudflows, and earthflows.

L. "Landslide hazard area" means an area potentially subject to landslides because of the combination of geologic, topographic, and hydrologic factors. These areas are typically susceptible to landslides because of a combination of factors, including bedrock, soil, slope gradient, slope aspect, geologic structure, ground water, or other factors. The following areas are considered to be subject to landslide hazard:

1. Any area with a combination of:

a. Slopes greater than fifteen percent; and

b. Impermeable soils (usually silt and clay) frequently interbedded with granular permeable soils (usually sand and gravel); and

c. Springs or ground water seepage.

2. Steep slopes of forty percent or greater.

3. Any area which has shown movement during the Holocene epoch (from ten thousand years ago to present) or which is underlain by mass wastage debris of that age.

4. Any area potentially unstable as a result of rapid stream incision, stream bank erosion, or undercutting by wave action.

5. Any area with slope stability designated as "I", "U", "Urs" or "Uos" by the Coastal Zone Atlas of Washington.

M. "Native vegetation" means plant species which are indigenous to the area in question.

N. "Ravine sidewall" means a steep slope which abuts and rises from the valley floor of a stream and which was created by the wearing action of the stream. Ravine sidewalls contain slopes predominantly in excess of forty percent, although portions may be less than forty percent. The toe of a ravine sidewall is the stream valley floor. The top of a ravine sidewall is typically a distinct line where the slope abruptly levels out. Where there is no distinct break in slope, the top is where the slope diminishes to less than fifteen percent. Minor natural or manmade breaks in the slope of ravine sidewalls shall not be considered as the top. Benches with slopes less than fifteen percent and containing developed or developable areas shall be considered as the top.

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

P. "Slope" means an inclined ground surface, the inclination of which is expressed as a ratio (percentage) of vertical distance to horizontal distance by the following formula:

$$\frac{\text{vertical distance}}{\text{horizontal distance}} \times 100 = \%\ \text{slope.}$$

Another method of measuring the inclination of the land surface is by measuring the angle, expressed in degrees, of the surface above a horizontal plane. The following chart shows the equivalents between these two methods of measurement for several slopes:

Slope in Percent	Angle in Degrees
8.7	5.0
15.0	8.5
25.0	14.0
30.0	16.7
40.0	21.8
50.0	26.6
100.0	45.0

Q. "Soil Survey of Thurston County Washington" is a soil survey published by the U.S. Department of Agriculture Soil Conservation Service. The survey contains information that can be applied in land use management. All the soils of the Thurston County Area are shown on detailed maps and described in text.

Section 59: Section 14.37.180 of the Lacey Municipal Code is hereby amended to read as follows:

14.37.180 Standards for geologically sensitive areas--Specific.

A. Undevelopable Geologically Sensitive Areas. Ravine sidewalls, bluffs and their buffers and hillsides with a slope greater than forty percent shall remain undeveloped except as otherwise provided in this chapter. The top, toe, and edges of ravine sidewalls, bluffs and the outside edge of their buffers and hillsides with forty percent slope or greater shall be determined and field marked by a qualified geotechnical engineer.

B. Landslide Hazard Areas. Hillsides containing or adjacent to landslide hazard areas shall be altered only when the site plan review committee concludes, based on required reports, the following:

1. There will be no increase in surface water discharge or sedimentation to adjacent properties; and

2. There will be no decrease in slope stability on adjacent properties; and

3. The alteration conforms to all other requirements of subsection 14.37.180(E); and

4. Either:

a. There is no hazard as proven by evidence of no landslide activity in the past in the vicinity of the proposed development and a quantitative analysis of slope stability indicates no significant risk to the development proposal and adjacent properties; or

b. The landslide hazard area can be modified or the development proposal can be designed so that the landslide hazard is eliminated or mitigated so that the site is as safe as a site without a landslide hazard; or

c. The alteration is so minor as not to pose a threat.

C. Ravine Sidewalls and Bluffs.

1. Buffers. A fifty-foot undisturbed buffer of native vegetation shall be established from the top, toe, and sides of all ravine sidewalls and bluffs.

2. Buffer Reduction. The buffer may be reduced when expert verification and environmental information demonstrate to the satisfaction of the site plan review committee or hearings examiner, whichever is applicable, that the proposed construction method will:

a. Not adversely impact the stability of ravine sidewalls and bluffs; and

b. Not increase erosion and mass movement potential of ravine sidewalls and bluffs; and

c. Use construction techniques which minimize disruption of the existing topography and vegetation; and

d. Include measures to overcome any geological, soils, and hydrological constraints of the site. The buffer may be reduced by no more than fifty percent.

3. Additional Buffers. The site plan review committee may require increased buffers if environmental studies indicate such increases are necessary to mitigate landslide, seismic and erosion hazards, or as otherwise necessary to protect the public health, safety and welfare.

4. Building Setback Lines. A building setback line of ten feet is required from the edge of any buffer of a ravine sidewall or bluff. Minor structural intrusions into the area of the building setback line may be allowed if it is determined that such intrusions will not negatively impact the geologically sensitive area.

5. A

ll buffers shall be measured from the top, toe, and sides of all ravine sidewalls or bluffs.

D. Developable Geologically Sensitive Areas. Hillsides other than ravine sidewalls and bluffs and their buffers and hillsides greater than forty percent slope are developable pursuant to the provisions of this chapter. The applicant shall clearly and convincingly demonstrate to the satisfaction of the site plan review committee or hearings examiner, whichever is applicable, that the proposal incorporates measures protecting the public health, safety, and welfare.

E. Hillsides of Fifteen Percent Slope and Greater--Disturbance Limitations. Development on hillsides shall comply with the following requirements regarding disturbance limitations, development location, development design, construction techniques and landscaping.

1. Amount of Disturbance Allowed. The following chart sets forth the maximum slope disturbance allowed on a development site:

Slope	Amount of Slope Which Can be Disturbed	Factor
0-15%	100%	1.00
15-25%	60%	.60
25-40%	45%	.45
40%+	0%	.00

The overall amount of disturbance allowed on development sites which have any combination of the above slope categories shall be determined by the following formula:

(Square footage of site having 0-15% slopes) x 1.00 + (Square footage of site having 15-25% slopes) x .60 + (Square footage of site having 25-40% slopes) x .45 = Total Amount of Allowable Site Disturbance.

The intent of this section shall be to provide reasonable flexibility in site development while promoting the intent of working with existing topography as opposed to against it.

2. Development Location.

a. Structures and improvements shall be clustered to retain as much open space as possible and the natural topographic character of the slope; and

b. Structures and improvements shall conform to the natural contour of the slope, foundations must be tiered to generally conform to the existing topography of the site; and

c. Structures and improvements shall be located to preserve the most sensitive portion of the site and its natural land forms and vegetation.

3. Development Design.

a. The footprint of buildings and other disturbed areas shall be minimized. The least number of buildings is desirable in order to consolidate the development; and

b. Use of common access drives and utility corridors is required where feasible; and

c. Impervious lot coverage shall be minimized. With the exception of detached single family structures, under-structure parking and multi-level structures shall be incorporated where feasible; and

d. Roads, walkways and parking areas shall be designed to parallel the natural contours of the hillsides while maintaining consolidated areas of natural topography and vegetation. Access shall be located in the least sensitive area feasible; and

e. Use of retaining walls which allow the maintenance of existing natural slope areas is preferred over graded artificial slopes.

4. Construction Techniques.

a. Use of foundation walls as retaining walls is preferable to rock or concrete walls built separately and away from the building. Freestanding retaining devices are only permitted when they cannot be designed as structural elements of the building foundation; and

b. Structures shall be tiered to conform to existing topography and to minimize topographic modification.

5. Excavation and Grading.

a. All requirements of the Grading Chapter ~~70~~ of the ~~Uniform~~ City's adopted Building Code ~~(UBC)~~ shall be satisfied. Requirements under Chapter 14.37 shall be consolidated with review requirements of the Grading Chapter ~~70~~ of the ~~UBC~~ Building Code to provide a coordinated review process.

6. Landscaping. The disturbed area of a development site not used for buildings and other improvements shall be landscaped according to a landscape design which will achieve a minimum forty percent coverage by the canopy of trees and shrubs within ten years to provide habitat desirable to native western Washington birds. The trees and shrubs shall be a mix of shade, flowering, and coniferous and broad-leaf evergreens that are either native to the Puget Sound region or are valuable to western Washington birds. The Department of Wildlife "Plants for Wildlife in Western Washington" shall be used as a general guide.

a. Trees shall be the following size at time of planting and shall conform to the "American Standard for Nursery Stock":

(1) Single-stem shade and flowering trees shall be a minimum one and one-half inch to two inch caliper trunk as measured six inches above the ground.

(2) Multi-stem shade and flowering trees shall be a minimum height of eight feet as measured from the ground level to the average uppermost point of growth of the plant.

(3) Coniferous evergreen trees shall be a minimum height of six feet as measured from the ground to the midpoint between the uppermost whorl and the tip of the leader. For species of trees without whorls, minimum height shall be measured to the uppermost side growth. The ratio of height to spread shall not be less than five to three.

(4) Broad-leaf evergreen trees shall be a minimum height of four feet as measured from the ground level to where the main part of the plant ends, not to the tip of a thin shoot.

b. Shrubs shall be the following size at time of planting and shall conform to the "American Standard for Nursery Stock":

(1) Dwarf and semi-dwarf deciduous shrubs shall be a minimum height of two to two and one-half feet above grade, and either a number three container size for container grown plants, ten inch diameter root ball for balled and burlapped plants, or eleven inch root spread for bare root plants.

(2) Strong-growing deciduous shrubs shall be a minimum height of two to three feet above grade, and either a number three container size for container grown plants, ten inch diameter root ball for balled and burlapped plants, or eleven inch root spread for bare root plants.

(3) Coniferous and broad-leaf evergreen shrubs (Types 1, 2, and 3) shall be a minimum height of two to two and one-half feet spread or height, and either a minimum number three container size for container grown plants or twelve inch diameter root ball for balled and burlapped plants.

7. Erosion Control. A special drainage and erosion control plan shall be prepared outlining measures being taken to effectively control drainage and erosion. Landscaping activities and grading and excavation activities may be limited to specific times of the year based upon an analysis of soil types, proximity of wetlands, or other factors that may indicate an unacceptable risk of erosion hazards and related impacts.

F. Seismic Hazard Areas. The city of Lacey acknowledges it is in a seismic hazard zone and shall pursue more specific identification of those areas in the city at the greatest risk. Once said areas are identified, specific criteria designed to protect the public safety shall be developed.

Section 60: Section 16.03.050 of the Lacey Municipal Code is hereby amended to read as follows:

16.03.050 Permitted intrusions into required yards.

A. Cornices, eaves and other similar architectural features may project from the foundation wall into any minimum yard setback requirement a maximum distance of two and one-half feet.

B. Open, unwalled and uncovered steps, ramps, not more than four feet in height may extend into the required front or rear yard setback requirement not more than five feet.

C. Decks and patio covers may be permitted to encroach into all residential district rear yard setbacks, provided a minimum setback of five feet is retained, and provided such deck be not more than sixteen inches above existing natural grade measured at deck floor from the highest point, and provided that such patio cover is not enclosed in any manner. A building permit is required.

D. Awnings and marquees may be allowed within required front yards and over sidewalks or public right-of-way in commercial and industrial zones if all the following requirements are satisfied:

1. The director of the department of community development and the director of the department of public works or their designees determine that placement of the awning or marquee within the setback areas or over the public sidewalk does not impede vehicular or pedestrian traffic flow or create any other type of hazard to the public.

2. The awning or marquee is specifically designed to benefit pedestrians by the providing of shelter and creating a friendlier pedestrian environment.

3. That development of an awning or marquee within the setback area or over public sidewalk is consistent with goals of the comprehensive development plan, the standards of the specific zone in which it is proposed to be located and consistent with the character of the surrounding neighborhood.

4. ~~Uniform~~ The City's Building Codes and ~~Uniform~~ Fire Codes are satisfied for the structure and location.

Section 61: Section 16.06.315 of the Lacey Municipal Code is hereby amended to read as follows:

16.06.315 Factory-built home. "Factory-built home" means a structure constructed in a factory of assembled parts and transported to the building site, in whole or in units, which meets the requirements of the ~~Uniform~~ State of Washington Building Code. The completed structure is not a mobile/manufactured home.

Section 62: Section 16.25.090 of the Lacey Municipal Code is hereby amended to read as follows:

16.25.090 Pedestrian circulation requirements.

A. It shall be the responsibility of the property owner/developer to ensure the provision of a safe and convenient pedestrian circulation linkage system as described in Section 16.25.090 and consistent with the designation identified on Table 16T-10 and Table 14T-16.

B. The pedestrian linkage system is a network including the major pedestrian corridor, landscaped walkways and perimeter sidewalks. It is established to provide safe pedestrian routes; enhance the appearance of buildings and their settings; provide a unified design element to offset varying architectural styles; and to soften the appearance of parking lots and service storage areas.

C. The various components of the linkage system shall be provided as property is developed or redeveloped by the property owner/developer as noted on Table 16T-10 and Table 14T-16.

D. When zero foot setbacks are utilized, landscaping requirements for planter strips may require sidewalks to be located outside of the normal right of way. In such cases, an unrestricted easement across sidewalks shall be granted to the city.

E. To maximize a pedestrian-friendly environment by providing an adequate separation between pedestrians and automobile traffic, development of a planter strip with street trees and grass between the curb and sidewalk shall be a primary goal and shall be required unless specifically stated otherwise below.

F. In cases where a sidewalk exists adjacent to the curb, the sidewalk must be moved back to accommodate a new planter strip, provided that improvements to the property necessitating site plan review and requiring conformance with this title exceed twenty-five percent of the fair market value of existing improvements at the site and the site has one hundred feet or more of lineal feet of frontage. In cases where only minor improvements to a project site are requested that do not exceed twenty-five percent of the fair market value of existing improvements at the site or the site has less than one hundred feet of frontage, the requirement for moving the sidewalk shall not be

mandatory, provided, however, that in consideration of the twenty-five percent threshold all improvements at the site since the effective date of this provision shall be included in calculating the total value. The twenty-five percent value shall be determined using the valuation procedures provided for in Chapter 14.04 adopting the~~tables of the Uniform~~ Building Code for proposed improvements and assessors office values for current structures.

G. Where adjacent properties do not have a planter strip and the sidewalk abuts the street, the new sidewalk shall be meandered to interconnect with the existing sidewalk and will provide the required planter strip for the project's street frontage.

H. In cases where provision of a planter strip would necessitate removal or moving of a building, provision of a planter strip shall not be required unless the site is to be redeveloped and the building removed and reconstructed as part of the proposal.

I. In cases where parking must be removed to provide the planter strip and landscaping, this shall be required, provided it leaves the site with at least seventy-five percent of the number of parking stalls required by the city zoning code or parking can be obtained on an adjacent site.

J. In cases where a minimum six and one-half foot planter strip area cannot be provided because of limitations discussed above, options for different dimensions of the planter area discussed below under Section 16.25.090.U., Street Tree Planting Requirements, may be used if approved by the department of Community Development. Minimum planter strip requirements may not be reduced when a zero foot front setback is proposed. Where the zero foot front yard setback is proposed, the front of the building shall have a main pedestrian entrance.

K. Because of identified financial impacts of requirements to move existing sidewalks, the city of Lacey shall establish a local grant program for very small businesses that would otherwise not be able to afford to move the sidewalk. Very small businesses shall be defined as those businesses with less than four employees. The grant program shall provide that the city will share up to fifty percent of the costs of landscaping and sidewalk improvements. The grant may be in the form of cash, city labor, city services or other real contribution resulting in cost reduction to the recipient. The director of community development is authorized to develop administrative policies and procedures in carrying out the intent and requirements of Section 16.25.090.

L. Where a linkage system exists or is required outside of a public right of way, an easement to the city of Lacey shall be required to provide continuity of public access to adjoining properties.

M. A structure may extend into or over a required linkage system or walkway only when:

1. The encroachment is integrated into the linkage system by providing a covered walkway, arcade, marquee, etc. or it otherwise complements pedestrian activities; and

2. The required width of the linkage system is maintained or when compensation is provided at another location.

N. Where a linkage system adjoins a public street, the system's width shall be measured from the edge of the existing or proposed curb.

O. Construction standards for the major pedestrian corridor, walkways, sidewalks and landscaping shall be as specified by the city engineer or as otherwise provided for in Chapter 16.25. In no case shall the width be less than the standards under Section 14.23.087.H and Table 14T-16.

P. A pedestrian-oriented facility may utilize a zero foot front yard setback if it meets all of the following criteria:

1. Use is pedestrian-oriented as determined by the director of community development or designee;

2. Façade has pedestrian-friendly features, such as awnings, main entrances, and pedestrian scale;

3. Pedestrian entrance is direct to building with no parking or vehicle access lane between sidewalk and the main pedestrian entrance to the building;

4. A planter strip is provided between the street and the sidewalk which meets requirements of Section 14.23.087.H and Table 14T-16.

Q. Each segment of walkways, perimeter sidewalks and landscaping shall be maintained by the property owner, unless a special assessment district is duly established for the specific purpose of maintaining a portion of or all such pedestrian linkage and landscaping improvements. The city shall maintain the intersections of all public streets adjoining any portion of the pedestrian linkage system.

R. A plot plan of all proposed pedestrian linkage improvements identifying all dimensions and pedestrian features shall be submitted along with the site plan for review to the city.

S. The property owner shall install street trees, in addition to any other landscaping requirements, in accordance with Table 14T-16 and as follows:

Where a six and one-half foot planter strip is to be provided, street trees must be planted four feet back from the curb edge between the street and walkway. Trees may be protected by a decorative metal grate or some other protective device. Street trees at least two inches in caliper measured six inches above existing grade must be planted not more than thirty-five feet on center. A street tree planting area may also include decorative paving other plant materials and street furniture as required. Street trees must be planted as specified in Section 16.25.090.U.

T. Outdoor exhibits, displays, sales, service of foot or drinks, or other activities may be conducted in pedestrian open space and linkage systems, including plazas, whether or not such facilities or activities are customarily accessory to the adjacent principal use; provided, free pedestrian movement through the area without unreasonable interruption by such facilities or activities is available and provided, said activities comply with the city's regulations for street merchants. Areas, activities and facilities so approved may be used for regular, intermittent, or temporary special events without further permitting under these zoning regulations, but shall not be exempted hereby from requirements for other permits.

U. The volume of exploitable soil in the pit of an urban street tree planting spot is critical to the long-term survival and health of the tree. Due to increased bulk density and difficulty for roots to penetrate the interface between the planting media placed in the pit and the surrounding subsurface soils, many tree's roots do not effectively utilize growing space beyond the pit. Therefore, total pit volume and exposed surface area are the two most important elements of pit design.

In consideration of these points, the following pit design is required for Lacey street trees:

Minimum surface area shall be six-foot by six-foot with a depth excavated to at least four feet and replaced with appropriate soil media. Variations in the shape of the surface opening are acceptable, however the total pit volume achieved by the six-foot by six-foot by four-foot pit design (one hundred forty-four cubic feet) shall not be compromised; see Tables 16T-24 and 16T-25.

A six-inch layer of gravel shall be placed in the bottom of the pit for drainage and a layer of fabric placed over the top of the gravel. The pit should then be filled with planting media and the media firmed before setting the balled and burlapped tree. A four-inch diameter perforated PVC percolator tube shall be placed vertically in the pit to allow deep irrigation penetration. The top of the root ball shall be set just above the surface of the planting media, two to three inches. Barriers shall be installed at an angle near the pit edges by sidewalks to deflect the roots downward to prevent heaving of the concrete. These barriers may be made from sheet metal, tin, fiberglass sheets, or wood.

The top of the pit shall be covered with two inches of pea gravel to prevent soil disturbance while irrigating. A two-inch lip shall be cut in the surrounding concrete to allow placement of metal grates with perforations.

Another option allowed is to place a four-inch bed of sand over the planting media and lay brick pavers that would be at the same level as the sidewalk. This technique also allows for aeration of the tree's root system.

Section 63: Section 16.41.070 of the Lacey Municipal Code is hereby amended to read as follows:

16.41.070 Landscaping.

A. General.

1. The site plan review committee shall have the authority to waive specific requirements or to impose additional requirements in unique or special circumstances. The waiver is not intended to reduce fulfillment of those requirements but rather to allow for flexibility and innovation of design. Special circumstances or unique conditions shall be reviewed with the city prior to submittal of a landscape plan. Examples of special conditions might include:

a. Preservation of unique wildlife habitat;

b. Preservation of natural or native areas;

c. Compliance with special easements;

d. Renovation of existing landscaping;

e. Unique site uses;

f. Urban beautification plan.

2. Plot Plan.

a. A plot plan of the proposed landscaping and screening shall be submitted with the site plan review application.

b. Plan Requirements. The site plan shall be accurately drawn, using an appropriate engineering or architect scale, and showing the following:

(1) Proposed landscaping including location, species and size at time of planting;

(2) Existing vegetation in general and identifying all evergreen and deciduous trees four inches and greater in diameter measured at twenty-four inches above grade level;

(3) Location of existing and proposed driveways and parking surfaces, curbs and sidewalks.

B. Landscape Plan Approval.

~~1. A building permit shall not be issued until the landscaping plan has been approved.~~

~~2~~. At the time of site plan review, the committee shall review specific landscape requirements with the owner or their representative.

C. Landscape Performance Bond.

1. A bond shall be required to guarantee the completion of the landscaping per the approved plan. The bond shall be posted with the city prior to issuance of the building permit. The bond shall be in the amount of one hundred fifty percent of the estimated landscaping and installation costs.

2. Types of landscape bonds which are acceptable:

a. Cash bonds;

b. Assignment of savings account;

c. Insurance company performance bond;

d. Letter of guarantee from lender with attached approved plan.

3. Bonding forms shall be as follows:

a. Cash bond: city of Lacey cash bond form;

b. Assignment of savings account: city of Lacey bond form;

c. Insurance company performance bond: Bond form as prescribed by the bonding company. This form must include the following:

(1) The amount of the bond,

(2) The name of the project and address as assigned by the city,

(3) The following statement of purpose: "Landscaping required by the city of Lacey Zoning Code and in accordance with the approved landscape plan on file with the city of Lacey,"

(4) All applicable signatures,

(5) Name, address and telephone number of the party to whom the bond is to be released;

d. City of Lacey guarantee form.

4. Failure to complete all of the required landscaping or part of it within six months of the building occupancy shall constitute a building violation, and the city shall use the bond to complete the required landscaping.

5. It shall be the responsibility of the project manager or business owner to contact the city upon completion of the landscaping work and request an inspection.

D. General Landscape Requirements.

1. All parking areas of under ten thousand square feet shall have a minimum of eight percent of the parking, maneuvering area, and loading space landscaped as a means to

reduce the barren appearance of the lot and to reduce the amount of stormwater runoff. Perimeter landscaping, required adjacent to property lines, shall not be calculated as part of the eight percent figure. Landscaping adjacent to building may be calculated as part of that area.

2. All parking areas of over ten thousand square feet shall have a minimum of fifteen percent of the parking, maneuvering area, and loading space landscaped as a means to reduce the barren appearance of the lot and to reduce the amount of stormwater runoff. Perimeter landscaping, required adjacent to property lines, shall not be calculated as part of the fifteen percent figure. Landscaping adjacent to building may be calculated as part of that area.

3. All ingress/egress easements which provide corridors to a lot not adjacent to a public right-of-way shall be considered the same as public right-of-way. Landscape requirements for easement corridors shall be the same as those required adjacent to public rights-of-way.

4. All outside storage areas shall be screened by masonry walls or wood fencing or landscaping to a minimum of ten feet in depth. The site plan review committee may eliminate the need for screening when the stored materials are not visually obtrusive or when the storage yard abuts another storage yard.

5. All portions of a lot not devoted to building, future building, parking, storage, or accessory uses shall be landscaped in a manner appropriate to the stated purpose of this chapter.

6. All required landscaping areas shall extend to the curb line or the street edge.

7. Required landscaping areas which are inappropriate to landscape due to the existence of rail lines or other features shall be provided first along another lot line, or second, to an equalized area in another portion of the lot, to be determined by the site plan review committee.

8. Bark mulch, gravel, or other nonvegetative material shall be used only in conjunction with landscaping to assist vegetative growth and maintenance or to visually complement plant material. Nonvegetative material is not a substitute for plant material.

9. Required landscape areas shall be provided with adequate drainage.

10. Slopes shall not exceed a three to one ratio (width to height) in order to decrease erosion potential and assist in ease of maintenance.

11. Landscaping shall not conflict with the safety of those using adjacent sidewalks or with traffic safety. Safety features of landscaping shall be discussed at the time of site plan review, if necessary.

12. Quantity, arrangement and types of plants installed shall be appropriate to the size of the required landscape area and purpose of planting area as noted in subsection 16.41.070(E).

13. All refuse containers shall be screened from abutting properties and/or streets by one hundred percent sight-obscuring wood fencing or masonry walls and appropriate landscaping.

Refuse container screening shall be required and be of a material and design compatible with the overall architectural theme of the associated structure, shall be at least as high as the refuse container, and shall in no case be less than six feet high. Refuse collection areas shall be designed to contain all refuse generated on site and deposited between collections. Deposited refuse shall not be visible from outside the refuse enclosure.

14. Landscaping shall be placed outside of sight-obscuring fences or walls unless it is determined by the site plan review committee that such arrangement would be detrimental to the stated purpose of this chapter.

15. All property abutting an arterial, flanking, or collector street shall be landscaped with a thirty foot average depth.

E. Types of Landscaping.

1. Type I: Solid Screen. Purpose. Type I landscaping is intended to provide a solid sight barrier to totally separate incompatible uses.

Description. Type I landscaping shall consist of evergreen trees or tall shrubs with a minimum height of six feet at planting, which will provide a one hundred percent sight-obscuring screen within two years from the time of planting; or a combination of evergreen and deciduous trees and shrubs backed by one hundred percent sight-obscuring fence.

2. Type II: Visual Screen. Purpose. Type II landscaping is intended to create a visual separation that is not necessarily one hundred percent sight-obscuring from incompatible uses.

Description. Type II landscaping shall be evergreen or a mixture of evergreen and deciduous trees with large shrubs and ground cover interspersed with the trees. A sight-obscuring fence will be required unless it is determined by the site plan review committee that such a fence is not necessary. The plants and fence must not violate the sight area safety requirements at street intersections.

Evergreen trees shall be an average height of six feet at planting. Deciduous trees shall be the following sizes based on their spacing:

One inch caliper/ten feet on center;

Two inch caliper/twenty feet on center;

Three inch caliper/thirty feet on center;

Three and one-half to five inch caliper/forty feet on center.

Ground cover shall be of sufficient size and spacing to form a solid cover within two years from the time of planting.

3. Type III: Visual Buffer. Purpose. Type III landscaping is intended to provide visual separation of uses from streets and main arterials and between compatible uses so as to soften the appearance of streets, parking lot and building facades.

Description. Type III landscaping shall be evergreen and deciduous trees planted not more than thirty feet on center, interspersed with large shrubs and ground cover. Where used to separate parking from streets, plantings must create a visual barrier of at least forty-two inches in height at time of planting and form a solid screen two years after planting. The planting shall not violate the sight area safety requirements at street intersections or driveways.

Evergreen trees shall be an average height of six feet at planting. Deciduous trees shall be the following sizes based on their spacing:

One inch caliper/ten feet on center;

Two inch caliper/twenty feet on center;

Three inch caliper/thirty feet on center;

Three and one-half to five inch caliper/forty feet on center.

Ground cover shall be sufficient size and spacing to form a solid cover within two years from the time of planting.

4. Type IV: Low Cover. Purpose. Type IV landscaping is intended to provide visual relief where clear sight is desired.

Description. Type IV landscaping shall consist of a mixture of evergreen and deciduous shrubs and/or ground cover, to provide solid covering of the entire landscaping area within two years of planting.

5. Type V: Open Area Landscaping. Purpose. Type V landscaping is primarily intended to visually interrupt large open spaces of parking areas.

Description. Type V landscaping shall consist of trees planted with supporting shrubs, sod or ground cover. Each landscape area shall be sufficient size to promote and protect growth of plantings, one hundred square foot minimum.

Evergreen trees shall be an average height of six feet at planting. Deciduous trees shall be the following sizes based on their spacing:

One inch caliper/ten feet on center;

Two inch caliper/twenty feet on center;

Three inch caliper/thirty feet on center;

Three and one-half inch to five inch caliper/forty feet on center.

Ground cover shall be of sufficient size and spacing to form a solid cover within two years from the time of planting.

F. Landscape Area Requirements for BP Zone.

1. Front Yard. The front twenty feet shall be improved with permanent Type III landscaping. All ground cover to be sod in this yard.

2. Side Yard. At least ten feet of each side yard shall be improved with permanent Type III landscaping. Where property lines are located at the centerline of a driveway, the required landscaping shall be placed adjacent to the building face. In no case shall this area be less than the minimum required. Where property lines pass through a building, the minimum landscaped area shall be located elsewhere. All landscape areas are to be located on that lot.

3. Building Wall Landscaping. Except at service yards, storage yards and loading dock faces there shall be a ten foot landscape area adjacent to the building walls. This area may be counted as landscaping. In no case shall it be counted as the minimum area for displaced property line landscaping.

4. Parking Lot Landscaping. Provide a minimum of one, five foot by twenty foot landscape island within the parking area for each ten cars. Provide a five foot by twenty foot island at the end of each row of parking stalls. Provide Type V landscaping.

5. Storage Yards. Provide Type I landscaping on all sides except as noted.

6. Service Yards and Loading Docks. Where loading docks and service doors are visible to the street, provide a Type II landscape screen.

7. All portions of lots not developed with buildings or paving shall be landscaped with a minimum Type IV landscaping.

8. Enclosure of Activities. Predominant activities and operations shall be completely enclosed within buildings or structures, except for customary appurtenances, such as loading and unloading areas. The site plan review committee shall be authorized to determine the reasonable application of this provision in cases of operational hardship or other showing of uncommon circumstances when reviewing outdoor crane or lift operations.

9. Outside Storage or Operations Yard. Outside storage or operations yards shall be confined to the area to the rear of the principal building or the rear two□thirds of the property, and screened from view from any property line by appropriate masonry walls, wood fencing, earth mounds, and landscaping. Outside storage exceeding a height of fifteen feet shall be so placed on the property as to not detract from the reasonable accepted appearance of the district.

10. Loading Areas. Loading areas must be located in such a manner that no loading, unloading and/or maneuvering of trucks associated therewith takes place on public rights-of-way. A forty-five foot clear area is to be provided in front of all drive-in doors. A one hundred foot apron with a maneuvering hammer head is to be provided at all dock height doors. In no case when a vehicle is parked in the loading/unloading position adjacent to the building shall it block the movement of other vehicles.

11. Improvement and Maintenance of Yards and Open Space. All required yards, parking areas, storage areas, operations yards, and other open uses on the site shall be maintained in a neat orderly manner appropriate for the district at all times. The city shall be authorized to reasonably pursue the enforcement of these provisions where a use is in violation, and to notify the owner or operator of the use, in writing, of such noncompliance. The property owner or operator of the use shall be given a reasonable length of time to correct the condition.

G. Maintenance Requirements.

1. Whenever landscaping is or has been required in accordance with the provisions of this code or any addition or amendments hereto, or in accordance with the provisions of any previous code or ordinance of the city, said requirements shall be set forth in a recorded document sufficient to bind the land. The landscaping shall be permanently maintained in such a manner as to accomplish the purpose for which it was initially required.

2. The city is hereby authorized and empowered to notify the owner of any property required to be landscaped, or the agent of any such owner, that said landscaping is not being adequately maintained and the specific nature of such failure to maintain. The notice shall specify the date by which said maintenance must be accomplished, and shall be sent by registered mail, addressed to the owner at the owner's last known address.

3. Action Upon Noncompliance. Upon the failure, neglect or refusal of any owner or agent so notified to perform the required maintenance within the time specified in the written notice, or within fifteen days after the date of such notice, the city is hereby authorized and empowered to cause the required maintenance to be done and provide for payment of the cost thereof, with said cost, together with interest at the rate then in effect for interest on judgments in the state of Washington, to be charged against the property owner.

4. Recorded Statement Constitutes Lien. If the full amount due the city is not paid by such owner within thirty days after being informed of said charge then, in that case, the city may cause to be recorded in the Thurston County auditor's office a sworn statement

showing the cost and expense incurred for the work, the date the work was done and the legal description of the property on which said work was done. The recording of such sworn statement shall constitute a lien on the property, and shall remain in full force and effect for the amount due in principal and interest, plus court costs and attorney fees if any, until final payment has been made. Said lien shall be foreclosed in the manner provided by RCW Chapter 60.04 for the foreclosure of liens for the improvement of real property.

5. Alternative Methods of Collection of Damages. In addition to or in lieu of foreclosure of the lien provided for in this subsection, the city may seek personal judgment against the property owner for charges, costs and attorney fees incurred and any civil penalties assessed pursuant to the Lacey Municipal Code.

Section 64: Section 16.43.050 of the Lacey Municipal Code is hereby amended to read as follows:

16.43.050 Development standards. Site development plans shall conform with the following standards:

A. Relationship of PID Site to Adjacent Areas. The design of a PID shall take into account the relationship of the site to the surrounding areas. The perimeter of the PID shall be so designed as to minimize undesirable impact of the PID on adjacent properties and, conversely, to minimize undesirable impact of adjacent land use and development characteristics on the PID.

B. Site Acreage. The minimum site for a planned industrial development shall be ten acres.

C. Access to Public Right-of-Way. Access serving the PID shall be subject to Chapter 16.73.

D. Lot Size. The minimum lot size provisions of other chapters of the zoning title are waived in a planned industrial development.

E. Setback and Side Yard Requirements. Setbacks from the exterior boundary line of the PID area shall be comparable to or compatible with those of existing development of adjacent properties or, if adjacent properties are undeveloped, the type of development which may reasonably be expected on such properties given the existing zoning of such properties or the projections of the comprehensive plan. In no event shall such setback be less than fifteen feet.

F. Off-Street Parking. Off-street parking shall be provided in a PID in the same ratios for types of buildings and uses as required for the underlying zoning district and as described in Chapter 16.72 of this title.

G. Height Limits. Height limits will be imposed if necessary to prevent detrimental effects upon the surrounding properties.

H. Transportation Terminals. Transportation terminals shall not be located within one thousand feet of any residential district, and any newly constructed roads or drives

accessing terminal areas shall not be located within five hundred feet of any residential district.

I. Landscaping.

1. Yard Setback Landscaping. All exterior minimum yard setback areas shall be landscaped with suitable ground cover and deciduous or evergreen trees, not to be less than:

   a. Front yard, fifteen feet,

   b. Side yard(s), five feet,

   c. Rear yard, five feet;

   The sum total of the site shall have no less than twenty percent landscaping. Landscaping must be included within the interior of the lot. Suitable ground cover may be grass, ivy, bark, river rock, and the like. Natural vegetation or stands of trees existing prior to development of the site may be acceptable to meet all or part of the landscape requirements. All deciduous trees shall have a minimum of one-and-one-half inch caliper measured six inches above existing grade and all evergreen trees shall be six to eight feet tall at time of planting.

2. Adjacent Areas. Parcels or lots which share a common boundary with properties in a residential or open space/institutional district shall, in lieu of the exterior boundary setback required in Section 16.43.050(E), provide a twenty-five foot strip for landscaping along said common boundary.

   The exterior edge(s) of the common boundaries shall be densely planted with site screening vegetation having a minimum height of four feet at the time of planting.

3. The perimeters of all parking areas shall be landscaped in such a way as to create a diversion between streets and parking areas, at the same time not obstructing the view of any walkways, driveways, or streets around entrances or exits to the site.

4. Refuse.

   a. Refuse container screening shall be required and be of a material and design compatible with the overall architectural theme of the associated structure, shall be at least as high as the refuse container, and shall in no case be less than six feet high.

   b. No refuse container shall be permitted between a street and the front of a building.

   c. Refuse collection areas shall be designed to contain all refuse generated on site and deposited between collections. Deposited refuse shall not be visible from outside the refuse enclosure.

5. Plot Plan.

   ~~a. A plot plan of the proposed landscaping and screening shall be submitted before building permits are issued. The plan may be incorporated into plans submitted for site plan review or hearings examiner review.~~

~~b.~~ Plan Requirements. The site plan shall be accurately drawn, using an appropriate engineering or architect scale, and showing the following:

(1) Boundaries and dimensions of the site;

(2) Location and identification of all streets, alleys and easements on or abutting the site;

(3) Location and approximate dimension of all conforming structures within one hundred feet of the site on abutting properties;

(4) Proposed location and dimensions of all on-site buildings;

(5) Existing and proposed topography at a maximum of five-foot contours, or by an alternate method approved by the manager;

(6) Proposed landscaping including location, species and size at time of planting;

(7) Existing vegetation in general and identifying all evergreen and deciduous trees four inches and greater in diameter measured at twenty-four inches above grade level;

(8) Details of any proposed architectural barriers;

(9) Location of existing and proposed driveways and parking surfaces, curbs and sidewalks.

6. Installation and Security Requirements.

a. Landscaping required pursuant to this chapter must be installed to the satisfaction of the enforcing officer, in accordance with the approved site plan, no later than three months after issuance of a certificate of occupancy for the project. The enforcing officer may extend the time limit for compliance up to six months after issuance of a certificate of occupancy when circumstances beyond the control of the applicant warrant an extension.

b. The enforcing officer may require performance bonds or other appropriate security, including letters of credit and set aside letters, to insure landscaping will be installed and maintained for one year, according to the approved plan and specifications.

7. Maintenance and Enforcement. All landscaped areas required by this code shall be planted according to accepted practice in good soil with a water source within seventy-five feet (except for self-sustaining natural-type growth commonly occurring in the vicinity of the development) and maintained with respect to pruning, trimming, watering or other requirements to create an attractive appearance and a healthy growing condition. Dead, diseased, stolen or vandalized plantings shall be replaced within three months. Property owners shall keep the planting area reasonably free of weeds and trash. Lack of maintenance shall constitute a violation of this code. The enforcing officer shall have the authority to enforce the standards set forth in this chapter and the conditions attached to all permits for development pursuant to application of this chapter, in accordance with the provisions of Chapter 16.102 of this title.

Section 65: Section 16.43.120 of the Lacey Municipal Code is hereby repealed.

Section 66: Section 16.53.070 of the Lacey Municipal Code is hereby amended to read as follows:

16.53.070 Provisions not to affect ~~Uniform~~ Building or Fire Codes. The regulating language contained in this chapter shall not be interpreted to supersede the rules and regulations pertaining to historical structures as outlined in either the ~~Uniform~~ Building or Fire Codes.

Section 67: Section 16.60.130 of the Lacey Municipal Code is hereby amended to read as follows:

16.60.130 Secondary use limitations.

A. Commercial uses are subject to full administrative review procedures contained in Section 1C.040 of the City of Lacey Development Guidelines and Public Works Standards and shall be provided for in the original, finally approved version of the PRD application for the development within which the commercial use is to be integrated. "Original," as is used in this subsection, refers to the PRD application as it existed at the time of its final approval by the city council.

B. The gross floor area of the commercial use shall not exceed the product of thirty square feet multiplied by the number of dwelling units within the development.

The purpose of restricting commercial development is to prevent the PRD process from being used as a vehicle for rezoning to commercial use which may not be at all related to the commercial needs of the area. Once a relatively large number of dwelling units have been completed or occupied, the need for such commercial development may be justified.

~~C. Construction of at least fifty percent of the residences in the PRD must be completed before any building permits will be issued for the construction of commercial uses.~~

Section 68: Section 16.61.050 of the Lacey Municipal Code is hereby amended to read as follows:

16.61.050 Review and approval procedure. Townhouse developments shall be approved pursuant to the regulations and procedures established in the platting and subdivision ordinance, as modified below, and the standards of this chapter.

A. Review. The site plan review committee shall review and approve the creation of nine or fewer townhouse lots. The site plan review committee approval does not involve a public hearing, but will be subject to notification of adjacent property owners. The decision of the site plan review committee is subject to the appeal process as identified in Chapter 16.84.

   The hearings examiner will review the creation of ten or more lots as provided for through the subdivision process.

B. Platting. A subdivision plat or short plat shall be required for all townhouse developments so that individual dwelling units are divided into lots with common walls located on lot lines.

When a townhouse development is platted, construction of townhouse dwellings may commence prior to final plat or final short subdivision approval, provided:

1. The proposed subdivision has received preliminary approval or the short subdivision has received conditional approval, and the necessary legal instruments have been filed to assure construction of required public improvements;

2. Partial or complete construction of structures shall not relieve the subdivider from, nor impair city enforcement of conditions of subdivision approval;

~~3. Units may not be rented or sold, nor occupancy permits issued until final plat or final short plat approval.~~

C. Site Plans. An application for a townhouse development shall include the following:

A site plan drawing or drawings at a scale not smaller than one hundred feet to the inch, showing all the information required for a preliminary plat plus the following:

1. Site boundaries;

2. Streets bounding or abutting the site;

3. Proposed building including dimensions, setbacks, identification of types and the number of dwelling units in each residential type;

4. Location and dimensions of open spaces;

5. Location and dimensions of garbage disposal areas;

6. The location and design of off-street parking facilities, showing their size;

7. Circulation plan, vehicular and pedestrian, and points of ingress and egress from the site, and their relationship to ingress and egress of neighborhood properties;

8. Existing buildings and indication of future use or disposition;

9. Landscaping plan;

10. Typical front and side elevations and exterior architectural treatment of the proposed units;

11. The existing and proposed contours at two foot intervals and which locates existing streams, lakes, marshes and other natural features.

D. Townhouse developments are subject to design review requirements of Chapter 14.23.

Section 69: Section 16.68.027 of the Lacey Municipal Code is hereby amended to read as follows:

16.68.027 Submittal requirements.

A. Applications proposed under Chapter 16.66 of the Lacey Municipal Code. In addition to the information requested in the conditional use application the following items shall be required for a WCF application:

1. A diagram or map showing the viewshed of the proposed facility.

2. Photosimulations of the proposed facility from affected residential properties and public rights-of-way at varying distances.

3. A map showing the service area of the proposed WCF and an explanation of the need for that facility.

4. A map showing the locations and service areas of other WCF sites operated by the applicant and those that are proposed by the applicant which are close enough to impact service within the city.

5. A site/landscaping plan showing the specific placement of the WCF on the site; showing the location of existing structures, trees, and other significant site features; and indicating type and locations of plant materials used to screen WCF components and the proposed color(s) for the WCF.

6. A signed statement indicating:

a. The applicant agrees to allow for the potential co-location of additional WCF requirement by other providers on the applicant's structure or within the same site location; and

b. That the applicant agrees to remove the facility within eighteen months after that site's use is discontinued.

7. A lease agreement with the landholder or letter of authorization from the owner allowing the provider to act as an agent for the landowner in a land use application.

~~8. Prior to issuance of the building permit, the applicant shall provide a lease agreement that:~~

~~a. Allows the landholder to enter into leases with other providers; and,~~

~~b. Specifies that if the provider fails to remove the facility upon eighteen months of its discontinued use, the responsibility for removal falls upon the landholder.~~

~~9~~8. Evaluation of reasonable stealth technology that could be proposed to lessen the visual land use impacts from the facility.

~~10~~9. Justification must be provided that the structure is necessary and essential, that other methods are not possible, such as use of existing structures (other towers, buildings, etc.) or use of other technological methods such as microcell technology where systems are built as part of cable systems and no towers are needed.

B. Applications submitted under Chapter 16.84 of the Lacey Municipal Code. In addition to information listed on the site plan review application, the following information may be required:

1. Those items listed under Section 16.68.027.A of the Lacey Municipal Code that the administrator deems necessary to properly evaluate the application.

Section 70: Section 16.70.040 of the Lacey Municipal Code is hereby amended to read as follows:

16.70.040 Design and development standards for retail stands. A small retail stand shall generally comply with the following requirements:

A. Retail stands will normally not be more than sixty square feet provided the site plan review committee may approve any size of retail stand it determines meets the spirit and intent of this chapter.

B. A canopy or umbrella may be included with the stand. The canopy or umbrella shall be of vinyl, canvas, or similar durable material. All parts of such umbrella or canopy must have a minimum of seven feet of vertical clearance to the ground.

C. Retail stand materials shall be low maintenance and cleanable, preferably painted and of non-corrosive metal.

D. Temporary/seasonal retail stands may be of the size necessary to carry out their temporary operations as approved by the site plan review committee.

E. Each retail stand shall be a self-contained unit; provided, however that self-contained electrical power generators are not permitted unless the site plan review committee determines noise impacts can be mitigated. Utility service connections may be permitted at permanent street merchant pads at the discretion of the City. Electrical service connections may be permitted by a property owner leasing space to a street merchant or by the adjacent property owner and when the following requirements are met:

   1. Electrical lines are not allowed overhead or lying on the sidewalk.

   2. The outlet location must be placed outside the walkways which are accessible to public and private use.

   3. Length of electrical hookup must be within fifteen feet of the stand.

   4. No extension cords will be allowed.

   5. Hookup must be permanently wired to the retail stand and meet National Electrical Code requirements as to type, size and grounding, terminating in an approved outside weatherproof type receptacle.

   6. Each retail stand shall require an electrical permit unless previously approved, and will require inspection prior to operation of the stand.

F. Advertising signs may only be placed on the cart. Provided street merchants selling food or non-alcoholic beverages within pedestrian plazas may have one sandwich board sign with a menu and prices which would be limited to two feet wide and four feet high. Such sandwich board sign must be located within the pedestrian plaza and oriented to pedestrians at the site.

G. All required licenses and permits issued by the City of Lacey must be displayed in a prominent, visible manner.

H. Retail stand operations must have a permit from the Thurston County Health Department when required and must comply with all applicable Health Department requirements.

I. All persons conducting a retail stand business within the City must keep the site clean and orderly at all times and pick up any refuse or debris and clean up liquid spillage deposited by any person using the business location. Additionally, all such persons shall provide a refuse container for litter. This container shall be of a design approved by the City and must be emptied on a regular basis.

J. Support equipment and accessories shall generally be self-contained within the retail stand. Support equipment and accessories must not be placed so as to impede pedestrian or vehicular traffic or distract from the pedestrian experience.

K. Retail stands selling food within a pedestrian plaza may have accessory seating and tables. Retail stands selling art and crafts may have merchandise displays set up adjacent to the retail stand for pedestrian view only. Art and craft displays shall be approved by the site plan review committee only when the site plan review committee determines such accessories will enhance the pedestrian experience at the site and be compatible with the intent of the zone and neighborhood in which it is located.

L. Noise-making devices designed to attract attention and loud shouting or yelling to attract attention are prohibited.

M. All persons conducting a retail stand business shall obey any order of a police officer to temporarily move such retail stand to avoid congestion or obstruction of the surrounding area for pedestrian and/or vehicular traffic.

N. All retail stands shall have fire extinguisher(s) available according to currently adopted ~~Uniform~~ Fire Code requirements.

Section 71: Section 16.75.040 of the Lacey Municipal Code is hereby amended to read as follows:

16.75.040 Installation requirements.

A. Structural requirements. The structure and erection of signs or flag poles within the city shall be governed by the ~~Uniform~~ City's adopted Building Code, ~~1994 Edition (or any superseding edition adopted by the city)~~. Compliance with the ~~Uniform~~ Building Code shall be a prerequisite to issuance of a sign permit under this code.

B. Electrical requirements. Electrical requirements for signs within the city shall be governed by the National Electrical Code. Compliance with the National Electrical Code shall be required by every sign utilizing electrical energy as a prerequisite to issuance of a sign permit under this code.

C. Illumination. Illumination from or upon any sign shall be shaded, shielded, directed or reduced so as to avoid undue brightness, glare or reflection of light on private or public property in the surrounding area, and so as to avoid unreasonably distracting pedestrians or motorists. "Undue brightness" is illumination in excess of that which is reasonably necessary to make the sign reasonably visible to the average person on an adjacent street. Illumination, if used, shall be what is known as white or yellow and shall not be blinking, fluctuating or moving. Light rays shall shine only upon the sign or upon the property within the premises and shall not spill over the property lines, in any direction, except by indirect reflection.

D. Maintenance. All signs, including signs heretofore installed shall be constantly maintained in a state of security, safety, appearance and repair. If any sign is found not to be so maintained or is insecurely fastened or otherwise dangerous, it shall be the duty of the owner and/or occupant of the premises on which the sign is fastened to repair or remove the sign within five days after receiving notice from the sign code administrator. The premises surrounding a free-standing sign shall be free and clear of rubbish and landscaping area maintained in a tidy manner.

E. Landscaping for free-standing and monument signs. All free-standing and monument signs shall include as part of their design landscaping about their base so as to prevent vehicles from hitting the sign and to improve the overall appearance of the installation.

F. Inspection. All sign users shall permit the periodic inspection of their signs by the city upon city request.

G. Location. All monument and temporary freestanding signs (such as construction signs and property "for sale" signs) must be set back a minimum of five feet from any property lines, or outside the sight triangle established by the vision clearance ordinance, whichever is greater.

Section 72: Section 16.80.090 of the Lacey Municipal Code is hereby amended to read as follows:

16.80.090 Performance assurance.

~~A. Prior to issuance of a building permit a performance assurance device such as assignment of savings, letter of credit or performance bond shall be required to assure completion of required landscaping. Landscaping is expected to be completed prior to occupancy. In no case may the property owner/developer delay performance for more than one year after occupancy.~~

~~B~~A. The city may accept, as an alternative to a performance assurance device, a contractual agreement or bond between the owner/developer and a licensed landscape architect, Washington-certified nurseryperson, or Washington-certified landscaper, along

with a rider or endorsement specifically identifying the city as a party to the agreement for purposes of enforcement. Nothing in this alternative shall be interpreted to in any way modify the conditions of subsection 16.80.090(A).

~~C~~B. If a performance assurance device or evidence of a similar device is required under subsections 16.80.090(A,B), the enforcing officer shall determine the specific type of assurance device required in order to insure completion of the required landscaping in accordance with the approved landscaping plan. The value of this device must equal one hundred fifty percent of the estimated cost of the landscaping to be performed, and shall be utilized by the city to perform any necessary work, and to reimburse the city for documented administrative costs associated with action on the device. If costs incurred by the city exceed the amount provided by the assurance device, the property owner shall reimburse the city in full, or the city may file a lien against the subject property for the amount of any deficit.

~~D~~C. If a performance assurance device or evidence of a similar device is required under subsections 16.80.090(A,B), the property owner shall provide the city with an irrevocable notarized agreement granting the city and its agents the right to enter the property and perform any required work remaining undone at the expiration of the assurance device.

~~E~~D. Upon completion of the required landscaping by the property owner, at or prior to expiration of the assurance device, the city shall promptly release the performance assurance device or evidence thereof.

Section 73: Section 16.81.020 of the Lacey Municipal Code is hereby repealed.

Section 74: Section 16.84.010 of the Lacey Municipal Code is hereby amended to read as follows:

16.84.010 Site plan review required, application and committee membership.

A. Site plan review and approval shall be required for any of the following activities.

1. The use of land for the location of any commercial, industrial or public building or activity, and for the location of any building containing more than two dwelling units or lot with more than one residential structure other than a permitted accessory dwelling.

2. A change of land use at an existing site or structure when the new activity requires either a change of occupancy according to the ~~Uniform~~ Building Code or is a change of land use according to the Standard Industrial Classification code and, in the opinion of the community development director, results in an intensification of land use and will require new development conditions to comply with existing regulations. This provision may not apply to malls (buildings with ten or more tenants sharing common parking) where original conditions to establish the mall complex anticipated a range of tenants and existing facilities and where it can be shown existing infrastructure can accommodate the new intensified use.

3. Expansion of an existing commercial, industrial, public or multifamily structure or use. Provided residential duplexes are exempt.

4. A remodel of an existing structure where the remodel is fifty percent or more of the assessed valuation of existing structures. The remodel value shall be calculated according to methodology described in ~~Section~~ Chapter 14.04~~.015~~ of the Lacey Municipal Code adopting the Building Code. The value of existing structures shall be the most recent value assigned by the County Assessor. The fifty percent threshold shall be cumulative over the most recent five years, including calculations of all previously exempt remodels, but shall not include life/safety improvements or normal maintenance not requiring a building permit. Remodels of residential duplex, triplex, and quadraplex shall be exempt from site plan review.

5. Uses and activities within designated environmentally sensitive areas or their buffers pursuant to the requirements of Chapter 14 of the Lacey Municipal Code.

B. An application, in completed form, shall be filed for site plan review and approval with the department of public works. An application shall not be in completed form under this section if it fails to contain any of the information and material required under Section 16.84.060 of the Lacey Municipal Code.

C. The site plan review committee shall consist of the following members: Lacey staff planner, who shall serve as chairman; city manager; and the city director of public works, or their designees in their temporary absence.

Section 75: The summary attached hereto is approved for publication.

PASSED BY THE CITY COUNCIL OF THE CITY OF LACEY,

WASHINGTON, this 14TH day of August, 2003.

CITY COUNCIL

By _____
Mayor

Attest:

_____
City Clerk

Approved as to form:

_____
City Attorney

City Attorney

Published: Summary - August 18, 2003
Monday

SUMMARY FOR PUBLICATION

ORDINANCE 1208

CITY OF LACEY

The City Council of the City of Lacey, Washington, passed on August 14, 2003, Ordinance No. 1208, entitled "AN ORDINANCE ADOPTING THE INTERNATIONAL BUILDING CODE AND IN FURTHERANCE THEREOF, REPEALING CHAPTERS 12.11, 14.03, 14.10, AND 14.17 AND SECTIONS 14.04.025, 14.05.025, 14.07.017, 14.07.018, 14.07.021, 14.07.030, 14.07.040, 14.07.045, 14.07.050, 14.07.060, 14.07.070, 14.07.080, 14.07.085, 16.43.120, AND 16.81.020 OF THE LACEY MUNICIPAL CODE, AMENDING THE TITLES TO CHAPTERS 14.04, 14.05, 14.07, 14.15, 14.16, AND 14.18 OF THE LACEY MUNICIPAL CODE, AMENDING SECTIONS 2.30.010, 2.30.090, 12.04.050, 12.24.030, 12.28.010, 13.08.070, 13.32.010, 14.04.010, 14.04.015, 14.04.020, 14.05.010, 14.05.015, 14.05.020, 14.06.010, 14.07.010, 14.07.015, 14.07.020, 14.13.010, 14.13.020, 14.13.030, 14.15.010, 14.15.020, 14.16.020, 14.18.010, 14.18.020, 14.18.030, 14.20.020, 14.23.086, 14.24.160, 14.32.069, 14.36.215, 14.37.030, 14.37.180, 16.03.050, 16.06.315, 16.25.090, 16.41.070, 16.43.050, 16.53.070, 16.60.130, 16.61.050, 16.68.027, 16.70.040, 16.75.040, 16.80.090, AND 16.84.010 OF THE LACEY MUNICIPAL CODE, ADDING NEW CHAPTER 14.03 AND NEW SECTIONS 14.04.016 AND 14.14.050 TO THE LACEY MUNICIPAL CODE, AND APPROVING A SUMMARY FOR PUBLICATION."

The main points of the Ordinance are described as follows:

1. Pursuant to adoption by the State of Washington of the International Building Code as the official Building Code of the State of Washington, the City of Lacey by enacting the above entitled ordinance has also adopted the International Building Code as the official Building Code of the City of Lacey;

2. Several Sections of the Lacey Municipal Code, as listed above, have been amended to correspond to the newly adopted International Building Code;

3. New Chapter 14.03 and new Sections 14.04.016 and 14.14.050 have been added to the Lacey Municipal Code in furtherance of the adoption of the International Building Code; and

4. Chapters 12.11, 14.03, 14.10, and 14.17 and Sections 14.04.025, 14.05.025, 14.07.017, 14.07.018, 14.07.021, 14.07.030, 14.07.040, 14.07.045, 14.07.050, 14.07.060, 14.07.070, 14.07.080, 14.07.085, 16.43.120, AND 16.81.020 of the Lacey Municipal Code have been repealed in furtherance of the adoption of the International Building Code.

A copy of the full text of this Ordinance will be mailed without charge to any person requesting the same from the City of Lacey.

Published: August 18, 2003.

Charlotte M. Taylor
Lacey City Clerk

ORDINANCE 1215

CITY OF LACEY

AN ORDINANCE RELATING TO THE CITY'S WETLANDS PROTECTION AND HABITAT CONSERVATION AREAS PROTECTION REGULATIONS, AMENDING THE LACEY MUNICIPAL CODE BY REPEALING SECTIONS 14.28.470, 14.28.480 AND 14.33.030, ADDING NEW SECTIONS 14.28.445, 14.28.447, 14.28.455, 14.28.465, 14.33.030, 14.33.115, 14.33.116 and 14.33.117, AMENDING SECTIONS 14.28.030, 14.28.080, 14.28.090, 14.28.100, 14.28.120, 14.28.140, 14.28.280, 14.28.300, 14.28.350, 14.28.360, 14.28.370, 14.28.440, 14.28.450, 14.28.460, 14.28.490, 14.33.060, 14.33.070, 14.33.080, 14.33.100, 14.33.110 AND 14.33.160 ALL OF SAID CODE AND ADOPTING A SUMMARY FOR PUBLICATION.

WHEREAS, the City has previously amended it's Environmental Protection and Resource Conservation Plan required by the State Growth Management Act which Plan requires changes to the City's Wetlands Protection and Habitat Conservation Areas Protection Ordinances found in Chapters 14.28 and 14.33 of the Lacey Municipal Code and further changes are required to bring said regulations in conformance with state law and the City's Planning Commission has recommended the modifications set forth herein,

NOW, THEREFORE;

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, AS FOLLOWS:

Section 1: Sections 14.28.470, 14.28.480 and 14.33.030 of the Lacey Municipal Code are hereby repealed.

Section 2: Section 14. 28.030 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.030 Definitions. For the purposes of this chapter, the following definitions shall apply:

A. "Applicant" means a person who files an application for permit under this chapter and who is either the owner of the land on which that proposed activity would be located, a contract vendee, a lessee of the land, the person who would actually control and direct the proposed activity, or the authorized agent of such a person.

B1. "Best management practices" means conservation practices or systems of practices and management measures that:

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

2. Minimize adverse impacts to surface water and ground water flow, circulation patterns, and to the chemical, physical, and biological characteristics of wetlands.

3. Protect trees and vegetation designated to be retained during the following site construction; and

4. Provide standards for proper use of chemical herbicides within critical areas.

B2. "Best available science" means current scientific information used in the process to designate, protect, or restore critical areas, that is derived from a valid scientific process as defined in WAC 365-195-900 through 925. Sources of best available science are included in "Citations of Recommended Sources of Best Available Science for designating and protecting critical areas" published by the State Office of Community Development.

C. "Compensation project" means actions necessary to replace project-induced wetland and wetland buffer losses, including land acquisition, planning, construction plans, monitoring and contingency actions.

D. "Compensatory mitigation" means replacing project-induced wetland losses or impacts, and includes, but is not limited to, the following:

1. "Restoration" - Actions performed to reestablish wetland functional characteristics and processes which have been lost by alterations, activities, or catastrophic events within an area which no longer meets the definition of a wetland.

2. "Creation" - Actions performed to intentionally establish a wetland at a site where it did not formerly exist.

3. "Enhancement" - Actions performed to improve the condition of existing degraded wetlands so that the functions they provide are of a higher quality.

4. "Preservation" - actions taken to ensure the permanent protection of existing high quality wetlands.

E. "Department" means the Washington State Department of Ecology.

F. "Developable area" means an area of land outside of wetlands and wetland buffers.

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

H. "Essential habitat" means habitat necessary for the survival of federally listed threatened, endangered, and sensitive species and state listed priority species.

I. "Existing and ongoing agriculture" includes those activities conducted on lands defined in RCW 84.34.020 (2), and those activities involved in the production of crops or livestock, for example, the operation and maintenance of farm and stock ponds or drainage ditches, operation and maintenance of ditches, irrigation systems including irrigation laterals, canals, or irrigation drainage ditches, changes between agricultural activities, and normal maintenance, repair, or operation of existing serviceable structures, facilities, or improved

areas. Activities which bring an area into agricultural use are not part of an ongoing operation. An operation ceases to be ongoing when the area on which it is conducted is converted to a nonagricultural use or has lain idle for more than five years, unless the idle land is registered in a federal or state soils conversation program, or unless the activity is maintenance of irrigation ditches, laterals, canals, or drainage ditches related to an existing and ongoing agricultural activity. Forest practices are not included in this definition.

J. "Exotic" means any species of plants or animals that are foreign to the planning area.

K. "Extraordinary hardship" means strict application of this chapter and/or programs adopted to implement this chapter by the city of Lacey would prevent all reasonable economic use of the parcel.

L. "Financial security" means a method of providing surety of financial performance and may include provision of a bond, assignment of savings, letter of credit or other financial guarantee approved by the city attorney.

M. "Forested wetland" means a regulated wetland with at least twenty percent of the surface area covered by woody vegetation greater than twenty feet in height.

N. "Functions", "beneficial functions", or "functions and values" means the beneficial roles served by wetlands including, but not limited to, water quality protection and enhancement, fish and wildlife habitat, food chain support, flood storage, conveyance and attenuation, ground water recharge and discharge, erosion control, wave attenuation, historical and archaeological and aesthetic value protection, and recreation. These beneficial roles are not listed in order of priority.

O. "High intensity land use" includes land uses which are associated with moderate or high levels of human disturbance or substantial wetland habitat impacts including, but not limited to, urban residential densities, active recreation uses, and commercial and industrial land uses.

P. "High quality wetlands" are those regulated wetlands which meet the following criteria:

1. No, or isolated, human alteration of the wetland topography;

2. No human-caused alteration of the hydrology or else the wetland appears to have recovered from the alteration;

3. Low cover and frequency of exotic plant species;

4. Relatively little human-related disturbance of the native vegetation, or recovery from past disturbance;

5. If the wetland system is degraded, it still contains a viable and high quality example of a native wetland community; and

6. No known major quality problems.

Q. "Hydric soil" means a soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part. The presence of hydric soil shall be determined following the methods described in the "Federal Manual for Identifying and Delineating Jurisdictional Wetlands".

R. "Hydrophytic vegetation" means macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. The presence of hydrophytic vegetation shall be determined following the methods described in the "Federal Manual for Identifying and Delineating Jurisdictional Wetlands".

S. "In-kind compensation" means to replace wetlands with substitute wetlands whose characteristics closely approximate those destroyed or degraded by a regulated activity. It does not necessarily mean replacement "in-category."

T. "Isolated wetlands" means those regulated wetlands which:

1. Are outside of and not contiguous to any 100 year floodplain of a lake, river, or stream; and

2. Have no contiguous hydric soil or hydrophytic vegetation between the wetland and any surface water.

U. "Lot of record" means a lot legally established by survey or legal description and recorded at the county auditor's office prior to adoption of the city of Lacey subdivision ordinance or a lot legally established after adoption of the city of Lacey subdivision regulations by recording of a building site plan, subdivision or short subdivision at the county auditor's office. The definition of lot shall be that definition used in the Lacey subdivision ordinance (LMC Section 15.08.020(E)).

V. "Low intensity land use" includes land uses which are associated with low levels of human disturbance or low wetland habitat impacts, including, but not limited to, passive recreation, open space, agricultural, or forest management land uses.

W. "Mitigation" includes avoiding, minimizing or compensating for adverse wetland impacts. Mitigation in the following 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 environment;

4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments;

6. Monitoring the impact and the compensation project and taking appropriate corrective measures. Mitigation for individual actions may include a combination of the above measures.

X. "Native vegetation" means plant species which are indigenous to the area in question.

Y. "Off-site compensation" means to replace wetlands away from the site on which a wetland has been impacted by a regulated activity.

Z. "On-site compensation" means to replace wetlands at or adjacent to the site on which a wetland has been impacted by a regulated activity.

AA. "Out-of-kind compensation" means to replace wetlands with substitute wetlands whose characteristics do not closely approximate those destroyed or degraded by a regulated activity. It does not refer to replacement "out-of-category."

BB. "Practicable alternative" means an alternative that is available and capable of being carried out after taking into consideration cost, existing technology, and logistics in light of overall project purposes, and having less impacts to regulated wetlands. It may include an area not owned by the applicant which could reasonably have been or be obtained, utilized, expanded, or managed in order to fulfill the basic purpose of the proposed activity.

CC. "Priority habitats" are a seasonal range or habitat element with which a given species has a primary association, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term. These might include areas of high relative density or species richness, breeding habitat, winter range and movement corridors. These might also include habitats that are of limited availability or high vulnerability to alteration.

DD. "Priority species" are those species that are of concern due to their population status and their sensitivity to habitat manipulation. Priority species include those which are state-listed endangered, threatened, and sensitive species as well as other species of concern and game species.

EE. "Puget Sound" means all salt waters of the state of Washington inside the international boundary line between the State of Washington and the province of British Columbia, lying east of one hundred twenty-three degrees, twenty-four minutes west longitude.

FF. "Qualified professional or technical wetlands consultant or scientist" means an individual or team that has both the academic qualifications and field experience to provide the technical expertise for making competent wetland delineations and recommendations necessary to implement the goals and requirements of this chapter. Said persons must have previous demonstrated competence in wetland work by having successfully prepared complex wetland studies that have been approved and accepted by the State Department of Ecology, and must be accepted by the city of Lacey pursuant to the requirements of Sections 14.28.065 and 14.28.067 of this chapter.

GG. "Regulated activities" means any of the following activities which are directly undertaken or originate in a regulated wetland or its buffer:

1. The removal, excavation, grading, or dredging of soil, sand, gravel, minerals, organic matter, or material of any kind;

2. The dumping, discharging, or filling with any material;

3. The draining, flooding, or disturbing of the water level or water table;

4. The driving of pilings;

5. The placing of obstructions;

6. The construction, reconstruction, demolition, or expansion of any structure;

7. The destruction or alteration of wetlands vegetation through clearing, harvesting, shading, intentional burning, or planting of vegetation that would alter the character of a regulated wetland or any other activity taking place in a wetland or buffer involving the modification of vegetation falling under the jurisdiction of the city's Tree and Vegetation Protection and Preservation Ordinance;

8. Activities that result in a significant change of water temperature, a significant change of physical or chemical characteristics of wetlands water sources, including quantity, or the introduction of pollutants.

HH. "Regulated wetlands" means ~~type 2 through 5 waters as defined by Washington Forest Practices Rules and Regulations WAC 222 and ponds twenty acres or less, including their submerged aquatic beds, and those lands defined as wetlands under the Federal Clean Water Act, 33 U.S.C. Sec. 1251 et seq., and rules promulgated pursuant thereto and shall be those areas and those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Regulated wetlands generally include streams falling under Forest Practice Regulations and swamps, marshes, bogs, and similar areas. Wetlands created as mitigation and wetlands modified for approved land use activities shall be considered as regulated wetlands. All Category I and V wetlands shall be considered regulated wetlands. Regulated wetlands do not include Category II and III wetlands less than two thousand five hundred square feet and Category IV wetlands less than ten thousand square feet. Regulated wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities. The applicant shall bear the burden of proving that the site was not previously a wetland. For identifying and delineating a regulated wetland, local government shall consider the "Federal Manual for Identifying and Delineating Jurisdictional Wetlands."~~ all wetlands as defined herein and wetlands which fall waterward of the ordinary high water mark of lakes. At the time of adoption of this provision the Department of Ecology, had not provided a threshold for small wetland exemptions. Previous recommendations prepared by the Department of Ecology, in the early 1990s, provided exemptions for some small wetlands; Category 2 and 3 wetlands under 2,500 square feet, and category IV wetlands under 10,000 square feet. The Department of Ecology no longer believes such exemptions are scientifically valid. Depending upon individual circumstances of a wetland site, these small wetlands may or may not have functions and values justifying regulation. Therefore, a preliminary site review and assessment should be preformed prior to the modification of any small wetland, under the thresholds described above, to consider the probable functions and values of the wetland. A wetland permit or other mitigation will be required unless the applicant adequately demonstrates that the wetland functions and values provided by the small wetland are sufficiently limited enough that consideration during development of the property is not warranted. If the preliminary review indicates the values and functions are sufficiently limited, considering other goals and policies of the Comprehensive Land Use Plan to develop an urban community, the small wetland may be exempted from full wetland permit review.

II. "Repair or maintenance" means 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. Activities that change the character, size, or scope of a project beyond the original design and drain, dredge, fill, flood, or otherwise alter additional regulated wetlands are not included in this definition.

JJ. "Scrub-shrub wetland" means a regulated wetland with at least thirty percent of its surface area covered by woody vegetation less than twenty feet in height as the uppermost strata.

KK. "Serviceable" means presently usable.

LL. "Unavoidable and necessary impacts" are impacts to regulated wetlands that remain after a person proposing to alter regulated wetlands has demonstrated that no practicable alternative exists for the proposed project.

MM. "Water-dependent" means requiring the use of surface water that would be essential to fulfill the purpose of the proposed project.

NN. "Wetlands" are ~~for the purposes of inventory, incentives, and nonregulatory programs, means those lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For the purposes of this definition, wetlands must have one or more of the following attributes:~~

~~1. At least periodically, the land supports predominantly hydrophytes;~~

~~2. The substrate is predominantly undrained hydric soil; and~~

~~3. The substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.~~ those areas that are inundated or saturated by surface or ground water 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 contruction 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 regulated wetland, local government shall use the Washington State Wetland Identification and Delineation Manual.

OO. "Wetlands site plan review approval" means any approval issued, conditioned or denied to implement the standards of this chapter.

PP. "Wetland buffers" or "wetland buffer zones" is an area that surrounds and protects a wetland from adverse impacts to the functions and values of a regulated wetland.

QQ. "Wetland classes," "classes of wetlands" or "wetland types" means descriptive classes of the wetlands taxonomic classification system of the United States Fish and Wildlife Service (Cowardin, et al., 1978).

RR. "Wetland edge" means the boundary of a wetland as delineated based on the definitions contained in this chapter.

Section 3: Section 14. 28.080 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.080 Maps and inventory. This chapter shall apply to all lots or parcels on which wetlands and/or wetland buffers are located within the jurisdiction of the city of Lacey. The approximate location and extent of wetlands in the city of Lacey is displayed on the city zoning map and wetland maps created by Regional Planning based upon National Wetland Inventory maps and local aerial photograph studies. ~~and Department of Natural Resources Stream Typing Maps.~~ The city zoning map and ~~Department of Natural Resources Stream Typing Maps~~ and inventory maps are to be used as a guide to the general location and extent of wetlands. Wetlands not shown on the zoning map, ~~Department of Natural Resources Stream Typing Maps~~ or National Wetlands Inventory are presumed to exist in the city of Lacey and are protected under all the provisions of this chapter. In the event that any of the wetland designations shown on the maps conflict with the criteria set forth in this chapter the criteria shall control.

Section 4: Section 14. 28.090 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.090 Determination of regulatory wetland boundary.

A. The exact location of the wetland boundary shall be determined by the applicant through the performance of a field investigation applying the wetland definition provided in Section 14.28.030 of this chapter. Qualified professional and technical scientists shall perform wetland delineations using the ~~"Federal Manual for Identifying and Delineating Jurisdictional Wetlands"~~ "Washington State Identification and Delineation Manual". The applicant is required under Section 14.28.190 of this chapter to show the location of the wetland boundary on a scaled drawing as a part of the permit application.

B. The city of Lacey, when requested by the applicant, may waive the delineation of boundary requirement for the applicant and, in lieu of delineation by the applicant, perform the delineation. The city of Lacey shall consult with qualified professional scientists and technical experts or other experts as needed to perform the delineation. The applicant may be charged for the costs incurred.

C. Where the city of Lacey performs a wetland delineation at the request of the applicant, such delineation shall be considered a final determination.

D. Where the applicant has provided a delineation of the wetland boundary, the city of Lacey shall verify the accuracy of, and may render adjustments to, the boundary delineation. In the event the adjusted boundary delineation is contested by the applicant, the city of Lacey shall, at the applicant's expense, obtain expert services to render a final delineation.

Section 5: Section 14. 28.100 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.100 Wetlands rating system. The following system shall be used to rate, establish and administer buffer widths, and replacement ratios for wetlands. For a detailed explanation of this system, refer to Washington State Wetland Rating System documents for Western Washington ~~(1991)~~ 1993, or as hereafter amended.

A. "Category I wetlands" can be described as the premium wetlands. Generally, these wetlands are not common and would make up a small percentage of the wetlands in the state. These are wetlands that: (1) are very valuable for a particular rare animal species; (2) represent a high quality example of a rare wetland type; (3) are rare habitat type within a given region; or, (4) provide irreplaceable functions and values which are impossible to replace within a human lifetime. ~~The criteria for Category I wetlands are as follows:~~

~~1. Documented habitat recognized by federal or state agencies for threatened or endangered plant (or potentially extirpated plant), animal, or fish species;~~

~~2. Documented Natural Heritage wetland sites or high quality native wetland communities which qualify as Natural Heritage wetland sites;~~

~~3. Documented habitat of regional (Pacific Coast) or national significance for migratory birds;~~

~~4~~3. ~~Regionally rare native wetland communities with irreplaceable ecological functions including sphagnum bogs and fens, estuarine wetlands, or mature forested swamps (defined in the rating system documents); or 5. Wetlands with irreplaceable ecological functions; or~~

~~6. Documented wetlands of local significance.~~

B. "Category II wetlands" occur more commonly than Category I wetlands. They can be described as those wetlands that: (1) provide habitat for very sensitive or important wildlife or plants; (2) are either difficult to replace; or, (3) provide very high functions and values, particularly for wildlife habitat.

~~The criteria for Category II wetlands satisfy no Category I criteria and are as follows:~~

~~1. Documented habitat~~s ~~for~~ State listed ~~recognized by federal or state agencies for sensitive plant, animal, or fish species;~~

~~2. Documented priority habitats and species recognized by state agencies;~~

~~3. Wetlands with significant functions which may not be adequately replicated through creation or restoration;~~

~~4. Wetlands with significant habitat value of twenty-two or more points from the rating system; or~~

~~5. Documented wetlands of local significance.~~

C. "Category III wetlands" occur more frequently throughout the state than do Category I and Category II wetlands. Generally these wetlands will be smaller, less diverse and/or more isolated than Category II wetlands. These wetlands also provide important functions and values and are important for a variety of wildlife species. These wetlands would be difficult to replace.

~~The criteria for Category III wetlands do not contain features outlined in Category I, II, or IV and are as follows:~~

~~1. Wetlands with significant habitat value of twenty-one points or less from the rating system;~~

~~2. Estuarine wetlands which do not satisfy the Category I or II wetland criteria; or~~

~~3. Documented wetlands of local significance.~~

D. "Category IV wetlands" are smaller, more isolated and have less diverse vegetation than the other wetland categories. These wetlands do have important values and function, but could be replaced. In some cases it may be able to improve its value for habitat.

~~The criteria for Category IV wetlands satisfy no Category I, II, or III criteria and are as follows:~~

~~1. Wetlands less than one acre, and h~~H~~ydrologically isolated that are less than or equal to one acre in size, have only one wetland class, and are dominated by a single non-native plant species (monotypic vegetation); or and comprised of one vegetated class that is dominated (greater than eighty percent areal cover) by soft rush, hard hack or cattail; or~~

~~2. Wetlands less than two (2) acres in size, and hydrologically isolated, with one wetland class and greater than ninety percent (90) areal cover of non-native plant species. vegetated class, and greater than ninety percent of areal cover in any combination of invasive or exotic species from the rating system. E. "Category V Wetlands".~~

~~E. 1. All 2-5 waters as defined by the Washington Forest Practice Rules and Regulations that do not meet requirements of Categories I-IV.~~

~~a. Type 1 waters as defined by WAC 222-16-020 are specifically excluded from Category V. Type 1 water means all waters, within their ordinary high-water mark, as inventoried as "shorelines of the state" under Chapter 90.58 RCW.~~

~~b. Type 2 through 5 waters are described by WAC 222-16-020 as follows:~~

~~"Type 2 water" shall mean segments of natural waters which are not classified as Type 1 water and have a high use and are important from a water quality standpoint for:~~

~~(1) Domestic water supplies,~~

~~(2) Public recreation,~~

~~(3) Fish spawning, rearing, or migration or wildlife uses, or~~

~~(4) Are highly significant to protect water quality.~~

~~"Type 3 water" shall mean segments of natural waters which are not classified as Type 1 or 2 water and have a moderate to slight use and are moderately important from a water qualify standpoint for:~~

~~(1) Domestic use,~~

~~(2) Public recreation,~~

~~(3) Fish spawning, rearing, or migration or wildlife uses, or~~

~~(4) Have moderate value to protect water quality.~~

~~"Type 4 water" shall mean segments of natural waters which are not classified as Type 1, 2, or 3. Their significance lies in their influence on water quality downstream in Type 1, 2, and 3 waters. These may be perennial or intermittent.~~

~~"Type 5 water" means all other waters, in natural water courses, including streams with or without a well-defined channel, areas of perennial or intermittent seepage, ponds, and natural sinks. Drainage ways having short periods of spring runoff are considered to be Type 5 waters. A more thorough description of water typing criteria is specified in WAC 222-16-030 and is hereby incorporated by reference. Stream typing maps identifying water types within the city of Lacey are available from the State Department of Natural Resources and are on file at Lacey City Hall and are also hereby incorporated by reference.~~

E. The city of Lacey shall have the authority to reevaluate Category II and III wetlands when the calculation from the rating manual results in point values from twenty-seven to seventeen points, or the point value described in the wetland rating manual as hereafter amended. This reevaluation shall be documented in writing and the city may use the descriptions of these wetland ~~classes~~ categories as guidance in determining the appropriate wetland rating.

F. Wetland rating categories shall be applied as the wetland exists on the date of adoption of the ordinance codified in this chapter; as the wetland may naturally change thereafter; or as the wetland may change in accordance with permitted activities. Wetland ratings shall not be altered to recognize illegal modifications.

Section 6: Section 14. 28.120 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.120 Allowed activities. A wetland development permit shall be obtained from the city of Lacey pursuant to the full administrative review procedures contained in Section 1C.040 of the City of Lacey Development Guidelines and Public Works Standards prior to undertaking the following activities, except where such activities result in the conversion of a regulated wetland or wetland buffer to a use to which it was not previously subjected.

A. Construction of a single family residence within the normal required wetland buffer on any legally established lot of record; provided it is not possible to locate said single family residence on said lot without reduction of the normally required buffer area and provided the site plan review committee shall require as large a buffer from the wetland as can reasonably

be accommodated on said lot. In no case shall a dwelling be permitted to be developed in the wetland area except through the provisions and procedures of Section 14.28.350 of this chapter;

B. Efforts of public and private organizations, clubs or memberships for the conservation or preservation of soil, water, vegetation, fish, shellfish, and other wildlife;

C. Outdoor recreational activities developed for the public or private organizations, clubs or memberships, including hunting, fishing, bird watching, hiking, boating, swimming, and canoeing, provided they do not adversely impact the wetland or wetland buffer;

D. The maintenance of drainage ditches. Maintenance shall not include construction of such drainage ditches except pursuant to subsections K and L of this section;

E. Development of nature trails;

F. Boat mooring buoys;

G. Normal maintenance, repair, or operation of existing serviceable structures, facilities, or improved areas. Maintenance and repair does not include any modification that changes the character, scope, or size of the original structure, facility, or improved area and does not include the construction of a maintenance road; and

H. Minor modification of existing serviceable structures within a buffer zone where modification does not adversely impact wetland functions;

I. Relocation of electric facilities, lines, equipment, or appurtenances, not including substations, with an associated voltage of fifty-five thousand volts or less when required by a local governmental agency;

J. Relocation of natural gas, cable communications, and telephone facilities, lines, pipes, mains, equipment or appurtenances when required by a local governmental agency.

K. Improvement of existing stormwater treatment facilities provided such activities are designed to improve or enhance wetlands by reduction of existing stormwater drainage impacts.

L. Construction of new publicly owned stormwater treatment facilities designed to improve or enhance wetlands by reduction of existing drainage impacts due to older substandard drainage infrastructure or design. Provided further such facilities shall be included in an adopted regional drainage basin plan or other adopted surface water improvement plan.

M. Stormwater management facilities. Stormwater management facilities, limited to stormwater dispersion outfalls and bioswales, may be allowed within the outer twenty-five percent of the buffer of a category III or IV wetlands only, provided that:

1. No other location is feasible, and

2. The location of such facilities will not degrade the functions or values of the wetland.

Section 7: Section 14. 28.140 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.140 Exempt activities. The following activities shall be exempt from the review requirements of this chapter provided such activities are undertaken using best management practices in a manner that does not adversely impact the wetland or wetland buffer. A permit exemption shall be required to review best management practices applied to the activity. Activities that may be exempted include:

A. Conservation or preservation of soil, water, native vegetation, fish, shellfish and other wildlife in consultation with the State Department of Wildlife and when undertaken by a property owner on his or her property for his or her personal noncommercial purposes;

B. Nonpublic outdoor recreation activities such as fishing, bird watching, hiking, boating and swimming when undertaken by a property owner on his or her property for his or her personal noncommercial purposes;

C. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, or alteration of the wetland by changing existing topography, water conditions or water sources;

D. Existing and ongoing agricultural activities including farming, horticulture, aquaculture, irrigation, ranching or grazing of animals. Activities on areas lying fallow as part of a conventional rotational cycle are part of an ongoing operation. Activities which bring an area into agricultural use are not part of an ongoing operation. An operation ceases to be ongoing when the area on which it was conducted has been converted to another use or has lain idle so long that modifications to the hydrological regime are necessary to resume operations;

E. Navigation aids and boundary markers;

F. Site investigative work necessary for land use application submittals such as surveys, soil logs, percolation tests and other related activities. In every case, wetland impacts shall be minimized and disturbed areas shall be immediately restored; and

G. Wetland educational activities and scientific research;

H. Normal and routine maintenance or repair of existing utility structures or right-of-way;

I. Installation, replacement, alteration or construction and operation of all electric facilities, lines, equipment or appurtenances, not including substations, with an associated voltage of fifty-five thousand volts or less in improved city road right-of-way;

J. Installation, replacement, alteration or construction and operation of all natural gas, cable communications and telephone facilities, lines, pipes, mains, equipment or appurtenances in improved city road right-of-way.

Section 8: Section 14. 28.280 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.280 Wetland buffers--Standard buffer zone widths. Wetland buffer zones shall be required for all regulated activities adjacent to regulated wetlands. Any wetland created, restored or enhanced as compensation for approved wetland alterations shall also include the standard buffer required for the category of the created, restored, or enhanced wetland. All

buffers shall be measured from the wetland boundary as surveyed in the field pursuant to the requirements of Section 14.28.090. The width of the wetland buffer zone shall be determined according to wetland category and the proposed land use. Where an area may be classified under more than one category, the category having the greatest buffer area shall apply. These buffer widths presume that buffer area is comprised of relatively intact native vegetation community adequate to protect the wetland functions at values at the time of the proposed activity. If the vegetation is not adequate, then the buffer width may need to be increased or planted to maintain the standard width:

A.	Category I	
	High intensity	300 feet
	Low intensity	200 feet
B.	Category II	
	High intensity	200 feet
	Low intensity	100 feet
C.	Category III	
	High intensity	100 feet
	Low intensity	50 feet
D.	Category IV	
	High intensity	50 feet
	Low intensity	25 feet
~~E.~~	~~Category V~~	
	~~Type 2-3 waters~~	~~200 feet~~
	~~Type 4 waters~~	~~100 feet~~
	~~Type 5 waters~~	~~50~~ feet

Section 9: Section 14. 28.300 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.300 Reduction of standard wetland buffer zone width.

A. The city of Lacey may reduce the standard buffer zone widths for Category II, III, and IV, ~~and V~~ wetlands up to twenty-five ~~fifty~~ percent on a case-by-case basis ~~when an existing wetland or wetland buffer area is significantly degraded~~, and it can be shown that the activities described below are in the best interest of wetland protection. The full ~~fifty~~ twenty-five percent reduction may be allowed when all of the activities listed below are undertaken and deemed ~~necessary~~ adequate to protect the wetland. A ~~twenty-five~~ ten percent reduction may be permitted when three of the five activities listed below are undertaken and deemed ~~necessary~~ adequate to protect the wetland.

1. Buffer Restoration. This means improving the quality of the buffer so that it provides for increased visual screening or increased vegetative diversity.

2. Shielding High Intensity Land Uses. This means providing berms and/or permanent solid fences at the edge of the buffer. It may also include orientation of the building so that the building itself acts as a shield to buffer the wetland.

3. Hydrologic Restoration. This means providing permanent improvements to the site hydrology, which may include removal of a ditch that is draining a wetland.

4. Habitat Restoration. This means substantial improvements to the fish and wildlife habitat of a wetland or its buffer such as importing snag or meandering a channelized stream.

5. Wetland Restoration. This means improving other functions and values of a wetland. Wetland enhancement is not allowed in a Class I wetland.

B. Whenever any of the activities listed in subsection 14.28.300(A) are used to reduce buffer widths, it shall be in accordance with a written plan provided by the qualified professional or technical wetlands consultant or scientist substantiating that the activity ~~is necessary because of existing degraded conditions of the wetland or buffer~~ ~~and that it~~ will result in improved protection of the wetland and wetland functions and values.

C. Any wetland created, restored, or enhanced as compensation for approved wetland alterations shall have the standard buffer required for the category of the created, restored, or enhanced wetland.

Section 10: Section 14. 28.350 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.350 Avoiding wetland impacts.

A. Regulated activities and special uses shall not be authorized in a regulated wetland except where it can be demonstrated that the impact is both unavoidable and necessary or that all reasonable economic uses are denied.

B. With respect to Category I ~~and V~~ wetlands, an applicant must demonstrate that denial would impose an extraordinary hardship on the part of the applicant brought about by circumstances peculiar to the subject property.

C. With respect to Category II and III wetlands, the following provisions shall apply:

1. For water-dependent activities, unavoidable and necessary impacts can be demonstrated where there are no practicable alternatives which would not involve a wetland or which would not have less adverse impact on a wetland, and would not have other significant adverse environmental consequences.

2. Where nonwater-dependent activities are proposed, it shall be presumed that adverse impacts are avoidable. This presumption may be rebutted upon a demonstration that:

a. The basic project purpose cannot reasonably be accomplished utilizing one or more other sites in the general region that would avoid, or result in less, adverse impact on a regulated wetland; and

b. A reduction in the size, scope, configuration, or density of the project as proposed and all alternative designs of the project as proposed that would avoid, or result in less, adverse impact on a regulated wetland or its buffer will not accomplish the basic purpose of the project; and

c. In cases where the applicant has rejected alternatives to the project as proposed due to constraints such as zoning, deficiencies of infrastructure, or parcel size, the applicant has made reasonable attempt to remove or accommodate such constraints.

D. With respect to Category IV wetlands, unavoidable and necessary impacts can be demonstrated where the proposed activity is the only reasonable alternative which will accomplish the applicant's objectives.

E. Reasonable Use. If an applicant for a development proposal demonstrates to the satisfaction of the city of Lacey that application of these standards would deny all reasonable economic use of the property, development as conditioned shall be allowed if the applicant also demonstrates all of the following to the satisfaction of the city of Lacey:

1. That the proposed project is water-dependent or requires access to the wetland as a central element of its basic function, or is not water-dependent but has no practicable alternative pursuant to this section;

2. That no reasonable use with less impact on the wetland and its buffer is possible (e.g., agriculture, aquaculture, transfer or sale of development rights or credits, sale of open space easements, etc.);

3. That there is no feasible on-site alternative to the proposed activities, including reduction in density, phasing of project implementation, change in timing of activities, revision of road and lot layout, and/or related site planning considerations, that would allow a reasonable economic use with less adverse impacts to wetlands and wetland buffers;

4. That the proposed activities will result in minimum feasible alteration or impairment to the wetland's functional characteristics and its existing contours, vegetation, fish and wildlife resources, and hydrological conditions;

5. That disturbance of wetlands has been minimized by locating any necessary alteration in wetland buffers to the extent possible;

6. That the proposed activities will not jeopardize the continued existence of species listed by the federal government or the state as endangered, threatened, rare, sensitive, or as documented priority species or priority habitats;

7. That the proposed activities will not cause significant degradation of ground water or surface water quality;

8. That the proposed activities comply with all state, local and federal laws, including those related to sediment control, pollution control, floodplain restrictions, and on-site wastewater disposal;

9. That any and all alterations to wetlands and wetland buffers will be mitigated as provided in Section 14.28.510;

10. That there will be no damage to nearby public or private property and no threat to the health or safety of people on or off the property; and

11. That the inability to derive reasonable economic use of the property is not the result of actions by the applicant in segregating or dividing the property and creating the undevelopable condition after the effective date of this chapter.
If the city of Lacey determines that alteration of a wetland and/or wetland buffer is necessary and unavoidable, the city of Lacey shall set forth in writing in the file it maintains regarding a permit application its findings with respect to each of the items listed in this subsection.

Section 11: Section 14. 28.360 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.360 Minimizing wetlands impacts.

A. After it has been determined by the city of Lacey pursuant to Section 14.28.350 that losses of wetland are necessary and unavoidable or that all reasonable economic use has been denied, the applicant shall take deliberate measures to minimize wetland impacts.

B. Minimizing impacts to wetlands shall include but is not limited to:

1. Limiting the degree or magnitude of the regulated activity;

2. Limiting the implementation of the regulated activity;

3. Using appropriate and best available technology <u>and best available science</u>;

4. Taking affirmative steps to avoid or reduce impacts;

5. Sensitive site design and siting of facilities and construction staging areas away from regulated wetlands and their buffers;

6. Involving resource agencies early in site planning; and

7. Providing protective measures such as siltation curtains, hay bales and other siltation prevention measures, scheduling the regulated activity to avoid interference with wildlife and fisheries rearing, resting, nesting or spawning activities.

Section 12: Section 14. 28.370 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.370 Limited density transfer and open space credit.

A. For development proposals on lands containing wetland buffers, the city of Lacey shall determine allowable dwelling units for residential development proposals based on the formulas below.

The following formula for density calculations is designed to provide incentives for the preservation of wetlands and wetland buffers, flexibility in design, and consistent treatment of different types of development proposals. The formula shall apply to all properties within existing residential zones on which wetlands and wetland buffers are located.

The maximum number of dwelling units (DU) for a lot or parcel which contains wetlands and wetland buffers shall be equal to:

The buffer density credit + upland non-buffer area density computed as follows:

the buffer density credit;

(acres in wetland buffer) (DU/acre) = (Density credit)

added to

the upland non-buffer area density;

(acres out of wetland buffer) (DU/acre)

~~The density credit figure is derived from the following table:~~

~~Percentage of site in buffers~~	~~Density Credit~~
~~1-10%~~	~~100%~~
~~11-20%~~	~~90%~~
~~21-30%~~	~~80%~~
~~31-40%~~	~~70%~~
~~41-50%~~	~~60%~~
~~51-60%~~	~~50%~~
~~61-70%~~	~~40%~~
~~71-80%~~	~~30%~~
~~81-90%~~	~~20%~~
~~91-99%~~	~~10%~~

The density credit can only be transferred within the development proposal site. To the extent that application of the formula may result in lot sizes and other zoning standards less than the minimum allowed by the underlying district, they may be authorized up to a fifty percent reduction of said standards provided that the resultant lot is of sufficient size to reasonably accommodate the intended use with room for adequate setbacks, private yard areas and other provisions deemed important to neighborhood quality and that any reduced standards result in a more innovative and superior design and provided further that uses allowed within the zoning district shall not be varied from. Additionally, lots must be of sufficient size to meet applicable health requirements. In cases where reduced lot sizes or departure from other standards is requested, the minimum standards shall be up to the sole discretion of the site plan review committee according to the processes in Section 1C.040 of the City of Lacey Development Guidelines and Public Wroks Standards or city hearings examiner and city council through the review process of Section 1C.050 of the City of Lacey Development Guidelines and Public Works Standards.

The city of Lacey shall not allow credit for density for the portions of the site occupied by wetlands.

B. Up to fifty percent of a development's open space requirement may be satisfied by wetland and wetland area buffers in consideration of the significant passive recreation opportunities provided by said lands. The remaining fifty percent open space requirement must be set aside outside of the wetland and wetland buffer area to provide for and accommodate proposed or potential future active (high intensity) recreational use.

Section 12: Section 14. 28.440 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.440 Application approval-- Compensatory mitigation--Applicant requirements. Given the uncertainties in scientific knowledge and the need for expertise and monitoring, wetland compensatory projects may be permitted only when the city of Lacey finds that the compensation project is associated with an activity or development otherwise permitted and that the restored, created, or enhanced wetland will be as persistent as the wetland it replaces. Additionally, applicants shall:

A. Demonstrate sufficient scientific expertise, supervisory capability, and financial resources to carry out the project;

B. Demonstrate the capability for monitoring the site and to make corrections during this period if the project fails to meet projected goals; and

C. Protect and manage or provide for the protection and management of the compensation area to avoid further development or degradation and to provide for long-term persistence of the compensation area.

D. Projects shall meet requirements of best available science.

Section 13: There Is Hereby Added To The Lacey Municipal Code A New Section 14.28.445 To Read As Follows:

14.28.445 Performance Standards - Mitigation requirments.

A. Mitigation shall achieve equivalent or greater biological functions. Mitigation for alterations to wetlands shall achieve equivalent or greater biologic functions and shall be consistent with the Department of Ecology Guidelines for Developing Freshwater Wetlands Mitigation Plans and Proposals, 1994, as revised.

B. Mitigation shall result in no net loss. Wetland mitigation actions shall not result in a net loss of wetland area except when the following criteria are met.

1. The lost wetland area provides minimal functions and the mitigation action(s) results in net gain in wetland functions as determined by a site specific function assessment; or

2 The lost wetland area provides minimal functions as determined by a site-specific function assessment and other protected or enhanced habitats provide greater benefits to the functioning of the watershed, such as riparian habitat protection and enhancement.

C. Mitigation for lost functions and values. Mitigation actions shall address functions affected by the alteration to achieve functional equivalency or improvement, and shall provide similar wetland functions as those lost except when:

1. The lost wetland provides minimal functions as determined by a site-specific function assessment and the proposed mitigation action(s) will provide equal or greater

functions or will provide function shown to be limiting within a watershed through a formal watershed assessment protocol; or

2. Out of kind replacement will best meet formally identified regional goals, such as replacement of historically diminished wetland types.

D. Preference of Mitigation Actions. Mitigation actions that require compensation by replacing, enhancing, or substitution, shall occur in the following order of preference:

1. Restoring wetlands on upland sites that were formerly wetlands.

2. Creating wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of exotic introduced species.

3. Enhancing significantly degraded wetlands.

4. Preserving high-quality wetlands that are under imminent threat.

Section 14: There Is Hereby Added To The Lacey Municipal Code A New Section 14.28.447 To Read As Follows:

14.28.447 Type and Location of Mitigation.

Mitigation actions shall be conducted within the same sub-drainage basin and on the site as the alteration except when the following apply:

1 There are no reasonable on-site opportunities or on-site opportunities do not have a high likelihood of success due to development pressures, adjacent land uses, or on-site buffers or connectivity are inadequate;

2. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland; and

3. Off-site locations shall be in the same sub-drainage basin and the same Water Resource Inventory Area (WRIA) unless;

a) the impact is located near the boundary of a WRIA;

b) Established regional or watershed goals for water quality, flood or conveyance, habitat or other wetland functions have been established and strongly justify location of mitigation at another site; or

c) Credits from a City certified wetland mitigation bank are used as mitigation, and the use of credits is consistent with the terms of the banks certification.

Section 15: Section 14. 28.450 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.450 Application approval-- Compensatory mitigation--Wetlands restoration and creation.

A. Any person who alters regulated wetlands shall restore or create equivalent areas or greater areas of wetlands than those altered in order to compensate for wetland losses.

B. Where feasible, restored or created wetlands shall be a higher category than the altered wetland.

C. Compensation areas shall be determined according to function, acreage, type, location, time factors, ability to be self-sustaining and projected success. Wetland functions and values shall be calculated using the best professional judgment of a qualified wetland ecologist using the best available techniques. Multiple compensation projects may be proposed for one project in order to best achieve the goal of no net loss.

D. Acreage Replacement Ratio. The following ratios apply to creation or restoration which is in-kind, on site, the same category, timed prior to or concurrent with alteration, and has a high probability of success~~, and with on-site restoration, enhancement or replacement given priority~~. These ratios do not apply to remedial actions resulting from illegal alterations; greater ratios shall apply in those cases. These ratios do not apply to the use of credits from a wetland bank approved by the City, the Department of Ecology or the U.S. Corps of Engineers. When credits from a certified bank are used, replacement ratios should be consistent with the requirements of the banks certification. The first number specifies the acreage of wetlands requiring replacement and the second specifies the acreage of wetlands altered.

Category I	6:1		
Category II ~~or III~~			
	~~Forested~~	3:1	
	Category III ~~Scrub-shrub~~		2:1
	~~Emergent~~	~~1.5:1~~	
Category IV	1.~~25~~5:1		
~~Category V~~			
	~~Type 2 water~~	~~6:1~~	
	~~Type 3 water~~	~~3:1~~	
	~~Type 4 water~~	~~2:1~~	
	~~Type 5 water~~	~~1.25:1~~	

1. Increased Replacement Ratio. The city of Lacey may increase the ratios under the following circumstances:

a. Uncertainty as to the probable success of the proposed restoration or creation;

b. Significant period of time ~~between destruction and replication of wetland functions~~ will elapse between impact and replication of wetland functions; or;

c. ~~Projected losses in functional value.~~ Proposed mitigation will result in a lower category wetland or reduced functions relative to the wetland being impacted; or

d. The impact was an unauthorized impact.

2. Decreased Replacement Ratio. The city of Lacey may decrease these ratios under the following circumstance:

a. ~~Findings of special studies coordinated with agencies with expertise which demonstrate that no net loss of wetland function or value is attained under the decreased ratio~~. Documentation by a qualified wetlands specialist demonstrates that the proposed mitigation actions have a very high likelihood of success;

b. Documentation by a qualified wetlands specialist demonstrates that the proposed mitigation actions will provide functions and values that are significantly greater than the wetland being impacted; or

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

3. ~~In all cases,~~ A minimum acreage replacement ratio of 1:1 shall be required except as provided by section 14.28.445 (B).

Section 16: There Is Hereby Added To The Lacey Municipal Code A New Section 14.28.455 To Read As Follows:

14.28.455 Wetland Mitigation Banks.

A. Credits from a wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands when:

1. The bank is approved by the City, the Department of Ecology, or the U.S. Army Corps of Engineers.

2. The City determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and

3. The proposed use of credits is consistent with the terms and conditions of the banks certification.

B. Replacement ratios for projects using bank credits shall be consistent with the replacement ratios specified in the banks certification.

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

Section 17: Section 14. 28.460 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.460 Application approval-- Compensatory mitigation--Wetlands enhancement.

A. ~~Any applicant proposing to alter wetlands may propose to enhance existing significantly degraded wetlands in order to compensate for wetland losses. Applicants proposing to enhance wetlands shall identify how enhancement conforms to the overall goals and requirements of the local wetlands protection program and established regional goals~~. Impacts to wetlands may be mitigated by enhancement of existing significantly degraded wetlands. Applicants proposing to enhance wetlands must produce a critical area report that identifies how enhancement will increase the functions of the degraded wetland and how this increase

will adequately mitigate for the loss of wetland area and function at the impact site. An enhancement proposal must also show whether existing wetland functions will be reduced by the enhancement actions.

B. ~~A wetlands enhancement compensation project shall be determined pursuant to Sections 14.28.430 through 14.28.510, provided that enhancement for one function and value will not degrade another function or value and that acreage replacement ratios shall be doubled to recognize existing functional values and, provided further, that Category I wetlands shall not be enhanced. (Ord. 912 §1 Sec. 7.5(f)(3), 1991).~~ At a minimum, enhancement acerage shall be double the acreage required for creation or restoration under 14.28.450. The ratios shall be greater than double the required acreage where the enhancement proposal would result in minimal gain in the performance of wetland functions and/or result in the reduction of other wetland functions currently being provided in the wetland.

Section 18: There Is Hereby Added To The Lacey Municipal Code A New Section 14.28.465 To Read As Follows:

14.28.465 Wetland preservation as mitigation. Impacts to wetlands may be mitigated by preservation of wetland areas when used in combination with other forms of mitigation such as creation, restoration, or enhancement at the preservation site or at a separate location. Preservation may also be used by itself, but more restriction, as outlined below, will apply.

A. Preservation in combination with other forms of compensation. Preservation as mitigation is acceptable when done in combination with restoration, creation or enhancement providing that a minimum of 1-to-1 acerage replacement is provided by restoration or creation and the criteria below are met.

1. The impact area is small, and/or impacts are to a category III oe IV wetland;

2. Preservation of a high quality system occurs in the same Water Resource Inventory Area (WRIA) or watershed basin as the wetland impact; and

3. Preservation sites includes buffer areas adequate to protect the habitat and its functions from encroachment and degradation.

B. Preservation as a sole means of mitigation for wetland impacts. Preservation of at risk, high quality habitat may be considered as the sole means of mitigation of wetland impacts when all of the following criteria are met;

1. Preservation is used as a form of mitigation only after the standard sequencing of mitigation (avoid, minimize, and then compensate) has been applied;

2. Creation, restoration, and enhancement opportunities have also been considered, and preservation is the best mitigation option;

3. The impact to the area is small and/or impacts are to a Category III or IV wetland;

4. Preservation of a high quality system occurs in the same Water Resource Inventory Area (WRIA) or a watershed where the wetland impact occurs;

5. Preservation sites include areas adequate to protect the habitat and its functions from encroachment and degradation;

6. The preservation site is determined to be under imminent threat, specifically, sites with the potential to experience a high rate of undesirable ecological change due to on or off-site activities. ("potential" includes permitted, or planned, or perceived actions); and

7.The area proposed for the preservation is of a high quality and critical for the health of the watershed or basin. Some of the following features may be indicative of high quality areas;

a) Category I or II wetland rating;

b) Rare wetland type (for example, bogs, estuaries);

c) Habitat for threatened or endangered species;

e) Wetland type that is rare in the area;

e) Provides biological and/or hydrological connectivity;

f) High regional or watershed importance (for example, listed as a priority site in watershed plan); and

g) Large size with species diversity (plants and/or animals) and/or high abundance.

C. Mitigation ratios for preservation as a sole means of mitigation. Mitigation ratios for preservation as the sole means of mitigation shall range from 10-to-1 to 20-to-1, as determined by the City, depending on the quality of wetlands being mitigated and the quality of the wetlands being preserved.

Section 19: Section 14. 28.490 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.490 Application approval-- Compensatory mitigation--Timing. Where feasible, compensatory projects shall be completed prior to activities that will disturb wetlands ~~and immediately after activities that will temporarily disturb wetlands~~. In all other cases, mitigation shall be completed immediately following disturbance and ~~except for Category I wetlands~~, ~~compensatory projects should be completed~~ prior to use or occupancy of the activity or development. ~~which was conditioned upon such compensation.~~ Construction of ~~compensation~~ mitigation projects shall be timed to reduce impacts to existing wildlife and flora. The City may authorize a one time temporary delay, up to one-hundred-twenty (120) days, in completing minor construction and landscaping when environmental conditions could produce a high probability of failure or significant construction difficulties. The delay shall not creat or perpetuate hazardous conditions or environmental damage or degradation, and the delay shall not be injurious to the health, saftey and general welfare of the public. The request for the temporay delay must include a written justification that documents the environmental constraints that preclude implementation of the mitigation plan. The justification must be verified and approved by the City, and include a financial guarantee.

Section 20: There is hereby added to the Lacey Municipal Code a new Section 14.33.030 to read as follows:

14.33.030 Definitions. For the purposes of this chapter, the following definitions shall apply:

A. "Anadromous fish" means fish that spawn and rear in freshwater and mature in the marine environment.

B. "Applicant" means a person who files an application for approval under this chapter and who is either the owner of the land on which that proposed activity would be located, a contract vendee, a lessee of the land, the person who would actually control and direct the proposed activity, or the authorized agent of such a person.

C. "Best available science" means current scientific information used in the process to designate, protect, or restore critical areas, that is derived from a valid scientific process as defined by WAC 365-195-900 through 925. Sources of best available science are included in "Citations of Recommended Sources of Best Available Science for Designating and Protecting Critical Areas" published by the state Office of Community Development.

D. "Best management practices" means conservation practices or systems of practices and management measures that:

1. Control soil loss and reduce water quality degradation caused by high concentrations of nutrients, animal waste, toxics, and sediment;

2. Minimize adverse impacts to surface water and ground water flow, circulation, patterns, and to chemical, physical, and biological characteristics of wetlands;

3. Protect trees and vegetation designated to be retained during and following site construction; and

4. Provide standards for proper use of chemical herbicides within critical areas.

E. "Buffer or buffer zone" means an area contiguous to and that protects a critical area that is required for the continued maintenance, functioning, and/or structural stability of a critical area.

F. "Channel migration zone (CMZ)" means the lateral extent of likely movement along a stream or river during the next one hundred years as determined by evidence of active stream channel movement over the past one hundred years. Evidence of active movement over the one hundred year time frame can be inferred from aerial photos or from specific channel and valley bottom characteristics. The time span typically represents the time it takes to grow mature trees that can provide functional large woody debris to streams. A CMZ is not typically present if the valley width is less than two bankfull widths, is confined by terraces, no current or historical aerial photographic evidence exists of significant channel movement, and there is no field evidence of secondary channels with recent scour from stream flow or progressive bank erosion at meander bends. Areas separated from the active channel by legally existing artificial channel constraints that limit bank erosion and channel avulsion without hydraulic connections shall not be considered within the CMZ.

G. "Critical area tract" means land held in private ownership and retained in an open condition in perpetuity for the protection of critical areas.

H. "Exotic" means any species of plants or animals which are foreign to the planning area.

I. "Fish and wildlife habitat conservation areas" also referred to as " Habitat Conservation Area" means areas necessary for maintaining species in suitable habitats within their natural geographic distribution so that isolated sub-populations are not created as designated by WAC 365-190-080 (5). These areas include:

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

2. Habitats and species of local importance, including but not limited to areas designated as priority habitats or priority species by the Dept. of Fish and Wildlife;

3. Commercial and recreational shellfish areas;

4. Kelp and eelgrass beds, herring and smelt spawning areas;

5. Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds;

6. Waters of the state, including 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;

7. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;

8. State natural area preserves and natural resource conservation areas; and

9. Land essential for preserving connections between habitat blocks and open spaces.

J. "Extraordinary hardship" means strict application of this chapter and/or programs adopted to implement this chapter by the city of Lacey that would prevent all reasonable economic use of the parcel.

K. "Financial security" means a method of providing surety of financial performance and may include provision of a bond, assignment of savings, letter of credit or

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

M. "In-kind compensation" means to replace critical areas with substitute areas whose characteristics and functions closely approximate those destroyed or degraded by a regulated activity. It does not mean replacement "in-category".

N. "Mitigation" means avoiding, minimizing or compensating for adverse critical areas impacts. Mitigation, in the following 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, such as project redesign, relocation, or timing, to avoid or reduce impacts;

3. Rectifying the impact to habitat conservation areas by repairing, rehabilitating or restoring the affected environment to the conditions existing at the time of the initiation of the project;

4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

5. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

6.Compensating for the impact to habitat conservation areas by replacing, enhancing, or providing substitute resources or environments; and

7. Monitoring the required mitigation and taking remedial action when necessary.

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

O. "Native vegetation" means plant species that are indigenous to the area in question.

P. "Ordinary high water mark (OHM)" means that mark which is 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, that the soil has a character distinct from that of the abutting upland in respect to vegetation.

Q. "Priority habitats" means a seasonal range or habitat element with which a given species has a primary association and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term. These might include areas of high relative density or species richness, breeding habitat, winter range, and movement corridors. These might also include habitats that are of limited availability or high vulnerability to alteration.

R. "Priority species" means those species that are of concern due to their population status and their sensitivity to habitat manipulation. Priority species include those which are state listed endangered, threatened, and sensitive species, as well as other species of concern, and game species.

S. "Qualified professional" means a person with experience and training in the applicable critical area. A qualified professional for habitats must have obtained a B.S. or B.A. or equivalent degree in biology, and at least two years of work experience related to the subject species or habitat.

T. "Restoration" means 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 reestablish structural and functional characteristics of the critical area that have been lost by alteration, past management activities, or catastrophic events.

U. "Riparian habitat" means areas adjacent to aquatic systems with flowing water 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 proving shade, fine or large woody material, nutrients, organic and inorganic debris, terrestrial insects, or habitat for riparian-associated wildlife.

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

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

X. "Species, threatened" means any fish or wildlife species that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range without cooperative management or removal of threats, and is listed by the state or federal government as a threatened species.

Y. "Water typing system" means waters classified according to WAC 222-16-031 as follows:

1. Type 1 water – all waters, within their ordinary high water mark, as inventoried as "shorelines of the state" under Chapter 90.,58 RCW and the rule promulgated pursuant to Chapter 90.58 RCW, but not including waters' associated wetlands as defined in Chapter 90.58 RCW.

2. Type 2 water- segments of natural waters that are not classified as Type 1 water and have a high fish, wildlife, or human use. These are segments of natural waters and periodically inundated areas of their associated wetlands, which:

a. Are used by substantial numbers of anadromous or resident game fish for spawning, rearing or migration. Waters having the following characteristics are presumed to have highly significant fish population:

(1) Stream segments having a defined channel 20 feet or greater in width between the ordinary high water mark and having a gradient of less than 4 percent.

(2) Lakes, ponds, or impoundments having a surface area of 1 acre or greater at seasonal low water.

b. Are used by salmonids for off-channel habitat. These areas are critical to the maintenance of optimum survival of juvenile salmonids. This habitat shall be identified based on the following criteria:

(1) The site must be connected to a stream bearing salmonid and accessible during some period of the year; and

(2) The off-channel water must be accessible to juvenile salmonids through a drainage channel with less than a 5% gradient.

(3) Type 3 water – segments of natural waters that are not classified as Type 1 or 2 waters and have a moderate to slight fish, wildlife and human use. These are segments of natural waters and periodically inundated areas of their associated wetlands which:

a. Are used by significant numbers of anadromous fish for spawning, rearing or migration. Waters having the following characteristics are presumed to have significant anadromous fish use:

(1) Streams segments having a defined channel of 5 feet or greater in width between the ordinary high water marks; and having a gradient of less than 12 percent and not upstream of a falls of more than 10 vertical feet.

(2) Ponds or impoundments having a surface area of less than 1 acre a seasonal low water and having an outlet to an anadromous fish stream.

b. Are used by significant numbers of resident game fish. Waters with the following characteristics are presumed to have significant resident game fish use:

(1) Stream segments having a defined channel of 10 feet or greater in width between the ordinary high water marks; and a summer low flow greater than 0.3 cubic feet per second; and a gradient of less than 12 percent.

(2) Ponds or impoundments having a surface area greater than 0.5 acres a seasonal low water.

c. Are highly significant for the protection of down stream water quality. Tributaries which contribute greater than 20 percent of the flow to a Type 1 or 2 water are presumed to be significant for 1,500 feet from their confluence with the Type 1 or 2 water or until their drainage area is less than 50 percent of their drainage area at the point of confluence, whichever is less.

4. Type 4 water – this classification shall be applied to segments of natural waters which are not classified as Type 1, 2 or 3, and for the purpose of protecting water quality downstream are classified as Type 4 water upstream until the channel width becomes less than 2 feet in width between the ordinary high water marks. Their significance lies in the influence on water quality downstream in Type 1, 2, and 3 waters. These may be perennial or intermittent.

5. Type 5 water – this classification shall be applied to all natural waters not classified as Type 1, 2, 3, or 4; including streams with or without well defined channels, areas of perennial or intermittent seepage, ponds, natural sinks and drainage ways having short periods of spring or storm runoff.

Section 21: Section 14. 33.060 of the Lacey Municipal Code is hereby amended to read as follows:

14.33.060 <u>Designation</u>, maps and inventory.

<u>A</u>. This chapter shall apply to all lots or parcels on which habitat conservation areas are located within the jurisdiction of the city of Lacey.

<u>B</u>. Fish and wildlife habitat conservation areas include:

<u>1. Areas with which state or federally designated endangered, threatened, and sensitive species have primary association.</u>

<u>a. Federally designated endangered and threatened species are those fish and wildlife species identified by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service that are in danger of extinction or threatened to become endangered. The U.S. Fish</u>

and Wildlife Service and the National Marine Fisheries Service should be consulted as necessary for current listing status.

b. State designated endangered, threatened, and sensitive species native to the state of Washington identified by the department of Fish and Wildlife, that are in danger of extinction, threatened to become endangered, vulnerable, or declining and are likely to become endangered, or threatened in a significant portion of their range within the state without cooperative management or removal of threats. State designated endangered, threatened, sensitive species are periodically recorded in WAC 232-12-014 (state endangered species), and WAC 232-12-011 (state threatened and sensitive species). The state Department of Fish and Wildlife maintains the most current listing and should be consulted as necessary for current listing status.

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

3. Habitat and species of local importance. Habitats and species of local importance are those identified by the City of Lacey, including those that possess unusual or unique habitat warranting protection because of qualitative species diversity or habitat system health indicators.

4. Kelp and eelgrass beds, and herring and smelt spawning areas.

5. Naturally occurring ponds under twenty (20) acres. Naturally occurring ponds are those ponds under twenty (20) acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds. Naturally occurring ponds do not include ponds deliberately designed and created from dry sites, such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds, and landscape amenities, unless such artificial ponds were intentionally created for mitigation.

6. Waters of the State. Waters of the state includes 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, as classified in WAC 222-16-030 or WAC 222-16-031 depending upon the classification used.

7. Type 1 through 5 waters as designated by the Department of Natural Resources. Type 1 through 5 waters are those water bodies designated by the Department of Natural Resources stream typing pursuant to WAC 222-13-031.

8. State natural area preserves and natural resource conservation areas. Natural area preserves and natural resource conservation areas are defined, established, and managed by the state Department of Natural Resources.

C. All areas within the City of Lacey meeting one or more of these criteria, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this title.

The approximate location and extent of habitat conservation areas in the city of Lacey is shown in maps provided in the city of Lacey Environmental Protection and Resource

Conservation Plan and on the city zoning map. The city Environmental Protection and Resource Conservation Plan maps and zoning maps are to be used as a guide to the general location and extent of habitat conservation areas. Other maps to be used to identify these areas include the following:

1. Department of Fish and Wildlife Priority Habitat and Species Maps;
2. Department of Natural Resources Official Water Type Reference Maps, as amended;
3. Department of Natural Resources Puget Sound Intertidal Habitat Inventory Maps;
4. Department of Natural Resources Shorezone Inventory;
5. Anadromus and resident salmonid distribution maps contained in the Habitat Limiting Factors
6. Reports published by the Washington Conservation Commission;
7. Department of Natural Resources State Natural Area Preserves and Natural Resource Conservation Area maps.

Section 22: Section 14. 33.070 of the Lacey Municipal Code is hereby amended to read as follows:

14.33.070 Determination of habitat conservation area.

A. The exact location of the fish and wildlife habitat conservation area shall be determined by the applicant through the performance of a field investigation applying specific habitat or species recommendations pursuant to the Department of Fish and Wildlife. A qualified professional wildlife habitat biologist shall perform habitat conservation area delineations using the methodology prescribed by the State of Washington Department of Wildlife. Provided that if no methodology is available the consultant shall use best available science to delineate the site for the Department of Fish and Wildlife's review. The applicant is required under Section 14.33.120 of this chapter to show the location of the habitat conservation area on a scaled drawing as a part of the approval application.

B. The city of Lacey shall verify the accuracy of, and may render adjustments to, the boundary delineation. In the event the adjusted boundary delineation is contested by the applicant, the city of Lacey shall, at the applicant's expense, obtain expert services to render a final delineation.

Section 23: Section 14. 33.080 of the Lacey Municipal Code is hereby amended to read as follows:

14.33.080 Exempt activities. The following activities shall be exempt from the review requirements of this chapter provided such activities are undertaken using best management practices in a manner that does not adversely impact the habitat conservation area:

A. Conservation or preservation of soil, water, vegetation, fish, shellfish and other wildlife in consultation with the State Department of Fish and Wildlife and when undertaken by a property owner on his or her property for his or her personal, noncommercial purposes;

B. Nonpublic outdoor recreation activities such as fishing, bird watching, hiking, boating and swimming when undertaken by a property owner on his or her property for his or her personal noncommercial purposes;

C. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, or alteration of the habitat conservation area by changing existing topography, water conditions or other natural parameters important to the conservation area;

D. Navigation aids and boundary markers;

E. Site investigative work necessary for land use application submittals such as surveys, soil logs, percolation tests and other related activities. In every case, habitat impacts shall be minimized and disturbed areas shall be immediately restored; and

F. Educational activities and scientific research;

G. Normal and routine maintenance or repair of existing utility structures or right-of-way;

H. Installation, replacement, alteration or construction and operation of all electric facilities, lines, equipment or appurtenances, not including substations, with an associated voltage of fifty-five thousand volts or less in improved city road right-of-way;

I. Installation, replacement, alteration or construction and operation of all natural gas, cable communications and telephone facilities, lines, pipes, mains, equipment or appurtenances in improved city road right-of-way.

Section 24: Section 14. 33.100 of the Lacey Municipal Code is hereby amended to read as follows:

14.33.100 Site plan review. Site plan review approval shall be obtained from the city of Lacey prior to any use or activity, except exempt activities described in Section 14.33.080 occurring in a fish and wildlife habitat conservation area or buffer.

Section 25: Section 14. 33.110 of the Lacey Municipal Code is hereby amended to read as follows:

14.33.110 Application information requirements.
A. An application for site plan review within a habitat conservation area or it's buffer shall be determined complete only when it contains all of the information described in Section 1B.050 of the City of Lacey Development Guidelines and Public Works Standards ~~and~~
B. The application shall also have the following information and materials:

1. A description and maps overlaid on an aerial photograph at a scale no smaller than 1" = 400' showing the entire parcel of land owned by the applicant and the exact boundary of the habitat conservation area pursuant to guidelines established in this chapter;

2. A description of the vegetative cover of the site and adjacent area including dominant species;

3. A site plan for the proposed activity overlaid on an aerial photograph at a scale no smaller than 1" = 400' showing the location, width, depth and length of all existing and proposed structures, roads, sewage treatment, and installations within the site;

4. The exact sites and specifications for all proposed activities including the amounts and methods;

5. Elevations of the site and adjacent lands within the habitat conservation area at contour intervals of no greater than five feet;

6. Top view and typical cross section views of the habitat conservation area to scale;

7. Specific means to mitigate any potential adverse environmental impacts of the applicant's proposal;

8. A critical area report containing information required in section 14.33.115 of this title.

~~8.~~9 A priority habitat and priority species management plan prepared by a qualified habitat biologist based upon best available science information provided in the critical area report. The plan shall detail how the designated fish and wildlife habitat conservation area and any priority species found within said area shall be protected. The plan shall follow all recommendations provided by the Department of Fish and Wildlife in its priority habitat and priority species program according to its publication "Management Recommendations of Washington Priority Habitats and Species" or based on site specific recommendations made by the Department of Wildlife based on review of the project site.

Section 26: There is hereby added to the Lacey Municipal Code a new Section 14.33.115 to read as follows:

14.33.115 Critical area report requirements.

A. Qualified habitat biologist. A critical area report shall be prepared by a qualified professional habitat biologist as identified in section 14.33.040 of this title.

B. Area considered. The following physical areas shall be addressed in the critical area report for habitat conservation areas;

1. The project area of the proposed activity;

2. All habitat conservation areas and recommended buffers within two hundred (200) feet of the project area; and

3. All shoreline areas, flood plains, and other critical areas, and related buffers within two hundred (200) feet of the project area.

C. Habitat assessment. A habitat assessment is an investigation of the project area to evaluate the presence or absence of a potential fish or wildlife species or habitat that is protected under this ordinance. A critical area report for a habitat conservation area shall contain

an assessment of habitats including the following minimum site and proposal related information;

1. Detailed description of vegetation on and adjacent to the project area;
2. Identification of any species of local importance, priority species, or endangered, threatened, sensitive or candidate species that have a primary association with habitat on or adjacent to the project area, an assessment of potential project impacts to the use of the site by the species;
3. A discussion of any federal, state, or local special management recommendations, including Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the project area;
4. A discussion of measures, including avoidance, minimization and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed land use activity and to be conducted in accordance with "mitigation sequencing"; and
5. A discussion of ongoing management practices that will protect habitat after the project site has been developed, including proposed monitoring and maintenance programs.

D. Additional information may be required. When appropriate due to the type of habitat or species present or the project area conditions, the site plan review committee may also require the habitat management program include:

1. An evaluation by the department of Fish and Wildlife or qualified expert regarding the applicant's analysis and effectiveness of any proposed mitigating measures or programs, to include any recommendations as appropriate;
2. An evaluation by the local Native American Indian Tribe;
3. Detailed surface and subsurface hydrologic features both on and adjacent to the site; and
4. Any other information or review necessary to meet expectations of the growth management act, to provide adequate best available scientific information to make an informed decision on the identified environmentally sensitive site.

Section 27: There is hereby added to the Lacey Municipal Code a new Section 14.33.116 to read as follows:

14.33.116 Performance standards.

A. Alterations shall not degrade the functions and values of habitat. A habitat conservation area may be altered only if the proposed alteration of the habitat or the mitigation proposed does not degrade the quantitative functions and values of the habitat. All new structures and land alterations shall be prohibited from habitat conservation areas except in accordance with this title.

B. Non-indigenous species shall not be introduced. No plant, wildlife, or fish species not indigenous to the region shall be introduced into a habitat conservation area unless authorized by a state or federal permit or approval.

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

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

1. Establishment of buffer zones;
2. Preservation of critically important vegetation;
3. Limitation of access to the habitat area, including fencing to deter unauthorized access;
4. Seasonal restriction of construction activities;
5. Establishment of duration and timetable for periodic review of mitigation activities;
6. Implementation of management recommendations for the species of animal or habitat in literature published or recommended by the Department of Fish and Wildlife for priority species and habitat;
7. All other conditions and management recommendations based upon best available science that are deemed necessary to meet expectations of the Growth Management Act for protection of sensitive areas.
8. Requirement of a performance bond, to ensure completion and success of proposed mitigation.

E. Mitigation shall achieve equivalent or greater biological functions. Mitigation of alterations to habitat conservation areas shall achieve equivalent or greater biological functions and shall include mitigation for adverse impacts upstream or downstream of the development proposal site. Mitigation shall address each function affected by the alteration to achieve functional equivalency or improvement on a per function basis.

F. Approvals shall be supported by the best available science. Any approval of alterations or impacts to a habitat conservation area shall be supported by the best available science.

G. Buffers.

1. Establishment of buffers. The City shall require the establishment of buffer areas for activities in, or adjacent to, habitat conservation areas when needed to protect habitat conservation areas. Buffers shall consist of an undisturbed area of native vegetation, or areas identified for restoration, established to protect the integrity, functions and values of the affected habitat. Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted

nearby, and shall be consistent with the management recommendations issued by the state Department of Fish and Wildlife.

2. Seasonal restrictions. When a species is more susceptible to adverse impacts during specific periods of the year, seasonal restrictions may apply. Larger buffers may be required and activities may be further restricted during the specified season.

3. Habitat buffer averaging. The City may allow the recommended habitat area buffer to be reduced in accordance with the critical area report, the best available science, and the management recommendations issued by the Department of Fish and Wildlife, only if;

   a. It will not reduce stream or habitat functions;

   b. It will not adversely affect salmonid habitat;

   c. It will provide natural resource protection, such as buffer enhancement;

   d. The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer;

   e. The buffer area width is not reduced by more than fifty percent (50%) in any location; and

   f. The buffer area width is not less than fifty (50) feet.

H. Signs and fencing of habitat conservation areas.

1. Temporary markers and fencing for construction activity. The outer perimeter of the habitat conservation area or buffer and the limits of those areas to be disturbed pursuant to an approved permit or authorization shall be fenced, with temporary construction fencing, and marked in such a way as to ensure that no unauthorized intrusion will occur. These shall be maintained throughout construction, and shall not be removed until permanent fencing or signs, if required, are in place.

2. Permanent signs. As a condition of any permit or authorization the City may require that the applicant install permanent signs along the boundary of a habitat conservation area or buffer.

   Permanent signs shall be made of a metal face and attached to a metal post, or other material of equal durability. Signs must be posted at an interval of no less than one per lot or every fifty (50) feet, whichever is less, and must be maintained by the property owner or homeowners association in perpetuity. The sign shall be worded as follows or with alternative wording approved by the City; "habitat conservation area - do not disturb - contact City of Lacey - regarding restrictions and uses."

3. Fencing.

   a. The City may condition any permit or authorization to require the applicant to install a permanent fence at the edge of the habitat conservation area or buffer, when fencing will prevent future impacts to the habitat conservation area.

b. The applicant shall be required to install a permanent fence around the habitat conservation area or buffer when domestic grazing animals are present or may be introduced on site.

c. Fencing installed as part of a proposed activity or as required in this section shall be designed as to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes habitat impacts.

I. Subdivisions. The subdivision and short subdivision of land in fish and wildlife habitat conservation areas and associated buffers is subject to the following:

1. Land that is located wholly within a habitat conservation area or its buffer may not be subdivided.

2. Land that is located partially within a habitat conservation area or its buffer may be divided, provided an accessible and contiguous portion of each new lot is located outside of the habitat conservation area or its buffer, and meets other requirements of the City zoning code. Provided further, that clustering, smaller lots, and other techniques can be used to protect the conservation area while providing reasonable density opportunities for the land owner.

3. Access roads and utilities serving the proposed may be permitted within the habitat conservation area and associated buffers only if the City determines that no other feasible alternative exists and when consistent with this title.

Section 28: There is hereby added to the Lacey Municipal Code a new Section 14.33.117 to read as follows:

14.33.117 Performance standards for specific habitats.

A. Endangered, threatened, and sensitive species.

1. No development shall be allowed within a habitat conservation area or buffer with which state or federally endangered, threatened, or sensitive species have a primary association.

2. Whenever activities are proposed adjacent to a habitat conservation area with which state or federally endangered, threatened, or sensitive species have a primary association, such area shall be protected through the application of protection measures in accordance with a critical area report prepared by a qualified habitat biologist and approved by the City. Approval for alteration of land adjacent to the habitat conservation area or its buffer shall not occur prior to consultation with the Department of Fish and Wildlife and the appropriate federal agency.

3. Bald eagle habitat shall be protected pursuant to the Washington State Bald Eagle Rules (WAC 2322-12-292). Whenever activities are proposed adjacent to a verified nest territory or communal roost, a qualified professional shall develop a habitat management plan. Activities are adjacent to bald eagle sites when they are within eight hundred (800) feet, or within a quarter mile (2,640 feet) and in a shoreline foraging area. The City shall verify the location of eagle management areas for each proposed

activity. Approval of the activity shall not occur prior to approval of the habitat management plan by the department of Fish and Wildlife.

B. Anadromous fish.

1. All activities, uses, and alterations proposed to be located in water bodies used by anadromous fish or in areas that affect such water bodies shall give special consideration to the preservation and enhancement of anadromous fish habitat, including, but not limited to, adhering to the following standards:

   a. Activities shall be timed to occur only during the allowable work window as designated by the Department of Fish and Wildlife for the applicable species;

   b. An alternative alignment or location for the activity is not feasible;

   c. The activity is designed so that it will not degrade the functions or values of the fish habitat or other critical areas; and

   d. Any impacts to the functions and values of the habitat conservation area are mitigated in accordance with an approved critical area report.

2. Structures that prevent the migration of salmonids shall not be allowed in the portion of water bodies used by anadromous fish. Fish bypass facilities shall be provided that allow the upstream migration of adult fish and shall prevent fry and juveniles migrating downstream from being trapped or harmed.

3. Fills may only intrude into water bodies used by anadromous fish when consistent with the Lacey shoreline management program and the applicant demonstrates that the fill is for a water-dependent use that is in the public interest.

C. Wetland habitats. All proposed activities within or adjacent to habitat conservation areas containing wetlands shall, at a minimum, conform to the wetland development performance standards set forth in title 14.28 (wetlands protection) of the Lacey Municipal Code.

D. Riparian habitat areas. Unless otherwise allowed in this title, all structures and activities shall be located outside of the riparian habitat area.

1. Establishment of riparian habitat areas. Riparian habitat areas shall be established for habitats that include aquatic systems.

2. Riparian habitat area widths. Recommended riparian habitat area widths are shown in the table below. A riparian habitat area shall have the width recommended,, unless a greater width is required pursuant to subsection_3, or a lesser width is allowed pursuant to subsection 4. Below. Widths shall be measured outward, on the horizontal plane, from the ordinary high water mark or from the top of the bank if the ordinary high water mark cannot be identified. Riparian areas should be sufficiently wide to achieve the full range of riparian and aquatic ecosystem functions, which include but are not limited to protection of in stream fish habitat through control of temperature and sedimentation in streams; preservation of fish and wildlife habitat; and connection of riparian wildlife habitat to other habitats.

TABLE OF RIPARIAN HABITAT AREA WIDTHS

Type 1 and 2 streams	250 feet
Type 3 streams-5 to 20 feet wide	200 feet
Other type 3 streams	150 feet
Type 4 and 5 stream	150 feet

3. Increased riparian habitat area widths. The recommended riparian habitat area widths shall be increased as follows:

   a. When the Lacey Site Plan Review committee determines that the recommended width is insufficient to prevent habitat degradation and to protect the structure and functions of the habitat area;

   b. When the frequently flooded area exceeds the recommended riparian habitat area width, the riparian habitat area shall extend to the outer edge of the frequently flooded area;

   c. When the channel migration zone exceeds the recommended riparian habitat area width, the riparian habitat area shall extend to the outer edge of the channel migration zone;

   d. When the habitat area is in an area of high blowdown potential, the riparian habitat area shall be expanded an additional fifty (50) feet on the windward side; and

   e. When the habitat area is within an erosion or landslide hazard area, or buffer, the riparian habitat area shall be the recommended distance, or the erosion or landslide hazard area or buffer, whichever is greater.

4. Riparian habitat area width averaging. The City may allow the recommended riparian habitat area width to be reduced in accordance with a critical area report only if: all of the following requirements are satisfied:

   a. The width reduction will not reduce stream or habitat functions including those of non fish habitat;

   b. The width reduction will not degrade the habitat, including habitat for anadromous fish;

   c. The proposal will provide additional habitat protection;

   d. The total area contained in the riparian habitat area of each stream on the development proposal site in not decreased;

   e. The recommended riparian habitat area width is not reduced by more than fifty percent (50%) in any one location;

   f. The recommended riparian habitat area width is not reduced to less than seventy-five (75) feet;

g. The width reduction will not be located within another critical area or associated buffer;

h. The reduced riparian habitat area width is supported by best available science.

i. All undeveloped lands within total area will be left undeveloped in perpetuity by covenant, deed restriction, easement or other legally binding mechanism;

j. The buffer averaging plan shall be conducted in consultation with a qualified biologist and the plan shall be submitted to the Washington Department of Fish and Wildlife for comment; and

k. The Site Plan Review Committee shall use the recommendations of the qualified experts in making its decision on a plan that uses buffer width averaging.

5. Riparian habitat mitigation. Mitigation of adverse impacts to riparian habitat areas shall result in equivalent functions and values, on a per function basis, and be located in the same sub drainage basin as the habitat impacted.

6. Alternative mitigation for riparian habitat areas. The requirements set forth in this section may be modified at the City's discretion if the applicant demonstrates that greater habitat functions, on a per function basis, can be obtained in the affected sub - drainage basin as a result of alternative mitigation measures.

E. Riparian habitat areas, ponds, lakes, waters of the state, and marine habitat. The following specific activities may be permitted within a riparian habitat area, pond, lake, water of the state, marine habitat or associated buffer when the activity complies with the provisions set forth in the Lacey shoreline management program and subject to the following standards:

1. Clearing and grading. When clearing and grading is permitted as part of an authorized activity or as otherwise allowed in these standards, the following shall apply:

a. Grading is allowed only during the dry season, which is typically regarded as beginning on May 1st and ending on October 1st of each year, provided the City may extend or shorten the dry season on a case by case basis, determined on actual weather conditions.

b. Filling or modification of a wetland or wetland buffer is permitted only if it is conducted as part of an approved wetland alteration.

c. The soil duff layer shall remain undisturbed to the maximum extent possible. Where feasible, any soil disturbed shall be redistributed to other areas of the project area.

d. The moisture-holding capacity of the topsoil layer shall be maintained by minimizing soil compaction or reestablishing natural soil structure and infiltrative capacity on all areas of the project area not covered by impervious surfaces.

e. Erosion and sediment control that meets or exceeds the standards set forth in the Lacey Development Guidelines and Public Works Standards shall be provided.

2. Shoreline erosion control measures. New replacement, or substantially improved, shoreline erosion control measures may be permitted in accordance with an approved area report that demonstrates the following:

   a. Natural shoreline processes will be maintained. The project will not result in increased beach erosion or alterations to, or loss of, shoreline substrate within one-quarter (1/4) mile of the project area.

   b. The shoreline erosion control measures will not degrade fish or wildlife habitat conservation areas or associated wetlands.

   c. Adequate mitigation measures ensure that there is no net loss of the functions or values of intertidal habitat or riparian habitat as a result of the proposed shoreline erosion control measures.

   d. The proposed shoreline erosion control measures do not result in alteration of intertidal migration corridors.

3. Stream-bank stabilization to protect new structures from future stabilization is achieved through bioengineering or soft armoring techniques in accordance with an approved critical area report.

4. Launching ramps - Public or private. Launching ramps may be permitted in accordance with an approved critical area report that has demonstrated the following:

   a. The project will not result in increased beach erosion or alterations to, or loss of, shoreline substrate within one-quarter (1/4) mile of the site;

   b. The ramp will not adversely impact critical fish or wildlife habitat areas or associated wetlands;

   c. Adequate mitigation measures ensure that there is no net loss of the functions or values of intertidal habitat or riparian habitat as a result of the ramp; and

   d. No alteration of intertidal migration will occur as a result of the ramp.

5. Docks. Repair and maintenance of an existing dock or pier may be permitted in accordance with an approved critical area report subject to the following:

   a. There is no increase in the use of materials creating shade for predator species or eelgrass;

   b. There is no expansion in over-water coverage;

   c. There is no new spanning of waters between three (3) and thirteen (13) feet deep;

   d. There is no increase in the size and number of pilings; and

   e. There is no use of toxic materials (such as creosote) that come in contact with the water.

6. Roads, trails, bridges, and rights-of-way. Construction of trails, roadways, and minor road bridging, less than or equal to thirty (30) feet wide, may be permitted in accordance with an approved critical area report subject to the following standards:

a. There is no other feasible alternative route with less impact on the environment;

b. The crossing minimizes interruption of downstream movement of wood and gravel;

c. Mitigation for impacts is provided pursuant to a mitigation plan of an approved critical area report;

d. Road bridges are designed according to the Department of Fish and Wildlife Fish Passage Design at Road Culverts, March 1999, and the National Marine Fisheries Service Guidelines for Salmonid Passage at Stream Crossings, 2000; and

e. Trails and associated viewing platforms shall not be made of continuous impervious materials.

7. Utility Facilities. New utility lines and facilities may be permitted to cross watercourses in accordance with an approved critical area report if they comply with the following standards:

a. Fish and wildlife habitat areas shall be avoided to the maximum extent possible;

b. Installation shall be accomplished by boring beneath the scour depth and hyporheic zone of the water body and channel migration zone, where feasible;

c. The utilities shall cross at an angle greater than sixty (60) degrees to the centerline of the channel in streams or perpendicular to the channel centerline whenever boring under the channel is not feasible;

d. Crossings shall be contained within the footprint of an existing road or utility crossing where possible;

e. The utility route shall not parallel the stream, or locate in adjacent ravines; and

f. The utility installation shall not increase or decrease the natural rate of shore migration or channel migration.

8. Public flood protection measures. New public flood protection measures and expansion of existing ones may be permitted, subject to the City's review and approval of a critical area report, and the approval of a Federal Biological Assessment, by the Federal agency responsible for reviewing actions related to a federally listed species.

9. In-stream structures. In-stream structures, such as, but not limited to, high flow bypasses, sediment ponds, in-stream ponds, retention and detention facilities, tide gates, dams, and weirs, shall be allowed only as part of an approved watershed basin restoration project approved by the City and upon acquisition of any required state or federal permits. The structure shall be designed to avoid modifying flows and water quality in ways that may adversely affect habitat conservation areas.

10. Storm-water conveyance facilities. Conveyance structures may be permitted in accordance with an approved critical area report subject to the following standards:

a. No other feasible alternatives with less impact exist;

b. Mitigation for impacts is provided;

c. Storm-water conveyance facilities shall incorporate fish habitat features; and

d. Vegetation shall be maintained and, if necessary, added adjacent to all open channels and ponds in order to retard erosion, filter out sediments, and shade the water.

11. On-site sewage systems and wells.

a. New on-site sewage systems and individual wells may be permitted in accordance with an approved critical area report only if accessory to an approved residential structure, for which it is not feasible to connect to a public sanitary sewer system.

b. Repairs to failing on-site systems associated with an existing structure shall be accomplished by utilizing one of the following methods that result in the least impact;

(1) Connection to an available public sanitary sewer system;

(2) Replacement with a new on-site sewage system located in a portion of the site that has already been disturbed by development and is located landward as far as possible, provided the proposed sewage system is in compliance with the Thurston County Health Department; or

(3) Repair to the existing on-site septic system.

Section 29: Section 14. 33.160 of the Lacey Municipal Code is hereby amended to read as follows:

14.33.160 Criteria for habitat conservation area approvals.

A. An approval shall only be granted if the approval, as conditioned, is consistent with the provisions of this chapter. Additionally, approvals shall only be granted if:

1. A proposed action avoids adverse impacts to fish and wildlife habitat conservation areas, protecting identified priority habitats and priority species pursuant to recommendations from the Washington State Department of Fish and Wildlife and the required priority habitat and priority species management plan.

2. Denial of an approval would cause an extraordinary hardship on the applicant.

B. Approvals shall not be effective and no activity thereunder shall be allowed during the time provided to file an appeal.

C. Except as otherwise specified, habitat conservation areas and buffer zones as required in a priority habitat or priority species management plan shall be retained in their natural condition.

Section 30: The summary attached hereto is hereby approved for publication.

PASSED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, this 6th day of November, 2003.

CITY COUNCIL

BY: _____
Mayor

Attest:

_____
City Clerk

Approved as to form:

_____
City Attorney

Published: Monday, November 10, 2003

SUMMARY FOR PUBLICATION

ORDINANCE 1215

CITY OF LACEY

The City Council of the City of Lacey, Washington, passed on November 6, 2003, Ordinance No. 1215, entitled "AN ORDINANCE RELATING TO THE CITY'S WETLANDS PROTECTION AND HABITAT CONSERVATION AREAS PROTECTION REGULATIONS, AMENDING THE LACEY MUNICIPAL CODE BY REPEALING SECTIONS 14.28.470, 14.28.480 AND 14.33.030, ADDING NEW SECTIONS 14.28.445, 14.28.447, 14.28.455, 14.28.465, 14.33.030, 14.33.115, 14.33.116 and 14.33.117, AMENDING SECTIONS 14.28.030, 14.28.080, 14.28.090, 14.28.100, 14.28.120, 14.28.140, 14.28.280, 14.28.300, 14.28.350, 14.28.360, 14.28.370, 14.28.440, 14.28.450, 14.28.460, 14.28.490, 14.33.060, 14.33.070, 14.33.080, 14.33.100, 14.33.110 AND 14.33.160 ALL OF SAID CODE AND ADOPTING A SUMMARY FOR PUBLICATION."

The main points of the Ordinance are as follows:

1. The Ordinance makes changes in the City's Wetlands Protection Ordinance found in LMC Chapter 14.28.

2. The Ordinance further makes changes in the City's Habitat Conservations Areas Protection Regulations found in LMC Chapter 14.33.

3. The changes to these two chapters of the Lacey Municipal Code are designed to bring the regulations in compliance with the City Environmental Protection and Resource Conservation Plan which was updated by action of the Council in 2002. The amendments include changes required by the State Growth Management Act and include provisions in the model regulations developed by the State Department of Community Trade and Economic Development.

4. One of the most significant changes in the regulations is to require that best available science be utilized in making environmental decisions.

5. The Ordinance approves this Summary for publication.

A copy of the full text of this Ordinance will be mailed without charge to any person requesting the same from the City of Lacey.

Charlotte M. Taylor
City Clerk

Published: November 10, 2003.

ORDINANCE NO. 1265

CITY OF LACEY

AN ORDINANCE RELATING TO THE CITY'S FLOOD PLAIN REGULATIONS, AMENDING SECTIONS 14.34.010, 14.34.030, 14.34.100, 14.34.120, 14.34.130, 14.34.135 AND 14.34.140 OF THE LACEY MUNICIPAL CODE AND APPROVING A SUMMARY FOR PUBLICATION.

WHEREAS, Chapter 14.34 of the Lacey Municipal Code contains the City's Flood Plain Regulations and in order to be in compliance with the current regulations of the National Flood Insurance Program modifications are necessary to such regulations,

NOW, THEREFORE,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, as follows:

Section 1. Section 14.34.010 of the Lacey Municipal Code is hereby amended to read as follows:

14.34.010 Definitions. Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application:

A. "Appeal" means a request for a review of the building official's interpretation of any provisions of this chapter or a request for a variance.

B. "Area of shallow flooding" means a designated AO or AH zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and, velocity flow may be evident. AO is characterized as sheet flow; AH indicates ponding, and is shown with standard base flood elevations.

C. "Area of special flood hazard" means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A and V.

D. "Base flood" means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the "100 year flood." Designated on Flood Insurance Rate Maps by the letters A or V.

E. "Basement" means any area of the building having its floor sub-grade (below ground level) on all sides.

~~E~~F. "Development" means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard.

G. "Elevation Certificate" means the official form (FEMA Form 81-31) used to track development, provide elevation information necessary to ensure compliance with community floodplain management ordinances, and determine the proper insurance premium rate with section B completed by Community Officials.

~~F~~H. "Flood" or "flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters; and/or

2. The unusual and rapid accumulation of runoff of surface waters from any source.

~~G~~I. "Flood Insurance Rate Map (FIRM)" means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

~~H~~J. "Flood Insurance Study" means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.

~~I~~K. "Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

~~J~~L. "Lowest floor" means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements.

~~K~~M. "Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes the term "manufactured home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than one hundred eighty consecutive days. For insurance purposes the term "manufactured home" does not include park trailers, travel trailers, and other similar vehicles.

~~L~~N. "Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

~~M~~O. "New construction" means structures for which the "start of construction" commenced on or after the effective date of this chapter.

~~N~~P. "Start of construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the state of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundation or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

~~O~~Q. "Structure" means a walled and roofed building, including a gas or liquid storage tank, that is principally above ground.

R. "Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

~~P~~S. "Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure either:

1. Before the improvement or repair is started; or

2. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term does not, however, include either:

1. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which have been previously identified by the local code enforcement official and which are the minimum ~~solely~~ necessary to assure safe living conditions; or

2. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

Q. "Variance" means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter.

Section 2. Section 14.34.030 of the Lacey Municipal Code is hereby amended to read as follows:

14.34.030 Basis for establishing the areas of special flood hazard. The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for the city of Lacey," dated January 1980, with accompanying Flood Insurance Rate Maps (FIRM) is hereby adopted by reference and declared to be a part of this chapter. The Flood Insurance Study and the FIRM are ~~is~~ on file at City Hall, 420 College Street S.E. The best available information for flood hazard area

identification as outlined in Section 14.34.100 shall be the basis for regulation until the new FIRM is issued that incorporates data utilized under section 14.34.100.

Section 3. Section 14.34.100 of the Lacey Municipal Code is hereby amended to read as follows:

14.34.100 Duties and responsibilities of the building official. Duties of the building official shall include, but not be limited to:

A. Permit Review.

1. Review all development permits to determine that the permit requirements of this chapter have been satisfied;

2. Review all development permits to determine that all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required;

3. Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section 14.34.140(A) are met.

B. Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with Section 14.34.030, the building official shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in order to administer Sections 14.34.130 and 14.34.140.

C. Information to be Obtained and Maintained.

1. Where base flood elevation data is provided through the Flood Insurance Study or required in Section 14.34.100(B), obtain and record the actual elevation (in relation to

mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement;

2. For all new or substantially improved floodproofed non-residential structures:

   a. Verify and record the actual elevation (in relation to mean sea level), to which the structure was floodproofed, and

   b. Maintain the floodproofing certifications required in Section 14.34.080(C);

3. Maintain for public inspection all records pertaining to the provisions of this chapter.

D. Alteration of Watercourses.

1. Notify communities and the Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration;

2. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

E. Interpretation of FIRM Boundaries. Make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation in accordance with Chapter 1D of the City of Lacey Development Guidelines and Public Works Standards.

Section 4. Section 14.34.120 of the Lacey Municipal Code is hereby amended to read as follows:

14.34.120 General standards for flood hazard protection. In all areas of special flood hazards, the following standards are required:

A. Anchoring.

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.

2. All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).

B. Construction Materials and Methods.

1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;

2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage;

3. Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

C. Utilities.

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;

2. Water wells shall be located on high ground that is not in the floodway;

~~2~~3. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters; and

~~3~~4. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

D. Subdivision Proposals.

1. All subdivision proposals shall be consistent with the need to minimize flood damage;
2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;
3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and
4. Base flood elevation data shall be provided for subdivision proposals and other proposed development which contain at least fifty lots or five acres (whichever is less).

E. Review of Building Permits. Where elevation data is not available, applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above the highest adjacent grade in these zones may result in higher insurance rates.

Section 5. Section 14.34.130 of the Lacey Municipal Code is hereby amended to read as follows:

14.34.130 Specific standards. In all areas of special flood hazards where base flood elevation data has been provided as set forth in Section 14.34.030 or 14.34.100(B), the following provisions are required:

A. Residential Construction.

1. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more ~~to or~~ above the base flood elevation (BFE);

2. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

   a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.

   b. The bottom of all openings shall be no higher than one foot above grade.

   c. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

B. Nonresidential Construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to or above the level of the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

1. Be floodproofed so that below a point one foot above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

3. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans;

4. Nonresidential structures that are elevated but not floodproofed must meet the same standards for space below the lowest floor as described in Section 14.34.130(A)(2);

5. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building floodproofed to one foot above the base flood level will be rated at the base flood level).

C. Manufactured Homes. All manufactured homes to be placed or substantially improved within zones A1-30, AH, and AE shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is at or above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the provisions of Section 14.34.120(A)(2). This paragraph applies to manufactured homes to be placed or substantially improved in an expansion to an existing manufactured home park or subdivision. This paragraph does not apply to manufactured homes to be placed or substantially improved in an existing manufactured home park or subdivision except where the repair, reconstruction, or improvement of the streets, utilities and pads equals or

exceeds fifty percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced.

D. Recreational Vehicles. Recreational vehicles placed on sites are required to either:

1. Be on the site for fewer than 180 consecutive days, (or)

2. Be fully licensed and ready for highway use, on it's wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or

3. Meet the requirements of 5.2-3 above the elevation and anchoring requirements for manufactured homes.

Section 6. Section 14.34.135 of the Lacey Municipal Code is hereby amended to read as follows:

14.34.135 AE and A1-30 zones with base flood elevations but no floodways. In areas with base flood elevations (but a regulatory floodway has not been designated), no new construction, substantial improvements, or other development (including fill) shall be permitted within zones A1-30 and AE on the communities FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than 1 foot at any point within the community.

Section 7. Section 14.34.140 of the Lacey Municipal Code is hereby amended to read as follows:

14.34.140 Floodways. Located within areas of special flood hazard established in Section 14.34.030 are areas designated as floodways. Since the floodway is an extremely hazardous

area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

A. Encroachments, including fill, new construction, substantial improvements, and other development is prohibited unless certification by a registered professional engineer or architect is provided demonstrating through hydrologic analysis performed in accordance with standard engineering practice that the proposed ~~that~~ encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

B. Construction or reconstruction of residential structures is prohibited within designated floodways, except for:

1. Repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and

2. Repairs, reconstruction or improvements to a structure, the cost of which does not exceed fifty percent of the market value of the structure either,

   a. Before the repair, reconstruction, or repair is started, or

   b. If the structure has been damaged, and is being restored, before the damage occurred. Work done on structures to comply with existing health, sanitary, or safety codes specifications which have been identified by the local code enforcement official and which are minimum necessary to assure safe living conditions, or to structures identified as historic places shall not be included in the fifty percent.

C. If Section 14.34.140(A) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 14.34.120.

Section 8. The Summary attached hereto is hereby approved for publication.

PASSED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, at a regularly-called meeting thereof, held this 8th day of JUNE, 2006.

CITY COUNCIL

By: _____
Mayor

Approved as to form:

_____
City Attorney

Attest:

_____
City Clerk

SUMMARY FOR PUBLICATION

ORDINANCE 1265

CITY OF LACEY

The City Council of the City of Lacey, Washington, passed on JUNE 8, 2006, Ordinance No. 1265, entitled "AN ORDINANCE RELATING TO THE CITY'S FLOOD PLAIN REGULATIONS, AMENDING SECTIONS 14.34.010, 14.34.030, 14.34.100, 14.34.120, 14.34.130, 14.34.135 AND 14.34.140 OF THE LACEY MUNICIPAL CODE AND APPROVING A SUMMARY FOR PUBLICATION."

The main points of the Ordinance are described as follows:

1. The Flood Plain Regulations of the City of Lacey are contained within Chapter 14.34 of the Lacey Municipal Code. After adoption of these regulations, the standards of National Flood Insurance Program have been modified. Therefore, this Ordinance makes modifications to the City's regulations in order that flood insurance will be available within the City limits in accordance with the National Flood Insurance Program.

2. The Ordinance amends several of the definitional sections of the City's regulations and modifies the provisions regarding the review of building permits, residential construction, the placement of recreational vehicles, specific provisions for the AE and A1-30 Zones and the provisions regarding floodways.

3. The Ordinance adopts this Summary for Publication.

A copy of the full text of this Ordinance will be mailed without charge to any person requesting the same from the City of Lacey.

Published: JUNE 12, 2006.

ORDINANCE NO. 1269

CITY OF LACEY

AN ORDINANCE ADOPTING THE LACEY URBAN FOREST MANAGEMENT PLAN AS PART OF THE LACEY COMPREHENSIVE PLAN, AMENDING SECTIONS 14.32.010, 14.32.020, 14.32.035, 14.32.040, 14.32.045, 14.32.050, 14.32.069, 14.32.090, 14.32.095 AND 16.03.015, REPEALING SECTIONS 14.32.030, 14.32.060, 14.32.065, 14.32.067, 14.32.070 AND ADOPTING NEW SECTIONS 14.32.030, 14.32.060, 14.32.063, 14.32.064, 14.32.065, 14.32.066, 14.32.067, 14.32.068, 14.32.069, 14.32.070, 14.32.072 AND 14.32.073, ALL OF THE LACEY MUNICIPAL CODE AND ADOPTING A SUMMARY FOR PUBLICATION.

WHEREAS, there has been presented to the Planning Commission of the City a document entitled Lacey Urban Forest Management Plan and proposed modifications to the regulations of the City regarding the protection of trees and vegetation, and

WHEREAS, the Planning Commission has recommended the adoption of said plan and the modification of the City's regulations in the manner set forth in this ordinance, and

WHEREAS, the City Council has reviewed such recommendations and finds that the adoption of such plan and the modification of the City's regulations are in the best interest of the public, NOW, THEREFORE,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, as follows:

Section 1. That certain document entitled Lacey Urban Forest Management Plan is hereby adopted as part of the City of Lacey Comprehensive Plan.

Section 2. Sections 14.32.030, 14.32.060, 14.32.065, 14.32.067 and 14.32.070 are hereby repealed.

Section 3. Section 14.32.010 of the Lacey Municipal Code is hereby amended to read as follows:

14.32.010 Short title. This chapter shall be known and may be cited as the Tree and Vegetation Protection /Urban Forest Management regulations of the city of Lacey.

Section 4. Section 14.32.020 of the Lacey Municipal Code is hereby amended to read as follows:

14.32.020 Purposes and permit criteria. These regulations are adopted for the following purposes and these purposes are to be used as criteria for the issuance of land clearing permits under Section 14.32.040 of this chapter:

A. To implement strategies for the management and protection of Lacey's urban forest resources pursuant to the goals and policies of the Lacey Urban Forest Management Plan;

B. To implement the purposes of the State Growth Management Act relating to conservation of natural resources, including Lacey's urban forest resources, pursuant to RCW Sections 36.70A.050, 36.70A.060 and 36.70A.080;

C. To implement the purposes of the State Growth Management Act pursuant to RCW 36.70A.172, considering the many environmental benefits of the urban forest as described in Lacey's Urban Forest Management Plan;

D.~~A.~~ To promote the public health, safety, and general welfare of the citizens of Lacey without preventing the reasonable development of land;

E.~~B.~~ To preserve and enhance the city's physical and aesthetic character by preventing indiscriminate removal or destruction of trees and ground cover and to insure the protection of trees chosen to remain during construction;

F.~~C.~~ To minimize surface water and ground water runoff and diversion and to prevent erosion and reduce the risk of slides;

G.~~D.~~ To retain and utilize trees to assist in site planning, considering the abatement of noise, visual screening, ~~and in~~ protection from wind, and other site design issues;

H.~~E.~~ To acknowledge that trees and ground cover have significant environmental and quality of life benefits as identified in Lacey's Urban Forest Management Plan, such as the ~~produce~~ production of pure oxygen from carbon dioxide, the reduction of air pollution, help in providing clean water, control of soil erosion, use in design for energy efficiency and temperature control, noise attenuation, and wildlife habitat;

I.~~F.~~ To promote building and site planning practices that are consistent with the city's natural topography~~ical~~, soils, and vegetation features. At the same time certain factors may require the removal of certain trees and ground cover for things such as, but not limited to disease, danger of falling, proximity to existing and proposed structures and improvements, interference with utility services, protection of scenic views, protection of solar access and the realization of a reasonable enjoyment of property;

J.~~G.~~ To insure prompt development, restoration, replanting, and effective erosion control of property after land clearing;

K.~~H~~ To reduce ~~siltation and~~ water pollution from siltation in the city's streams and lakes;

L.~~I.~~ To implement the goals and objectives of the Washington State Environmental Policy Act;

M. ~~J.~~ To implement and further the City's Comprehensive Land Use Plan and its Environmental Protection and Resource Conservation Element;

N.~~K.~~ To encourage protection of wildlife and/or wildlife habitat whenever possible.

Section 5. There is hereby added to the Lacey Municipal Code a new Section 14.32.030 to read as follows:

14.32.030 Definitions.

A. "Brushing" means the practice of removing ground cover to create better visibility on a property for purposes such as marketing or surveying of said property.

B. "Caliper" is the standard for trunk measurement of nursery stock. Caliper of the trunk shall be the trunk diameter measured 6" above the ground for up to, and including, 4 inch caliper size and 12 inch above the ground for larger sizes.

C. "City" means the city of Lacey, Washington.

D. "Class IV forest practice activity" is a timber harvest, thinning or other activity as established in the Washington State Department of Natural Resources Forest Practices Regulations, whereby a property owner is allowed to harvest a limited amount of timber from their property within the city of Lacey, while still maintaining their rights to convert their property to a use inconsistent with growing timber.

E. "DBH" is the diameter at breast height, measured 4.5 feet above the groundline on the high side of the tree.

F. "Director" means director of community development or his/her designee.

G. "Drip line" of a tree is located by the vertical projection of a line at the tips of the outermost branches.

H. "Ground cover" means grass, forbs, shrubs, and trees less than four inches in diameter measured four and one half feet above the ground level (DBH).

I. "Hazard tree" means any tree that is dead, dying, damaged, diseased, or structurally defective, recently exposed by adjacent clearing, or some other factor that will subject the tree to failure, and the tree could reasonably reach a target, as determined by the tree protection professional.

J. “Land clearing” means the direct and indirect removal of trees and/or ground cover from any public or private undeveloped, partially developed, or developed lot, public lands or public right-of-way. This shall also include any destructive or inappropriate activity applied to a tree that will result in its death or effectively destroy the trees appearance and/or functionality, such as topping.

K. "Historical tree" is a tree or group of trees designated as such by the city because of its historical value to the residents of the city.

L. "Root protection zone" is an area around the tree to be saved equal to one foot of radius for each one inch of tree diameter measured 4.5 feet above the ground line (DBH), unless otherwise designated by the city’s tree protection professional.

M. "Specimen tree" is a tree that is unique or rare because of its exceptional size or quality, species, or value in a particular location.

N. "Topping" is the indiscriminant placement of cuts to reduce a tree’s size. Topping is not an acceptable pruning practice in the city of Lacey.

O. “Tree” means any living woody plant characterized by one main stem or trunk and many branches, and having a diameter of four inches or more measured at four and one half feet above the ground level (DBH).

P. “Tree protection professional” is a certified professional with academic and/or field experience that makes him or her a recognized expert in urban forestry and tree protection during development. A tree protection professional shall be a member of the Society of American Foresters, the Association of Consulting Foresters of America, or similar professional forestry organizations, and shall have specific experience with urban tree management in the state of Washington. Additionally the tree protection professional shall be a Certified Arborist with the necessary training and experience to use and apply the International Society of Arboriculture’s Guide for Plant Appraisal and to professionally provide the necessary expertise relating to management of urban trees specified in this chapter.

Q. "Tree tract" is a portion of land designated for the preservation and protection of existing trees or the planting of new trees to maintain tree canopy at a development site. The tree tract shall be a separate designated lot(s) shown on the plat map, binding site plan, or site plan review map, and shall be recorded with appropriate description of purposes and restrictions. Restrictions applied to the tree tract will not allow any use other than the growing of trees in the tract, and will reserve the tract for the protection and preservation of trees in perpetuity. Tree tracts can be used for other open space uses when the uses are compatible with trees and will not impact tree health. The tract will be dedicated to, and owned and maintained by the home owners, or lot owners association, or comparable entity. The tract may be dedicated to the city of Lacey for maintenance if approved by the city. Creation of tree tracts to save the best trees on a site may require modifications to the street locations, lot designs and/or other features of the site plan.

Section 6. Section 14.32.035 of the Lacey Municipal Code is hereby amended to read as follows:

14.32.035 The city's tree protection professional. ~~In the interest of achieving professional assistance in the city's tree protection efforts,~~ T~~t~~he city shall contract with one or more professionals that qualify as a tree protection professional under the definition of this chapter. Said professional or professionals shall be responsible for providing the information and services required of a tree protection professional described herein.

Individual applicants will be responsible for payment of the costs and fees of the designated tree protection professional for projects necessitating work to be performed by the tree protection professional with the exception of work in determining an exempt project. The city shall be responsible for billing and collecting costs and fees charged to the applicant and transferring said payment to the tree protection professional unless the city has opted for some other mechanism of providing for the costs and fees, such as inclusion of such costs and fees in the schedule of application fees.

Section 7. Section 14.32.040 of the Lacey Municipal Code is hereby amended to read as follows:

14.32.040 Permits. No person, corporation, or other legal entity shall engage in timber harvesting or cause land clearing in the city without having complied with one of the following:

A. Received a land clearing permit from the director;

B. Having obtained approval of the proposed work under the processes described in Section 14.32.050A;

C. Having received an exemption from the director under the provisions of Section 14.32.050. In such cases an exemption notice shall be required for posting at the site.

Section 8. Section 14.32.045 of the Lacey Municipal Code is hereby amended to read as follows:

14.32.045 ~~Urban growth management boundary~~ Class IV forest practice applications.

A. **Urban growth boundary.** Areas within the city urban growth ~~management~~ boundary~~ies~~ ~~established pursuant to the urban growth management agreement~~ are anticipated to be available for development with urban uses within the next twenty ~~five to ten~~ year period. Pursuant to RCW 76.09.070 lands within the urban growth ~~management~~ area are not considered appropriate for ~~reforestation and~~ long term timber production and harvesting which takes a full forty ~~thirty~~ year cycle. Forest ~~Timber~~ management activities shall be consistent with the city's Comprehensive ~~l~~Land ~~u~~Use ~~p~~Plan~~s~~ and implementing regulations ~~ordinances~~ for the urban growth area. Forest management activities shall promote the goals

and policies of the Lacey Urban Forest Management Plan. Forest practice applications shall meet the requirements specified in Subsections B, C and D of the LMC Section 14.32.045**.**

B. **Conversions and timing**. Because conversion of properties within the urban growth ~~management area~~ boundary can reasonably be is expected, significant land clearing of such ~~area~~ properties shall only ~~needs to~~ take place at the time of a valid land use application. Tree tracts, open spaces and buffers can then be properly coordinated with the actual development plans.

To further the purposes, ~~of the urban growth management agreement and~~ goals, and policies of the Urban Forest Management Plan ~~tree protection and preservation ordinance~~, timber harvesting and conversion of forested ~~timbered~~ lands within the urban growth ~~management~~ boundary shall not be permitted until such time as a valid land use application for development is made; provided, however, requests may be made for maintenance and thinning of existing timber stands to promote the overall health and growth of the stand until said stand is converted and harvested pursuant to plans provided within a valid land use permit.

C. **Maintenance and thinning**. ~~Such~~ Class IV forest practice applications and applications for maintenance and thinning ~~requests~~ shall be reviewed by the city's tree protection professional who shall make recommendations on the request to the land clearing committee. Recommendations shall ensure that action shall improve the health and growth of the stand and preserve long term tree protection alternatives to meet the goals of this chapter.

D. **Selective thinning limited**. ~~Additionally, t~~Thinning activities shall be strictly limited to less than thirty-five ~~forty~~ percent of the volume every ten years ~~and trees~~. High grading or top-down thinning shall not be permitted. The remaining stand of trees should be healthy, long-term trees from the dominant and co-dominant crown classes. The stand shall be marked prior to the selective thinning operation, indicating which trees will be removed and saved.

Section 9. Section 14.32.050 of the Lacey Municipal Code is hereby amended to read as follows:

14.32.050 Exemptions. The following shall be exempt from land clearing permit requirements of this chapter but shall satisfy all standards and requirements of Section 14.32.065 and other sections as noted below:

A. **Coordination with land use applications**. Projects requiring approval of the city of Lacey site plan review committee under Chapter 16.84 of this code, or projects requiring review by the hearings examiner or city council, provided that land clearing on such projects shall take place only after approval and shall be in accordance with such approval and the standards of this chapter including the information requirements and standards of Section 14.32.060;

B. **Hazard trees**. Removal of hazard trees ~~and ground cover~~ in emergency situations involving immediate danger to life or property ~~or substantial fire hazards~~ as determined by the city's tree protection professional;

C. **Unhealthy trees and groundcovers.** Removal of obviously dead or diseased trees or ground cover which may be a fire hazard as determined by the city's tree protection professional ~~or trees~~;

D. **Individual lot exemption**. Removal of less than six trees in any thirty-six consecutive months or ground cover for the purposes of solar access, general property and utility maintenance, landscaping or gardening, provided a minimum tree threshold is maintained pursuant to section 14.32.066, and provided further this exemption does not apply to historical trees or trees and ground cover in an area designated as environmentally sensitive. An exemption must be issued by the city of Lacey prior to the removal of trees under this exemption provision.

E. **Building footprint**. Removal of trees and ground cover within a maximum of ten feet (when required for construction) of the perimeter of the building line and any area proposed to be cleared for driveway, ~~and~~ septic, sewer and water purposes, of a single-family or duplex dwelling to be constructed as indicated on the plot plan submitted to the building official with an application for a building permit; provided, however, the director may require minor modifications in siting and placement of driveways, utilities and septic tank drain field systems and sewer and water lines where such modifications will promote the goals of the chapter and still satisfy the need and function of improvements.

F. **Clear vision**. Removal of obstructions required by the vision clearance at intersections regulations of Chapter 12.24 of the Lacey Municipal Code.

Section 10. There is hereby added to the Lacey Municipal Code a new Section 14.32.060 to read as follows:

14.32.060 Application for permits.

A. **Pre-submission conference**. Prior to application for land use permits and actions such as a land division, commercial site plan review (SPR), or a conditional use permit (CUP), a pre-submission conference shall be required consistent with the requirements of chapter one of the Development Guidelines and Public Works Standards. The pre-submission conference is designed to review the proposed action and identify permit requirements and issues an applicant may incur if the project is implemented. As part of this review it should be made clear that the city of Lacey has an Urban Forest Management Plan and tree protection regulations that require early consideration of tree protection options, and that urban forest concepts and strategies shall be part of the early design considerations for new projects. Location and design of major infrastructure, buildings, and planned uses must consider the tree protection opportunities to further the purposes of the Urban Forest Management Plan.

B. **Applicable requirements**. An application for a land clearing permit or information required by this chapter shall be submitted at the same time as a valid land use application or building permit on a form provided by the city and shall be accompanied by such of the following documents and information as are determined to be necessary by the director:

1. **Site Plan**. Copies of the site plan, pursuant to requirements of Chapter One of the Development Guidelines and Public Works Standards, which shall include the following information:

a. Name, address, and telephone number of the applicant and owner of property;

b. Legal description of property;

c. Date, north arrow, and adequate scale, as determined by the director, on the map or plot plan;

d. Topography map showing contours at not greater than ten foot intervals of proposed clearing projects within areas of steep slopes, creeks and shorelines;

e. Location of proposed improvements, including, but not limited to, structures, roads, driveways, utilities, and storm drainage facilities. Said improvement locations shall also be staked on site to enable the city's tree protection professional and other city staff to review improvement locations and their relationship to the site and existing vegetation;

f. Approximate and general location, type, size and condition of trees and ground cover and a general identification of trees and ground cover which are to be removed.

2. **Tree protection professional report.** On forested property greater in size than one acre or commercial property with one or more trees, or other sites the city deems it necessary because of special circumstances or complexity, the city's tree protection professional shall review the site and provide a report analyzing the site for tree protection consistent with the requirements of this chapter. The report should provide information important to urban forest management and options for consideration when developing preliminary designs. The report should suggest options for design to best achieve the purposes of the Urban Forest Management Plan and this chapter. The report shall include but shall not be limited to:

a. Information required under Subsections 14.32.060B 1 through 7;

b. An analysis of technical information requested by the site plan review committee related to trees and forest practices;

c. Analysis of what portion of the site is best for designation of the tree tract if required, considering the intent of this chapter, soil type, topography, tree species, health of trees and reasonable project design limitations;

d. Recommendations for saving of individual tree specimens based upon the intent of this chapter, soil type, topography, tree species, health of trees, and reasonable project design limitations;

e. A plan for protection of trees to be saved during construction including placement of construction fences, monitoring of construction activity and other measures necessary to ensure adequate tree protection;

f. Consideration of the location of roads, other infrastructure, and buildings and potential options for alternative locations, if applicable, to best satisfy the purposes of the Urban Forest Management Plan;

g. A timeline for tree protection activity;

h. The final tree protection plan should be prepared on the site grading plan. All tree protection fences, trees to be saved, and trees to be removed should also be shown on the site demolition plan. Necessary save tree pruning and selective thinning within tree tracts shall be detailed and trees marked as such. The tree protection plan and demolition plan should be part of the submittal to the city of Lacey and shall be approved by the tree protection professional. The tree protection plan shall be part of the contractor bid package and a copy of the tree protection plan shall be available to the contractors on site at all times during logging, clearing, and construction.

3. **Schedule**. A proposed time schedule for land clearing, land restoration, implementation of erosion control and any excavation or construction of improvements;

4. **Strategy for Control**. A statement indicating the method to be followed in erosion control and restoration of land during and immediately following land clearing;

5. **Landscape Plan**. Proposed landscape plan or written or graphic description of proposed action;

6. **Areas of Saved Trees**. Location of tree tracts, proposed buffers, open space, and other areas of the site where stands of trees are to be saved;

7. **Revegetation**. If the option for revegetation of the site or a portion of the site is proposed under Section 14.32.069 of this chapter, information requirements described under Section 14.32.069 shall be required at the time of application.

C. **Review body.** Review shall take place as part of the underlying permit review process. The review authority (site plan review committee, hearing examiner, or city council) shall review the application and make a decision in accordance with review requirements of the underlying permit.

D. **Expiration**. Any permit granted hereunder shall run with the underlying permit or shall expire eighteen months from the date of issuance. Upon a showing of good cause, a permit may be extended by the director for one six month period. The permit may be suspended or revoked by the director because of incorrect information supplied or any violation of the provisions of this chapter. Minor amendments of a permit may be granted by the director. Major amendments may be accomplished only by making a new application and proceeding through the requirements of this chapter and Chapter One of the City of Lacey

Development Guidelines and Public Works Standards. Major alterations are changes that alter the intent of the original decision. What constitutes a minor or major amendment shall be left up to the discretion of the director who may consult the site plan review committee for guidance.

E. **Permit notice posted**. No work shall commence until a permit notice has been posted on the subject site in a conspicuous location. The notice shall remain posted until the project has been completed.

F. **Pre-construction conference**. Prior to the start of logging and land clearing activity, a preconstruction conference shall be held with the city tree protection professional to insure the contractors understand the necessary tree protection measures prescribed in the tree protection plan and that all required tree protection fences and other required tree protection activity is completed prior to the start of site work.

Section 11. There is hereby added to the Lacey Municipal Code a new Section

14.32.063 to read as follows:

14.32.063 Conformance to standards. All land clearing shall conform to the following standards and provisions unless otherwise recommended in a forest management plan, prepared by the city's tree protection professional and approved by the city, where the alternate procedures will be equal or superior in achieving the policies of this code. In addition, the following minimum standards and provisions shall be the governing criteria for the issuance or denial of land clearing permits under this chapter:

A. **Tree tract**. Land clearing shall meet requirements for tree tracts as specified in section 14.32.064 of the Lacey Municipal Code.

B. **Soil stability**. The clearing will not create or contribute to landslides, accelerated soil creep, settlement and subsidence or hazards associated with strong ground motion and soil liquefaction.

C. **Preservation**. The proposal shall contain reasonable provisions for the preservation of natural topography, water features, vegetation, drainage and other existing natural features on the site.

D. **Runoff**. The clearing will not create or contribute to flooding, erosion or increased turbidity, siltation or other forms of pollution in a watercourse.

E. **Sensitive areas**. No ground cover or trees which are within the designated buffer area of creeks, streams, lakes and other shoreline or wetland areas shall be removed, nor shall any mechanical equipment operate in such areas; provided, that conditions deemed by the director to constitute a public nuisance may be removed; and provided, that a property owner shall not be prohibited from making landscaping improvements where such improvements are consistent with the aims of this chapter. The designated buffer area shall be in accordance with the city's wetland protection ordinance as hereafter amended. Buffer areas shall be consistent with best available science guidelines and recommendations from the Washington

State Department of Ecology for classification, protection and designation of wetlands and wetland buffer areas.

F. **Aesthetic character**. The clearing will be undertaken in such a manner as to preserve and enhance the city's aesthetic character. Vegetative screens or buffer strips shall be maintained or be reestablished in a timely manner with approved plantings along public rights-of-way and adjoining property boundaries.

G. **Erosion control**. Clearing operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time, consistent with an anticipated build-out schedule.

H. **Conformance with laws**. Land clearing activities shall be performed in accordance with all applicable laws, rules and regulations pertaining to air and water pollution, the Washington Forest Practices Act, and the Shoreline Master Program.

I. **Protection of roots**. Except for the use of existing roads and constructed pathways, land clearing machinery shall be kept outside of the root protection zone of any trees designated for retention. Damaging of trees designated for retention by making cuts or fills, trenching, compacting of the soil, draining concrete rinsate, attaching wires or other devices to the trees, piling of materials, modification of drainage within the root protection zone, breaking of tree stems or branches, removal of desirable groundcovers from under tree, or otherwise damaging the roots or root zone of the tree shall be considered a violation of this chapter and shall require mitigation pursuant to the requirements of Section 14.32.090.C of the Lacey Municipal Code. All requirements for protection of trees and vegetation detailed in plans prepared by the city's tree protection professional or in land clearing conditions required by staff such as fencing and other protection measures shall be satisfied.

J. **Clearing of individual lots with land division approvals prohibited**. Where a land division of property is concerned, only areas where streets and utilities are to be constructed can be cleared of trees and ground cover. No such rights-of-way clearing of trees or ground cover shall take place until preliminary short plat, preliminary plat or preliminary binding site plan approval has been granted and engineered plans for road construction have been approved by the city and said road areas have been surveyed and staked to enable city staff to confirm road locations. No tree removal or brushing shall take place on lots or in open space areas of a preliminary short plat or preliminary plat except through the provisions of Section 14.32.069. Additionally, no tree removal or brushing shall take place on lots or in open space areas of a final land division except through the provisions of section 14.32.069 of the Lacey Municipal Code, or on a lot by lot basis after individual building permit applications have been made and land clearing activities have been approved for said individual lots pursuant to the requirements of Section 14.32.050, or 14.32.060.

K. **Intent**. Land clearing shall meet the intent and requirements of Lacey's Urban Forest Management Plan.

Section 12. There is hereby added to the Lacey Municipal Code a new Section 14.32.064 to read as follows:

14.32.064 Tree Tract requirements. Every commercial project over one acre in size, and every land division over two acres in size shall be required to designate a tree tract(s) to further the goals of the Urban Forest Management Plan for maintenance and no net loss of tree canopy in the city of Lacey.

A. **Tree tract basic standard**. The tree tract or tracts shall generally cover five percent or more of the site and shall represent the primary strategy for maintaining the tree canopy. All developing properties shall create a tree tract equal to 5 percent of the gross site area.

B. **Tree tract credit for required open space area**. Land divisions and most binding site plans require provision of open space as a requirement of the approval process. Up to one hundred percent of the requirement for a tree tract(s) may be satisfied in combination with the open space requirement provided the following conditions apply:

1. The open space area can function for necessary recreation activities, is located in the most strategic location of the site to provide centralized recreation functions or combined with adjacent open space identified for a public park;

2. The open space satisfies open space needs as identified in the City Comprehensive Plan for Outdoor Recreation;

3. The location is the best site for the tree tract(s) based upon urban forestry principals and intent of the Urban Forest Management Plan.

4. If the open space and tree tract location requirements are not compatible, the requirement for open space may be reduced to provide for the full tree tract requirement provided the following conditions apply:

a. There shall be adequate area set aside for tot lot and subdivision park activities to satisfy the expected needs of the subdivision residents, as determined by the city parks and recreation department director;

b. In no case shall the combined amount of land in the open space and tree tract(s) be less than the original open space requirement for the development.

C. **Ownership**. Tree tracts shall be held in common ownership by the homeowner's or lot owner’s association or a comparable entity. Tree tracts may be deeded to the city of Lacey if approved by the city.

D. **Priority of tree types**. Trees to be protected must be healthy, windfirm, and appropriate to the site at their mature size, as identified by a qualified professional forester. In designing a development project's tree tract, the applicant shall protect the following types of trees in designated tract(s) in the following order of priority.

1. **Historical trees**. Trees designated as historical trees under section 14.32.072 of the Lacey Municipal Code.

2. Specimen trees. Unusual, rare, or high quality trees.

3. Critical area buffer. Trees located adjacent to critical area buffers.

4. Significant wildlife habitat. Trees located within or buffering Significant Wildlife Habitat.

5. Other high quality. Individual trees or groves of trees.

Section 13. There is hereby added to the Lacey Municipal Code a new Section 14.32.065 to read as follows:

14.32.065 Tree replacement in tree tracts. Tree replacement is required where no trees exist in the tree tract, where tree canopy coverage in the tree tract is less than 100 percent, where unhealthy, unsuitable, or hazardous trees occur within the tree tract, where gaps in the stand require replanting, or where underplanting is necessary for future stand replacement. The tree tract shall be replanted to achieve 90 percent canopy coverage within fifteen years. Replacement trees will be a minimum of 1.5 inch caliper for deciduous species and 6-7 foot tall for conifers unless otherwise recommended by the city tree protection professional. Conifers will be native to the Pacific Northwest. Deciduous tree species will be compatible with the other trees in the tract, and will provide wildlife, aesthetic, and other amenities to the tract.

Section 14. There is hereby added to the Lacey Municipal Code a new Section 14.32.066 to read as follows:

14.32.066. Tree replacement and establishment of new trees on lots. Tree planting is required on all newly developed single and multi-family residential, commercial, and industrial lots, and all properties on which a class IV forest practice occurs. A minimum tree threshold, according to the provisions of this section, is required on all developed lots where tree removal or other site disturbance is proposed.

When trees are planted on individual lots the species shall be appropriate for the size of the lot and the space planted pursuant to guidance provided in the Urban Forest Management Plan and, if applicable, as provided on approved revegetation or landscaping plans developed for the land division.

The following table provides a summary of the required minimum tree requirements and replacement for developed and developing properties:

Type of Development	**Lot Size**	**Required New or Saved Trees**	**Tree Size ****
Developing Single and Multi-Family Lots	Less than 3,500 ft^2	2	2.0" Caliper Deciduous 7-8' Tall Conifers
	3,500ft^2 to 4,999 ft^2	3	2.0" Caliper Deciduous 7-8' Tall Conifers
	5,000 ft^2 to 6,499 ft^2	4	2.0" Caliper Deciduous 7-8' Tall Conifers
	6,500 ft^2 or over	5	2.0" Caliper Deciduous 7-8' Tall Conifers
Developed Single-Family and Multi-Family Lots	All	4 trees per 5,000 ft^2*	2.0" Caliper Deciduous 7-8' Tall Conifers
Developing Commercial or Industrial	All	2 Trees per 10,000 ft^2*	2.0" Caliper Deciduous 7-8' Tall Conifers
Developed Commercial/ Industrial/Multifamily proposing an addition, tree removal, or other site disturbance	All	2 Trees per 10,000 ft^2	2.0" CaliperDeciduous 7-8' Tall Conifers
Class IV Forest Practice Activity	All	Replanting required when average stocking (basal area) falls below 80 ft^2 per acre – Tree spacing required is 10 ft on center	Seedlings or transplants 1+1, 2-0, 2-1, P+1, or 1-2

** In addition to all tree tract requirements and landscape ordinance requirements.*
*** Tree species will be selected from the general tree list in the Lacey Urban Forest Management Plan.*

A. Replacement tree location. The applicant's proposed location of transplanted or replacement trees shall be subject to city approval as part of the tree plan. Replacement trees should be planted according to the following priority:

1. **On-Site**.

2. **Off-site**. When space is unavailable for planting the required trees on-site, then they may be planted at another approved location within the city of Lacey or Lacey's growth area.

B. City tree account. When on-site and off-site locations are unavailable, the applicant shall pay an amount of money equal to the replacement cost of the replacement trees into the city's tree account. The replacement cost is the retail cost of the tree plus all cost of planting and maintenance for three years.

C. Tree replacement. Replacement trees shall meet the required quality and priority. On sites where there are currently inadequate numbers of existing trees, or where the trees are inappropriate for protection as determined by the tree protection professional, then replacement tree planting shall be required. In designing a development project and in meeting the required tree stocking the following trees shall be planted in the following order of priority:

1. **Buffers**. Trees in or adjacent to critical area and/or significant wildlife habitat.

2. **Tree tracts.** Trees to replace unhealthy or unsuitable trees for tree tracts with no trees or inadequate numbers of trees.

3. **Landscaping**. Trees required to be protected or planted as a requirement of Chapter 14.32 of the Lacey Municipal Code are in addition to any required to be planted by the Landscaping Ordinance Chapter 16.80 of the Lacey Municipal Code. Protected trees within any required landscaping area can be used to satisfy the required spacing in the landscaping requirements. For residential subdivisions this may include entrance landscaping, traffic islands, separate deeded tree tracts, and other common areas.

D. Replacement tree quality. Replacement trees shall meet the quality, caliper, and root-ball size standards delineated in the Urban Forestry Management Plan and the current edition of the American Standard for Nursery Stock (ANSI Z60.1). Trees shall be healthy and free of damage, insects, and disease, be well-branched and show evidence of cultural care in the nursery to create quality trees.

E. Replacement tree planting standards. Trees shall be planted pursuant to the industry planting standards delineated in the Urban Forestry Management Plan.

Section 15. There is hereby added to the Lacey Municipal Code a new Section 14.32.067 to read as follows:

14.32.67 Street tree requirements. Street trees are required on all public streets within all new developments. The species of tree shall be selected from the street tree list or the general tree list in the Lacey Urban Forest Management Plan. The required tree spacing depends on the expected tree size at age thirty. Landscape trees are required in all alleys. Street trees can be counted towards tree replacement requirements for individual lots.

Section 16. There is hereby added to the Lacey Municipal Code a new Section 14.32.068 to read as follows:

14.32.068 Solar access considerations. While trees have long been used to complement solar planning and site design such as providing deciduous trees in strategic locations to cool areas in summer and providing solar access in winter, providing of adequate solar access may sometimes conflict with protection of existing trees, particularly evergreen trees. When established city goals designed for different purposes conflict, balancing of different community and individual needs must be accomplished. In implementing the goals of this chapter, the review body shall give due consideration to valid solar access needs together with any specific solar access policies that may hereafter be adopted.

Section 17. There is hereby added to the Lacey Municipal Code a new Section 14.32.069 to read as follows:

14.32.069 Revegetation option. Based upon recommendations in a report by the city's tree protection professional, removal of areas of vegetation that might normally be saved may be permitted if extensive revegetation is accomplished and standards for tree tract(s) are satisfied pursuant to the requirements of sections 14.32.064 and 14.32.065 of the Lacey Municipal Code. Such alternatives may be desirable for sites with significant physical limitations such as topography, soil type or proposed small lot sizes (less than sixty-five hundred square feet). Additionally, limitations of existing trees such as unsuitable species or poor health of a particular tree stand may make such options desirable.

On a site with documented special circumstances, an alternative allowing removal of vegetation normally saved may be approved with a comprehensive revegetation plan developed by the city's tree protection professional. At a minimum, the plan shall include:

A. **General information**. Information required under Section 14.32.060 of this chapter.

B. **General standards**. Consideration of the standards provided in Section 14.32.063 of this chapter.

C. **Justification.** An evaluation of what circumstances are present in specific areas of the site to make incorporation of topography and existing vegetation undesirable and recommendations on what areas if any can be designed to accommodate existing vegetation.

D. **Consideration of functions and values**. Consideration of overstory and understory vegetative species to provide wildlife habitat and meet specific purposes important to the neighborhood environment and project design such as buffers, green belts, open spaces, street trees, urban beautification, solar access, and other functions and purposes deemed desirable and appropriate to the anticipated use.

E. **Landscape plan map**. A comprehensive map showing location, number, species and size of planned vegetative improvements. The plan shall also consider the particular circumstances of the site and proposed project, and detail species selected based upon the anticipated use of the property consistent with the site's zoning designation, permitted uses, and lot size.

F. **Timing**. A time line for completion of improvements.

G. **Value of vegetation**. An appraisal of the value of vegetation being removed under this option. Said appraisal must be accomplished pursuant to the most recent guidelines established by the International Society of Arboriculture in its “Guide for Plant Appraisal" and be completed by the city tree protection professional.

H. **Commensurate value replaced**. Said plan shall provide for a commensurate value of vegetation to be installed as is to be taken out under this option. Said amount shall be above and beyond what is normally required for landscaping in the projects not utilizing this option. The calculated value of the revegetation shall include only appraised value of the trees and vegetation and shall not include the applicant’s administrative or labor costs, or the costs of the city’s tree protection professional.

I. **Maintenance**. A three year maintenance plan including provision for an irrigation system, weed control and a shrub and tree maintenance program.

J. **Protection strategy for vegetation to be saved**. If any existing vegetation is to be saved, a plan shall be provided for the protection of said vegetation during construction activity, including fencing and other protective measures deemed necessary by the city’s tree protection professional.

K. **Land division elements considered**. If the project involves a land division, the landscaping plan should include a comprehensive treatment of tree tracts, open space areas, green belt areas, buffers, common areas, and street frontages (street trees and parkways). All common improvements shall be completed prior to the final land division, approval or financial security provided to the city in a form acceptable to the city in the amount of one hundred fifty percent of the estimated costs including two years maintenance and twenty percent replacement.

L. **Required consideration for clearing individual lots with land division approval**. If a developer desires to clear individual lots within the land division at the same time as road areas, this may be done if it is consistent with the approved plans and the following conditions are satisfied:

1. **Valuation of vegetation**. An average valuation of vegetation on individual lots shall be provided with a conceptual plan of typical yard landscaping of equal value. Such conceptual plan shall contain specific guidelines for revegetation of individual lots and said guidelines shall be incorporated into protective covenants and lot owner's association articles of incorporation;

2. **Financial security**. Financial security is provided to the city in a form acceptable to the city at one hundred fifty percent of the estimated costs of improvements of individual lots based upon the conceptual typical yard landscaping plan.

3. **Meets requirements**. A detail of how the revegetation plan satisfies the requirements for tree tract(s) pursuant to this chapter.

Section 18. There is hereby added to the Lacey Municipal Code a new Section

14.32.070 to read as follows:

14.32.070 Additional considerations for commercial developments.

Commercial projects generally have different demands than residential areas. Commercial sites have parking lots to serve the traveling public, they have larger buildings, and they may have need of significant utility infrastructure to service commercial uses. While Lacey has the same goals to maintain our tree canopy and to save significant stands of trees, urban forestry requirements for commercial areas need to be crafted to acknowledge and plan for differences in site design and construction requirements. In addition to other requirements of this ordinance, commercial sites shall have emphasis on the following considerations and requirements:

1. Early planning prior to project design shall consider the stands of trees on the site. For a land use application to be considered complete a tree inventory with consideration of urban forestry issues shall be required to be submitted with the land use application. The tree inventory and evaluation shall be utilized in the design layout of the site. Existing trees and protection opportunities shall play an important role in site design;

2. The major strategy for tree protection on commercial sites will be designation of a tree tract(s) pursuant to the requirements of section 14.32.068 of the Lacey Municipal Code. Analysis and recommendations of the tree protection professional will determine if certain individual trees should have special emphasis based upon their health and significance, individual site conditions, and retention opportunities. A review of these recommendations shall be provided in the tree protection professional's report;

3. The selection of the location of the tree tract(s) and individual trees shall be chosen early on at the pre-submission stage, before design of the site, and it shall consider the best location of the site to address urban forestry issues. The design of the commercial site layout shall work within the framework of tree protection opportunities for designation of the tree tract and individual trees**;**

4. Deciduous trees are generally encouraged for parking areas because of advantages for solar access considerations (shading in summer and solar access in winter), temperature and climate control factors (reducing temperature in parking lots in summer), pollution

control advantages (broad leaves absorption of gases and removal filtering of particulate matter), and options for providing tree canopy coverage over parking sites and drive lanes. Select deciduous trees can also be chosen for root character that will not damage asphalt and parking lot overlays. For these advantages planting of select deciduous trees will generally be a good choice to provide canopy coverage in parking lots for commercial sites over the long term. It is also important to restore some native conifers to the project site. This can occur in larger planter islands or as a backdrop to buildings or as foundation plantings to breakup concrete facades. The tree protection professional's report shall reflect these considerations, shall indicate the best areas for removal of trees to accommodate parking needs (based upon indigenous tree areas with the least protection value) and shall recommend replacement of trees;

5. In some cases commercial sites may require extensive grading because of the nature of the topography and other development requirements. For this reason, and the emphasis on provision of a designated tree tract to achieve canopy goals, some flexibility may be permitted for grading to provide for intensive infrastructure needs of the project design. Provided, the design takes advantage of tree protection opportunities to provide an attractive, functional and unique shopping experience. This flexibility is not intended to limit creative development with the site. Where possible, commercial developments should seek to use variations in terrain to create an interesting development scheme.

Section 19. There is hereby added to the Lacey Municipal Code a new Section 14.32.072 to read as follows:

14.32.072 Historical Tree(s).

A. **Purpose**. The purpose of the historical tree designation is to protect trees with a historical significance and to establish a register of these trees. Historical trees require protection due to their special value in that they are irreplaceable. They may be associated with historic figures, events, or properties; or be rare or unusual species; or they may have aesthetic value worthy of protection for the health and general welfare of the residents of this city.

Therefore, the purpose of this section is:

1. **Protection and maintenance**. To provide for the protection and proper maintenance of historical trees, to minimize disturbance to the trees, and to prevent other environmental damage from erosion or destruction of wildlife habitat;

2. **Health, safety, welfare**. To protect the health, safety and general welfare of the public;

3. **Goals and objectives**. To implement the goals and objectives of the city's Urban Forest Management Plan.

B. **Historical Tree Registration**. The city shall prepare and thereafter maintain a list of historical trees within the city limits. The inventory may include a map identifying the location of the trees and a brief narrative description of each historical tree. The

historical tree inventory shall be prepared and amended at any time following the procedures established below.

1. **Nomination.** A tree may be nominated for historical tree status by the property owner, a neighborhood organization, or any person by submitting a map, a photograph, and a narrative description including the location, species, approximate age, and the characteristics on which the nomination is based;

2. **Review.** The director, upon receipt of a nomination, shall review the nomination and confer with the city tree protection professional and other city staff as may be appropriate. Notice of the nomination shall be mailed to the property owner and shall be posted by the city on the subject site for a period of ten days. The director shall inspect the tree, consider public comments, and decide in each case whether or not the tree is to be designated a historical tree. The city shall place each designated historical tree on the historical tree register. In the event the owner of the tree does not approve of its designation as a historical tree, the nomination will be disapproved;

3. **Notification of the director's decision.** Notice of the director's decision shall be mailed to the property owner and shall be posted by the city on the subject site for a period of ten days;

4. **Appeal.** Any person may appeal the director's decision to the hearing examiner;

5. **Hearing examiner.** The hearing examiner shall hold a public meeting on the appeal pursuant to the procedures specified in section 1.C.050 (Quasi-Judicial Review of Applications) of the City of Lacey Development Guidelines and Public Works Standards. The hearing examiner will make a decision which will constitute a recommendation to the city council. All recommendations of the hearing examiner will be considered by the city council at the next available council meeting;

6. **Notification of registration.** Each property owner who has one or more registered historical trees shall be notified by first class mail of the designation within thirty days of designation;

7. **Recording of historical tree covenant.** Each property owner who has one or more registered historical trees shall execute a historical tree covenant in a form agreeable to the city. The historical tree covenant shall require that the tree be maintained in a manner which is consistent with the provisions of this chapter. The historical tree covenant shall be recorded by the county auditor. Recording fees shall be paid by the applicant;

8. **Duration of covenant.** The historical tree covenant shall be effective from the date of recording until such a time that a tree removal permit has been issued by the director pursuant to Section 14.32.072 of this chapter;

9. **Education benefits.** From time to time the city may prepare public information programs on historical trees and provide qualified professional tree care advice to owners of the historical trees;

C. **Limitation on removal**. Subject to the exceptions enumerated in Section 14.32.072 (D) of this chapter, no person shall remove, or cause to be removed, any historical tree.

D. **Removal Procedures**. Historical trees shall not be removed except through the procedures established in this section.

1. **Permit Required**. No Historical tree shall be removed without first applying for and receiving a land clearing permit. The applicant for the permit shall be the property owner or the city. An application for a tree removal permit shall be submitted on a form provided by the city. The applicant must state the justification for removal on the tree removal application;

2. **Review**. If justification for removal is based upon health of the tree, and a visual inspection by the director cannot establish that the tree is dead, diseased, or hazardous, the applicant shall pay for the city Tree Protection Professional to make a determination. If it is determined by the Tree Protection Professional that the tree is dead, diseased, or otherwise hazardous and cannot be saved, the director may approve the removal. If the tree is determined to be healthy, or with treatable infestation or infection, the director may deny the permit.

   If justification is due to reasons other than health of the tree, the director shall confer with other city personnel as may be appropriate in evaluating the justification and make a decision pursuant to the procedures and requirements of section 1E.030 (Limited Administrative Review of Applications) of the Development Guidelines and Public Works Standards;

3. **Notification**. If the director decides that a permit is justified, notice of the director's decision shall be mailed to the applicant, all parties of record, and posted by the city on the subject site for a period of ten days, during which no work shall commence. No work shall commence during the notice periods or when appeals are pending disposition;

4. **Appeal**. The property owner or any person residing or owning property within 300' of the tree may appeal the director's decision to the hearing examiner, whether that decision is positive or negative. Appeals must be submitted in writing within ten days of the posting of the director's decision;

5. **Hearing Examiner.** The hearing examiner shall hold a public meeting on the appeal pursuant to the procedures specified in section 1K.050 (Quasi-Judicial Review of Applications) of the Development Guidelines and Public Works Standards. The hearing examiner will make a decision which will constitute a recommendation to the city council. All recommendations of the hearing examiner will be considered by the city council at the next available council meeting. The city council decision shall be final. No work shall commence during the notice periods or when appeals are pending disposition;

6. **Permit for Tree Removal Timing**. Any tree removal permit granted under this chapter shall be valid for one year. In addition to the permit, the property owner will execute a revocation of covenant in a form agreeable to the city. The

revocation of covenant shall be recorded by the county auditor. Recording fees shall be paid by the property owner.

Section 20. There is hereby added to the Lacey Municipal Code a new Section 14.32.073 to read as follows:

14.32.073 Financial security. The review body may require financial security in such form and amounts as may be deemed necessary to assure that the work shall be completed in accordance with the permit. Financial security, if required, shall be furnished by the property owner, or other person or agent in control of the property at one hundred fifty percent of the estimated tree and vegetation replacement costs or appraised value.

Section 21. Section 14.32.090 of the Lacey Municipal Code is hereby amended to read as follows:

14.32.090 Violations.

A. **Violation general**. Violation of the provisions of this chapter or failure to comply with any of the requirements shall constitute a misdemeanor and such violation shall be punished as provided by Title 9 of this code for the commission of a misdemeanor. Each day such violation continues shall be considered a separate, distinct offense.

B. **Penalties**. Any person who commits, participates in, assists or maintains such violation may be found guilty of a separate offense and suffer the penalties as set forth in subsection 14.32.090(A).

C. **Mitigation required**. In addition to the penalties set forth in subsections 14.32.090(A) and (B), any violation of the provisions of this chapter shall be mitigated by comprehensive treatment of environmental impacts through revegetation of the affected site. In assessing environmental damage, the city's tree protection professional shall determine the extent and value of vegetation removed or damaged and other environmental damage inconsistent with the intent and requirements of this chapter. In assessing environmental damage, the tree protection professional shall consider what the outcome of the site should have been had the proposed project been designed around existing topography and vegetation and all appropriate vegetation saved. The tree protection professional shall use the methodology in the current edition ~~recommendations~~ of the International Society of Arboriculture's "Guide for Plant Appraisal" in determining the value of removed and damaged vegetation.

D. **Environmental damage reviewed**. If the violation is discovered after evidence has been removed, the city tree protection professional shall use whatever resources are immediately available to determine environmental damage which may include aerial photographs, other photographs, interviews with adjacent property owners, receipts of timber sales off the site, and any other records available that have a bearing on the quantity and quality of vegetation removed ~~from the site~~ or environmental damage sustained. The tree protection professional also may estimate the appraised value

~~probable worth~~ of removed vegetation at the site by analyzing the best case growing capability of the site given soil conditions, health of surrounding tree stands and type of species suspected of being removed. The determination of environmental damage made by the tree protection professional shall be given substantial weight in a court of law.

E. **Revegetation**. Once the value of the environmental damage is determined, a comprehensive plan for revegetation of the site shall be prepared by the tree protection professional considering the purposes of this chapter and the specific elements provided in Section 14.32.069 of this chapter. The plan shall provide for a value of new vegetation commensurate with the determined value of environmental damage at the site. The violator shall be fully responsible for implementation of the plan, accomplishment of all improvements and maintenance of said improvements.

F. **City tree account**. If the cost of restoration of the site is less than the true value of environmental damage at the site, the balance shall be paid to the city tree account ~~to an urban tree planting fund~~. The city shall then utilize those funds for planting trees in other areas of the city.

G. **Appeal**. The determination of the city tree protection professional regarding the environmental damage at the site may be appealed to the city hearings examiner pursuant to the requirements of Section 14.32.080.

H. **Hearing examiner review**. In review of the tree protection professional's decision, the hearings examiner shall determine if the tree protection professional's decision accurately reflects the criteria set forth in Section 14.32.020.

I. **Relevant facts**. Additionally, the city hearings examiner may consider any other facts the examiner determines are relevant to the specific situation.

J. **Reduction of monetary value**. In cases where the determined value of environmental damage far exceeds the site restoration requirements, and extenuating circumstances the examiner determines are relevant to the case are present, the hearings examiner may reduce the monetary value assigned to the environmental damage, provided the hearings examiner shall reduce the determined compensation only when all of the following criteria are demonstrated by the applicant:

1. **Professional forester or certified arborist**. A professional forester, Certified Arborist, or other professional who could have alerted the applicant of tree protection requirements was not involved in the action leading to the violation;

2. **Monetary gain**. The violation action was not associated with a tree harvesting operation for monetary gain;

3. **Previous record**. The applicant has no previous record of tree and vegetation protection and preservation ordinance violations.

K. **Monetary compensation**. If all of the above criteria are demonstrated, the hearings examiner may reduce the monetary compensation required. In determining the monetary compensation reduction, the hearings examiner shall consider the following factors:

1. **Person responded**. Whether the person responded to staff attempts to contact the person and cooperated with efforts to review the site and arrive at an agreement on site restoration;

2. **Due diligence**. Whether the person showed due diligence and/or substantial progress in site restoration;

3. **Code interpretation**. Whether a genuine code interpretation issue exists;

4. **Other factors**. Any other factors considered relevant to the situation by the hearings examiner.

L. **Limitation on reduction**. In fixing the amount of compensation, the hearings examiner shall not reduce the determined compensation by more than thirty percent of the true value of the environmental damage as determined by the tree protection professional; provided further, that no reduction shall be given in cases where the true value of environmental damage does not exceed the cost of restoration determined necessary by the city's tree protection professional; provided further the hearings examiner may double the monetary compensation if the violation is a repeat violation. In determining the amount of increased compensation, the examiner shall also consider the criteria of this section.

M. **Appeal of hearing examiner determination**. Appeals of violation determinations by the city hearings examiner shall be appealed to Superior Court. An appeal of the hearings examiner decision must be filed with Thurston County Superior Court within twenty calendar days from the date the hearings examiner decision was mailed to the person to whom the decision on monetary compensation was made.

Section 22. Section 14.32.095 of the Lacey Municipal Code is hereby amended to read as follows:

14.32.095 Requirements for foresters and contractors doing land clearing work in Lacey. In order to assure compliance with the standards and requirements of Chapter 14.32, "Tree and Vegetation Protection/Urban Forest Management ~~and Preservation~~" of the Lacey Municipal Code, ~~private~~ foresters, arborists, and logging and land clearing contractors or others ~~and heavy equipment operators~~ involved in land clearing operations in the city of Lacey shall be required to sign and submit a "Statement of Tree and Vegetation Protection ~~and Preservation~~ Acknowledgment" to the city of Lacey. This statement shall attest such forester's or contractor's knowledge of the city of Lacey's tree and vegetation protection requirements. This statement shall be required in conjunction with normal city licensing requirements for persons performing work in the city of Lacey. The required statement shall be in substantially the following form:

"I, _____, a duly licensed professional contractor in the State of Washington, or professional forester, hereby attest that I have read and am knowledgeable of Chapter 14.32, "Tree and Vegetation Protection/Urban Forest Management ~~and Preservation~~", of the city of Lacey.

"I further attest that, as a professional doing land clearing work in the city of Lacey, I am accountable for following the city's tree and vegetation protection and conservation requirements, including obtaining a land clearing permit or exemption prior to performing land clearing work, as defined by Chapter 14.32.030(C) of the Lacey Municipal Code, as well as following all conditions and requirements of said permit or exemption.

"I attest that if I fail to follow tree protection requirements I will be held jointly responsible with the landowner for any restitution required as a result of environmental damage determined by the city tree protection professional to be the result of improper land clearing activities at the site. This may result in claims against my bond pursuant to Section 18.27.040 of the Revised Code of Washington and other monetary penalties as allowed by this Chapter or State law."

Private professionals involved in land clearing operations who do not provide the above statement shall be prohibited from performing land clearing services in the city of Lacey. Said professionals who do not provide this statement and perform land clearing services in the city of Lacey shall be considered in violation of this chapter and may be prosecuted under this chapter, the city's civil penalties ordinance, or as otherwise provided by law. All ~~professional~~ foresters, arborists, loggers, or other land clearing contractors ~~or heavy equipment operators~~ involved in land clearing operations shall be jointly responsible with the landowner for any land clearing violation and restitution required at a site as a result of improper land clearing activity.

Section 23. Section 16.03.015 of the Lacey Municipal Code is hereby amended to read as follows:

16.03.015 Lacey Comprehensive Land Use Plan. That certain series of documents identified as City of Lacey and Thurston County Land Use Plan for the Lacey Urban Growth Area – updated under Growth Management Act Requirements 2003, Housing Element for the City of Lacey and the Lacey Urban Growth Area – updated under Growth Management Act Requirements 2003, Environmental Protection and Resource Conservation Plan for the City of Lacey, City of Lacey 1998 Transportation Plan, Capital Facilities Element for the City of Lacey and the Lacey Urban Growth Area, Utilities Element for the Lacey Comprehensive Plan, Comprehensive Plan for Outdoor Recreation, Water Comprehensive Plan for City of Lacey, City of Lacey 2005 Wastewater Comprehensive Plan Update, Lacey Urban Forest Management Plan, and Economic Development Element for the City of Lacey together with the Comprehensive Plan Downtown Element as supplemented by the City of Lacey Woodland District Guidelines and the Northeast Area Plan constitutes the Lacey Comprehensive Plan and all regulatory and zoning ordinances of the city shall be construed to be consistent with said plan as adopted or hereafter amended.

Section 24. The Summary attached hereto is hereby approved for publication.

PASSED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, at a regularly-called meeting thereof, held this 27th day of July, 2006.

CITY COUNCIL

By:_____
Mayor

Approved as to form:

_____
City Attorney

Attest:

_____
City Clerk

ORDINANCE NO. 1295

CITY OF LACEY

AN ORDINANCE RELATING TO WETLAND BUFFERS, REQUIRING CONSIDERATION OF A WETLAND'S IDENTIFIED FUNCTIONS AND VALUES, AMENDING SECTION 14.28.280 OF THE LACEY MUNICIPAL CODE AND APPROVING A SUMMARY FOR PUBLICATION.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, as follows:

Section 1. Section 14.28.280 of the Lacey Municipal Code is hereby amended to read as follows:

14.28.280 Wetland buffers--Standard buffer zone widths. Wetland buffer zones shall be required for all regulated activities adjacent to regulated wetlands. Any wetland created, restored or enhanced as compensation for approved wetland alterations shall also include the standard buffer required for the category of the created, restored, or enhanced wetland. All buffers shall be measured from the wetland boundary as surveyed in the field pursuant to the requirements of Section 14.28.090. The width of the wetland buffer zone shall be determined according to wetland category, ~~and~~ the proposed land use and the wetland's identified functions and values.

Criteria for determination of the appropriate category of wetland and functions and values shall be as identified in the publication used by the Department of Ecology for wetland protection and impact mitigation; Wetlands in Washington State Volume 2 - Protecting and Managing Wetlands Appendix 8-C. The specific strategy to be applied from this section shall be the "Modified Buffer Widths in Alternative 3 Using a Graduated Scale for the Habitat Functions (Alternative 3A)". This methodology shall be applied except when the Community Development Director, through consultation with the Department of Ecology, determines that another methodology better addresses best available science and/or the specific circumstances of the wetland and wetland protection needs.

Where an area of a wetland may be classified under more than one category, the category having the greatest buffer area shall apply. These buffer widths presume that buffer area is comprised of relatively intact native vegetation community adequate to protect the wetland functions at values at the time of the proposed activity. If the vegetation is not adequate, then the buffer width may need to be increased or planted to maintain the standard width:

~~A. Category I~~
~~High intensity 300 feet~~
~~Low intensity 200 feet~~
~~B. Category II~~
~~High intensity 200 feet~~
~~Low intensity 100 feet~~
~~C. Category III~~
~~High intensity 100 feet~~
~~Low intensity 50 feet~~
~~D. Category IV~~
~~High intensity 50 feet~~
~~Low intensity 25 feet~~

Buffer width required for points identified pursuant to the Department of Ecology wetland rating system:

Points for Habitat from Wetland Rating Form	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Wetland Buffer Width High Intensity Uses	100	100	100	120	140	160	180	200	220	240	260	280	300	300	300	300	300	300
Wetland Buffer Width Low Intensity Uses	50	50	50	60	70	80	90	100	110	120	130	140	150	150	150	150	150	150

Section 2. The Summary attached hereto is hereby approved for publication.

PASSED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, at a regularly-called meeting thereof, held this 25th day of OCTOBER, 2007.

CITY COUNCIL

By: _____
Mayor

Approved as to form:

_____
City Attorney

Attest:

_____
City Clerk

SUMMARY FOR PUBLICATION

ORDINANCE 1295

CITY OF LACEY

The City Council of the City of Lacey, Washington, passed on OCTOBER 25, 2007, Ordinance No. 1295, entitled "AN ORDINANCE RELATING TO WETLAND BUFFERS, REQUIRING CONSIDERATION OF A WETLAND'S IDENTIFIED FUNCTIONS AND VALUES, AMENDING SECTION 14.28.280 OF THE LACEY MUNICIPAL CODE AND APPROVING A SUMMARY FOR PUBLICATION."

The main points of the Ordinance are described as follows:

1. The Ordinance amends Section 14.28.280 of the Lacey Municipal Code regarding wetland buffers to require consideration of the wetland category, the proposed land use and the wetlands' identified functions and values in determining the width of the required buffer. A point system is utilized in analyzing each project and references are made to specific publications of the Department of Ecology.

2. The Ordinance approves this Summary for Publication.

A copy of the full text of this Ordinance will be mailed without charge to any person requesting the same from the City of Lacey.

Published: OCTOBER 29, 2007.