PLANNING COMMISSION
REGULAR MEETING AGENDA

CALL TO ORDER & ROLL CALL

APPEARANCES
This is the time set aside for members of the public to speak to the Commission about issues of concern. If you wish to speak, please consider the following points:
- Speak audibly into the podium microphone
- State your name and address for the record
- Limit your comments to three minutes
(Note: The Commission may limit the number of speakers and modify the time allotted. Total time for appearances: 15 minutes)

APPROVAL OF MINUTES
Minutes from March 17, 2010

REGULAR BUSINESS
Agenda Item #1

OTHER BUSINESS
- Council Liaison Report
- Staff Comments
- Planned Absences for Future Meetings
- Announcements & Communications
- Next Regular Meeting: May 5, 2010

ADJOURN

AGENDA TIMES ARE APPROXIMATE
CALL TO ORDER:
Chair Adam Cooper called the meeting to order at 7:33 PM in the Council Chambers, at 9611 SE 36th Street, Mercer Island, Washington.

ROLL CALL:
Chair Adam Cooper, Vice-Chair Eric Laschever, Commissioners Bryan Cairns, Jon Friedman, Steve Marshall, and Kristen White were present. Commissioner Craig Olson was excused. City staff was represented by Shane Moloney, Assistant City Attorney; George Steirer, Principal Planner; and Travis Saunders, Planner.

APPEARANCES:
David Douglas, Waterfront Construction, 10315 19th Avenue SE, Suite 106, Everett, WA 98208 provided comment regarding the Shoreline Master Program update.

Rita Moore of 4509 Ferncroft Road provided comment regarding the Shoreline Master Program update.

MINUTES:
Commissioner Laschever motioned to approve the minutes from March 3, 2010 with an amendment that reflected the Commission’s tabling of discussion regarding the percentage of repair that constitutes dock replacement. Commissioner White seconded the motion. The Commission unanimously approved the minutes as amended.

REGULAR BUSINESS:
Agenda Item #1: Shoreline Master Program Update – Review of Preliminary Draft Shoreline Master Program

Travis Saunders, Planner, provided a staff presentation.

Ellie Ziegler, Environmental Planner, Sound Transit, 401 South Jackson Street, Seattle, WA 98104, provided a presentation and answered questions from the Commission.

The Commission worked through exhibit edits provided in the Commission packet, approving certain staff edits, asking questions of staff, and requesting edits for staff to make in a future draft.

Barbara Nightingale, Regional Shoreline Planner, Washington State Department of Ecology, 3091 160th Avenue SE, Bellevue, WA 98008, provided comment and answered questions from the Commission.

The Commission directed staff to return with a draft that reflects the changes discussed during the meeting, along with the Shoreline Master Program Cumulative Impacts Analysis
and Restoration Plan. The Commission also directed staff to bring forward science information related to the City of Bellevue’s Shoreline Master Program to be presented at the March 24th Bellevue Planning Commission meeting if available.

COUNCIL LIAISON REPORT:
None

STAFF COMMENTS:
Staff will return to the Commission with the Shoreline Master Program Cumulative Impacts Analysis and Restoration Plan, along with a first working draft Shoreline Master Program on April 7, 2010. Following the Commission’s review of the above items, staff will coordinate a May 5, 2010 Public Hearing for the Shoreline Master Program. Code Text Amendments to MICC Chapter 19, Unified Land Code will come before the Commission on April 21, 2010.

PLANNED ABSENCES FOR FUTURE MEETINGS:
Commissioner White will be absent on April 21, 2010

ANNOUNCEMENTS AND COMMUNICATIONS:
None

NEXT REGULAR MEETING:
The next Planning Commission meeting is scheduled for April 7, 2010.

ADJOURNMENT:
The Planning Commission meeting was adjourned at 10:23 PM.

Respectfully submitted by Travis Saunders, Planner
Memorandum

To: City of Mercer Island Planning Commission and Deputy Mayor Jahncke
From: Travis Saunders, Planner
Re: April 21, 2010 Shoreline Master Program (SMP) Update
Date: April 15, 2010

Commissioners and Deputy Mayor Jahncke:

The enclosed Shoreline Master Program update packet contains the following agenda item:

Agenda item 1 – Review of requested revisions to shoreline language in MICC 19.07, Shoreline Master Program Cumulative Impacts Analysis, and Restoration Plan:
During the March 17, 2010 Planning Commission meeting, the Commission reviewed their recommended modifications to the existing Mercer Island shoreline regulations, along with draft language for the Comprehensive Plan Shoreline Element, as written in ordinance format. Following a page by page review of draft, the Commission directed staff to return with a revised draft that reflects additional changes discussed during the meeting.

Exhibit 1 in the enclosed packet is a copy of the Draft Shoreline Master Program, shown in an ordinance format. The draft contains edits requested by the Commission at the March 17, 2010 meeting. (Black text represents existing code. Non-bold red text is language approved by the Commission. Non-bold red text with the comment, “Edit per 3-17-10 PC Comments” is specific language changes prescribed by the Commission at the March 17, 2010 meeting. Bold red text with the comment, “Staff edit per 3-17-10 PC direction” is language drafted by staff in response to the Commission’s request of staff to develop language for its review. Bold red text with the comment, “Per discussions with Sound Transit” is language drafted following discussions with Sound Transit.)

Exhibit 2 in the packet is a copy of the Draft Cumulative Impacts Analysis, which is required by WAC 173-26-201(3)(d)(iii) as demonstration that the City’s regulation of development will achieve no net loss of ecological functions.

Exhibit 3 in the packet is a copy of the Draft Restoration Plan, which is required by WAC 173-26-201(2)(f) in order to identify existing and ongoing projects and programs that are designed to contribute to local shoreline restoration goals.

Exhibit 4 in the packet is a letter from the Department of Ecology that expresses concern regarding some of the language in the City’s proposed draft of the Shoreline Master Program.

Exhibit 5 in the packet is a copy of the 2010 King County Noxious Weed List, as requested by the Commission at the March 17, 2010 meeting.

Exhibit 6 in the packet is a letter from Sound Transit that suggests language related to Policy 3 of the Circulation Element found in Exhibit 1’s Exhibit B to Ordinance No. 10C-XX (page 20).

Should you have questions regarding the materials or the update process, feel free to contact me.
CITY OF MERCER ISLAND
ORDINANCE NO. 10C-XX

AN ORDINANCE OF THE CITY OF MERCER ISLAND, WASHINGTON
ADOPTING THE MERCER ISLAND SHORELINE MASTER PROGRAM
UPDATE; AMENDING THE SHORELINE ELEMENT IN THE MERCER
ISLAND COMPREHENSIVE PLAN; AMENDING THE SHORELINE
DESIGNATION MAP; ADOPTING AND AMENDING SHORELINE
DEFINITIONS IN CHAPTER 19.16 OF THE MERCER ISLAND UNIFIED
LAND DEVELOPMENT CODE; AMENDING DEVELOPMENT
REGULATIONS RELATING TO SHORELINES IN TITLES 19.07.100
AND 19.07.110 OF THE MERCER ISLAND UNIFIED LAND
DEVELOPMENT CODE; PROVIDING FOR SEVERABILITY AND
ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, the Washington Shoreline Management Act (RCW 90.58, referred to herein as
“SMA”) recognizes that shorelines are among the most valuable and fragile resources of the
state, and that the state and local government must establish a coordinated planning program to
address the types and effects of development occurring along shorelines of state-wide
significance; and

WHEREAS, the City of Mercer Island (“City”) is required to update its Shoreline Master
Program (“SMP”) pursuant to the SMA and WAC 173-26; and

WHEREAS, on July 20, 2009, the City submitted a Final Shoreline Analysis Report to the
Washington State Department of Ecology (“DOE”), which is an inventory and characterization
of the City’s shorelines to assess ecological functions and ecosystem-wide processes operating
within the City’s shoreline jurisdictions and to serve as a baseline from which future
development actions in the shoreline jurisdiction will be measured; and

WHEREAS, there has been extensive public participation opportunities with respect to the SMP
update, including but not limited to a public open house, and public meetings.

WHEREAS, on March 8, 2010, the City’s Responsible Official reviewed the proposed
amendments to Chapters 19.07.100, 19.07.110, and 19.16 and the Shoreline Element of the
Comprehensive Plan, and under the provisions of the State Environmental Policy Act (SEPA),
issued a Determination of Non-Significance; and

WHEREAS, the Mercer Island Planning Commission, after numerous meetings and a public
hearing, recommended approval of the SMP update at its April 7, 2010 meeting; and

WHEREAS, the Mercer Island City Council considered the SMP at its Regular Meeting of
________ _____, 2010, and Regular Meeting of ________ _____, 2010; and
WHEREAS, the Mercer Island City Council did conclude that the SMP will result in “no net loss” in shoreline ecological function relative to the baseline due to implementation and will ultimately produce a net improvement in shoreline ecological function; and

WHEREAS, on “MONTH DAY YEAR”, the Mercer Island City Council concludes that the SMP is consistent with and meets the guidelines established under WAC Chapter 173.26; and

WHEREAS, the Mercer Island City Council concludes that the SMP is consistent with and implements Shoreline Management Act (RCW 90.58 and the Growth Management Act (RCW 36.70; and

WHEREAS, the Washington State Department of Ecology is authorized under the SMA to approve, deny or propose modifications to the City’s SMP; and

WHEREAS, after considering all public testimony and written comments, the City Council adopts the following Ordinance.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MERCER ISLAND, WASHINGTON DOES HEREBY ORDAIN AS FOLLOWS:

Section 1: Amendments to 19.07.100 MICC, Shoreline Areas. MICC 19.07.100
“Shoreline Areas” is hereby amended as follows:

Shorelands directly impact water quality as surface and subsurface waters are filtered back into the lake. Additionally, shorelines are a valuable fish habitat area characterized by lake bottom conditions, erosion tendencies, and the proximity to watercourse outfalls. These may combine to provide a suitable environment for spawning fish.

A. Critical Areas Delineations.
1. A survey to determine the line of ordinary high water (OHW) shall be current to within one year of the application for single lots, short subdivisions, long subdivisions, or lot line revisions.
2. The survey may be included in the site construction plan (see MICC 19.07.060, Reports and Surveys) or waived by city staff if the OHW has been delineated by an existing bulkhead.
3. Mark the shoreline setback on the site prior to the preconstruction meeting.

B. Site Development.
1. A 25-foot setback from OHW is required.
2. If a wetland is adjacent to the shoreline, measure the shoreline setback from the wetland’s boundary.
3. 25% of the 20 feet closest to the OHW shall contain vegetation coverage. The five feet nearest the OHW shall contain at least 25% native coverage. A shoreline vegetation plan shall be submitted to the City for approval. A variety of ground cover, shrubs, and trees that provides lake shading is encouraged.
C. Site Coverage. The amount of impervious surfaces which will be permitted is as follows:

<table>
<thead>
<tr>
<th>Distance from OHW</th>
<th>Impervious Surface Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 25 feet</td>
<td>10% – No building(s) allowed</td>
</tr>
<tr>
<td>26 – 50 feet</td>
<td>30% – Structure(s) allowed</td>
</tr>
</tbody>
</table>

D. Storm Water and Erosion Control. Erosion control devices shall be installed along the boundaries of the shoreland setback following the preconstruction meeting and prior to clearing or grading.

E. Alteration. Any alteration in this area requires either: (1) a shoreline exemption or (2) a substantial development permit, a building/grading permit, and storm water permit. Some development or alteration may also require a conditional use permit. (Ord. 08C-01 § 3; Ord. 05C-12 § 6; Ord. 02C-09 § 6; Ord. 99C-13 § 1. Formerly 19.07.050).

Section 2: Amendments to 19.07.110 MICC, Shoreline Management Master Program
MICC 19.07.110 “Shoreline Management Master Program” is hereby amended as follows:

A. General Information.
1. Introduction and Purpose. The Washington State Legislature enacted the Shoreline Management Act (SMA) of 1971 (Chapter 90.58 RCW) to provide a uniform set of rules governing the development and management of shoreline areas. As a basis for the policies of the
SMA, the Legislature incorporated findings that “the shorelines are among the most valuable and fragile” of the state’s resources, that they are under “ever increasing pressure of additional uses” and that “unrestricted construction on the privately or publicly owned shorelines of the state is not in the best public interest.” The Legislature further finds that “coordinated planning is necessary in order to protect the public interest associated with the shorelines of the state, while, at the same time, recognizing and protecting private property rights consistent with the public interest.”

The SMA sets up a process for managing development of the state’s shorelines through state-monitored, locally administered permitting program. Local governments are required to prepare shoreline master programs to manage shoreline development within their jurisdiction. The SMA specifies that each local shoreline master program includes goals and policies that take into account the specific local conditions influencing the shoreline jurisdiction.

The purpose of the shoreline master program is to implement the Shoreline Management Act of 1971 and to establish regulations for development based on the local shoreline goals and policies.

a. The shoreline master program specifies boundaries of a shoreline jurisdiction and shoreline designated environments;
b. The shoreline master program establishes regulations for development within the shoreline jurisdiction;
c. The shoreline master program specifies requirements for public participation in decisions about shoreline development.

2. Shoreline Jurisdiction. The shoreline jurisdiction is geographically defined as:

a. All lands extending landward 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark and all associated shorelands (RCW 90.58.030).

b. All lands under Lake Washington extending waterward to the line of navigability inner harbor line as established in 1984 by the Board of natural Resources No. 461, middle of Lake Washington, pursuant to RCW 35.21.160.

The following illustration shows the applicability of the shoreline master program jurisdiction:
3. Applicability. The regulations and procedures of the shoreline master program apply
to all development within the shoreline jurisdiction of the city including the waters and
underlying land of Lake Washington and to the shoreline uses established within the shoreline designated environments.

4. Adoption Authority. The regulations contained in MICC 19.07.080 within the Shoreline Master Program are hereby adopted as the shoreline master program for the City of Mercer Island. These regulations are adopted under the authority of the Chapter 90.58 RCW and Chapter 173-26 WAC.

5. Relationship to Land Use Code and Other Ordinances.
   a. The shoreline master program regulations are supplemental to the city of Mercer Island comprehensive plan, the Mercer Island development code and various other provisions of city, state and federal laws. Applicants must comply with all applicable laws prior to commencing any use, activity, or development.
   b. The shoreline jurisdiction and the shoreline designated environments are superimposed upon the existing zoning classifications. The zoning regulations specified in the development code and this section are intended to operate together to produce coherent and thorough regulations. All uses, activities and developments must comply with both the Mercer Island development code and shoreline master program. If there is a conflict between the two, the more restrictive regulation applies.

6. Shoreline Master Program Goals and Policies. In 1974 the city of Mercer Island adopted shoreline goals and policies. These goals and policies are consistent with the city's comprehensive plan adopted in 1993. The goals and policies contained within the City’s Comprehensive Plan Shoreline Chapter shall constitute Mercer Island’s Shoreline Master Program goals and policies.

7. Shoreline Master Program Regulations. The following regulations shall constitute the City of Mercer Island shoreline development regulations:
   a. MICC 19.07.100, Shoreline Areas
   b. MICC 19.07.110, Shoreline Master Program
   c. MICC 19.07. Critical Areas (Ord. No. 05C-12)
   d. MICC 15.09, Storm Water Management Program
   e. Definitions – Those specific to shorelines shall have the meaning ascribed to them below. Terms not defined in this section shall be defined as set forth in MICC 19.16

   Boat Lift: A structure or device used to raise a watercraft above the waterline for secure moorage purposes.
   Boat Ramp: An inclined structure upon which a watercraft is raised or pulled onto land or a dock.
   Breakwater: A protective structure usually built offshore for the purpose of protecting the shoreline or harbor areas from wave action.
   Bulkhead: A solid or open pile of rock, concrete, steel, timber or other materials erected parallel to, and normally erected at, the ordinary high water line for the purpose of protecting adjacent property from waves or currents.
   Covered Moorage: A pier, dock, boatlift, series of piles, or other structure intended for moorage over which a roof or canopy is erected.
   Ecological functions or shoreline functions: means the work performed or role played by the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments that constitute the shoreline’s natural ecosystem.
Ecosystem-wide processes: means the suite of naturally occurring physical and geologic processes of erosion, transport, and deposition; and specific chemical processes that shape landforms within a specific shoreline ecosystem and determine both the types of habitat and the associated ecological functions.

Feasible: means an action, such as a development project, mitigation, or preservation requirement, 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. In cases where these guidelines require certain actions unless they are infeasible, the burden of proving infeasibility is on the applicant. 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.

Fill: means 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.

Finger Pier: An extension from a dock used to create moorage slips.

Floating Platform: A flat structure or device moored or anchored, not permanently secured by piles, which floats upon the water.

Geotechnical report or geotechnical analysis: means a scientific study or evaluation conducted by a qualified expert that includes a description of the ground and surface hydrology and geology, the affected land form and its susceptibility to mass wasting, erosion, and other geologic hazards or processes, conclusions and recommendations regarding the effect of the proposed development on geologic conditions, the adequacy of the site to be developed, the Washington State Shoreline Master Program Guidelines, Chapter 173-26 WAC 96 of 100 impacts of the proposed development, alternative approaches to the proposed development, and measures to mitigate potential site-specific and cumulative geological and hydrological impacts of the proposed development, including the potential adverse impacts to adjacent and down-current properties. Geotechnical reports shall conform to accepted technical standards and must be prepared by qualified professional engineers or geologists who have professional expertise about the regional and local shoreline geology and processes.

Groin: A structure used to interrupt sediment movement along the shore.

Jetty: A barrier used to protect areas from accumulations of excess sediment.

Landward: Any point located inland from the ordinary high water mark.

Lateral Line: The extension waterward of a property line into Lake Washington beyond the ordinary high water mark. How property lines extend waterward from the ordinary high water mark is an area of misconception. If the title does not clearly state the location of the property lines waterward from the ordinary high water mark, waterfront owners are not allowed to unilaterally project the upland boundaries out into the shorelands (waterward). There are no statutes defining the direction of the lateral lines waterward from the ordinary high water mark. The Supreme Court has the final word to decide location of lateral line on case-by-case basis.

Light Rail Transit Facilities: A public rail transit line, including all ancillary facilities such as transit power substations, that operates at grade level, above grade level, on a bridge or in a tunnel and that provides high capacity, regional transit service owned or operated by a regional
transit authority authorized under Chapter 81.112 RCW. A regional light rail transit system will be designed to cross I-90 right-of-way.

Marina: A commercial basin providing rental or sale of docks, watercraft, moorage, and/or supplies. Casual single-family renting of moorage is excluded from this definition.

May: means the action is acceptable, provided it conforms to the provisions of this chapter.

Mean Low Water: The level of Lake Washington during the fall and winter when the water level is lowered to minimize winter storm damage to lakeside properties. Mean low water is one and one-half feet lower than ordinary high water.

Moorage Facility: Any device or structure used to secure a boat or a vessel, including piers, docks, piles, lift stations or buoys.

Must: means a mandate; the action is required.

Nonwater-oriented uses: means those uses that are not water-dependent, water-related, or water-enjoyment.

Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. "Normal maintenance" includes those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition. "Normal repair" means to restore a development or structure to a state comparable to its original condition, including but not limited to its size, shape, configuration, location and external appearance, within a reasonable period after decay or partial destruction, except where repair causes substantial adverse effects to shoreline resources or environment. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development and the replacement structure or development is comparable to the original structure or development including but not limited to its size, shape, configuration, location and external appearance and the replacement does not cause substantial adverse effects to shoreline resources or environment.

Ordinary High Water (OHW): The point on the shore that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971, as it may naturally change thereafter in accordance with permits issued by a local government or the department.

Personal Watercraft (PWC) Lift: A structure or device used to raise a personal watercraft such as a jet-ski or wave runner above the water line for secure moorage purposes.

Public Access: A means of physical approach to and along the shoreline, or other area, available to the general public. Public access may also include visual approach.

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

Shall: means a mandate; the action must be done.

Shoreline areas and shoreline jurisdiction: means all shorelines of the state and shorelands as defined in RCW 90.58.030.

Shoreline master program or master program: means the comprehensive use plan for a described area, and the use regulations together with maps, diagrams, charts, or other descriptive material and text, a statement of desired goals, and standards developed in accordance with the policies enunciated in RCW 90.58.020. As provided in RCW 36.70A.480, the goals and policies...
of a shoreline master program for a county or city approved under chapter 90.58 RCW shall be considered an element of the county or city's comprehensive 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 county or city’s development regulations.

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

Should: means that the particular action is required unless there is a demonstrated, compelling reason, based on policy of the Shoreline Management Act and this chapter, against taking the action.

Water-Dependent: A use or a portion of a use which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations. Examples of water-dependent uses may include ship cargo terminal loading areas, ferry and passenger terminals, barge loading facilities, ship building and dry docking, marinas, aquaculture, float plane facilities and sewer outfalls.

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

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

Water-related use: means a use or portion of a use which is not intrinsically dependent on a waterfront location but whose economic viability is dependent upon a waterfront location because: (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. Washington State Shoreline Master Program Guidelines, Chapter 173-26 WAC 100 of 100.

Waterfront Structure: Docks, piers, wharves, floats, mooring piles, anchor buoys, bulkheads, bridges, submerged or overhead wires, pipes, cables, and any other object passing beneath, through or over the water beyond the line of ordinary high water.

Waterward: Any point located in Lake Washington, lakeward from the ordinary high water mark.

B. Shoreline Designated Environments.

1. Designated Environments. Different areas of the city’s shoreline have different natural characteristics and development patterns. As a result, three shoreline designated environments are established to regulate developments and uses consistent with the specific conditions of the designated environments and to protect resources of the Mercer Island shoreline jurisdiction. They are:

a. Conservancy Environment. This environment constitutes large undeveloped areas with some natural constraints such as wetland conditions, containing a variety of flora and fauna. The
The purpose of this environment is to protect and manage the existing natural resources in order to achieve sustained resource utilization and provide recreational opportunities.

ba. Urban Park. This environment consists of shoreline areas designated for public access and active and passive public recreation. It includes, but is not limited to, street ends, public utilities and other publicly owned rights-of-way. The uses located in this environment should be water-dependent and designed to maintain the natural character of the shorelines.

cb. Urban Residential. The purpose of this environment is to provide for residential and recreational utilization of the shorelines, compatible with the existing residential character in terms of bulk, scale and type of development.

2. Shoreline Environment Map. The map in Appendix F of this development code is the official map of the city designating the various shoreline environments and the shoreline jurisdiction within the city.

3. Permit Requirements for Shoreline Uses and Development within the Designated Environments. All proposed development within the shoreline jurisdiction shall be consistent with the regulations of this Shoreline Master Program, the Shoreline Management Act of 1971 and the Mercer Island development code. In addition all development shall conform to permit requirements of all other agencies having jurisdiction within the designated environments.

The following table specifies the shoreline uses and developments which may take place or be conducted within the designated environments. It also specifies the type of shoreline permit required and further states the necessary reviews under the State Environmental Policy Act (SEPA). The uses and developments listed in the matrix are allowed only if they are not in conflict with more restrictive regulations of the Mercer Island development code and are in compliance with the regulations specified in subsection D of this section.

| Key: | CE: Categorically Exempt | SEP: Shoreline Exemption Permit | SDP: Substantial Development Permit | SEPA: Required Review under the State Environmental Policy Act | NP: Not Permitted Use |

The regulations of the shoreline master program apply to all shoreline uses and development, whether or not that development is exempt from the permit requirements (CE, SEP, or SDP).

<table>
<thead>
<tr>
<th>Designated Environments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoreline Use</td>
</tr>
<tr>
<td>Single-family residential and associated appurtenances</td>
</tr>
<tr>
<td>Use</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>Multifamily residential</td>
</tr>
<tr>
<td>Public and private recreational facilities and parks</td>
</tr>
<tr>
<td>Moorage facilities (including piers, docks, piles, lift stations, or buoys)</td>
</tr>
<tr>
<td>Commercial marinas, moorage and storage of commercial boats and ships</td>
</tr>
<tr>
<td>Bulkheads and shoreline protective structures</td>
</tr>
<tr>
<td>Breakwaters and jetties</td>
</tr>
<tr>
<td>Utilities</td>
</tr>
<tr>
<td>Dredging</td>
</tr>
<tr>
<td>Alterations over 250 cubic yards – outside the building footprint</td>
</tr>
<tr>
<td>Boating Facilities</td>
</tr>
<tr>
<td>Transportation and Parking Facilities</td>
</tr>
<tr>
<td>Light Rail Transit Facilities</td>
</tr>
</tbody>
</table>

If a use is not listed in this matrix, it shall be considered as a conditional use, pursuant to WAC 173-26-160.

C. Administration and Procedures.
1. Administrative Responsibility. Except as otherwise stated in this section, the code official is responsible for:
   a. Administering the shoreline master program.
   b. Approving, approving with conditions or denying shoreline exemption permit, substantial development permits, variances and permit revisions in accordance with the provisions of this shoreline master program.
   c. Determining compliance with Chapter 43.21C RCW, State Environmental Policy Act.
2. Permits and Decisions. No development shall be undertaken within the shoreline jurisdiction without first obtaining a permit in accordance with the procedures established in the shoreline master program. In addition such permit shall be in compliance with permit requirements of all other agencies having jurisdiction within the shoreline designated environment.
   a. Shoreline Exemption Permit. A shoreline exemption permit (SEP) may be granted to the following development as long as such development is in compliance with all applicable requirements of this shoreline master program, the city of Mercer Island development code and WAC 173-27-040:
      i. Any development of which the total cost or fair market value, whichever is higher, does not exceed $5,718 or as periodically revised by the Washington State Office of Financial Management, if such development does not materially interfere with the normal public use of the water or shorelines of the state;
      ii. Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. “Normal maintenance” includes those usual acts established to prevent a decline, lapse, or cessation from a lawfully established condition. “Normal repair” means 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 total replacement which is not common practice or causes substantial adverse effects to the shoreline resource or environment. Normal maintenance of single-family dwellings is categorically exempt as stated above;
      iii. Construction of a “normal protective” bulkhead common to single-family dwellings. A “normal protective” bulkhead is constructed at or near the ordinary high water mark to protect a single-family dwelling and is for protecting land from erosion, not for the purpose of creating land. Where an existing bulkhead is being replaced, it shall be constructed no further waterward of the existing bulkhead than is necessary for construction of new footings;
      iv. Emergency construction necessary to protect property from damage by the elements. An “emergency” is an unanticipated and imminent threat to public health, safety, or the environment which requires immediate action within a time too short to allow full compliance with this section;
      v. Construction or modification of navigational aids such as channel markers and anchor buoys;
      vi. Construction of a dock, designed for pleasure craft only, for the private noncommercial use of the owners, lessee, or contract purchaser of a single-family dwelling, for which the cost or fair market value, whichever is higher, does not exceed $10,000;
      vii. Any project with a certification from the governor pursuant to Chapter 80.50 RCW.
   b. Substantial Development Permit. A substantial development permit (SDP) is required for any development within a shoreline jurisdiction not covered under a categorical exemption or shoreline exemption permit. Requirements and procedures for securing a substantial development permit are established below. Compliance with all applicable federal and state regulations is also required.
c. Deviations and Deviation Criteria. The city planning commission shall have the authority to grant deviations from the regulations specified in Table B in subsection D of this section; provided, the proposed deviation:

i. Will not constitute a hazard to the public health, welfare, and safety, or be injurious to affected shoreline properties in the vicinity;
ii. Will not compromise a reasonable interest of the adjacent property owners;
iii. Is necessary to the reasonable enjoyment of property rights of the applicant; and
iv. Is not in conflict with the general intent and purpose of the SMA, the shoreline master program and the development code.

d. Variances and Variance Criteria. Variances to the shoreline master program requirements are only granted in circumstances where denial of the permit would result in a thwarting of the policy enumerated in RCW 90.58.020. In addition, in all instances the applicant for a variance shall demonstrate strict compliance with all variance criteria set out in MICC 19.15.020(G)(4) and the following additional criteria:

i. In the granting of all variance permits, consideration shall be given to the cumulative impact of additional request for like actions in the area. For example if variances were granted to other developments 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 produce substantial adverse effects to the shoreline environment.

ii. Variance permits for development that will be located landward of the ordinary high water mark 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 the applicable master program precludes or significantly interferes with reasonable use of the property not otherwise prohibited by the master program;
   (b) That the hardship in subsection (C)(2)(d)(ii)(a) of this section is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features and the application of 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 permitted activities in the area and will not cause adverse effects to adjacent properties or the shoreline environment;
   (d) That the requested variance does not constitute a grant of special privilege not enjoyed by the other properties in the area, and is the minimum necessary to afford relief; and
   (e) That the public interest will suffer no substantial detrimental effect.

iii. Variance permits for development that will be located waterward of the ordinary high water mark 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 the applicable master program precludes reasonable use of the property not otherwise prohibited by the master program;
   (b) That the proposal is consistent with the criteria established under subsections (C)(2)(d)(ii)(b) through (e) of this section; and
   (c) That the public rights of navigation and use of the shorelines will not be adversely affected.


Step 1. Application.

The applicant shall arrange a preapplication meeting for all substantial development permits, deviations and variances. Upon completion of the preapplication meeting, a complete application including the required processing fees shall be filed with the city on approved forms to ensure
compliance with development codes and standards. A complete application for the shoreline exemption permit (SEP), substantial development permit (SDP), or variance and SEPA checklist, if applicable, shall be filed with the city on required forms.

SEP Review Process: The city shall issue or deny the SEP within 10 calendar days of receiving the request, or after SEPA review. The city shall then send the SEP to the applicant and the Department of Ecology, pursuant to WAC 173-27-130, and to all other applicable local, state, or federal agencies.

Step 2. Public Notice.

Public notice of an application for a substantial development permit shall be made in accordance with the procedures set forth in MICC 19.15.020; provided, such notice shall be given at least 30 days before the date of final local action.

If an application is not exempt from SEPA and no prior SEPA notice has been given, the city shall publish the SEPA determination and a notice that comments on the SEPA documents may be made during the review of the SDP, deviation and variance application.

Within 30 days of the final publication, posting or mailing of the notice, whichever comes last, any interested person may submit written comments on the proposed application. The city will not make a decision on the permit until after the end of the comment period.

Step 3. Review.

The Shoreline Management Act does not require that public hearing be held on SDP and/or variance application. The technical review of SDP and/or variance must ensure that the proposal complies with the criteria of the shoreline master program, Shoreline Management Act policies and all requirements of the city of Mercer Island development code.

An open record hearing before the planning commission, as set out in MICC 19.15.020(F), shall be conducted on all deviation applications and may be conducted on the SDP or variance application when the following factors exist:

(a) The proposed development has broad public significance; or
(b) Within the 30-day comment period, 10 or more interested citizens file a written request for a public hearing; or
(c) The cost of the proposed development, exclusive of land, will exceed $100,000.

Step 4. Decision.

After the 30-day comment period has ended, the city shall decide whether to approve or deny any SDP, deviation and/or variance application, unless the applicant and any adverse parties agree in writing to an extension of time with a certain date.

The city’s action in approving, approving with conditions, or denying SDP, deviation and/or variance shall be given in writing in the form required by WAC 173-27-120 (or its successor) and mailed to the applicant, all persons who submitted written comments, the Department of Ecology, the Washington State Attorney General, and all other applicable local, state, or federal agencies.

The city’s action in approving, approving with conditions, or denying any SDP and/or deviation is final unless an appeal is filed in accordance with applicable law.

The final decision in approving, approving with conditions, or denying variance is rendered by the Department of Ecology in accordance with WAC 173-27-200, and to all other applicable local, state, or federal agencies.

Step 5. Filing.
The city’s final action in approving, approving with conditions, or denying SDP, deviation and/or variance shall be filed with the Department of Ecology and Washington State Attorney General.

If the SDP and/or variance is approved, the applicant shall not begin construction until after the 21-day review period by the Department of Ecology is over and/or any appeals concluded. The applicant shall also comply with all applicable federal, state and city standards for construction.

4. Time Limits of Permits. The following time limits shall apply to all shoreline exemption, substantial development, deviation and variance permits:
   a. Construction or substantial progress toward construction of a development for which a permit has been granted must be undertaken within two years of the effective date of a shoreline permit. The effective date of a shoreline permit shall be the date of the last action required on the shoreline permit and all other government permits and approvals that authorize the development to proceed, including all administrative and legal actions on any such permit or approval.
   b. A single extension before the end of the time limit, with prior notice to parties of record, for up to one year, based on reasonable factors may be granted.

5. Suspension of Permits. The city may suspend any shoreline exemption, substantial development, deviation and variance permit when the permittee has not complied with the conditions of the permit. Such noncompliance may be considered a public nuisance. The enforcement shall be in conformance with the procedures set forth in MICC 19.15.030, Enforcement.

6. Revisions. When an applicant seeks to revise a SDP, deviation and/or variance permit the requirement of WAC 173-27-100, as amended, shall be met.

D. Use Regulations. All development within the shoreline jurisdiction shall be in compliance with all development requirements specified in this section.

1. Table A. Requirements for Development Located Landward from the OHWM

<table>
<thead>
<tr>
<th>Setbacks for All Structures (Including Fences over 48 Inches High) and Parking</th>
<th>A*</th>
<th>25 feet from the OHWM and all required setbacks of the development code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height Limits for All Structures</td>
<td>B</td>
<td>Shall be the same as height limits specified in the development code but shall not exceed a height of 35 feet above average grade level (WAC 173-27-040); provided that the trackway, overhead wires, support poles, and similar features necessary to operate light rail transit facilities on the I-90 bridges are exempt from these height limits</td>
</tr>
<tr>
<td>Maximum Impervious Surface Coverage</td>
<td>C</td>
<td>10%: between 0 – 25 feet from OHWM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30%: between 25 – 50 feet from OHWM</td>
</tr>
<tr>
<td>Minimum Land Area Requirements</td>
<td>E</td>
<td>All semi-private, commercial and noncommercial recreational tracts and areas shall have minimum land area: 200 square feet per family, but not less than 600 square feet, exclusive of driveways or parking areas. Screening of the boundaries with abutting properties and a planning commission approval of a site plan is required</td>
</tr>
</tbody>
</table>

*The letters in this column refer to the Plan View(A) and Section(A) diagrams.
1. Table B. Requirements for Moorage Facilities and Development Located Waterward from the OHWM

| Setbacks for All Moorage Facilities, Covered Moorage, Lift Stations, Boatlifts and Floating Platforms | A* | 10 feet from the lateral line  
35 feet from adjoining moorage structures (except where moorage facility is built pursuant to the agreement between adjoining owners as shown in Figure B below)  
50 feet or 50% of the water frontage of the property, whichever is less, from the common boundary of the subject property urban park or conservation environment |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Setbacks for Boat Ramps and Other Facilities for Launching Boats by Auto or Hand, Including Parking and Maneuvering Space</td>
<td>D</td>
<td>25 feet from any adjacent private property line</td>
</tr>
<tr>
<td>Length or Maximum Distance Waterward from the OHWM for Moorage Facilities, Covered Moorage, Lift Stations, Boatlifts and Floating Platforms</td>
<td>E</td>
<td>Maximum 100 feet, but in cases where water depth is less than 10 feet from the mean low water, length may extend up to 150 feet or to the point where water depth is 10 feet at mean low water, whichever is less</td>
</tr>
<tr>
<td>Width</td>
<td>F</td>
<td>Maximum 8 feet; does not apply to boat ramps, lift stations, or floating platforms</td>
</tr>
</tbody>
</table>
| Square Footage of Piers/Docks | Single ** Waterfront Owner- Maximum 1,000 square feet, including floats  
2 **Waterfront Owners- Maximum 1,150 square feet including floats.  
3 or more **Waterfront Owners- Maximum 1,300 square feet including floats  
**-Must meet minimum water frontage standards |
| Decking requirements for New Piers/Docks | For the construction of new piers/docks, decking shall be constructed of material that provides a minimum of 40% open space |
| Height Limits for Piers and Docks | G | 1.5 feet minimum and 5 feet maximum above the elevation of the OHWM |
| Height Limits for Walls, Handrails and Storage Containers Located on Piers | H | 3-3.5 feet above the decking surface of the moorage facility, dock or pier  
4 feet above the surface of a dock or pier for ramps and gangways designed to clear span within the 30 feet of the nearshore area |
| Height Limits for Mooring Piles, Diving Boards and Diving Platforms | I | 10 feet above the elevation of the OHWM |
Height Limits for Light Rail Transit Facilities within the Existing I-90 Corridor

The trackway and overhead wires, support poles, and similar features necessary to operate light rail transit facilities may be erected upon and exceed the height of the existing I-90 bridges

*The letters in this column refer to the Plan View(B) and Section(B) diagrams.

Comment [ts11]: Per discussions with Sound Transit
### Table B (continued) Requirements for Moorage Facilities and Development Located Waterward from the OHWM

<table>
<thead>
<tr>
<th>Minimum Water Frontage for Moorage Facility</th>
<th>J*</th>
<th>K</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-family lots: 40 feet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shared – two adjoining lots: 40 feet combined</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi-private recreational tracts:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 families: 40 feet</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3 – 5 families: 40 feet plus 10 feet for each family more than 2</td>
<td></td>
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<tr>
<td>6 – 10 families: 70 feet plus 5 feet for each family more than 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 – 100 families: 95 feet plus 2 feet for each family more than 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101+ families: 275 feet plus 1 foot for each family more than 100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Covered Moorage**

Permitted on single-family residential lots subject to the following:

- Maximum height above the OHWM: 20 feet; 20 to 25 feet subject to deviation process [MICC 19.07.080(C)(2)(d), MICC 19.07.110(C)(2)(c)]
- Location/area requirements: See Figure A for single-family lots and Figure B for shared moorage.
  - Outside the triangle subject to deviation process (MICC 19.07.080(C)(2)(d), MICC 19.07.110(C)(2)(c)).
- Building area: 600 square feet.
  - Building areas larger than 600 square feet are subject to conditional use permit within the triangle, or variance outside the triangle
- Covered moorage shall have open sides.
  - Prohibited in semi-private recreational tracts, commercial and noncommercial recreational areas.
- Translucent canopies are required.

**Boatlifts**

Permitted subject to the following:

- Minimum distance waterward from the OHWM: 30 feet. This does not apply to personal watercraft lifts.

*The letters in this column refer to the Plan View(C).
Table 1: Figure A: Area of Permitted Covered Moorage, Individual Lots
The covered portion of a moorage shall be restricted to the area lying within a triangle. The base of the triangle shall be a line drawn between the points of intersection of the property sidelines with the ordinary high water mark. The location of the covered moorage shall not extend more than 100 feet from the center of the base line of such triangle. In cases where water depth is less than 10 feet from the mean low water, the location of the covered moorage may extend up to 150 from the center of the base line or to the point where water depth is 10 feet at mean low water, whichever is less. The required 10 foot setbacks from the side property lines shall be deducted from the triangle area.
Where a covered moorage or moorage facility is built pursuant to the agreement of adjoining owners of single-family lots, the covered moorage area shall be deemed to include, subject to limitations of such joint agreement, all of the combined areas lying within the triangles extended upon each adjoining property and the inverted triangle situated between the aforesaid triangles.

   a. Moorage facilities may be developed and used as an accessory to dwellings on shoreline lots with water frontage meeting or exceeding the minimum lot width requirements specified in Table A.
   b. Piles, floats or other structures in direct contact with water shall not be treated or coated with toxic substances harmful to the aquatic environment. Chemical treatment of structures shall comply with all applicable state and federal regulations.

   a. 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 or waves. The following conditions apply:
      i. The replacement structure should be designed, located, sized, and constructed to assure no net loss of ecological functions.
      ii. Replacement walls or bulkheads shall not encroach waterward of the ordinary high water mark or existing structure unless the primary structure 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.
      iii. Soft shoreline stabilization measures that provide restoration of shoreline ecological functions may be permitted waterward of the ordinary high-water mark.
   b. 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.
   c. Construction and maintenance of normal protective bulkhead common to single-family dwellings requires only a shoreline exemption permit, unless a report is required by the code official to ensure compliance with the above conditions; however, if the construction of the
bulkhead is undertaken wholly or in part on lands covered by water, such construction shall comply with the SEPA Rules, Chapter 197-11 WAC.

b. New Structures for Existing Primary Structures: New or enlarged structural shoreline stabilization measures for an existing primary structure, including residences, should not be allowed unless there is conclusive evidence, documented by a geotechnical analysis, that the structure is in danger from shoreline erosion caused by 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 should evaluate on-site drainage issues and address drainage problems away from the shoreline edge before considering structural shoreline stabilization. New or enlarged erosion control structure shall not result in a net loss of shoreline ecological functions.

c. New development should be located and designed to avoid the need for future shoreline stabilization to the extent feasible. Future shoreline stabilization does not apply to stabilization that occurs pursuant to subsection (a) of this section. New structural stabilization measures in support of new nonwater-dependent development, including single-family residences, shall only be allowed when all of the conditions below apply:

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

ii. 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.

iii. The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report, in compliance with MICC 19.07.110(D)(4)(k). The damage must be caused by natural processes, such as currents, and waves.

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

d. 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, in compliance with MICC 19.07.110(D)(4)(g). New development that would require shoreline stabilization which causes significant impacts to adjacent or down-current properties and shoreline areas should not be allowed.

e. New structural stabilization measures in support of water-dependent development shall only be allowed when all of the conditions below apply:

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

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

iii. The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report, in compliance with MICC 19.07.110(D)(4)(k).

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

f. New structural stabilization measures to protect projects for the restoration of ecological functions or hazardous substance remediation projects pursuant to RCW 70.105D shall only be allowed when all of the conditions below apply:

i. Nonstructural measures, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.
ii. The erosion control structure will not result in a net loss of shoreline ecological functions.

b. Bulkheads shall be located generally parallel to the natural shoreline. No filling may be allowed waterward of the ordinary high water mark, unless there has been severe and unusual erosion within one year immediately preceding the application for the bulkhead. In this event the city may allow the placement of the bulkhead to recover the dry land area lost by erosion.

e. Replacement bulkheads may be located immediately in front of and abutting an existing bulkhead, but no filling shall be allowed waterward of the ordinary high water mark.

h. Geotechnical reports pursuant to this section that address the need to prevent potential damage to a primary structure shall address 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 should 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.

i. When any structural shoreline stabilization measures are demonstrated to be necessary, pursuant to above provisions, the following shall apply:

i. 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.

ii. Ensure that publicly financed or subsidized shoreline erosion control measures do not permanently 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). Where feasible, incorporate ecological restoration and public access improvements into the project.

iii. 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 systems. Where sediment conveyance systems cross jurisdictional boundaries, local governments should coordinate shoreline management efforts. If beach erosion is threatening existing development, local governments should 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.

j. Breakwaters, jetties, groins, and weirs. Breakwaters, jetties, groins, and weirs located waterward of the ordinary high-water mark shall be allowed only where necessary to support water-dependent uses, public access, shoreline stabilization, or other specific public purpose. Breakwaters, jetties, groins, and similar structures should require a conditional use permit, except for those structures installed to protect or restore ecological functions, such as woody debris installed in streams. Breakwaters, jetties, groins, and weirs shall be designed to protect critical areas and shall provide for mitigation according to the sequence defined in WAC 173-26-201 (2)(e).

5. Utilities.
a. Utilities shall be placed underground and in common rights-of-way wherever economically and technically practical.

b. Shoreline public access shall be encouraged on publicly owned utility rights-of-way, when such access will not unduly interfere with utility operations or endanger public health and safety. Utility easements on private property will not be used for public access, unless otherwise provided for in such easement.

c. Restoration of the site is required upon completion of utility installation.

d. Construction of utility buildings and structures require a conditional use permit.

6. Dredging.

a. Dredging waterward or landward of the ordinary high water mark shall be permitted only if navigational access has been unduly restricted or other extraordinary conditions in conjunction with water-dependent use; provided, that the use meets all state and federal regulations.

b. Dredging shall be the minimum necessary to accommodate the proposed use.

c. Dredging shall utilize techniques that cause the least possible environmental and aesthetic impact.

d. Dredging is prohibited in the following locations:
   i. Fish spawning areas.
   ii. In unique environments such as lake logging of the underwater forest.

e. Disposal of dredged material shall comply with Ecology Water Quality Certification process and U.S. Army Corps of Engineers permit requirements. The location and manner of the disposal shall be approved by the city.

7. Transportation and Parking

a. Shoreline circulation system planning shall include safe, reasonable, and adequate systems for pedestrian, bicycle, and public transportation where appropriate. Circulation planning and projects should support existing and proposed shoreline uses that are consistent with the master program.

b. Transportation and parking facilities shall be planned, located, and designed where routes will have the least possible adverse effect on unique or fragile shoreline features, and will not result in a net loss of shoreline ecological functions or adversely impact existing or planned water-dependent uses.

c. Where other options are available and feasible, new roads or road expansions should not be built within shoreline jurisdiction.

d. Parking facilities in shorelines shall be allowed only as necessary to support an authorized use.

e. Parking facilities in shorelines shall minimize the environmental and visual impacts.

E. General Provisions

1. Archaeological and Historic Resources

a. If archaeological resources are uncovered during excavation, the developer and property owner shall immediately stop work and notify the City, the Office of Archaeology and Historic Preservation, and affected Indian tribes.

b. In areas documented to contain archaeological resources by the Office of Archaeology and Historic Preservation, a site inspection or evaluation is required by a professional archaeologist in coordination with affected Indian tribes.

2. Public Access
a. Development by public entities shall include public access, unless such access is shown to be incompatible due to reasons of safety, security, or impact to the shoreline environment.

b. Public access shall be provided for developments for water-enjoyment, water-related, and non-water-dependent uses; and for new subdivisions of more than four parcels, except:
   i. Where the City provides more effective public access
   ii. Where it is demonstrated to be infeasible due to reasons of incompatible uses, safety, security, or impact to the shoreline environment, or due to constitutional or other legal limitations that may be applicable
   iii. For individual single-family residences.

c. In determining infeasibility of public access in a given situation, the City may consider alternate methods of providing public access, such as off-site improvements, viewing platforms, separation of uses through site planning and design, and restricting hours of public access.

d. Public access improvements shall not result in a net loss of shoreline ecological functions.

Section 3: Amendments to 19.16 MICC, Definitions. MICC 19.16 “Definitions” is hereby amended as follows:

Words used in the singular include the plural and the plural the singular. **For definitions that are specific to the Shoreline, see 19.07.110(A)(7)(e).**

B

…

Boat Ramp: An inclined structure upon which a watercraft is raised or pulled onto land or a dock.

Breakwater: A protective structure usually built offshore for the purpose of protecting the shoreline or harbor areas from wave action.

…

Bulkhead: A solid or open pile of rock, concrete, steel, timber or other materials erected parallel to, and normally erected at, the ordinary high water line for the purpose of protecting adjacent property from waves or currents.

C

…

Covered Moorage: A pier, dock, boatlift, series of piles, or other structure intended for moorage over which a roof or canopy is erected.

…

F

…

Finger Pier: An extension from a dock used to create moorage slips.

…

Floating Platform: A flat structure or device moored or anchored, not permanently secured by piles, which floats upon the water.
G

... Groin: A structure used to interrupt sediment movement along the shore.

J

Jetty: A barrier used to protect areas from accumulations of excess sediment.

L

Lateral Line: The extension waterward of a property line into Lake Washington beyond the ordinary high water mark. How property lines extend waterward from the ordinary high water mark is an area of misconception. If the title does not clearly state the location of the property lines waterward from the ordinary high water mark, waterfront owners are not allowed to unilaterally project the upland boundaries out into the shorelands (waterward). There are no statutes defining the direction of the lateral lines waterward from the ordinary high water mark. The Supreme Court has the final word to decide location of lateral line on case-by-case basis.

Lift Station (Boat Hoist): A structure or device normally attached to a dock or pier used to raise a watercraft above the waterline for secure moorage purposes.

M

Marina: A commercial basin providing rental or sale of docks, watercraft, moorage, and/or supplies. Casual single-family renting of moorage is excluded from this definition.

Mean Low Water: The level of Lake Washington during the fall and winter when the water level is lowered to minimize winter storm damage to lakeside properties. Mean low water is one and one-half feet lower than ordinary high water.

Moorage Facility: Any device or structure used to secure a boat or a vessel, including piers, docks, piles, lift stations or buoys.

W

Water-Dependent: A use or a portion of a use which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations. Examples of water-dependent uses may include ship cargo terminal loading areas, ferry and passenger terminals, barge loading facilities, ship building and dry docking, marinas, aquaculture, float plane facilities and sewer outfalls.

Waterfront Structure: Docks, piers, wharves, floats, mooring piles, anchor buoys, bulkheads, submerged or overhead wires, pipes, cables, and any other object passing beneath, through or over the water beyond the line of ordinary high water.

Waterward: Any point located in Lake Washington, lakeward from the ordinary high water mark.
Section 4: **Repeal and Replace Appendix F to Title 19 MICC.** Appendix F to MICC Title 19 is hereby repealed and replaced with the attached EXHIBIT A.

Section 5: **Amendments to the Shoreline Element of the Comprehensive Plan.** The City of Mercer Island Comprehensive Plan, Shoreline Element is hereby amended as set forth in the attached EXHIBIT B.

Section 6: **Severability/Validity.** The provisions of this ordinance are declared separate and severable. If any section, paragraph, subsection, clause or phrase of this ordinance is for any reason held to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that they would have passed this ordinance and each section, paragraph, subsection, clause or phrase thereof irrespective of the fact that any one or more sections, paragraphs, clauses or phrases may subsequently be held by a competent authority to be unconstitutional or invalid.

Section 7: **Ratification.** Any act consistent with the authority and prior to the effective date of this ordinance is hereby ratified and affirmed.

Section 8: **Effective Date.** This Ordinance shall take effect and be in force 30 days after its passage and publication.

PASSED by the City Council of the City of Mercer Island, Washington at its regular meeting on the ________ day of ________ 2010 and signed in authentication of its passage.

CITY OF MERCER ISLAND

_________________________________________
Jim Pearman, Mayor

ATTEST:

________________________________________
Allison Spietz, City Clerk

Approved as to Form:

________________________________________
Katie Knight, City Attorney

Date of Publication: _____________________
Appendix F - Proposed Shoreline Environment Designations

Shoreline Master Program - City of Mercer Island

All areas within shoreline jurisdiction that are not mapped and/or designated are automatically assigned the "Urban Residential" designation until the shoreline can be redesignated through a master program amendment. In the event of a mapping error, the City of Mercer Island shall rely upon common boundary descriptions and the criteria contained in RCW 90.58.030(2) and Chapter 173-22 WAC pertaining to determinations of shorelands, as amended, rather than the incorrect or outdated map.

Waterward extent of City jurisdiction is measured to the middle of Lake Washington, pursuant to RCW 35.21.160.

Waterward extent of Shoreline Management Area is measured from the Ordinary High Watermark to the middle of Lake Washington.

Landward extent of Shoreline Management Area is measured 200 ft landward of the Ordinary High Water Mark.
EXHIBIT B to Ordinance No. 10C-XX

INTRODUCTION

The purpose of this document is four-fold:

1. To fulfill the requirements of the Shoreline Management Act (SMA) of 1971, Chapter 286, Laws of 1971, Chapter 90.58. RCW and Chapter 173-26 WAC by developing a Master Program to guide the future use and development of Mercer Island’s shoreline.

2. To recognize the Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan.

3. To recognize the Regional Lake Washington Master Program as a basis for Mercer Island’s Master Program.

4. To provide guidelines and recommendations for revising local ordinances and zoning codes and for updating the comprehensive plan.

5. To provide a basis for evaluating applications for shoreline permits on Mercer Island.

The State of Washington Shoreline Management Act of 1971 recognizes that the shorelines of the state are among our most valuable and fragile natural resources and directs all local governments to develop a Master Program for the management of these shorelines. The Law specifies that all lakes over 1,000 acres in surface area are Shorelines of Statewide Significance. Lake Washington is such a shoreline and in our planning we must, as the Shoreline Management Act specifies, provide for uses in the following order of preference: those which

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 shoreline;
6. Increase recreational opportunities for the public in the shoreline;
7. Provide for any other element deemed appropriate or necessary.

PROLOGUE

To the early developers who built metropolitan Seattle, Lake Washington was perceived as a utilitarian resource. During the past hundred years the Lake has been utilized for transportation, agricultural and domestic water supplies, waste disposal, and numerous types of commercial and industrial enterprises. Many of these activities had adverse impacts on the Lake, and the discharge of sewage eventually led to serious problems with respect to water quality. In response to the rapidly declining quality of Lake Washington, the public voted to create the Municipality of Metropolitan Seattle (METRO) for the purpose of treating sanitary sewage and diverting its discharge from the Lake to Puget Sound. Today the lake is once again suitable for swimming and other recreational activities.

Many of the functions previously related to the lake are now met by other means. The region’s water supply is from rivers, one of which feeds into Lake Washington. Sanitary sewers have
been diverted and measures are being taken to minimize further pollutants from entering the Lake. Water-borne transportation has been largely replaced by an extensive road network around and across the Lake. Also, commercial and industrial uses of the Lake have declined in recent years. In contrast, the use of Lake Washington for leisure activities has increased. The vast majority of the Lake is presently used for residential or recreational purposes. Thus, the future of Lake Washington may be quite different from the expectations of its early developers.

Mercer Island was originally utilized as a source of timber, and although proposed as a “regional park” in its entirety at one time, it became a recreational and, later, a prime residential area. Until 1940, boat and ferry travel was the primary means of reaching the Island from Seattle. In 1940 the Lake Washington floating bridge was completed. At this time the population of the Island and, subsequently, the complexion of development changed rapidly. Developers took advantage of the relatively easy access and relatively close proximity to Seattle’s employment centers, and land quickly changed from forest to subdivision.

Planning during this time and up until the early 1960’s was conducted by King County. Since accepting the County zoning upon incorporation of the City in 1960, few changes affecting the shoreline uses have occurred, with single-family residential and recreation constituting the primary shoreline uses.

The City developed its first Shoreline Master Program in 1974. Key considerations within this plan included conservation, public access to the shoreline, residential development, and the guidance for recreational uses along the Mercer Island shoreline. These initial policy objectives are reflected in today’s protection of the City’s shoreline, which includes approximately 6,000 linear feet of publicly owned shoreline, developed as waterfront recreation areas. Included in these publicly owned lands are nineteen street ends; Groveland Beach Park; Clarke Beach Park; and Luther Burbank Park, which was transferred in 2003 from King County to the City of Mercer Island via an Intergovernmental Land Transfer Agreement.

During the 35 years since the City adopted its first SMP, the Mercer Island has matured to the point where it is largely developed with the priority uses planned for in the first SMP. For example, an inventory of the shoreline prepared as part of this SMP update identified only 30 shoreline properties that are currently undeveloped.

Since 1990, when the state enacted the Growth Management Act, state policy has promoted greater density in urban areas, such as the City of Mercer Island and the other cities that surround Lake Washington. In addition, the increased land values on the Island have created pressures for more intense use of lands during redevelopment.

The City’s and region’s development during this time has impacted the shoreline. Docks and bulkheads, impervious surfaces in shoreline area and in adjacent areas have impacted the shoreline environment, including salmonid habitat. In 1999, Chinook salmon and bull trout were listed as “Threatened” under the Federal Endangered Species Act. New scientific data and
research has improved our understanding of shoreline ecological functions and their value in terms of fish and wildlife, water quality, and human health. Scientific information, however, remains incomplete and sometimes inconsistent in some areas important to Mercer Island’s development pattern.

INTENT
To address changes in the shoreline environment, comply with the mandates of the Shoreline Management Act, and enable the City to plan for emerging issues, the City has initiated an extensive update of its Shoreline Master Program. The new program is intended to respond to current conditions and the community’s vision for the future.

The largely built out character of the shoreline, as well as the increasing protections under state and federal law for shoreline habitat are two factors that have strongly influenced the Update’s direction. In updating the program, the City’s primary objectives are to:

- Enable current and future generations to enjoy an attractive, healthy and safe waterfront.
- Protect the quality of water and shoreline natural resources to preserve fish and wildlife and their habitats.
- Protect the City’s investments, as well as those of property owners along and near the shoreline.
- Produce an updated Shoreline Master Program (SMP) that is supported by Mercer Island’s elected and appointed officials, citizens, property owners, the State of Washington, and other key groups with an interest in the shoreline.
- Fairly allocate the responsibilities for increased shoreline protection among new development and redevelopment.

The City of Mercer Island, through adoption of the Shoreline Master Program, intends to implement the Washington State Shoreline Management Act (RCW 90.58) and its policies, including protecting the State’s shorelines and their associated natural resources, planning for and fostering all reasonable and appropriate uses, and providing opportunities for the general public to have access to and enjoy shorelines.

The City of Mercer Island’s Shoreline Master Program represents the City’s participation in a coordinated planning effort to protect the public interest associated with the shorelines of the State while, at the same time, recognizing and protecting private property rights consistent with the public interest. The Program preserves the public’s opportunity to enjoy the physical and aesthetic qualities of shorelines of the State and protects the functions of shorelines so that, at a
minimum, the City achieves a ‘no net loss’ of ecological functions, as evaluated under the Final Shoreline Analysis Report issued in July 2009. The Program also promotes restoration of ecological functions where such functions are found to have been impaired, enabling functions to improve over time.

The goals and policies of the SMA constitute one of the goals for growth management as set forth in RCW 36.70A.020 and, as a result, the goals and policies of this SMP serve as an element of Mercer Island’s Comprehensive Plan and should be consistent with other elements of the Comprehensive Plan. In addition, other portions of the SMP adopted under chapter 90.58 RCW, including use regulations, are considered a part of the city's development regulations.

Most of the shoreline of Mercer Island had been platted previous to incorporation. Some of these areas are zoned R-8.4 which is a higher density than the R-15 which Mercer Island preferred to impose on the unplatted land it had the opportunity to regulate. Changes in zoning to a lower density along the shoreline have been virtually impossible to achieve. However, the City has developed several ordinances such as those relating to waterfront structures, community waterfront tracts, tree clearing, preserving of watercourses and others that directly or indirectly preserve and enhance shoreline areas.

INTENT
The Lake Washington Regional Citizens and Technical Committees have recognized that the shoreline of Lake Washington is a valuable and fragile natural resource and that there is a great concern throughout the region relating to its utilization, protection, restoration, and preservation. They further recognized that unrestricted construction on the shoreline of Lake Washington is not in the best public interest, while at the same time recognizing and protecting private property rights consistent with the public interest. In addition, they recognized that the shoreline of Lake Washington is located within a major urbanized area and is subjected to ever increasing pressures of additional uses necessitating increased coordination in the management and development of said shoreline. They stated that there is a clear and urgent demand for a planned, rational and concerted effort to insure coordinated and optimum utilization of the shoreline of Lake Washington.

Although the Regional Program provides a basis for the Mercer Island Master Program, historically, shoreline development and, more recently, the nature of our land use ordinances, zoning codes and comprehensive plan, have established a fairly set land use pattern. Community attitudes have strongly emphasized the desire to retain the residential/recreational uses of the shoreline. Therefore, there appears to be a need to slightly modify the tone of the Regional Program to fit Mercer Island.

The Mercer Island Citizen Advisory Committee has indicated that the order of preference for shoreline development should be evaluated according to the following considerations:

1. Low density single-family residences should continue to be the primary land use of the shoreline of Mercer Island.

2. Conservation of marshes, spawning grounds and other unique or fragile areas is of primary
concern.

3. Importance of the public having ample access to the shoreline.

4. Water-oriented recreation is deemed to be appropriate and desirable.

Planning and usage of the Mercer Island shoreline should reflect these priorities.

This document should be read in its entirety and be considered as a whole. These goals and policies were developed with the above priorities in mind and should be applied accordingly. The goals and policies within the following Elements: Shoreline Uses and Activities, Conservation, Public Access, and Components are intended by the Committees to be applicable in all cases.

LAKE WASHINGTON REGIONAL GOALS

The Regional Goals have provided a basis for the Goals and Policies developed for Mercer Island. The Regional Goals are, therefore, summarized below to provide a reference to the Goals and Policies formulated by the Mercer Island Citizens Committee.

PRIMARY GOAL

The natural amenities and resources of Lake Washington are to be conserved in a predominately recreational/residential environment with adequate access available to the public.

The regional goals established by the Regional Committees are listed below in order of preference:

-- The shoreline of Lake Washington is to be planned and coordinated to afford optimal use of the limited water resource.

-- The shoreline of Lake Washington is to provide natural amenities within an urban environment.

-- The resources and amenities of Lake Washington are to be protected and preserved for use and enjoyment by present and future generations.

-- Increase public access to and along the shoreline areas, provided public safety, private property rights, and unique or fragile areas are not adversely affected.

-- Water-dependent recreational activities available to the public are to be encouraged and increased on the shoreline of Lake Washington where appropriate and consistent with public interest.

-- Existing residential uses are to be recognized and new residential construction will be subject to certain limitations if applicable.
Existing economic uses and activities on the shoreline of Lake Washington are to be recognized, while economic uses of activities that are not dependent on a Lake Washington location are to be discouraged.

A balanced transportation system for moving people and goods is to be encouraged within existing corridors.

**DESIGNATED ENVIRONMENTS**

The Final Guidelines — Shoreline Management Act of 1971 requires that as a part of the Master Program the City is required to do the following:

1. Designated type of environments the Mercer Island shorelines represent.
2. The environmental designations be consistent with the information in the Shoreline Inventory.
3. The designation must be consistent with the provisions of the Guidelines and Mercer Island’s Goals and Policies.

More generally the Guidelines state that:

“...in order to plan and effectively manage shoreline resources, a system of categorizing shoreline areas is required for use by local governments in the preparation of the master programs. The system is designed to provide a uniform basis for applying policies and use regulations within distinctively different shoreline areas. To accomplish this, the environmental designation to be given any specific area is to be based on the existing development pattern, the biophysical capabilities and limitations of the shoreline being considered for development and the goals and aspirations of local citizenry.

WAC 173-26-211 states, “Master programs shall contain a system to classify shoreline areas into specific environment designations. This classification system shall be based on the existing use pattern, the biological and physical character of the shoreline, and the goals and aspirations of the community as expressed through comprehensive plans as well as the criteria in this section. Each master program’s classification system shall be consistent with that described in WAC 173-26-211 (4) and (5) unless the alternative proposed provides equal or better implementation of the act.”

The recommended system classifies shorelines into four distinct environments (natural, conservancy, rural and urban) which provide the framework for implementing shoreline policies and regulatory measures.

WAC 173-26-211(4)(c) allows for local governments to establish a designation system, provided it is consistent with the purposes and policies of WAC 173-26-211 and WAC 173-26-211(5).

Mercer Island contains two distinct shoreline designations, pursuant to WAC 173-26-
(4)(c): urban residential, and urban park.

This system is designed to encourage uses in each environment which enhance the character of that environment. The basic intent of this system is to utilize performance standards which regulate use activities in accordance with goals and objectives defined locally, rather than to exclude any use from any one environment. Thus, the particular uses or type of developments placed in each environment should be designed and located so that there are no effects detrimental to achieving the objectives of the environment designations and local development criteria. This approach provides an ‘umbrella’ environment class over local planning and zoning on the shorelines. Since every area is endowed with different resources, has different intensity of development and attaches different social values to these physical and economic characteristics, the enforcement designations should not be regarded as a substitute for local planning and land-use regulations.”

Although none of the four categories precisely fit Mercer Island, the most appropriate environment designation is that of Urban as designated in WAC 173-160 (4)(b)(iv). The objective of the urban environment is to ensure optimum utilization of shorelines within urbanized areas by providing for intensive public use and by managing development so that it enhances and maintains shorelines from a multiplicity of urban uses. Because shorelines suitable for urban uses are a limited resource, emphasis should be given to development within already developed areas. In the master program, priority is also to be given to planning for public visual and physical access to water in the urban environment. Identifying needs and planning for the acquisition of urban land for permanent public access points to the shoreline should be linked to non-motorized transportation routes, such as bicycle and hiking trails.

In some instances, the Conservancy Environment designation may apply. Designation of these areas should be undertaken at the time unique and fragile areas are further inventoried and mapped.

**Urban Residential**

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

**Designation Criteria.** Areas that are predominantly single-family or multifamily residential development or are planned and platted for residential development.

**Management Policies.**

1. Standards for density or minimum frontage width, setbacks, lot coverage limitations, buffers, shoreline stabilization, vegetation conservation, critical area protection, and water quality shall be set to assure no net loss of shoreline ecological functions, taking into account the environmental limitations and sensitivity of the shoreline area, the level of infrastructure and services available, and other comprehensive planning considerations.
2. Development of multifamily, recreational and residential subdivisions of five or more lots should provide public access and joint use for community recreational facilities.

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

4. Commercial development should be limited to water-oriented uses.

Urban Park Environment
The purpose of the urban park environment is to protect and restore ecological functions in urban and developed settings, while allowing public access and a variety of park and recreation uses.

Designation Criteria. An urban park environment designation will be assigned to publicly owned shorelands, including all parks, street ends and public access points.

Management policies

1. Uses that preserve the natural character of the area or promote preservation of open space, 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 should be established for shoreline stabilization measures, vegetation conservation, water quality, and shoreline modifications within the urban park designation. These standards shall ensure that new development does not result in a net loss of shoreline ecological functions or further degrade other shoreline values.

3. Public access and public recreation objectives should be implemented whenever feasible and significant ecological impacts can be mitigated.

4. Water-oriented uses should be given priority over nonwater-oriented uses. For shoreline areas adjacent to commercially navigable waters, water-dependent uses should be given highest priority.

SHORELINE USES AND ACTIVITIES

The Mercer Island Shoreline Inventory indicates that present usage of the shoreline is primarily residential/recreational in character. As the population of both the Island and the region grows, demands for all forms of shoreline use and activities on Lake Washington are expected to increase. At some future time this demand is likely to exceed the existing supply of the Lake’s shoreline. Several studies related to appropriate uses of the shoreline, particularly those of a residential or recreational nature, have been undertaken on Mercer Island to determine the best
land uses. Most of these studies and plans have only indirectly addressed the question of proliferation of shoreline development on Lake Washington. To date a water use management plan has also been indirectly considered. This document is intended to complement existing studies and to provide criteria to assist in determining the optimal mix of shoreline uses.

The following goals and policies address the general distribution, location, and extent of all uses within shoreline jurisdiction.

GOALS

1. Ensure that the land use patterns within shoreline areas are compatible with shoreline environment designations and will be sensitive to and not degrade habitat, ecological systems, and other shoreline resources. The Shoreline of Mercer Island is to be planned and coordinated to afford optimal use of the limited resources.

2. The shoreline of Mercer Island is to provide natural amenities within an urban environment.

POLICIES-POLICY

1. Plans should be made for reasonable and appropriate shoreline uses and activities.

   a. Short-term economic gain or convenience in development should be evaluated in relationship to potential long-term effects on the shoreline.

   b. Preference should be given to those uses or activities which enhance the natural amenities of the Lake and which depend on a shoreline location or provide public access to the shoreline.

   c. Planning, zoning, capital improvements and other policy and regulatory standards should not increase the density or intensity of shoreline uses or activities.

   d. Shorelines particularly suited for a specific appropriate water-dependent use or activity should be planned for and designated.

   e. Multiple-use of shorelines should be planned where location and integration of compatible uses or activities are feasible.

   f. Aesthetic values must be considered when evaluating new development, redevelopment of existing facilities or for general enhancement of shoreline areas.

   g. Shoreline uses and activities should be discouraged if they are objectionable due to noise or odor or if they create offensive or unsafe conditions in relating to reasonable and appropriate uses and activities.
1. All activities, development and redevelopment within the City’s shoreline jurisdiction should be designed to ensure no net loss of shoreline ecological functions.

2. Existing shoreline use or activities identified as being inappropriate should be encouraged to relocate away from the shoreline.

3. Uses and activities in unique or fragile shoreline areas should be discouraged unless measures can be satisfactorily undertaken to mitigate all related adverse impacts.

4. Sufficient amounts of open space should be distributed along the shoreline to provide nearby recreational opportunities for the general public.

5. Shoreline uses or activities not specified in this document should be consistent with the intent of the goals and policies stated herein.

RECOMMENDATIONS:

1. Mercer Island should formulate programs for the relocation of inappropriate uses and activities. The use of public funds, trading of other public lands where feasible, or other incentives should be considered when necessary to accomplish this objective.

2. Unique and fragile shoreline areas should be defined and inventoried on Mercer Island by appropriate City staff members and Boards and Commissions as soon as possible.

CONSERVATION ELEMENT

The following goal and policies address the protection of the resources of the shoreline. According to the Shoreline Management Act, three of the highest priorities for Shorelines of Statewide Significance are to a) preserve the natural character of the shorelines; b) result in long term over short term benefit; and c) protect the resources and ecology of the shoreline. Although some natural resources are non-renewable in character, Lake Washington is a unique biological, economic and recreational resource which can be managed in a way to allow its assets to be continually available to the region and the state.

Human activities have either directly or indirectly influenced the Lake’s entire shoreline. Some areas (stream outlets, marshes, embayments, wooded areas and others) have remained in a somewhat natural condition. As the population of the Island increases, the pressures to develop these natural condition. But the costs involved in preparing some of these sites for development may be high due to soil or hydrologic conditions. There may be greater long term value in preserving these areas for purposes of open space within an urbanizing region. Often these areas are also important habitats for fish and wildlife. Preservation of these remaining areas, during the subdivision or development process, could be accomplished through the use of the open space option of the Subdivision Ordinance.

Conservation efforts are not directed solely toward undeveloped areas. Activities on the shoreline or within the drainage basin may adversely affect water quality, aquatic life or other
resources of the Lake. Normal single family residential activities within the shoreline appear to have minimal negative effects on the resources of the Lake. Long Range planning should seek to minimize such adverse impacts.

The concept of conservation should also apply to structures or areas worth preserving for their historical, cultural, educational or scientific value. The use of some areas, either on a temporary basis for special events or festivals, or permanently for facilities reflecting our past or enhancing our future, are considered as reasonable and appropriate.

GOAL

The resources and amenities of Lake Washington are to be protected and preserved for use and enjoyment by present and future generations.

POLICIES:

1. Existing natural resources should be conserved, consistent with private property rights.
   
   a. Aquatic habitats, particularly spawning grounds, should be protected, improved and, if feasible, increased.
   
   b. Wildlife habitats should be protected, improved and, if feasible, increased.
   
   c. Unique and fragile areas should be designated and have been mapped. Access and use should be restricted if necessary for the conservation of these areas. The type and degree of development to be allowed should be based upon such factors as: slope, soils, vegetation, geology and hydrology.
   
   d. Water quality should be maintained at a level to permit recreational use (specifically swimming), provide a suitable habitat for desirable forms of aquatic life and satisfy other required human needs.

2. Existing and future activities on Lake Washington and its shoreline should be designed to minimize adverse effects on the natural systems.

   a. Developers should be required to bear the cost of providing safeguards to prevent storm drainage damage resulting from their development.
   
   b. Excessive soil erosion and sedimentation and other polluting elements should be prevented from entering and adversely affecting the Lake and its constituent watercourses.
   
   c. Restoration of natural systems adversely affected by sedimentation and pollution should
be encouraged.

d. The destruction of watercourses feeding into Lake Washington should be discouraged.

e. The planning and control of surface drainage water from Mercer Island into Lake Washington should be based on such factors as the quality and quantity of water, rate of flow and containment, etc. The latest applicable data should be used in the implementation of a storm drainage system.

4. Shoreline areas having historical, cultural, educational or scientific value should be protected and restored.
   a. Public and private cooperation should be encouraged in site preservation and protection.
   b. Suspected or newly discovered sites should be kept free from intrusion until their value is determined.
   c. Festivals and temporary uses involving public interest and not substantially or permanently impairing water quality or unique and fragile areas should be permitted.

RECOMMENDATIONS

1. Since the shorelines are valuable and fragile resources, Mercer Island should designate use regulations to minimize man-made intrusions on the shoreline. Conservancy environments should be designated and mapped where the natural conditions so indicate.

2. Unique and fragile areas on the Island's shoreline should be further defined, inventoried and mapped by August, 1974.

3. Discharge of sewage (sewage is defined as treated or untreated wastes which do not meet Federal, State, or local standards for discharge in Lake Washington), waste, rubbish and litter from boats on Lake Washington should not be permitted. Pumping and tank facilities for the discharge of sewage, waste, rubbish and litter from boats equipped with marine toilets and/or galleys, should be provided in all new marinas or public moorages.

4. Comment should be solicited from Metro concerning proposed activities affecting water quality in Lake Washington or its tributaries.

5. Mercer Island should consider designating sites of historic value such as the passenger boat and ferry landings and areas of early settlement such as the Proctor, Calkins and Olds homesites.

6. Where appropriate, natural watercourses should be retained.

7. A watercourse ordinance to preserve the systems of natural drainage on the Island should be passed.
8. Information concerning the use of the State Open Space Taxation legislation of 1970, 1971, and 1973 should be made available to encourage preservation of unique and fragile areas.

9. The open space option of Mercer Island’s Ordinance 50, the Subdivision Ordinance, should be utilized for preserving unique and fragile areas.

PUBLIC ACCESS ELEMENT

The waters of Lake Washington are in the public domain and should be readily accessible to the public. As the population around Lake Washington grows, there will be an increasing need for public access to the shoreline. The Shoreline Management Act and the Final Guidelines make repeated reference to the issue of public access to the shoreline; in accordance with the Act, a Public Access Element has been included in this study. However, this situation is not unique to Lake Washington, and other planning efforts have addressed this challenge in a variety of ways.

The intent of the Shoreline Management Act and these goals and policies is not to reduce unlawfully the rights attached to private property to condone trespass, but rather to recognize and protect private property rights consistent with the public interest. The public access requirements of this section are not applicable to single family residences.

The following goal and policies address the ability of the public to reach, touch, view, and travel on Lake Washington and to view the water and the shoreline from public places.

GOAL

Increase and enhance public access to and along the Mercer Island Shoreline where appropriate and consistent with public interest, provided public safety, private property rights, and unique or fragile areas are not adversely affected.

POLICIES:

1. Public access to and along the water’s edge should be consistent with the public safety, private property rights, and conservation of unique or fragile areas.

2. Public access to and along the water’s edge should be available in publicly owned shoreline areas.

3. In new substantial shoreline development, developers should be encouraged to provide public access to and along the water’s edge provided that no private property shall be taken involuntarily for public purposes without due compensation.

4. When substantial modifications or additions are proposed to substantial developments, the developer should be encouraged to provide for public access to and along the water’s edge if physically feasible provided that no private property be taken involuntarily without due compensation.

5. In new developments on the shoreline, the water’s edge should be kept free of buildings.
6. Where publicly owned shoreline areas are available for public pedestrian and bicycle pathways, these should be developed as close to the water’s edge as reasonable.

7. Views of the shoreline and water from shoreline and upland areas should be preserved and enhanced. Enhancement of views shall not be construed to mean excessive removal of vegetation.

8. Rights-of-way on the shoreline should be made available for public access where appropriate.

9. Access onto shoreline public street ends should be enhanced.

**RECOMMENDATION**

10. Consideration should be given to provisions for the handicapped, disabled, and elderly when developing public access to shoreline areas.

**RECREATION ELEMENT**

Mercer Island has approximately 15 miles of shoreline most of which is devoted to low density single family residences. It could be said that almost 100% of the developed shoreline of Mercer Island is devoted to water-dependent recreation, assuming that the waterfront residents find both active and passive enjoyment from their shoreline location. The remainder of the shoreline is set aside for public or semi-public water-related recreation except for a fraction which is utilized for bridge crossings and utilities. The latter, in some cases, is also available for public access to the water.

The City presently owns 2,600 to approximately 6,000 feet of shoreline which is developed as waterfront parks with facilities for swimming, fishing and car-top boat launching. Beaches at Luther Burbank Park and Groveland Beach Park are staffed with lifeguards during the summer season. Unguarded designated swimming areas also exist at Calkins Landing and Clarke Beach Park. Dock facilities that serve fishing and other activities are located at Luther Burbank Park and Proctor Landing, and seasonally at Clarke and Groveland Beaches. The City manages several summer camps for youth and adult with instruction on sailing and kayaking based at Luther Burbank Park.

Nineteen street ends of widths varying from 30’ to 75’ add an additional 938 to 600 lineal feet of shoreline to the public domain and provide the potential for considerable access to the water’s edge in all segments of the Island. Development of some street ends has been undertaken as a cooperative effort between the city and the adjacent neighborhoods. Some provide swimming access, others offer car-top launching access, others provide minimal access solely for passive enjoyment because of the limitation of size or topography, and lack of neighborhood interest and availability of funds. Three street ends were re-developed in 2003, which included eliminating bulkheads and enhancing near shore habitat.
There are three private waterfront clubs owning a combined 1,840 feet of frontage. They provide swimming, moorage, and boat launching facilities to a significant portion of the Island’s families.

Shorewood Apartments, Covenant Shores, a continuing care retirement community, owns approximately 650 feet of shoreline which serves as open space, swimming, picnicking, and moorage for its 690 residential units. Numerous private neighborhood waterfront “parks,” with shared access for neighboring residences, offering access to up, and residents exist along the shoreline.

Regarding waterfront recreation, The City of Mercer Island Parks and Recreation Plan, adopted in 2007, calls for Capital improvements at 2 waterfront facilities to enhance recreation opportunities. Shoreline restoration, swim beach enhancements and dock area improvements are anticipated at Luther Burbank Park, and improved boat launching and retrieval is anticipated with planned improvements at the Mercer Island Boat Launch. Future development of Luther Burbank Park is also subject to the Luther Burbank Master Plan.

The Mercer Island Park and Open Space Plan, adopted by the City in 1966, was specific in expressing the desire to acquire and develop waterfront parks and public access to the water’s edge. As of 1973 several of the plans have been implemented. Yet to be accomplished, is the goal to acquire a waterfront park in the East Seattle area, further utilize the street ends and provide public trailer boat launching facilities.

**GOAL**

Water-dependent recreational activities available to the public are to be encouraged and increased on the shoreline of Mercer Island where appropriate and consistent with the public interest.

**POLICIES**

1. Provide additional public water-oriented recreation opportunities.

2. Locate public recreational uses in shoreline areas that can support those uses without risks to human health, safety, and/or security, while minimizing effects on shoreline functions, private property rights, and/or neighboring uses.

3. Water-dependent recreational activities should be increased and given priority.
   a. Public shoreline parks should be increased in size and number.
e. Additional swimming areas should be developed on the shoreline.

e. Recreational fishing should be maintained or increased.

d. Recreational boating activities should be encouraged as long as they are compatible with other uses. Day moorage should be a permitted use in recreational areas where feasible except in unique and fragile areas.

e. Accommodations should be made for launching small water craft at public shoreline parks and street ends where feasible.

2. Open space and opportunity for passive forms of recreation should be encouraged and increased.

3. Retention of some public shoreline in a nearly natural state is desirable.

4. Based on the Mercer Island Comprehensive Plan, the appropriate governmental agency should avail itself of the earliest opportunity to acquire shoreline when available. See Recommendations.

5. Mercer Island and other appropriate governmental agencies should join in a cooperative effort to expand recreational opportunities through programs of acquisition, development, and maintenance of waterfront areas.

6. Semi-public water-dependent recreational facilities (e.g., private beach clubs, yacht clubs, etc.) should be permitted and recognized as providing access to the water for a segment of the population of Mercer Island and should be recognized as providing a vital part of the island's recreational facilities.

7. Every opportunity should be taken to acquire private recreational facilities if they are likely to be developed for other than recreational purposes.

8. Recreational shoreline activities adjacent to residential uses are not to constitute a public nuisance.

RECOMMENDATIONS:

1. The Mercer Island Park and Open Space Plan should be coordinated with appropriate, adopted regional plans.

2. Early efforts should be made to suitably develop presently held public shoreline for water-dependent public recreational uses and open space.

3. Cooperation between the City of Mercer Island and neighborhoods should be continued in the
— planning and development of small neighborhood parks and street ends.

4. Mercer Island should cooperate with other governmental agencies to undertake studies to determine the optimum level of boating activity on Lake Washington.

5. Rental or provision of small, non-motorized water craft and water related recreational equipment should be made available at several waterfront parks when feasible.

6. Small non-motorized water craft are nondestructive to the shoreline environment and such boating activity should be shown preference by policies governing waterfront recreation facilities.

7. The designation of underwater areas for skin or scuba diving should be considered.

8. Interest in fishing for bass, perch, crappie, and other under-utilized species should be stimulated through community education.

9. Procedures should be developed for real estate agencies to notify public agencies when waterfront property is available for purchase.

RESIDENTIAL ELEMENT

Residential development presently accounts for over 85% of Mercer Island’s wetland area. Single-family dwellings comprise the majority of this use with Shorewood Apartments being the only multi-family use. The Shoreline Management Act specifically excludes individual homes in the permit process, but the Act does not exclude other types of residential development, such as multi-family structures or residential subdivisions. Inasmuch as the Act encourages the inclusion of elements deemed sufficiently important or necessary, although not specifically named therein, the Residential Element is included herein.

Present residential zoning on Mercer Island’s shoreline is for single family dwellings, residential uses, and conditional uses that are complementary to the single family environment, such as public parks, private recreational areas, retirement homes located on properties used primarily for a place of worship, and noncommercial recreational areas. It should be noted that some of the shoreline is not yet developed as intensely as it could be under existing zoning. Several large shoreline properties now used by one family could be subdivided to allow from one to three additional residences.

GOAL

Existing residential uses are to be recognized, and new residential construction will be subject to certain limitations where applicable.

POLICIES
1. Existing single-family residential uses will be protected. New construction or modifications shall be allowed within the framework of the policies in this document and City Ordinance.

2. New residential uses over water will not be permitted.

3. In single-family development developments within the shoreline, the water’s edge should be kept free of buildings other than components required for boat and equipment storage. Such components should be screened by appropriate landscaping. Single-family uses may include fences or other means to minimize trespassing and provide protection.

4. Public access to and along the water’s edge should be encouraged in the design of multi-family structures, subdivisions of five or more lots, and planned unit developments occurring on the shoreline, provided that no private property shall be taken involuntarily without due compensation.

5. Public access does not include the right to enter upon single-family residential property without the permission of the owner.

RECOMMENDATIONS

1. The Mercer Island Planning Department should have information available for shoreline homeowners regarding the enhancement of fish and wildlife habitats, especially at the water’s edge.

2. Consideration should be given to revising the Mercer Island Zoning Code regarding back yard structures to reflect the intent of Policy No. 2. Boat houses on the water’s edge should be considered as an alternative to, not in addition to, a boat moorage.

3. The Planning Commission should consider actions to clarify the City Zoning Code to provide for a minimum twenty-five (25) foot setback from the water’s edge for all primary residential structures and appropriate accessory structures.

ECONOMIC DEVELOPMENT ELEMENT

Economic development of the shorelines of Mercer Island is essentially non-existent. Such shorelines and associated wetlands, being zoned single-family and multi-family residential, preclude economic development other than that associated with recreation. Thus, zoning and the Comprehensive Plan do not allow for economic development on the shoreline of Mercer Island.

GOAL

Existing economic uses and activities on the shorelines of Mercer Island are to be recognized. Economic uses or activities that are not dependent upon a Mercer Island Shoreline location are to be discouraged.
POLICIES

1. Shoreline economic uses and activities on Lake Washington should locate where commercial or industrial areas exist.

2. Economic uses and activities which do not depend on a Mercer Island shoreline location shall not be permitted.

3. Drilling for oil or gas and deep or surface mining for minerals is prohibited in the shoreline areas of Mercer Island.

CIRCULATION ELEMENT

Lake Washington is a 22,139 acre body of water located in the midst of an urban area. An extensive network of transportation routes exists around and across the Lake. Although transportation facilities were developed in response to projected demands, these facilities have in turn helped generate additional transportation needs. For example, construction of the Lake Washington bridges has permitted the eastern portion of the region to change from a low density, summer home area to a higher density, suburban/commercial area. This increase in activity has resulted in suggestions for third and fourth bridges crossing the Lake. Lake Washington itself is a navigable body of water and is connected to Puget Sound by a system of canals and locks. Although some commercial navigation does occur, most of the boating activities in Lake Washington are recreational in nature. Seaplane activity is also present on the Lake, and three airfields are located on the shoreline. The automobile, however, is the predominant means of transportation to, from, around and across the Lake. Our heavy reliance on the automobile has contributed to problems in air quality, fuel supply and traffic congestion. In the long-term, urban areas should look toward providing alternatives to the automobile as the primary means of transportation.

Principal transportation routes on Mercer Island include Inter-State 90, a highway that crosses Lake Washington via Mercer Island and two connecting bridges, and a series of arterial roads that follow the shoreline around the Island a short distance inland. Thus, shoreline-related roads form an important element of principal transportation routes on the Island. In addition, numerous lateral roads connect the shoreline following arterials with properties along the water’s edge, and frequently provide public access to the lake through developed and undeveloped street ends as well as visual access to the lake.

A rudimentary system of pedestrian and bicycle ways has gradually developed along portions of the shoreline following arterials; more definitive development of such ways is planned via the City’s Pedestrian and Bicycle Facility Plan. Metro buses provide important modes of on-Island transportation as well as access to neighboring municipalities and employment centers. Other forms of transportation are non-existent, except for privately owned boats and a few seaplanes along the shore.
GOAL

A balanced transportation system for moving people and goods is to be encouraged within existing corridors.

POLICIES

1. Develop efficient circulation systems in a manner that assures the safe movement of people and goods while minimizing adverse effects on shoreline use, developments and shoreline ecological functions.
2. Provide and/or enhance physical and visual public access to shorelines along public roads in accordance with the public access goals.
3. Encourage shoreline circulation systems that provide alternative routes and modes of travel.
4. Roadways serving shoreline areas should be developed principally as scenic avenues rather than major arterials.
5. Public transportation should be provided to facilitate access to recreation areas on the shoreline.
6. Pedestrian and bicycle pathways, including provisions for maintenance, operation and security, should be developed around and across the Lake, consistent with private property rights.
7. Access points to and along the shoreline should be linked by pedestrian and bicycle pathways developed as close to the water’s edge as reasonable.
8. Pedestrian and bicycle pathways should be included in new or expanded bridges.
9. Pedestrian and bicycle pathways should be included in publicly financed transportation systems or rights-of-way, consistent with public interest and safety.
10. Provisions for METRO Public Transit should be implemented in transportation facilities crossing Mercer Island.
11. No new regional vehicular traffic corridors should be opened across Mercer Island’s shoreline.
   a. The width of the I-90 corridor shall be limited to that approved by the City of Mercer Island as stated in Mercer Island Resolution 595 adopted September 24, 1973.
   b. Future regional requirements for moving people through Mercer Island’s shorelines shall be limited to public mass transit systems constructed within the approved I-90 corridor.
12. Commercial aircraft facilities on the shoreline should not be permitted.
7. Moorage, storage, servicing and operation facilities for ocean-going or commercial ships and barges should not be permitted on the shoreline.

8. Proposals for additional transportation across Lake Washington should consider alternative modes above, on, or below the surface of the Lake.

9. Cross-lake transportation facilities must be designed to minimize the increase in noise, air or water pollution above existing levels and, in addition, must reduce to the maximum extent, similar impacts from existing facilities via upgrading and improvement.

RECOMMENDATIONS

1. Mercer Island should cooperate with Metro to coordinate public transportation routes with public access points along the shoreline.

2. Mercer Island should coordinate with King County and neighboring communities in the implementation of its Trails Plan when feasible.

3. The connection of upland trails on the Island to the shoreline activity nodes and pedestrian and bicycle pathways, along the Mercer Ways, should be encouraged and developed.

4. To assist in developing pedestrian and bicycle pathways, easements along rights-of-way should be obtained and incentives should be offered to property owners for utilizing setback areas.

5. Mercer Island and other governmental agencies should consider using waterborne modes of transporting commuters and sightseers in a manner compatible with environmental quality and recreational activity. Such considerations should include terminals and connections.

COMPONENTS

Lake Washington’s shoreline has been recognized as a “valuable and fragile resource” by the Shoreline Management Act of 1971. The extent and the desirability of man-made modifications to these shorelines has not yet been determined. Although several studies relative to this issue have been made, are being conducted, and are envisioned, it is unlikely that any conclusive evidence will be available in the near future.

In instances where the literal interpretation of the policies in the Components Element create a demonstrated hardship, unique to an individual property, relief may be sought through the variance process as delineated in the Variance and Conditional Uses Section, pages 38 and 39.

POLICIES

Activities, Conservation, Public Access, NOTE: The policies set forth within the following Elements—Shoreline Uses and Components, are to apply to all uses and activities contained within this document. The policies under this heading are to apply to all components.
1. Components in or near the water should not be constructed from materials which have significant adverse physical or chemical effects on water quality, vegetation, fish and/or wildlife.

2. Components should be discouraged in unique or fragile areas, unless it can be shown that measures can be taken to adequately mitigate all related adverse impacts.

3. Components should be designed to permit normal circulation of water, sediments, fish and other aquatic life in and along the shoreline area.

4. High rise structures should be prohibited on the shoreline.

5. Shoreline low-rise development should provide substantial grade level views of the water from public shoreline roads running generally parallel to the water’s edge.

6. Enclosed overwater structures should not be allowed except when overriding considerations of the public interest are served. This would not preclude the use of covered, unenclosed moorage’s.

7. Substantial repairs or alterations to nonconforming structures should be in conformance with the policies contained herein.

8. Non-conforming shoreline structures which receive little use and/or are in a general state of disrepair should be abated within a reasonable period of time.

RECOMMENDATIONS:

1. The Component Section of this document should be reviewed and modified as necessary at the completion of the research program being undertaken by the cooperative Fishery Unit at the University of Washington, and any other relevant studies.

2. Site planning should include setbacks from the shoreline. Landscaping should also be considered as a method of retaining a sense of nature in developed shoreline areas. Retention of trees and other natural vegetation should be encouraged where possible, particularly in those areas in or adjacent to marshes, wetlands, or other areas of ecological and environmental significance. (Note: all site planning, landscaping, and development for non-single family uses is subject to review by the Design Commission under Ordinance No. 297 and the Design Commission Guidelines.)

LANDFILL AND DREDGING

Landfill is usually contemplated in locations where the water is shallow and where rooted vegetation often occurs. In their natural condition these same areas provide suitable habitat for
fish and wildlife feeding, breeding and shelter. Biologically the shallow vegetation areas tend to be highly productive portions of the Lake. For these reasons governmental agencies and scientific experts have generally taken a stand against landfill.

In most cases when dredging is done it also occurs in shallow areas and may disturb the environment in the following ways: 1) temporary reduction of water clarity from suspended sediments, 2) losses in aquatic plants and animals by direct removal or from the sedimentation of suspended materials, 3) alteration in the nutrient and oxygen levels of the water column, and 4) suspension of toxic materials from the sediments into the water column.

Mercer Island has some uneven shorelines due to the historically varying degrees of control over filling and bulkheading beyond the ordinary high water line. In some instances, it may be appropriate to bulkhead and do minor landfill. These instances may include, but not be limited to, provision of protection of slide prone areas where necessary and to add to or repair failing bulkheads. These and other unusual situations in which the literal interpretation of the Shorelines Master Program, Guidelines or Mercer Island Goals and Policies creates a demonstrated hardship can be addressed through variance procedures. (Note: See Variance and Conditional Uses Section)

POLICIES

1. Fills shall be located, designed, and constructed to protect shoreline ecological functions and ecosystem-wide processes, including channel migration.
2. Fills waterward of the ordinary high-water mark shall be allowed only when necessary to support: water-dependent use, public access, cleanup and disposal of contaminated sediments as part of an interagency environmental clean-up plan, disposal of dredged material considered suitable under, and conducted in accordance with the Dredged Material Management Program of the Department of Natural Resources, 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, mitigation action, environmental restoration, beach nourishment or enhancement project. Fills waterward of the ordinary high-water mark for any use except ecological restoration should require a conditional use permit.
3. Dredging and dredge material disposal shall be done in a manner which avoids or minimizes significant ecological impacts and impacts which cannot be avoided should be mitigated in a manner that assures no net loss of shoreline ecological functions.
4. New development should be sited and designed to avoid or, if that is not possible, to minimize the need for new and maintenance dredging. Dredging for the purpose of establishing, expanding, or relocating or reconfiguring navigation channels and basins should be allowed where necessary for assuring safe and efficient accommodation of existing navigational uses and then only when significant ecological impacts are minimized and when mitigation is provided. Maintenance dredging of established navigation channels and basins should be restricted to maintaining previously dredged and/or existing authorized location, depth, and width.
5. Dredging waterward of the ordinary high-water mark for the primary purpose of obtaining fill material shall not be allowed, except when the material is necessary for the
restoration of ecological functions. When allowed, the site where the fill is to be placed must be located waterward of the ordinary high-water mark. The project must be either associated with a MTCA or CERCLA habitat restoration project or, if approved through a shoreline conditional use permit, any other significant habitat enhancement project.

Landfill and dredging should be prohibited in unique or fragile areas.

2. Landfill or dredging should not be permitted except in the following cases, and even then should generally be discouraged.
   a. Landfill or dredging may be permitted where necessary for the development and maintenance of public shoreline parks.
   b. Landfill or dredging may be permitted where necessary to improve water quality where no other possible alternatives are available.
   c. Replenishing sand on public and private community beaches should be allowed.
   d. Landfill or dredging may be permitted where additional public access is provided, and/or where there is anticipated to be a significant improvement to fish or wildlife habitat; provided there is no major reduction upon the surface waters of the Lake.

3. Dredging spoils should be deposited on approved dumping sites. Dumping sites should not be allowed in the Lake or in unique or fragile areas.

4. Dredging should be permitted to maintain water flow, navigability, and water depth in cases of water course siltation.

5. Dredging for the purpose of obtaining fill or construction material should be prohibited.

RECOMMENDATIONS

1. When reviewing applications for landfill intended to improve water quality, Mercer Island Planning Department should consult with appropriate governmental agencies to determine the necessity and proper location for such fill.

2. Appropriate governmental agencies and local jurisdictions should approve funding and/or personnel to undertake a short term study on the biological impacts of dredging and landfills and to devise suitable criteria or guidelines for such activities.

SHORELINE PROTECTIVE STRUCTURES STABILIZATION

Shoreline protective structures are used to diminish the destructive forces of waves and currents.
on beaches, to protect anchorages, to encourage the deposition of littoral materials or, in some cases, for purposes of convenience of appearance. Although these structures protect the backshore, they may also encourage scouring or erosion on adjacent shoreline or submerged land.

On Mercer Island individual situations and related problems may dictate that the repair of bulkheads or placing of new ones in order to control slides may occur very near to, rather than precisely at, the ordinary high water line. Such minor deviations should remain within the province of the City Planning Department discretion. However, in any other instances where significant changes occur to the water side of the ordinary high water line, these can be addressed through variance procedures.

**BULKHEADS**

The purpose of a bulkhead is to stabilize land at the water's edge to prevent erosion. When structures reflect rather than absorb wave energy, the destructive forces are largely redirected. In some cases, bulkheads transmit wave energy downward, thereby eroding the beach at the base of the structure. Sloping, permeable structures, on the other hand, absorb wave energy, reduce wave run-up and minimize scouring action at the base. In cases where bulkheading is permitted, scientific information suggests a rock riprap design should be preferred. The cracks and openings in such a structure afford suitable habitats for certain forms of aquatic life.

At times bulkheads are built out into the water in conjunction with landfill for the purpose of creating new dry land areas. However, this is being discouraged at all levels of jurisdiction concerned with shorelines.

The following policies address shoreline stabilization.

**POLICIES**

1. Construction or repair of bulkheads should not extend into the Lake beyond the existing high water line, except as approved by a variance or in the case of approved landfill.

2. The use of vegetation for stabilizing the water's edge from erosion should be encouraged with the use of bulkheads.

3. Bulkheads at the water's edge should be designed to minimize the transmission of wave energy to other properties.

4. Bulkheads and landfill may be permitted to restore lands lost to erosion within one year of the date that erosion occurred. A one year extension for a reasonable cause may be granted by the local jurisdiction. The applicant is responsible for demonstrating the severity and extent of such erosion.

5. Breakwaters should generally be discouraged. In those limited instances where breakwaters are permitted, a floating design is preferred unless such a design is not technically or
6. There should be no construction of jetties, groins, or other protective structures unless there is a demonstrated need for such structures and no preferable alternatives are available.

RECOMMENDATIONS

1. Appropriate governmental agencies should be encouraged to undertake a study on the short-term and long-term effects of breakwaters, bulkheads, and other shoreline protective structures in order to develop suitable criteria or guidelines for their construction. It is recommended that bulkheads be of sloping rock riprap design.

3. It is recommended that policy be developed on the issuance of variances for bulkheads to cover such instances as those in which lands are lost to erosion where a suitable building site does not exist. Further, bulkheads or landfills may be permitted out to a line connecting existing immediately adjoining neighboring bulkheads through the variance procedures.

1. Non-structural stabilization measures are preferred over “soft” structural measures. Soft structural measures are preferred over hard structural measures.

PIERS AND MOORAGES

The following policies address piers and moorages. A majority of the single family properties on the shoreline have piers and/or moorages. The only multi-family area, Shorewood, also has piers along its waterfront area. These waterfront components provide desirable facilities to the property owners but may, at some future date, if totally uncontrolled, result in some undesirable consequences for the Lake and the community. Further, the Shoreline Management Act directs the Local Master Program to address itself to this possibility. Therefore, it is appropriate to consider additional piers and/or moorages in light of future as well as existing uses and patterns and further, to provide general guidelines and controls for issuing permits and reviewing new development proposals.

Existing City zoning codes contain sections on pier length and setbacks as well as moorages. These should be reviewed in light of the recommendations contained in this Master Program. In addition, any relevant data generated from local and regional studies on piers and moorages should be considered in the periodic updating of the Mercer Island Master Program.

POLICIES

1. New piers and docks shall be allowed only for water-dependent uses or public access. Piers and docks associated with single family residences are considered a water-dependent use.

2. Piers and docks shall be designed and constructed to avoid or, if that is not possible, to minimize and mitigate the impacts to ecological functions.
Construction of new or expanded piers should generally be regulated, and the following limitations shall apply:

Piers should be allowed only for moorage of pleasure craft, for water-dependent recreation, for water-dependent economic activities, for utility maintenance, or for required emergency vessels.

Temporary moorages may be permitted for vessels used in the construction of shoreline facilities.

Adjoining waterfront property owners should be encouraged to share a common pier.

The size and extent of a pier should not exceed that which is required for the water-dependent purposes for which it was constructed.

In multi-family or condominium developments, the ratio of moorage berths to residential units should be equal to or some fraction less than one.

2. The use of buoys for moorage should be considered as an alternative to the construction of piers for this purpose. Such buoys should be placed as close to shore as possible in order to minimize hazards to navigation.

3. Exterior lighting utilized in conjunction with piers and waterfront structures should be directed away from adjacent property and the water wherever offensive.

RECOMMENDATIONS

1. Mercer Island should establish uniform standards governing the design of piers including criteria for length, width, location, density and floating versus pile construction. It should be noted that floating piers can be rearranged, removed or relocated as needs or regulations change.

2. Consideration should be given to revising Ordinance 15, the Zoning Code, to
reduce setbacks along property lines for piers from ten (10) feet to zero (0) feet.

3. Regulation of spacing between piers and total number of piers in a designated distance should be considered.

4. Study and consideration should be given to revising Ordinance 15, the Zoning Code, as it prescribes dock length at 100 feet. Dock length should be related to intended use and water depth which may be greater or less than that prescribed by the Code.

UTILITIES

The following policies address utilities. Utilities are services which produce or carry electric power, gas, sewage, water, communications or oil products. The potential exists for combining some of these uses with other shoreline uses, including public access.

Although the diversion of sewage away from Lake Washington has substantially improved water quality in the Lake, storm sewers continue to affect water quality. As rain and other waters pass over impervious land surfaces, these waters pick up large quantities of sediments, oil, litter, heat and other contaminants. The impact of surface runoff from construction sites is of particular concern. Excessive quantities of suspended solids and oil are carried away and may significantly affect the quality of the receiving waters and associated aquatic life.

It should be noted that the Federal Water Pollution Control Act of 1972 may apply to surface runoff if there is a recognizable source of contamination (for example, business districts, parking lots, major land developments, and others). But the issue is complicated by the fact that much contamination comes from numerous sources which are small and often very difficult to identify.

POLICIES

1. Utility facilities should 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.

2. Transmission facilities for the conveyance of services, such as power lines, cables, and pipelines, shall be located outside of the shoreline area where feasible, and when necessarily located within the shoreline area, shall assure no net loss of shoreline ecological functions.

3. Utilities should be located in existing rights of way and corridors whenever possible.

4. Whenever possible, consolidation of utilities should be encouraged within rights of way.
2. These facilities should be placed underground, except where it is clearly technically and economically not feasible.

3. After completion of installation or maintenance of these facilities, the shoreline area should be restored to its pre-project condition. If the previous condition is identified as being undesirable, then landscaping and other improvements should be undertaken.

4. In all new developments, the developer should install means to control the entry of contaminants into the Lake within acceptable water quality standards.

5. Prior to construction of major new outfalls, water circulation studies should be conducted to determine the best shoreline location for such facilities.

6. Major shoreline outfalls should be designed and constructed to minimize damage to the lake's edge and be placed below the surface of the Lake where feasible.

RECOMMENDATIONS

1. The proliferation of impervious surfaces in the drainage basins serving Lake Washington should be kept to a minimum.

2. Whenever possible contaminants should be removed from surface runoff at the source of contamination. Methods of removing contaminants include oil skimmers, sediment traps, and street sweeping.

3. When contemplating the construction of a major new outfall, Metro and other appropriate governmental agencies should be consulted regarding the appropriate location and design for the outfall.

PARKING

The following policies address parking. Whether for work or leisure time, many people reach the shoreline by automobile. The use of shoreline areas for parking, however, precludes other more appropriate uses of the land. Since landfill as a means of increasing dry land areas is to be discouraged, the storage space for automobiles is limited. Thus, the number of required parking spaces for new construction can severely restrict the density in many developments.

The use of the automobiles as the primary mode of transportation is expected to continue. Any reliable public transportation system may take years to develop. The problem of the automobile as a major waterfront land user may increase as the demand for various waterfront uses and activities increases.

POLICIES
Parking facilities for motor vehicles or boat trailers should be minimized in the shoreline area.

a. Parking facilities should not be permitted along the water’s edge.

b. Upland parking facilities for shoreline activities should provide adequate pedestrian access to the shoreline.

c. Upland parking facilities should be designed and landscaped to minimize adverse impacts on the shoreline and adjacent lands.

d. Parking facilities shall be planned, located and designed where they will have the least possible adverse effect on unique or fragile shoreline features, and will not result in a net loss of shoreline ecological functions or adversely impact existing or planned water-dependent uses.

e. Parking facilities in shorelines shall minimize the environmental and visual impacts.

BOAT LAUNCHING FACILITIES

The following policies address boat launching facilities. Boating is a popular form of recreation in the Lake Washington area, and demand for boating is expected to increase as the population in the region grows. The use of boat launching facilities permits dry land storage of vessels and reduces the need for marinas and piers. At present there are 41 public boat launching ramps on Lake Washington; however, none exist on Mercer Island at present. The proposed Comprehensive Plan envisions two areas for boat launching and water-related recreation under the future I-90 bridge approaches.

POLICIES

1. Regional boat launching facilities should be provided which are adequate for the needs and carrying capacity of the Lake subject to other policies herein governing land and water use.

2. Boat launching facilities should not be constructed in unique and fragile areas.

3. Boat launching facilities should be separated from swimming areas wherever possible.

RECOMMENDATIONS

1. Mercer Island should consider the feasibility of developing one or two of their shoreline street ends for car-top boat launching.

2. Mercer Island and appropriate governmental agencies should join together in a
Lake-wide study which would optimize the number of boat launching facilities on Lake Washington.

3. Boat launching ramps should only be provided after provisions for adequate parking, screening, and landscaping have been made.

SIGNS

Signs are public displays whose purpose is to provide information, direction, identification and advertising. Mercer Island has developed an Ordinance (No. 297) creating a Design Commission. The Ordinance enjoins the Commission to control all signs within the public and private sectors (except traffic control), to assure uniform application to achieve a desirable, balanced environment. Form, proportion, color, material, surface treatment, and position will be considered in each case. The criteria used for Design Commission sign review are the interim sign guidelines developed as a part of the Mercer Island Design Guidelines.

POLICIES

1. Off-premise and non-appurtenant signs are prohibited on the shoreline.

2. Illuminated or free-standing signs or any signs extending above roof lines should be prohibited on the shoreline except for required navigational aids.

3. Advertising signs, when permitted, and approved by the Design Commission, should be limited to areas of high-intensity land use, and should be stationary, non-blinking, and a size commensurate with the structure to which it is fixed.

4. Signs advertising the sale of property are not prohibited provided they do not exceed 6 sq. ft. (e.g.: 2’ x 3’), and are limited to one street side and one water side sign.

APPENDIX 'A'

Mercer Island’s Comprehensive Plan and Zoning Ordinance preclude economic uses of shorelines such as those permitted in Business, Planned Business, or Commercial-Office zones and community values have clearly shown an intent to perpetuate this land use pattern. However, the Regional Master Program, and, in particular, the Economic Element thereof, addresses potential development that may have a significant impact on the waters of Lake Washington and the shoreline. For these reasons the Regional Economic Element is contained herein to indicate Mercer Island’s concern for major developments that may affect the quality of Lake Washington and its tributaries.
SHORELINE CUMULATIVE IMPACTS ANALYSIS

for the City of Mercer Island
Shoreline Master Program

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SHORELINE CUMULATIVE IMPACTS ANALYSIS
FOR CITY OF MERCER ISLAND SHORELINE MASTER PROGRAM

1 INTRODUCTION

The Shoreline Management Act guidelines require local shoreline master programs to regulate new development to “achieve no net loss of ecological function.” The guidelines (WAC 173-26-186(8)(d)) state that, “To ensure no net loss of ecological functions and protection of other shoreline functions and/or uses, master programs shall contain policies, programs, and regulations that address adverse cumulative impacts and fairly allocate the burden of addressing cumulative impacts.”

The guidelines further elaborate on the concept of net loss as follows:

“When based on the inventory and analysis requirements and completed consistent with the specific provisions of these guidelines, the master program should ensure that development will be protective of ecological functions necessary to sustain existing shoreline natural resources and meet the standard. The concept of “net” as used herein, recognizes that any development has potential or actual, short-term or long-term impacts and that through application of appropriate development standards and employment of mitigation measures in accordance with the mitigation sequence, those impacts will be addressed in a manner necessary to assure that the end result will not diminish the shoreline resources and values as they currently exist. Where uses or development that impact ecological functions are necessary to achieve other objectives of RCW 90.58.020, master program provisions shall, to the greatest extent feasible, protect existing ecological functions and avoid new impacts to habitat and ecological functions before implementing other measures designed to achieve no net loss of ecological functions.” [WAC 173-206-201(2)(c)]

In short, updated SMPs shall contain goals, policies and regulations that prevent degradation of ecological functions relative to the existing conditions as documented in that jurisdiction’s characterization and analysis report. For those projects that result in degradation of ecological functions, the required mitigation must return the resultant ecological function back to the baseline. This is illustrated in Figure 1 below. The jurisdiction must be able to demonstrate that it has accomplished that goal through an
analysis of cumulative impacts that might occur through implementation of the updated SMP. Evaluation of such cumulative impacts should consider:

(i) current circumstances affecting the shorelines and relevant natural processes;
(ii) reasonably foreseeable future development and use of the shoreline; and
(iii) beneficial effects of any established regulatory programs under other local, state, and federal laws.”

**SMP Updates: Achieving No Net Loss of Ecological Function**

![Diagram](image)

Source: Department of Ecology

Figure 1. Department of Ecology Illustration to Achieve “no net loss”

As outlined in the Shoreline Restoration Plan prepared as part of this SMP update, the SMA also seeks to restore ecological functions in degraded shorelines. This cannot be required by the SMP at a project level, but Section 173-26-201(2)(f) of the Guidelines says: “master programs shall include goals and policies that provide for restoration of such impaired ecological functions.” See the Shoreline Restoration Plan for additional discussion of SMP policies and other programs and activities in Mercer Island that
contribute to the long-term restoration of ecological functions relative to the baseline condition.

The following information and analysis provided in this report provides an overview by proposed environment designation of existing conditions, anticipated development, relevant Shoreline Master Program (SMP) and other regulatory provisions, and the expected net impact on ecological function.

2 EXISTING CONDITIONS

The following summary of existing conditions is based on the Shoreline Analysis Report (The Watershed Company 2009a) and additional analysis needed to perform this assessment. As per the Shoreline Analysis Report, this discussion has been divided by proposed shoreline environment designations. As shown in Appendix A, these include Urban Residential, and Urban Park designations. The Shoreline Analysis Report includes an in-depth discussion of the topics below, as well as information about transportation, stormwater and wastewater utilities, impervious surfaces, and historical/archaeological sites, among others.

2.1 Urban Residential Environment

Approximately 90.4 percent of the City’s upland shoreline jurisdiction is in the Urban Residential environment.

2.1.1 Existing Land Use

The entire shoreline within the Urban Residential environment is zoned single-family residential (R-8.4, R-9.6, R-12, or R-15), while Comprehensive Plan designations include single-family residential and multi-family residential (R-8.4, R-9.6, R-12, R-15, and MF-3). Land uses are predominantly single-family residential, with one multi-family use, Covenant Shores (senior retirement facility), located along the north shore of the island. Mercerwood Shore Club and Mercer Island Beach Club, two private swimming, fitness, and tennis clubs, are also included in the Urban Residential environment designation.

In general, the land area designated as Urban Residential is fully developed. Out of 945 existing lots, only 57 (roughly 6% percent) are listed as vacant or undeveloped. Of these lots, only 10 have development potential, based on City G.I.S. analysis. Expansion, redevelopment or alteration to existing single-family units will occur over time, but the majority of this environment will remain unchanged. Since single-family residences are considered to be a preferred use along the shoreline, and thus, very few conflicts are anticipated.
Under the current SMP, the standard residential structure setback is 25 feet from the ordinary high water mark (OHWM). The actual median setback in the Urban Residential environment is 66.4 feet. Table 1 presents data on existing residential structure setbacks on parcels within the Shoreline Residential environment. As Table 1 shows, 44 (6.2%) of the 713 waterfront parcels are listed as vacant. A total of 126 (17.7%) lots have residential structures located less than 25 feet (non-conforming structures) from the OHWM. Of the remaining developed lots, 587 (82.3%) have residential structures greater than 25 feet from OHWM, 413 (58.2%) have residential structures greater than 50 feet from OHWM, 291 (40.8%) have residential structures greater than 75 feet from OHWM, and 206 (28.9%) have residential structures greater than 100 feet from OHWM.

While all areas of the City’s shoreline contain a wide variety of existing setbacks, it is fairly evident that the western shoreline contains a higher percentage of properties with smaller setbacks (those less than 50 feet), including quite a few with non-conforming structures (less than 25 feet). Conversely, areas along the north and eastern shoreline have a higher percentage of lots with structures greater than 50 feet from shore.

Table 1. Existing shoreline residential structure setback data for the Urban Residential environment.

<table>
<thead>
<tr>
<th>Measure of residential structure setback</th>
<th>Number of Waterfront Parcels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Waterfront Parcels</td>
<td>713</td>
</tr>
<tr>
<td>Vacant</td>
<td>44</td>
</tr>
<tr>
<td>Structures &lt; 25 ft from OHWM (non-conforming)</td>
<td>126</td>
</tr>
<tr>
<td>Structures ≥ 25 ft. from OHWM</td>
<td>587</td>
</tr>
<tr>
<td>≥ 50 ft. from OHWM</td>
<td>415</td>
</tr>
<tr>
<td>≥ 75 ft. from OHWM</td>
<td>291</td>
</tr>
<tr>
<td>≥ 100 ft. from OHWM</td>
<td>206</td>
</tr>
</tbody>
</table>

2.1.2 Parks and Open Space/Public Access
There are no formal public parks or open spaces within the Shoreline Residential environment.

2.1.3 Shoreline Modifications
The Urban Residential environment is heavily modified with just over 82 percent of the shoreline armored at or near the OHWM (Table 2) (see Figures 7.1-7.14 in the Shoreline Analysis Report) and a pier density of approximately 47 piers per mile (Table 3). This compares to 71 percent armored and 36 piers per mile for the entire Lake Washington shoreline (Toft 2001). Thus, for Mercer Island’s Urban Residential environment, pier
density is much higher and shoreline armoring is slightly higher than the lake-wide figures.

Table 2. Shoreline armoring in the Urban Residential environment.

<table>
<thead>
<tr>
<th>Shoreline Condition (feet / % of shoreline)</th>
<th>Armored</th>
<th>Natural / Semi-Natural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>57,934 (82%)</td>
<td>12,444 (18%)</td>
</tr>
</tbody>
</table>

1 “Armored” shorelines encompass angular or rounded granite or basalt boulder, concrete, and wood armoring types.

2 “Natural/Semi-Natural” shorelines captures those areas that are not solidly armored at the ordinary high water line; they may include some scattered boulders or woody debris at or near the ordinary high water line.

Table 3. In-water structures in the Urban Residential environment.

<table>
<thead>
<tr>
<th>Total Number of Piers</th>
<th>Average Number of Piers per Mile</th>
<th>Total Overwater Cover (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>678</td>
<td>47</td>
<td>532,008</td>
</tr>
</tbody>
</table>

It is not uncommon around Lake Washington for some historic fills to be associated with the original bulkhead construction, usually to create a more level or larger yard. Most of these shoreline fills occurred at the time that the lake elevation was lowered during construction of the Hiram Chittenden Locks.

2.2 Urban Park

Approximately 9.6 percent of the City’s shoreline jurisdiction is in the Urban Park environment and includes Luther Burbank Park, which has been re-designated from Conservancy to Urban Park under this update of the Shoreline Master Program. The following data includes Luther Burbank Park in the Urban Park environment.

2.2.1 Existing Land Use

As identified by the City’s Comprehensive Plan, the Urban Park environment is comprised of regional, community, neighborhood, and mini- parks. The entire shoreline within the Urban Park environment is zoned single-family residential (R-8.4, R-9.6, R-12, and R-15), while the Comprehensive Plan zones eight of the parks as “Park”, including Luther Burbank Park.
As with the other environment designations, the standard structure setback under the current SMP is 25 feet from OHWM. The actual median setback in the Urban Park environment is 115 feet, and the mean is 82 feet, based the four park properties that have structures.

2.2.2 Parks and Open Space/Public Access

The City parks discussed below provide public access to Lake Washington, as well as provide opportunities for water-dependent, water-related, and water-enjoyment recreational uses.

- **Clarke Beach** is an 8.8-acre grassy park with waterfront access, a swimming area, diving board, public docks, fishing access and picnicking and barbeque areas. It also provides a Lakes-to-Locks Water Trail Launch and Landing Site.

- **Groveland Beach** is a 3.2-acre park with waterfront access, a swimming area, fishing access, public dock, playground, and picnicking and barbeque areas. This park also provides a Lakes-to-Locks Water Trail Launch and Landing Site.

- **Slater Park** is a half-acre park with waterfront access, a swimming area, and a picnic area.

- **Mercer Island Boat Launch** is a public boat launch located at 3600 East Mercer Way. This park provides a Lakes-to-Locks Water Trail Launch and Landing Site.

- **Park on the Lid** is a 20-acre park that provides visual access to the water, as well as a variety of recreational opportunities including: tennis, baseball/softball, soccer, basketball, walking trails, playgrounds, and picnic areas.

- **Calkins Landing** is a waterfront street-end park with a non-guarded public beach and picnicking space. It also provides a Lakes-to-Locks Water Trail Launch and Landing Site.

- **Franklin Landing** is a street-end park with waterfront access and provides a Lakes-to-Locks Water Trail Launch and Landing Site.

- **Forest Landing** is a street-end park with waterfront access.

- **Fruitland Landing** is a street-end park that provides a Lakes-to-Locks Water Trail Launch and Landing Site.

- **Garfield Landing** is a street-end park with waterfront access.

- **Lincoln Landing** is a street-end park with a picnic area that provides a Lakes-to-Locks Water Trail Launch and Landing Site.

- **Luther Burbank Park** is approximately 78 acres in size and provides over three-quarters of a mile of shoreline for public access. A majority of the park has been left undeveloped and contains areas of natural shoreline. The park includes a swimming beach, public boat dock, off-leash dog area, public fishing pier, former
Luther Burbank School brick dormitory, steam plant and dairy ruins, trails and other groomed areas, wetlands, watercourses, and woodlands. A total of 2 parcels make up the shoreline environment within the park.

- **Miller Landing** is a street-end park with waterfront access.
- **Proctor Landing** is a street-end park with waterfront access, fishing access, and a public dock. It also provides a Lakes-to-Locks Water Trail Launch and Landing Site.
- **Roanoke Landing** is a street-end park with waterfront access.
- **77th Avenue SE Landing** is a street-end park with waterfront access.
- **SE 56th Street Landing** is a street-end park that is primarily undeveloped.
- **SE 72nd Street Landing** is a street-end park with waterfront access.
- **South Point** is a street-end park that provides a Lakes-to-Locks Water Trail Launch and Landing Site.

As funding allows, additional street-ends, other City rights-of-way, and other opportunities may also be formally added to the public access system.

### 2.2.3 Shoreline Modifications

The Mercer Island shoreline in the Urban Park environment has been modified with approximately 35 percent of the shoreline armored (Table 4) (see Figures 7.1-7.14 in the Shoreline Analysis Report) at or near the OHWM and a total of approximately 16 piers per mile (Table 5). As expected, pier density along Mercer Island’s Urban Park environment is significantly lower than the lake-wide figures. Shoreline armoring is also significantly lower than the lake-wide average of 71 percent.

<table>
<thead>
<tr>
<th>Shoreline Condition (feet / % of shoreline)</th>
<th>Armored(^1)</th>
<th>Natural / Semi-Natural(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,539 (35%)</td>
<td>4,716 (65%)</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) “Armored” shorelines encompass angular or rounded granite or basalt boulder, concrete, and wood armoring types.

\(^2\) “Natural/Semi-Natural” shorelines captures those areas that are not solidly armored at the ordinary high water line; they may include some scattered boulders or woody debris at or near the ordinary high water line.
Table 5. In-water structures in the Urban Park environment.

<table>
<thead>
<tr>
<th>Total Number of Piers</th>
<th>Average Number of Piers per Mile</th>
<th>Total Overwater Cover (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>16.6</td>
<td>15,861</td>
</tr>
</tbody>
</table>

2.3 Biological Resources and Critical Areas

The shoreline zone itself is generally deficient in high-quality biological resources and critical areas, primarily because of the extensive residential development and its associated shoreline modifications. The highest-functioning shoreline area is within Luther Burbank Park, which has two distinct shoreline associate wetlands and a substantial amount of shoreline vegetation. Many of the parks and street-ends in the Urban Park environment have the potential for the improvement of ecological functions.

Geologically hazardous areas encumber almost the entire island. This is likely due to the steep topography of the island, as well as the crossing of the Seattle Fault along the I-90 corridor. As mentioned above, two wetlands have been inventoried within shoreline jurisdiction, both of which are located in Luther Burbank Park. There are a number of streams in Mercer Island that discharge into Lake Washington. According to a stream inventory completed by Adolfson Associates, Inc. (Adolfson Associates 2005), there are 37 perennial streams, 3 of which have documented fish use and an additional 12 which may have potential for fish use near their mouths at Lake Washington. These streams that are known to support fish use may include chinook (known juvenile use of the mouths of several streams), coho, and sockeye salmon and cutthroat trout. Many of the smaller tributaries to Lake Washington originate as hillside seeps or springs and flow seasonally or during periods of heavy rains. Many of these smaller systems are piped at some point and discharge directly to Lake Washington via a closed system.

3 ANTICIPATED DEVELOPMENT AND POTENTIAL EFFECT ON FUNCTION

3.1 Patterns of Shoreline Activity

The City reviewed its shoreline permitting records for the past eight years and found 200 issued Shoreline Exemptions and 86 issued Shoreline Substantial Development Permits. Table 6 presents the shoreline permitting history.

<table>
<thead>
<tr>
<th>Year</th>
<th># of Cases</th>
<th>Pier</th>
<th># of Cases</th>
<th>Permit Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Modification/Replacement</td>
<td>New</td>
<td>Bulkhead Modification</td>
</tr>
<tr>
<td>2000</td>
<td>28</td>
<td>13</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2001</td>
<td>42</td>
<td>25</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>2002</td>
<td>43</td>
<td>26</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2003</td>
<td>43</td>
<td>24</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>2004</td>
<td>24</td>
<td>14</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>2005</td>
<td>28</td>
<td>16</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2006</td>
<td>30</td>
<td>18</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>2007</td>
<td>49</td>
<td>23</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>286</td>
<td>159</td>
<td>12</td>
<td>55</td>
</tr>
</tbody>
</table>

As indicated by the data presented above, new piers are very infrequent, averaging less than two proposals per year. The most commonly proposed shoreline activities are pier modifications/replacements, averaging over 19 proposals per year.

3.2 Residences

With the possible exception of limited additional residential lands being acquired for public open space, land use in the Urban Residential environment is not expected to change over the next 20 years, although some re-builds and substantial remodels are anticipated. As mentioned above, there are only 57 (6%) vacant lots in the Urban Residential environment, 44 of which are listed as vacant waterfront lots. However, only 10 of those lots have any potential for development as the remainder of the vacant lots are either in permanent tracts, easements, public ownership, or simply too small for a single-family use.

Typically, development of vacant lots into residential uses would result in replacement of pervious, vegetated areas with impervious surfaces and a landscape management regime that often includes chemical treatments of lawn and landscaping. These actions can have multiple effects on shoreline ecological functions, including:

1. Increase in surface water runoff due to reduced infiltration area and increased impervious surfaces, which can lead to excessive soil erosion and subsequent in-lake sediment deposition. This can affect the following:
   - **Hydrologic Functions**
     - Storing water and sediment

2. Reduction in ability of site to improve quality of waters passing through the untreated vegetation and healthy soils. This can affect the following:


Hydrologic Functions

*Removing excess nutrients and toxic compounds*

Vegetation Functions

*Water quality improvement*

3. Potential contamination of surface water from chemical and nutrient applications. This can affect the following:

Vegetation Functions

*Water quality improvement*

4. Elimination of upland habitat occupied by wildlife that use riparian areas. This can affect the following:

Habitat Functions

*Physical space and conditions for life history*

*Food production and delivery*

Expansions and remodels of existing residences are likely to occur relatively frequently during the future. Many of these activities would not change the baseline condition of ecological function, although expansions that increase impervious surfaces may occur. Runoff from most expanded residences is clean, however, and water quantity is not an issue in the Lake Washington environment. The significance of impervious surfaces on a lake environment where water quantity is not really a factor is very diminished given the residential uses. Single-family or multi-family homes generally have clean roof and sidewalk runoff, and driveways whether 50 square feet or 5,000 square feet are typically pollution-generating surfaces only to the extent that vehicle-related pollutants are deposited on them. Most single-family homes have between two and four vehicles, regardless of the driveway area and thus the correlation between driveway area and amount of pollution is not strong. However, improperly managed runoff during and post construction could increase erosion, and could cause sediments and pollutants to enter the lake.

As mentioned above, the existing median setback in the Urban Residential environment is 66 feet. The SMP proposes a residential setback of 25 feet. Based on the City’s analysis of redevelopment potential, the resultant median setback in the Shoreline Residential environment would be approximately 59 feet. This reduction in the median setback results in a conversion of a maximum of 22 acres of space between the primary structure and the OHWM to a greater level of development. This conversion number is likely an overestimate, both in area and assumed corresponding function, as primary structures are never as wide as the lot. It also does not factor in that much of that “lost” space is already occupied by decks, paved surfaces, lawn or other improvements that have reduced or eliminated the function of that space. Finally, because of the staggered distribution of lot depths and primary structure locations, some of that space landward of a primary structure currently set back far from the water’s edge may be greatly impacted by activities on shallower adjacent lots where the structure is located closer to the water’s edge.
To address the other less direct losses to shoreline function resulting from reduction in the space between primary structures and their attendant activities and the water’s edge, the SMP contains vegetation requirements within 20 feet of Lake Washington’s ordinary high water mark for new development and redevelopment.

### 3.3 Overwater Structures

Piers can adversely affect ecological functions and habitat in the following ways:

1. Alter patterns of light transmission to the water column, affecting macrophyte growth and altering habitat for and behavior of aquatic organisms, including juvenile salmon. This can affect the following:
   - **Habitat Functions**
   - *Physical space and conditions for life history*
   - *Food production and delivery*

2. Interfere with long-shore movement of sediments, altering substrate composition and development. This can affect the following:
   - **Hydrologic Functions**
   - *Attenuating wave energy*

3. Contribute to contamination of surface water from chemical treatments of structural materials. This can affect the following:
   - **Hydrologic Functions**
   - *Removing excess nutrients and toxic compounds*

4. Pier lighting is known to affect fish movement and predation. This can affect the following:
   - **Habitat Functions**
   - *Physical space and conditions for life*

Overwater structures encompass a variety of uses, from in-water structures, such as fixed-pile piers and floating docks, to moorage covers, such as canopies and boathouses with associated boatlifts. It is difficult to determine exactly how many waterfront properties do not have a pier or pier access, particularly as many piers are located near property lines and thus it is possible that those may be shared with the adjacent property. In total, it is estimated that out of the 713 waterfront residential properties, approximately 60 (8%) parcels do not have a pier.

Given the current rate of new pier proposals, only about 30 new piers are likely over the next 20 years. If all of those properties add a pier, that would represent a 4.2 percent increase in the total number of piers in the Shoreline Residential environment, with a final density of 49 piers per mile.
Under the proposed SMP, new piers will be smaller than piers approved under the current SMP. New and replacement piers will also include light-transmitting decking material, which will reduce the impact of the overwater cover. Nevertheless, if new piers were the only pier-related activity, ecological function would still decline. The decline would be due to an unavoidable net increase in the number of in-water structures and overwater cover that can be minimized but not entirely mitigated.

However, pier repair and pier maintenance activities are more common, and it is anticipated that pier replacement proposals may become even more common as existing piers degrade or do not meet the property owner’s needs in their current configuration or location. Under the proposed SMP, replacement piers are considered new moorage structures and must meet the dimensional criteria for new private piers or be otherwise approved by State and Federal agencies (Washington Department of Fish and Wildlife and the U.S. Army Corps of Engineers). Any pier repair which involves the replacement of more than 40 percent of the pier support piles must also meet the dimensional criteria of new private piers.

A summary of the quantitative analysis is provided below (Table 7, full analysis provided in Appendix B, based on City trends and assumptions. Based on the trends and assumptions made regarding new piers, pier replacement, pier repairs, and pier additions, the total area of effective1 overwater cover would decline by 2.8 percent over a 20-year time period.

**Table 7. Summary of Pier Analysis**

<table>
<thead>
<tr>
<th>Existing Overwater Coverage</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total existing overwater coverage - single-family</td>
<td>683,697</td>
</tr>
<tr>
<td>Total existing overwater coverage - semi-private</td>
<td>15,183</td>
</tr>
<tr>
<td>Total existing overwater coverage - public</td>
<td>15,661</td>
</tr>
<tr>
<td><strong>Total existing overwater coverage (square footage)</strong></td>
<td><strong>714,741</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effective Overwater Coverage in 20 years</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total overwater cover in 20 years - single-family</td>
<td>664,759</td>
</tr>
<tr>
<td>Total overwater cover in 20 years - semi-private</td>
<td>15,010</td>
</tr>
<tr>
<td>Total overwater cover in 20 years - public</td>
<td>14,858</td>
</tr>
<tr>
<td><strong>Total effective overwater coverage in 20 years (square footage)</strong></td>
<td><strong>694,627</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change in Effective Overwater Coverage in 20 years</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net change in overwater cover - single-family</td>
<td>-18,938</td>
</tr>
<tr>
<td>Net change in overwater cover - semi-private</td>
<td>-173</td>
</tr>
<tr>
<td>Net change in overwater cover - public</td>
<td>-1,003</td>
</tr>
<tr>
<td><strong>TOTAL CHANGE IN EFFECTIVE OVERWATER COVER IN 20 YEARS</strong></td>
<td><strong>-20,115</strong></td>
</tr>
<tr>
<td><strong>PERCENTAGE DECREASE IN OVERWATER COVER IN 20 YEARS</strong></td>
<td><strong>-2.8%</strong></td>
</tr>
</tbody>
</table>

1 Note: “Effective” overwater cover is a measure of the actual solid footprint that shades the water, rather than the structure’s total footprint. Use of grated decking with a minimum of 40% open space reduces the adverse impacts of the overwater structure, even though the traditional structure footprint may increase.
The proposed regulations (MICC 19.07.110) have specifically been crafted to avoid and minimize the following specific potential impacts as outlined below:

1. Growth of aquatic vegetation: Overwater cover is minimized through size and height restrictions for new piers restricting size of replacement structures and requiring grated decking (MICC 19.07.110(D)(1) Table B).

2. Sediment movement. Boatlifts are restricted in the nearshore area (MICC 19.07.110(D)(1) Table B)The use of jetties or breakwaters are prohibited in all environments.

3. Chemical contamination: Piers and other structures shall be constructed of materials that will not adversely affect water quality (MICC 19.07.110(D)(3)b)).

3.4 Shoreline Stabilization

Bulkheads typically have the following effects on ecological functions:

1. Reduction in nearshore habitat quality for juvenile salmonids and other aquatic organisms. Specifically, shoreline complexity and emergent vegetation that provides forage and cover may be reduced or eliminated. Elimination of shallow-water habitat may also increase vulnerability of juvenile salmonids to aquatic predators. This can affect the following:
   - **Habitat Functions**
     - Physical space and conditions for life history
     - Food production and delivery

2. Reduction of natural sediment recruitment from the shoreline. This recruitment is necessary to replenish substrate and preserve shallow water conditions. This can affect the following:
   - **Habitat Functions**
     - Physical space and conditions for life history

3. Increase in wave energy at the shoreline if shallow water is eliminated, resulting in increased nearshore turbulence that can be disruptive to juvenile fish and other organisms. This can affect the following:
   - **Hydrologic Functions**
     - Attenuating wave energy
   - **Habitat Functions**
     - Physical space and conditions for life history

Repairs and replacements of existing bulkheads perpetuate those conditions. There have been 55 bulkhead modification proposals in the last eight years, and future proposals are likely to be repairs and replacements (based on trends observed in other Lake Washington jurisdictions with similar shoreline activity). Applications for new
bulkheads are likely to be infrequent as the majority of the shoreline has already been developed with 82 percent arming in the Urban Residential environment.

The updated SMP states that new shoreline stabilization would only be allowed when “conclusive evidence, documented by a geotechnical analysis, is provided that the structure is in danger from shoreline erosion caused by waves...” It must be demonstrated in a study prepared by a qualified professional that the proposed stabilization is the least harmful method to the environment. Replacement bulkheads must generally be installed in the same location as the existing bulkhead, or farther landward, and must also demonstrate that a loss of ecological functions will not occur. Replacement bulkheads would not be allowed to encroach farther waterward, except that soft shoreline stabilization measures that provide restoration of shoreline ecological functions may be permitted waterward of the ordinary high water mark. Finally, all shoreline stabilization proposals must ensure that there will be no net loss of ecological functions.

Over time, the combined effects of the City’s proposed SMP will likely result in a reduction over time of the net amount of hardened shoreline at the ordinary high water mark and an increase in shallow-water habitat.

4 PROTECTIVE SMP PROVISIONS

4.1 Environment Designations

The first line of protection of the City’s shorelines is the environment designation assignments. Table 8 below identifies the prohibited and allowed uses and modifications in each of the shoreline environments, and clearly shows a hierarchy of higher-impacting uses and modifications being allowed in the already highly altered shoreline environments. This strategy helps to minimize cumulative impacts by concentrating development activity in lower functioning areas that are not likely to experience function degradation with incremental increases in new development.

Table 8. Shoreline Use Matrix

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE</td>
<td>Categorically Exempt</td>
</tr>
<tr>
<td>SEP</td>
<td>Shoreline Exemption Permit</td>
</tr>
<tr>
<td>SDP</td>
<td>Substantial Development Permit</td>
</tr>
<tr>
<td>SEPA</td>
<td>Required Review under the State Environmental Policy Act</td>
</tr>
<tr>
<td>NP</td>
<td>Not Permitted Use</td>
</tr>
<tr>
<td>Shoreline Use</td>
<td>Designated Environments</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Single-family residential and associated appurtenances</td>
<td>NP</td>
</tr>
<tr>
<td>Multifamily residential</td>
<td>NP</td>
</tr>
<tr>
<td>Public and private recreational facilities and parks</td>
<td>SDP, SEPA</td>
</tr>
<tr>
<td>Moorage facilities (including piers, docks, piles, lift stations, or buoys)</td>
<td>SDP, SEPA</td>
</tr>
<tr>
<td>Commercial marinas, moorage and storage of commercial boats and ships</td>
<td>NP</td>
</tr>
<tr>
<td>Bulkheads and shoreline protective structures</td>
<td>SDP, SEPA</td>
</tr>
<tr>
<td>Breakwaters and jetties</td>
<td>NP</td>
</tr>
<tr>
<td>Utilities</td>
<td>SDP, SEPA</td>
</tr>
<tr>
<td>Dredging</td>
<td>SDP, SEPA</td>
</tr>
<tr>
<td>Alterations over 250 cubic yards – outside the building footprint</td>
<td>SDP, SEPA</td>
</tr>
<tr>
<td>Boating Facilities</td>
<td>SDP, SEPA</td>
</tr>
<tr>
<td>Transportation and Parking</td>
<td>SDP, SEPA</td>
</tr>
<tr>
<td>Light Rail Transit Facilities</td>
<td>SDP, SEPA</td>
</tr>
</tbody>
</table>

If a use is not listed in this matrix, it shall be considered as a conditional use, pursuant to WAC 173-26-160.

**4.2 General Goals, Policies and Regulations**

The SMP contains numerous general policies, with supporting regulations (see SMP), intended to protect the ecological functions of the shoreline and prevent adverse cumulative impacts. These policies are summarized below.
• All activities, development and redevelopment within the City’s shoreline jurisdiction should be designed to ensure no net loss of shoreline ecological functions.
• Standards for density or minimum frontage width, setbacks, lot coverage limitations, buffers, shoreline stabilization, vegetation conservation, critical area protection, and water quality shall be set to assure no net loss of shoreline ecological functions, taking into account the environmental limitations and sensitivity of the shoreline area, the level of infrastructure and services available, and other comprehensive planning considerations.
• Standards should be established for shoreline stabilization measures, vegetation conservation, water quality, and shoreline modifications. These standards shall ensure that new development does not result in a net loss of shoreline ecological functions or further degrade other shoreline values.
• Existing natural resources should be conserved, consistent with private property rights.
• Existing and future activities on Lake Washington and its shoreline should be designed to minimize adverse effects on the natural systems.
• Public access to and along the water’s edge should be consistent with the public safety, private property rights, and conservation of unique or fragile areas.
• Develop efficient circulation systems in a manner that assures the safe movement of people and goods while minimizing adverse effects on shoreline use, developments and shoreline ecological functions.
• Fills shall be located, designed, and constructed to protect shoreline ecological functions and ecosystem-wide processes, including channel migration.
• Piers and docks shall be designed and constructed to avoid or, if that is not possible, to minimize and mitigate the impacts to ecological functions.

• Utility facilities should 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.
• Critical areas within shoreline jurisdiction will be regulated per MICC 19.07.
5 EFFECT OF OTHER DEVELOPMENT AND RESTORATION ACTIVITIES/PROGRAMS

5.1 Washington Department of Fish and Wildlife
The Washington Department of Fish and Wildlife has jurisdiction over in- and over-water activities up to and including the ordinary high water mark, as well as any other activities that could “use, divert, obstruct, or change the bed or flow of state waters” (http://www.wdfw.wa.gov/hab/hpapage.htm). Practically speaking, these activities in the City of Mercer Island include, but are not limited to, installation or modification of shoreline stabilization measures, piers and accessory structures such as boatlifts, culverts, and bridges and footbridges. These types of projects must obtain a Hydraulic Project Approval from WDFW, which will contain conditions intended to prevent damage to fish and other aquatic life, and their habitats. In some cases, the project may be denied if significant impacts would occur that could not be adequately mitigated.

5.2 Washington Department of Ecology
The Washington Department of Ecology may review and condition a variety of project types in Mercer Island, including any project that needs a permit from the U.S. Army Corps of Engineers (see below), any project that requires a shoreline Conditional Use Permit or Shoreline Variance, and any project that disturbs more than 1 acre of land. Project types that may trigger Ecology involvement include pier and shoreline modification proposals and wetland or stream modification proposals, among others. Ecology’s three primary goals are to: 1) prevent pollution, 2) clean up pollution, and 3) support sustainable communities and natural resources (http://www.ecy.wa.gov/about.html). Their authority comes from the State Shoreline Management Act, Section 401 of the Federal Clean Water Act, the Federal Water Pollution Control Act, the Federal Coastal Zone Management Act of 1972, the State Environmental Policy Act, the Growth Management Act, and various RCWs and WACs of the State of Washington.

5.3 U.S. Army Corps of Engineers
The U.S. Army Corps of Engineers has jurisdiction over any work in or over navigable waters (including Lake Washington) under Section 10 of the Federal Rivers and Harbors Act of 1899, and discharges of dredged or fill material into waters of the United States (including Lake Washington, streams, and non-isolated wetlands) under Section 404 of the Federal Clean Water Act.

As a federal agency, any activity within Corps jurisdiction that could affect species listed under the Federal Endangered Species Act must be consulted on with the National
Marine Fisheries Service and the U.S. Fish and Wildlife Service. These agencies ensure that the project includes impact minimization and compensation measures for protection of listed species and their habitats. Since salmon were first listed in Puget Sound, the Corps and the other federal agencies have been working closely to streamline the permitting process, particularly for new pier and pier modification projects. The result of those efforts for Lake Washington has culminated in Regional General Permit (RGP) 3.

6 Restoration Opportunities

As discussed above, one of the key objectives that the SMP must address is “no net loss of ecological shoreline functions necessary to sustain shoreline natural resources” (Ecology 2004). However, SMP updates seek not only to maintain conditions, but to improve them:

“...[shoreline master programs] include planning elements that when implemented, serve to improve the overall condition of habitat and resources within the shoreline area of each city and county (WAC 173-26-201(c)).”

The guidelines state that “master programs shall include goals, policies and actions for restoration of impaired shoreline ecological functions. These master program provisions should be designed to achieve overall improvements in shoreline ecological functions over time, when compared to the status upon adoption of the master program” (WAC 173-26-201(2)(f)). Pursuant to that direction, the City has prepared a Shoreline Restoration Plan (The Watershed Company 2009b).

Practically, it is not always feasible for shoreline developments and redevelopments to achieve no net loss at the site scale, particularly for those developments on currently undeveloped properties or a new pier or bulkhead. The Restoration Plan, therefore, can be an important component in making up that difference in ecological function that would otherwise result just from implementation of the SMP. The Restoration Plan represents a long-term vision for restoration that will be implemented over time, resulting in incremental improvement over the existing conditions.

The Shoreline Restoration Plan identifies a number of project-specific opportunities for restoration on both public and private properties inside and outside of shoreline jurisdiction, and also identifies ongoing City programs and activities, non-governmental organization programs and activities, and other recommended actions consistent with the Final Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan.
7 ASSESSMENT OF CUMULATIVE IMPACTS

The following table (Table 9) summarizes for each environment designation the existing conditions (Chapter 2 above), anticipated development (Chapter 3 above), relevant Shoreline Master Program (SMP) and other regulatory provisions, and the expected net impact on ecological function. The complete assessment of overwater structure impacts is presented in Section 3.3, organized by pier type rather than environment designation. The discussion of existing conditions is based on the Final Shoreline Analysis Report (The Watershed Company 2009a), and additional analysis conducted to perform this assessment. The Analysis Report includes a more in-depth discussion of the topics below, as well as information about transportation, stormwater and wastewater utilities, impervious surfaces, and historical/archaeological sites, among others.
### Table 9. Qualitative Assessment of Cumulative Impacts

<table>
<thead>
<tr>
<th>Existing Conditions</th>
<th>Likely Development / Functions or Processes Potentially Impacted</th>
<th>Effect of SMP Provisions</th>
<th>Effect of Other Regulatory Programs and Non-Regulatory Restoration Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urban Residential</strong></td>
<td><strong>FUTURE DEVELOPMENT</strong> in the Urban Residential environment will likely be restricted to remodeled or expanded residences since only ten vacant waterfront lots (&lt;1 percent) have development potential. Based on permit data from 2000 – 2007, the City anticipates that approximately 25 percent of existing developed lots will likely redevelop over the next 20 years. No change in uses is anticipated.</td>
<td>Several facets of the SMP development standards for the Urban Residential environment are aimed at minimizing potential impacts to shoreline ecological functions that are discussed in Sections 3.2, 3.3, and 3.4. Residential setbacks are one of the key components to assess overall impacts to ecological function as they relate to many of the items listed below. Structure setbacks are regulated under MICC 19.07.100(B)(1). Under these scenarios and an anticipated redevelopment of up to 167 lots, the median residential setback would change from 66 feet to 59 feet.</td>
<td><strong>Other Regulatory Programs:</strong> Any in- or over-water proposals, primarily piers and shoreline reconstruction, would require review not only by the City of Mercer Island, but also by the WDFW, the U.S. Army Corps of Engineers (Corps), and/or Ecology. Each of these agencies is charged with regulating and/or protecting streams, lakes, and wetlands, and would impose certain design or mitigation requirements on applicants. Due to Endangered Species Act consultation requirements with the U.S. Fish and Wildlife Service and National Marine Fisheries Service, the Corps has developed recommendations to minimize project impacts. These include Regional General Permit 3 (RGP-3) for overwater structures and a Programmatic Biological Evaluation for shoreline stabilization. WDFW also follows similar design standards as the Corps. The City of Mercer Island has included some of these design elements within the proposed SMP. These agencies would also impose certain design and mitigation requirements on a proposed project to minimize adverse impacts.</td>
</tr>
</tbody>
</table>

**FUNCTIONS/PROCESSES IMPACTED:**

1. Impervious surface increases
2. Vegetation removal
3. Chemical contaminant increases

Additional impacts could occur with associated new pier development and shoreline modification; these are cumulatively discussed in Sections 3.3 and 3.4. These impacts may affect:

4. Growth of aquatic vegetation
5. Juvenile salmon migration and behavior
6. Sediment movement
7. Chemical contamination
8. Shoreline complexity
9. Wave attenuation

**Non-Regulatory Restoration Actions**

Although no specific restoration projects have been identified in the Urban Residential environment, the City’s Shoreline Restoration Plan (The Watershed Company 2009b) does include goals and objectives with an emphasis on public education and involvement intended to promote voluntary shoreline enhancement and restoration on private land. Examples of specific items include:

- **Encourage salmon friendly shoreline design during new construction or redevelopment**
- **Offer incentives for voluntary removal of bulkheads, beach improvement, riparian revegetation**
- **Encourage low impact development through regulations, incentives, education/training, and demonstration projects**
- **Through grant funding sources, restoration opportunities may be available to multiple contiguous shoreline properties, including residential lots that are interested in improving shoreline function.**
### Existing Conditions

<table>
<thead>
<tr>
<th>Likely Development / Functions or Processes Potentially Impacted</th>
<th>Effect of SMP Provisions</th>
<th>Effect of Other Regulatory Programs and Non-Regulatory Restoration Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Vegetation Removal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercer Island’s shoreline is largely developed with single family residences, many of which contain lawn areas abutting the shoreline. As redevelopment occurs, on a whole, structures may move closer to the shoreline, which will result in some vegetation removal. Since lawn areas provide little ecological function, and are a source for water polluting fertilizers, reduction of these areas will have little negative effect.</td>
<td>To address any ecological impact that may occur, the SMP requires new development and redevelopment to provide vegetation as follows: 25% of the 20 feet closest to the OHW shall contain vegetation coverage. The five feet nearest the OHW shall contain at least 25% native coverage. A shoreline vegetation plan shall be submitted to the City for approval. A variety of ground cover, shrubs, and trees that provides lake shading is encouraged. This regulation, along with the City’s Restoration Plan, a no-net loss of shoreline functions and values related to vegetation should be met.</td>
<td></td>
</tr>
<tr>
<td>3. Chemical contaminant increases</td>
<td>It is anticipated that new development and re-development will not likely increase the level of potential chemical applications, such as fertilizers, to the shoreline jurisdiction area. To address storm water discharges, the SMP has included by reference the City’s Storm Water Management Program (MICC 19.15), which utilizes Best Management Practices as set forth by the 2005 Stormwater Management Manual for Western Washington by the Washington State Department of Ecology.</td>
<td></td>
</tr>
</tbody>
</table>

### Urban Park

This segment contains land areas in shoreline jurisdiction generally dominated by City parks, street-ends, and open spaces. The three largest City parks include [FUTURE DEVELOPMENT](#) in the Urban Park environment will be limited. There will be a number of park improvements, including restoration work at Groveland and Clarke beach parks, which may be similar to the Shoreline Residential environment described above. SMP development standards for the Urban Park environment are also aimed at minimizing potential impacts to shoreline ecological functions that result from shoreline structures, armoring, and overwater cover.

### Other Regulatory Programs:

Any in- or over-water proposals, primarily piers and shoreline reconstruction, would require review not only by the City of Mercer Island, but also by the WDFW, the Corps, and/or Ecology. Each of these agencies is charged with regulating and/or protecting streams, lakes, and wetlands, and would impose certain design or mitigation requirements on applicants. Due to Endangered Species Act consultation requirements with the U.S. Fish and Wildlife Service and National Marine
## Existing Conditions

<table>
<thead>
<tr>
<th>Groveland Beach Park, Clarke Beach Park, and Luther Burbank Park.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Include improvements to shoreline armoring and overwater cover. No change in use is anticipated in Clarke Beach Park and Groveland Park. Recent shoreline restoration activities in Luther Burbank Park took place in 2008 as part of mitigation for future sewer lake line repairs expected to occur in 2009/2010. Other restoration activities are expected as part of implementation of the Park Master Plan, including extensive re-vegetation of shoreline areas. No modification to existing shoreline armoring is anticipated. Any future modifications to the three existing pier structures would likely involve installation of grated decking which would improve light transmission. No change in use is anticipated in Luther Burbank Park.</td>
</tr>
</tbody>
</table>

## Likely Development / Functions or Processes Potentially Impacted

FUNCTIONS/PROCESSES IMPACTED:
The anticipated alterations to parks are expected to alter, in most cases beneficially, the following upland functions.

1. Impervious surface
2. Vegetation/habitat

Additional impacts could occur with associated overwater structure development and shoreline modification; these are cumulatively discussed in Sections 3.3 and 3.4. These impacts may affect:

3. Growth of aquatic vegetation
4. Juvenile salmon migration and behavior
5. Sediment movement
6. Chemical contamination
7. External lighting impacts on overwater structures
8. Shoreline complexity

## Effect of SMP Provisions

These are regulated under MiCC 19.07.110. As already mentioned, new developments within the parks are not anticipated and redevelopment is not likely to result in structures being located closer to the water’s edge than the current condition, so the existing average setback would not change.

Several of the parks, street-ends, and open spaces also include watercourses, which have additional protections under MiCC 19.07.070.

Luther Burbank Park also includes watercourses and wetlands, which have additional protections under MiCC 19.07.070 and MiCC 19.07.080.

1. Impervious surface
   - It is anticipated that little change in impervious surface in the Urban Park environment will occur.
2. Vegetation/habitat
   - As previously mentioned, many of the activities in the parks are intended to improve ecological functions, and would be conducted voluntarily beyond the SMP requirements for mitigation tied to any development.

## Effect of Other Regulatory Programs and Non-Regulatory Restoration Actions

Fisheries Service, the Corps has developed recommendations to minimize project impacts. These include Regional General Permit 3 (RGP-3) for overwater structures and a Programmatic Biological Evaluation for shoreline stabilization. While these recommendations are intended for single-family property, many of the same guidelines are also applicable to public and commercial property. WDFW also follows similar design standards as the Corps and the City of Mercer Island has included some of these design elements within the proposed SMP. These agencies would also impose certain design and mitigation requirements on a proposed project to minimize adverse impacts.

Outside of the immediate shoreline zone, short- and long-term stormwater management per the latest Ecology Stormwater Manual would minimize/eliminate construction-related stormwater runoff impacts and may slowly improve the quality of any waters reaching the shoreline.

Non-Regulatory Restoration Actions

The City’s Shoreline Restoration Plan (The Watershed Company 2009b) includes goals and objectives with an emphasis on public education and involvement intended to promote voluntary shoreline enhancement and restoration. The Restoration Plan includes two specific projects. One at Groveland Beach Park to remove invasive vegetation, replace worn playground elements, and prepare shoreline improvements. The second at Clarke Beach Park to remove a concrete retaining wall/bulkhead along the shoreline.

Other priorities listed in the Restoration Plan include: invasive vegetation species management, reductions in overwater cover and in-water structure, reductions in shoreline armoring, and improvements in stormwater discharges. These measures would improve shoreline processes and ecological functions for fish and wildlife.

The City’s Parks Department also has a number of other partnerships or efforts that will likely result in additional improvements to parks that improve ecological function, including Forest Stewardship, Adopt-a-Park, and EarthCorps.
<table>
<thead>
<tr>
<th>Existing Conditions</th>
<th>Likely Development / Functions or Processes Potentially Impacted</th>
<th>Effect of SMP Provisions</th>
<th>Effect of Other Regulatory Programs and Non-Regulatory Restoration Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9. Wave attenuation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8 NET EFFECT ON ECOCLOGICAL FUNCTION

Table 12 above examines development and redevelopment potential by environment designation, except for piers and shoreline armoring which are addressed collectively in Section 3.3 and 3.4. It is clear from Table 9 that the City is already highly developed, and has limited potential for new development on a small number of vacant lots. Most of the ten vacant lots with development potential have a mixture of lawn and vegetation, including some trees. Development of these lots would increase impervious surfaces, and may reduce vegetation and alter existing shoreline functions in those specific areas.

Collectively, the redevelopment potential may shift development closer to the water’s edge, but the condition of the remaining space between the water and structures will be improved overall through vegetation requirements within 20 feet of Lake Washington’s ordinary high water mark for new development and redevelopment, the City-wide tree retention requirements under MICC 19.10, and the City’s Restoration Plan.

In the long term, impervious surfaces currently located in the existing and proposed setbacks may be removed.

The effective overwater coverage (but not the actual footprints) should also decrease over the next 20 years, even with installation of new piers and pier additions due to the required installation of grated decking during redevelopment of existing docks and the relatively small number of new docks.

Because of the increased requirements to demonstrate need for new shoreline armoring and the requirements to consider soft solutions for new and replacement shoreline armoring, the City’s overall shoreline hardening condition will at worst remain the same, and realistically will improve over time.

Potential for improvement of shoreline ecological functions is currently greatest on City park properties, with installation of native vegetation and removal of invasive vegetation and enhancement of currently armored shoreline.

Even without implementation of the Restoration Plan, the proposed Shoreline Master Program should result in maintenance of the current level of ecological function, and possibly even improvements over time. However, when paired with the Restoration Plan, ecological function of the City’s Lake Washington shoreline is certain to improve.

Therefore, no net loss of shoreline ecological functions is anticipated.
9 REFERENCES


City of Mercer Island. 2007. City of Mercer Island Capital Improvement Program.


10 LIST OF ACRONYMS AND ABBREVIATIONS

CIP ....................... Capital Investment Program
Corps ...................... U.S. Army Corps of Engineers
Ecology ................... Washington Department of Ecology
OHWM ...................... ordinary high water mark
SMP ....................... Shoreline Master Program
WDFW ..................... Washington Department of Fish and Wildlife
Appendix A

Shoreline Environment Designation Map
Appendix F - Proposed Shoreline Environment Designations
Shoreline Master Program - City of Mercer Island

All areas within shoreline jurisdiction that are not mapped and/or designated are automatically assigned the "Urban Residential" designation until the shoreline can be redesignated through a master program amendment. In the event of a mapping error, the City of Mercer Island shall rely upon common boundary descriptions and the criteria contained in RCW 90.58.030(2) and Chapter 173-22 WAC pertaining to determinations of shorelands, as amended, rather than the incorrect or outdated map.

1. Waterward extent of Shoreline Management Area is measured from the Ordinary High Watermark to the middle of Lake Washington.

2. Waterward extent of City jurisdiction is measured to the middle of Lake Washington, pursuant to RCW 35.21.160.

3. Landward extent of Shoreline Management Area is measured 200 ft landward of the Ordinary High Water Mark.

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### New Single-Family Overwater Structures

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of new single-family piers possible</td>
<td>30</td>
</tr>
<tr>
<td>Total square footage allowed for a new single-family pier (fully grated)</td>
<td>1,000</td>
</tr>
<tr>
<td>Total # of new joint-use piers possible</td>
<td>2</td>
</tr>
<tr>
<td>Total square footage allowed for new joint-use pier (fully grated)</td>
<td>1,000</td>
</tr>
<tr>
<td>Total new square footage for new piers</td>
<td>32,000</td>
</tr>
<tr>
<td>Total # of new covered moorages possible</td>
<td>30</td>
</tr>
<tr>
<td>Total square footage allowed for a new covered moorage</td>
<td>600</td>
</tr>
<tr>
<td>Total new square footage for new covered moorage</td>
<td>18,000</td>
</tr>
<tr>
<td>Total new effective overwater square footage (see open space value)</td>
<td>37,200</td>
</tr>
</tbody>
</table>

### Replacement of Single-Family Overwater Structures

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of existing single-family piers</td>
<td>678</td>
</tr>
<tr>
<td>Percentage of piers to be replaced</td>
<td>20%</td>
</tr>
<tr>
<td>Total # of piers to be replaced</td>
<td>136</td>
</tr>
<tr>
<td>Average replacement pier size (assumes piers to be rebuilt at same size as existing, but fully grated)</td>
<td>828</td>
</tr>
<tr>
<td>Total square footage fully grated</td>
<td>828</td>
</tr>
<tr>
<td>Total square footage of replacement piers (same as existing footage)</td>
<td>112,277</td>
</tr>
<tr>
<td>Effective overwater coverage of replacement piers (see open space value)</td>
<td>67,366</td>
</tr>
</tbody>
</table>

### Repair of Single-Family Overwater Structures

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of existing single-family structures</td>
<td>678</td>
</tr>
<tr>
<td>Percentage of existing piers to be replaced with grated decking in nearshore 30 feet (area assumption to right)</td>
<td>30%</td>
</tr>
<tr>
<td>Total # of piers to be repaired</td>
<td>203</td>
</tr>
<tr>
<td>Total square footage of decking to be replaced with grating</td>
<td>58,579</td>
</tr>
<tr>
<td>Effective overwater coverage of replaced decking (see open space value)</td>
<td>35,148</td>
</tr>
</tbody>
</table>

### Additions to Single-Family Overwater Structures

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of existing single-family structures</td>
<td>678</td>
</tr>
<tr>
<td>Percent of existing piers expected to propose additions</td>
<td>10%</td>
</tr>
<tr>
<td>Total # of piers with additions</td>
<td>68</td>
</tr>
<tr>
<td>Total square footage estimated for new additions</td>
<td>20,340</td>
</tr>
</tbody>
</table>

### Notes
- Number of new piers is based upon 8 year permit history from 2000 to 2007 in which 12 applications for new piers occurred.
- Joint-use applications are fairly rare.
- Total number is 60 lots without piers.
- Number of new covered moorage structures expected based on permit history.

### Other Information
- Minimum Percent Open Space in Grated Decking: 40%
- Number of new piers is based upon 8 year permit history from 2000 to 2007 in which 12 applications for new piers occurred.
- Average existing pier size comes from shoreline inventory. 678 existing piers with approximately 532,000 square feet of overwater cover.
- Average pier width in nearshore 30 feet: 9.6
- Average pier area in nearshore 30 feet: 288
- Average pier width in nearshore 30 feet: 300
<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
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## Repair of Semi-private Overwater Structures

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<tr>
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<td>Total # of existing semi-private structures</td>
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<td>5</td>
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<td>Average square footage of semi-private structures</td>
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<td>Percentage of existing piers to be replaced with grated decking in nearshore 30 feet (area assumption to right)</td>
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<td>Average pier width in nearshore 30 feet</td>
<td>8</td>
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<td>7</td>
<td>Total square footage of decking to be replaced with grating</td>
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<td>Effective reduction in coverage from repair</td>
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<tr>
<td>15</td>
<td>Reduction of effective overwater cover based on repairs</td>
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<td>16</td>
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<td>17</td>
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<td>12</td>
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<td><strong>Repair of Public Overwater Structures</strong></td>
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<tr>
<td>Total # of existing public structures</td>
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<td>Total square footage of structures</td>
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<tr>
<td>Average square footage of public structures</td>
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<tr>
<td>Total square footage of decking to be replaced</td>
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</tr>
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<td>Effective overwater coverage of replaced decking (see open space value)</td>
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<td><strong>Additions to Public Overwater Structures</strong></td>
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<td>Total # of additions to piers possible</td>
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<td><strong>Total Cover Calculation for Public Structures</strong></td>
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<td>Total square footage of existing public piers</td>
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<td>Reduction of effective overwater cover based on repairs</td>
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<tr>
<td>Increase in effective overwater cover based on additions</td>
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<td><strong>TOTAL FINAL EFFECTIVE OVERWATER COVER</strong></td>
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40%  Minimum Percent Open Space in Grated Decking (See single family tab)

NOTE  Assume 30% repair of all public structures
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<tr>
<td>Total existing overwater coverage - single-family</td>
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<td>Total existing overwater coverage - public</td>
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<td><strong>Effective Overwater Coverage in 20 years</strong></td>
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<td>15,010</td>
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<td>Net change in overwater cover - single-family</td>
<td>-18,938</td>
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</tr>
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<td>Net change in overwater cover - semi-private</td>
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<td>Net change in overwater cover - public</td>
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<td><strong>PERCENTAGE DECREASE IN OVERWATER COVER IN 20 YEARS</strong></td>
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SHORELINE RESTORATION PLAN
for the City of Mercer Island
Shoreline Master Program

Prepared by:

City of Mercer Island
Development Services Group
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June 2009
The Watershed Company Reference Number:
070613

The Watershed Company Contact Person:
Dan Nickel and Christa H. Strickwerda

Cite this document as:
7.6 Priority 6 – Improve Water Quality and Reduce Sediment and Pollutant Delivery ................................................................. 29
7.7 Priority 7 – Improve Riparian Vegetation, Reduce Impervious Coverage 29
7.8 Priority 8 – Reduce Aquatic Non-Native Invasive Weeds ..................... 30
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SHORELINE RESTORATION PLAN
FOR CITY OF MERCER ISLAND
SHORELINE MASTER PROGRAM

1 INTRODUCTION

A jurisdiction’s Shoreline Master Program applies to activities in the jurisdiction’s shoreline zone. Activities that have adverse affects on the ecological functions and values of the shoreline must provide mitigation for those impacts. By law, the proponent of that activity is not required to return the subject shoreline to a condition that is better than the baseline level at the time the activity takes place. How then can the shoreline be improved over time in areas where the baseline condition is severely, or even marginally, degraded?

Section 173-26-201(2)(f) WAC of the Shoreline Master Program Guidelines\(^1\) says:

“master programs shall include goals and policies that provide for restoration of such impaired ecological functions. These master program provisions shall identify existing policies and programs that contribute to planned restoration goals and identify any additional policies and programs that local government will implement to achieve its goals. These master program elements regarding restoration should make real and meaningful use of established or funded nonregulatory policies and programs that contribute to restoration of ecological functions, and should appropriately consider the direct or indirect effects of other regulatory or nonregulatory programs under other local, state, and federal laws, as well as any restoration effects that may flow indirectly from shoreline development regulations and mitigation standards.”

However, degraded shorelines are not just a result of pre-Shoreline Master Program activities, but also of unregulated activities and exempt development. The new Guidelines also require that “[l]ocal master programs shall include regulations ensuring that exempt development in the aggregate will not cause a net loss of ecological functions of the shoreline.” While some actions within shoreline jurisdiction are exempt from a permit, the Shoreline Master Program should clearly state that those actions are

\(^{1}\) The Shoreline Master Program Guidelines were prepared by the Washington Department of Ecology and codified as WAC 173-26. The Guidelines translate the broad policies of the Shoreline Management Act (RCW 90.58.020) into standards for regulation of shoreline uses. See

not exempt from compliance with the Shoreline Management Act or the local Shoreline Master Program. Because the shoreline environment is also affected by activities taking placed outside of a specific local master program’s jurisdiction (e.g., outside of city limits, outside of the shoreline zone within the city), assembly of out-of-jurisdiction actions, programs and policies can be essential for understanding how the City fits into the larger watershed context. The latter is critical when establishing realistic goals and objectives for dynamic and highly inter-connected environments.

As directed by the Guidelines, the following discussions provides a summary of baseline shoreline conditions, lists restoration goals and objectives, and discusses existing or potential programs and projects that positively impact the shoreline environment. Finally, anticipated scheduling, funding, and monitoring of these various comprehensive restoration elements are provided. In total, implementation of the Shoreline Master Program (with mitigation of project-related impacts) in combination with this Restoration Plan (for restoration of lost ecological functions that occurred prior to a specific project) should result in a net improvement in the City of Mercer Island’s shoreline environment in the long term.

In addition to meeting the requirements of the Guidelines, this Restoration Plan is also intended to support the City’s or other non-governmental organizations’ applications for grant funding, and to provide the interested public with contact information for the various entities working within the City to enhance the environment.

2 SHORELINE INVENTORY SUMMARY

2.1 Introduction

The City conducted a comprehensive inventory of its Lake Washington shoreline in 2008. The purpose of the shoreline inventory was to facilitate the City of Mercer Island’s compliance with the State of Washington’s Shoreline Management Act (SMA) and updated Shoreline Master Program Guidelines. The inventory describes existing physical and biological conditions in the Lake Washington shoreline zone within City limits, including recommendations for restoration of ecological functions where they are degraded. The full Final Shoreline Analysis Report is included as an appendix to the Shoreline Master Program, and is summarized below.

2.2 Shoreline Boundary

As defined by the Shoreline Management Act of 1971, shorelines include certain waters of the state plus their associated “shorelands.” Shorelands are defined as:
“those lands extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward 200 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...Any county or city may determine that portion of a one-hundred-year-floodplain² to be included in its master program as long as such portion includes, as a minimum, the floodway and the adjacent land extending landward two hundred feet therefrom (RCW 90.58.030)”

Shorelands in the City of Mercer Island include only areas within 200 feet of the ordinary high water mark, as established by the U.S. Army Corps of Engineers for Lake Washington, and any associated wetlands within shoreline jurisdiction. As part of the shoreline jurisdiction assessment, there were two wetlands identified in Luther Burbank Park that extend the shoreline jurisdiction beyond 200 feet from the Lake Washington ordinary high water mark (Figure 1). Lake Washington does not have a floodway or floodplain.

Figure 1: Mercer Island Shoreline Jurisdiction Including Associated Wetlands (inset)

---

² According to RCW 173-220-030, 100-year floodplain is “that land area susceptible to being inundated by stream derived waters 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;”
2.3 Inventory

The shoreline inventory is divided into five main sections: Introduction, Current Regulatory Framework Summary, Shoreline Inventory, Analysis of Ecological Functions and Ecosystem-wide Processes, Land Use Analysis and Shoreline Management Recommendations. The City’s shoreline jurisdiction is divided into two segments: Urban Residential, and Urban Park. These segments are based on existing land use and zoning, as well as the City’s current environment designations.

2.3.1 Land Use and Physical Conditions

Existing Land Use

In general, the City of Mercer Island shoreline area is fully developed. The few areas not occupied by single or multi-family residential uses are either private recreation clubs, vacant lots, City parks or landings. With the possible exception of limited additional residential lands being acquired for public open space, land uses along the shoreline are not expected to change over the next 20 years, although re-builds, substantial remodels and some redevelopment of single-family residential are anticipated. The City’s shoreline is predominately zoned single-family residential (R-8.4, R-9.6, R-12 and R-15). Residential and private club uses (Urban Residential designation) comprise 90.4 percent of the City’s shoreline area, Luther Burbank Park (Urban Park designation) comprises 6 percent, and public recreation and open space (Urban Park designation) comprise the remaining 3.6 percent of the shoreline area. There are five City parks, one City boat launch, two private recreational clubs, and one private retirement facility on the waterfront. There are also 13 City-owned street ends (“landings”) located within the shoreline area. The Mercerwood Shore Club and Mercer Island Beach Club are private waterfront recreation clubs that include clubhouses, picnic areas, swimming beaches, tennis and fitness facilities, boat moorage, and other amenities. Covenant Shores retirement center includes private boat moorage and other similar private recreational opportunities. There are 57 privately owned lots (roughly 6%) within the shoreline jurisdiction that are considered vacant or undeveloped, 44 of which are along the shoreline. Of those 44 properties, only 10 have development potential.

Parks and Open Space/Public Access

There are a number of opportunities to access the Mercer Island waterfront, whether at public parks, landings or the City boat launch. Luther Burbank Park is the City’s largest multi-use park and is considered the crown jewel of the park system (Figure 2). The park is 77 acres and includes a swimming beach, public boat
dock, public fishing pier, former Luther Burbank School brick dormitory, steam plant and dairy ruins, trails, off-leash dog area, and other groomed and wooded areas. Calkins Point, located on the north end of the park, has been slowly eroding away and has been identified by the City as a high-priority for shoreline restoration.

Other parks located along the shoreline include Clarke Beach (Figure 3), Groveland Beach, Slater Park, and Park on the Lid. These parks provide multiple opportunities for water-related recreational uses, including swimming, fishing, picnicking, and active and passive recreation. Mercer Island Boat Launch is located along the City’s northeast shore and provides a Lakes-to-Locks Water Trail Launch and Landing Site.

There are 13 street-end public rights-of-way into public spaces and parks that provide access to the waterfront. The landings, which vary in the level of development, include swimming and fishing areas, boat launch facilities and docks. A few of the landings remain undeveloped and provide opportunities for future restoration or improvements.

Figure 3: Clarke Beach Park

Shoreline Modifications
The Mercer Island shoreline is heavily modified with close to 78 percent of the shoreline armored at or near the ordinary high water mark and a pier density of approximately 47.5 overwater structures per mile. This compares to 71 percent armored and 36 piers per mile for the entire Lake Washington shoreline. Thus, for Mercer Island, both pier density and shoreline armoring are slightly higher than the lake-wide figures. Many of the piers have one or more boatlifts.

As expected, the Urban Residential segment has the most altered shoreline, with 82 percent armored with either vertical or boulder bulkheads. The Urban Park segment is 35 percent armored. It is not uncommon around Lake Washington for some historic fills to be associated with the original bulkhead construction, usually to create a more level or larger yard. Most of these shoreline fills occurred at the time that the lake elevation was lowered during construction of the Hiram Chittenden Locks.

Also as expected, the highest amount of overwater cover per lineal foot of shoreline can be found in the Urban Residential segment. This can be attributed to the presence of a
number of residential homes within this segment, as well as two beach clubs which have marinas.
The full shoreline inventory includes a more in-depth discussion of the above topics, as well as information about transportation, stormwater and wastewater utilities, impervious surfaces, and historical/archaeological sites, among others.

2.3.2 Biological Resources and Critical Areas

With the exception of some portions of the shoreline along Luther Burbank Park (Urban Park), the shoreline zone itself is generally deficient in high-quality biological resources and critical areas, primarily because of the extensive residential development and its associated shoreline modifications. There are a number of City parks along the shoreline, but a majority of these are mostly well manicured and include extensive shoreline armoring or pier and dock structures. The highest-functioning shoreline area is Luther Burbank Park, which contains a majority of the City’s last unaltered shoreline. There are also a few City-owned landings which are undeveloped, but these are surrounded by residential development and do not cover an extensive area of the shoreline area. Virtually all of the Mercer Island shoreline is encumbered by geologically hazard areas, including seismic, erosion and landslide areas. According to City data, there are two wetlands inventoried within shoreline jurisdiction, both of which are located in Luther Burbank Park. There are a number of streams that discharge into Lake Washington, including 39 perennial streams, 13 of which have been identified as having potential for fish use near their mouth to Lake Washington. These streams are used by Chinook, coho, and sockeye salmon, as well as cutthroat trout. Many of the smaller tributaries to Lake Washington originate as hillside seeps or springs and flow seasonally or during periods of heavy rains. Many of these smaller systems are piped at some point and discharge directly to Lake Washington via a closed system. These streams have been impacted extensively by basin development, resulting in increased peak flows, unstable and eroding banks, loss of riparian vegetation, and fish and debris passage barriers. These changes have altered their contributions of sediment, organic debris, and invertebrates into Lake Washington.

WDFW mapping of Priority Habitat and Species (WDFW 2008) also indicates the presence of other Fish and Wildlife Habitat Conservation Areas within and adjacent to the shoreline zone. These include historic and current bald eagle nest locations, wetlands, and urban natural open space (parks and other green spaces). Segments B and C, Urban Park and Urban Residential respectively, generally do not contain any significant fish or other wildlife habitats other than Lake Washington. Extensive residential and park development, which includes landscaping and shoreline modifications, has removed much of the potential for riparian habitat.
3 Restoration Goals and Objectives

According to the Lake Washington/Cedar/Sammamish Watershed (WRIA) Near-Term Action Agenda For Salmon Habitat Conservation, Lake Washington suffers from “Altered trophic interactions (predation, competition), degradation of riparian shoreline conditions, altered hydrology, invasive exotic plants, poor water quality (phosphorus, alkalinity, pH), [and] poor sediment quality” (WRIA 8 Steering Committee 2002). Mercer Island’s Final Shoreline Analysis Report (The Watershed Company 2009) provides supporting information that validates these claims specifically in the City’s shoreline jurisdiction. The WRIA 8 Action Agenda established four “ecosystem objectives,” which are intended to guide development and prioritization of restoration actions and strategies. The objectives are as follows:

- “Maintain, restore, or enhance watershed processes that create habitat characteristics favorable to salmon.
- Maintain or enhance habitat required by salmon during all life stages and maintain functional corridors linking these habitats.
- Maintain a well-dispersed network of high-quality refuge habitats to serve as centers of population expansion.
- Maintain connectivity between high-quality habitats to allow for population expansion into recovered habitat as degraded systems recover.”

The WRIA 8 restoration objectives, in combination with the results of the City’s Final Shoreline Analysis Report, the direction of Ecology’s Shoreline Master Program Guidelines, and the City’s commitment (Appendix A) to support the Final Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan, are the foundation for the following goals and objectives of the City of Mercer Island’s restoration strategy. Although the WRIA 8 Action Agenda and the Final Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan are salmon-centered, pursuit of ecosystem-wide processes and ecological functions performance that favors salmon generally captures those processes and functions that benefit all fish and wildlife.

**Goal 1** – Maintain, restore or enhance watershed processes, including sediment, water, wood, light and nutrient delivery, movement and loss.

**Goal 2** – Maintain or enhance fish and wildlife habitat during all life stages and maintain functional corridors linking these habitats.

**Goal 3** – Contribute to conservation and recovery of chinook salmon and other anadromous fish, focusing on preserving, protecting and restoring habitat with the intent to recover listed species, including sustainable, genetically diverse, harvestable populations of naturally spawning chinook salmon.
System-wide restoration objectives

- Continue to work collaboratively with other jurisdictions and stakeholders in WRIA 8 to implement the Final Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan.

- Use the scientific foundation and the conservation strategy as the basis for local actions recommended in the Chinook Salmon Conservation Plan and as one source of best available science for future projects, ordinances, and other appropriate local government activities.

- Use the comprehensive list of actions, and other actions consistent with the Chinook Salmon Conservation Plan, as a source of potential site-specific projects and land use and public outreach recommendations.

- Use the start-list to guide priorities for regional funding in the first ten years of Chinook Salmon Conservation Plan implementation, and implementing start-list actions through local capital improvement projects, ordinances, and other activities.

- Seek funding for various restoration actions and programs from local sources and by working with other WRIA 8 jurisdictions and stakeholders to seek federal, state, grant and other funding opportunities.

- Develop a public education plan to inform private property owners in the shoreline zone and in the remainder of the City about the effects of land management practices and other unregulated activities (such as vegetation removal, pesticide/herbicide use, car washing) on fish and wildlife habitats.

Lake Washington restoration objectives


- Improve Lake Washington tributary stream health by eliminating man-made barriers to anadromous fish passage, preventing the creation of new barriers, and providing for transport of water, sediment and organic matter at all stream crossings.

- Improve Lake Washington and Lake Washington tributary stream health by identifying hardened and eroding lakeshores and streambanks, and correcting to the extent feasible with bioengineered stabilization solutions.

- Improve Lake Washington and Lake Washington tributary stream health by increasing large woody debris recruitment potential through plantings of
trees in the riparian corridors, particularly conifers. Where feasible, install large woody debris to meet short-term needs.

- Increase quality, width and diversity of native vegetation in protected corridors adjacent to stream and lake habitats to provide safe migration pathways for fish and wildlife, food, nest sites, shade, perches, and organic debris. Strive to control non-indigenous plants or weeds that are proven harmful to native vegetation or habitats.

- Reconnect and enhance small creek mouths as juvenile rearing areas.

- Habitat in small Lake Washington tributaries, such as those in the City of Mercer Island, should be restored for coho so that production of cutthroat trout, which prey on juvenile chinook salmon in Lake Washington, is reduced.

- Decrease the amount and impact of overwater and in-water structures through minimization of structure size and use of innovative materials such as grated decking.

- Participate in lake-wide efforts to reduce populations of non-native aquatic vegetation.

4 List of Existing and Ongoing Projects and Programs

The following series of existing projects and programs are generally organized from the larger watershed scale to the City-scale, including City projects and programs and finally non-profit organizations that are also active in the Mercer Island area.

4.1 Water Resource Inventory Area (WRIA) 8 Participation

Mercer Island has taken advantage of outreach and education offered by WRIA 8 staff on salmon-friendly shoreline landscape design. Mercer Island continues to be involved in the Forum at both the elected official and staff level. The City was one of 27 members of the WRIA 8 Forum, which participated in financing and developing the Final Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan. The Chinook Salmon Conservation Plan includes the City of Mercer Island’s implementation commitment in the form of City Council Resolution 1347, approved September 6, 2005 (Appendix A).

The City’s preparation of the Shoreline Analysis Report Including Shoreline Inventory and Characterization of the City of Mercer Island’s Lake Washington Shoreline (The Watershed Company 2009) and this Shoreline Restoration Plan are important steps
toward furthering the goals and objectives of the WRIA 8 Chinook Salmon Conservation Plan. The City’s Shoreline Master Program update products rely heavily on the science included in the WRIA 8 products, and incorporate recommended actions from the WRIA 8 products (Table 1).

To review, the WRIA 8 Steering Committee’s mission and goal statements state that the Plan shall: 1) recognize that local governments are key implementing entities for the plan, because of their responsibilities for land use, 2) direct most future population growth to already urbanized areas, because new development has greater negative effects on hydrology and ecological health of streams in rural than in urban areas, 3) create incentives for behavior that would support Plan goals, and 4) be coordinated with the Growth Management Act, local and regional responses to the Clean Water Act, other environmental laws and past/current planning efforts.

The Plan presents an Action Start-List that attempts to compile the land use, site-specific habitat protection and restoration projects, and public outreach and education recommendations into a single strategy list which focuses watershed priorities yet also provides a manageable number of actions. Conservation priority actions identified for WRIA 8 chinook salmon habitat within Lake Washington included in the Plan are as follows:

- Reduce predation on juvenile migrants in Lake Washington by providing increased rearing and refuge opportunities.
- Restore shallow water habitats and creek mouths for juvenile rearing and migration.

<table>
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<tr>
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<th>Mercer Island Implementation</th>
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<tr>
<td>Reduce predation to outmigrating juvenile chinook by: reducing bank hardening, restoring overhanging riparian vegetation, replacing bulkhead and rip-rap with sandy beaches with gentle slopes, and use of mesh dock surfaces and/or community docks.</td>
<td>The proposed SMP includes provisions that ensure salmon friendly shoreline design for new construction and redevelopment, including requirements for grated decking and shoreline vegetation…</td>
</tr>
<tr>
<td>Encourage salmon friendly shoreline design during new construction or redevelopment by offering incentives and regulatory flexibility to improve bulkhead and dock design and revegetate shorelines.</td>
<td>The City has done two projects demonstrating these techniques at public Right of Way street ends on the</td>
</tr>
<tr>
<td>Action Item</td>
<td>Mercer Island Implementation</td>
</tr>
<tr>
<td>-------------</td>
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</tr>
<tr>
<td>Increase enforcement and address nonconforming structures over long run by requiring that major redevelopment projects meet current standards.</td>
<td>Code enforcement is responsible for enforcing regulations which address public health and safety issues, including regulations related to rubbish, garbage, specific nuisances, removal of vegetation, zoning, housing, dangerous buildings, and inoperable and unlicensed vehicles on private property. Enforcement actions are taken both proactively and in response to requests for action received from citizens. The City has not recently updated its code enforcement.</td>
</tr>
<tr>
<td>Discourage construction of new bulkheads; offer incentives (e.g., provide expertise, expedite permitting) for voluntary removal of bulkheads, beach improvement, riparian revegetation.</td>
<td>The proposed SMP includes provisions that discourage construction of new bulkheads by limiting new bulkheads to only those properties that can show a demonstrated need through a geotechnical analysis.</td>
</tr>
<tr>
<td>Support joint effort by NOAA Fisheries and other agencies to develop dock/pier specifications to streamline federal/state/local permitting; encourage similar effort for bulkhead specifications.</td>
<td>The City has been coordinating on a regular basis with state and federal agencies to help develop consistent pier and bulkhead design standards, including coordination with adjacent jurisdictions.</td>
</tr>
<tr>
<td>Promote value of light-permeable docks, smaller piling sizes, and community docks to both salmon and landowners through direct mailings to lakeshore landowners or registered boat owners sent with property tax notice or boat registration tab renewal.</td>
<td>The City has hosted workshops for lakeshore owners which has highlighted the value of eco-friendly pier construction. This includes King County Lakeshore Living and Greenshoreslines workshops.</td>
</tr>
<tr>
<td>Develop workshop series specifically for lakeshore property owners on lakeside living: natural yard care, alternatives to vertical wall bulkheads, fish friendly dock design, best management practices for aquatic weed control, porous paving, and environmentally friendly methods of maintaining boats, docks, and decks.</td>
<td>King County has led this effort. As mentioned above, the City has hosted workshops on this topic in the past (Lakeshore Living and Greenshoreslines). This work is expected to continue in the near future.</td>
</tr>
</tbody>
</table>

**Protect and restore water quality in tributaries and along shoreline. Restore coho runs in smaller tributaries as control mechanism to reduce the cutthroat population.**
<table>
<thead>
<tr>
<th>Action Item</th>
<th>Mercer Island Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconnect and enhance small creek mouths as juvenile rearing areas.</td>
<td>The City currently implements Ecology’s 2005 Stormwater Management Manual for Western Washington through its NPDES Phase 2 permit. The NPDES Phase II permit is required to cover the City’s stormwater discharges into regulated lakes and streams. Under the conditions of the permit, the City must protect and improve water quality through public education and outreach, detection and elimination of illicit non-stormwater discharges (e.g., spills, illegal dumping, wastewater), management and regulation of construction site runoff, management and regulation of runoff from new development and redevelopment, and pollution prevention and maintenance for municipal operations.</td>
</tr>
<tr>
<td>Address water quality and high flow impacts from creeks and shoreline development through NPDES Phase 1 and Phase 2 permit updates, consistent with Washington Department of Ecology’s 2001 Stormwater Management Manual, including low impact development techniques, on-site stormwater detention for new and redeveloped projects, and control of point sources that discharge directly into the lakes.</td>
<td></td>
</tr>
<tr>
<td>Encourage low impact development through regulations, incentives, education/training, and demonstration projects.</td>
<td>The Comprehensive Plan and the proposed SMP contain provisions which promote LID, including allowance of stormwater strategies that minimize the creation of impervious surfaces, and measures to minimize the disturbance of native soils and vegetation. The City has already identified a short list of good candidates for LID demonstration projects at City facilities that will be completed in the future.</td>
</tr>
<tr>
<td>Protect and restore water quality and other ecological functions in tributaries to reduce effects of urbanization and reduce conditions which encourage cutthroat. Protect and restore forest cover, riparian buffers, wetlands, and creek mouths by revising and enforcing critical areas ordinances and Shoreline Master Programs, incentives, and flexible development tools.</td>
<td>The City updated the Critical Areas Ordinance in 2005. Management of the City’s critical areas using these regulations should help insure that ecological functions and values are not degraded, and impacts to critical areas are mitigated. The City also coordinates ongoing Maintenance activities, specifically with drainage basins, with open spaces improvements on adjoining properties. The City currently implements the 2004 Open Space Vegetation Plan (City of</td>
</tr>
<tr>
<td>Action Item</td>
<td>Mercer Island Implementation</td>
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<td>----------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Promote through design competitions and media coverage the use of “rain gardens” and other low impact development practices that mimic natural hydrology.</td>
<td>Mercer Island 2004) which promotes funding to support eradication and control of invasive and non-native plants.</td>
</tr>
<tr>
<td>The City actively promotes rain garden and LID education through local news media and support for ongoing workshops.</td>
<td></td>
</tr>
</tbody>
</table>

### 4.2 Comprehensive Plan Policies

The City updated its Comprehensive Plan on July 5, 2005. The updated Comprehensive Plan, specifically the Conservation Element of the Shoreline Goals and Policies, contains a number of general and specific goals and policies that direct the City to permit and condition development in such a way that the natural environment is preserved and enhanced. The specific goals and policies include:

**Goal:** The resources and amenities of Lake Washington are to be protected and preserved for use and enjoyment by present and future generations.

- **Policy 1:** Existing natural resources should be conserved, consistent with private property rights.

- **Policy 2:** Existing and future activities on Lake Washington and its shoreline should be designed to minimize adverse effects on the natural systems.

- **Policy 3:** Uses or activities within all drainage basins related to Lake Washington should be considered as an integral part of shoreline planning.

- **Policy 4:** Shoreline areas having historical, cultural, educational or scientific value should be protected and restored.

Techniques suggested by the various policies to protect the natural environment include requiring setbacks from sensitive areas, preserving habitats for sensitive species, preventing adverse alterations to water quality and quantity, promoting low impact development, preserving existing native vegetation, educating the public, and mitigating necessary sensitive area impacts, among others.
4.3 Critical Areas Regulations

The City of Mercer Island critical areas regulations are found in Mercer Island City Code Chapter 19.07 Environment. The City completed its last critical areas regulations update on 2005. The updated regulations are based on best available science, and provide protection to critical areas in the City, particularly for streams and wetlands. All activities which require a substantial development permit, conditional use or variance under the SMP are reviewed under the City’s CAO for consistency. As stated above, if there is a conflict between the CAO and SMP, the regulations that offer the greatest environmental protection apply.

Some of the basic components of the critical areas regulations include a four-tiered watercourse typing system with standard buffers ranging between 25 and 75 feet, and Ecology’s four-tiered wetland rating system with standard buffers ranging from 35 to 100 feet. Management of the City’s critical areas using these regulations should help insure that ecological functions and values are not degraded, and impacts to critical areas are mitigated. These critical areas regulations are one important tool that will help the City meet its restoration goals.

4.4 Stormwater Management and Planning

Although much of the City of Mercer Island’s Storm and Surface Water Utility’s jurisdiction is outside of the shoreline zone, all of the regulated surface waters, both natural and piped, are discharged ultimately into Lake Washington and thus affect shoreline conditions. According to the City’s GIS data, there are 208 known stormwater outfalls, 187 of which are located within the shoreline jurisdiction area (see Figures 5.1 - 5.3). The City’s Utilities section of the Comprehensive Plan contains the following stormwater policies:

4.1 The City shall continue to implement programs and projects designed to meet the goals and requirements of the Puget Sound Water Quality Management Plan.

4.2 The City shall actively promote and support education efforts focusing on all facets of stormwater management.

4.3 The City shall maintain and enforce land-use plans and ordinances requiring stormwater controls for new development and re-development. The ordinances shall be based on standards developed by the state Department of Ecology and shall be consistent with the policies in the Land-Use Element of this plan and the goals and policies of the City’s Development Services Group.

The City received its National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit in January 2007 from Ecology. The NPDES Phase II permit is required to cover the City’s stormwater discharges into regulated lakes and streams. Under the conditions of the permit, the City must protect and improve water
quality through public education and outreach, detection and elimination of illicit non-
stormwater discharges (e.g., spills, illegal dumping, wastewater), management and
regulation of construction site runoff, management and regulation of runoff from new
development and redevelopment, and pollution prevention and maintenance for
municipal operations (City of Mercer Island website).

In 2007, the Department of Ecology published information about toxics levels in fish,
including fish sampled in Lake Washington (Department of Ecology 2007). Lake
Washington ranked second only to the Wenatchee River near Leavenworth for a site
contaminant score. Although this report does not identify specific point sources, it
represents a clear need to better understand contaminant sources and control.

The City’s 2004 Open Space Vegetation Plan (City of Mercer Island 2004) was prioritized
by multiple factors including storm water buffering and erosion control. It directs work
to sites where it would most likely improve storm water buffering and erosion control.

4.5 Public Education

The City of Mercer Island’s Comprehensive Plan identifies various policy statements
based on the goal of environmental public involvement (excerpted below). These items
help guide City staff and local citizen groups in developing mechanisms to educate the
public and broaden the interest in protecting and enhancing local environmental
resources.

4.5.1 Land Use Element

Natural Environment Policies

Goal 10: The protection of the natural environment will continue to be a priority in
all Island development. Protection of the environment and private
property rights will be consistent with all state and federal laws.

Policy 10.1 The City of Mercer Island shall protect environmentally sensitive
lands such as watercourses, geologic hazard areas, steep slopes,
shorelines, wildlife habitat conservation areas, and wetlands. Such
protection should continue through the implementation and
enforcement of critical areas and shoreline regulations.

Policy 10.2 Land use actions, storm water regulations and basin planning should
reflect intent to maintain and improve the ecological health of
watercourses and Lake Washington water quality.

Policy 10.3 New development should be designed to avoid increasing risks to
people and property associated with natural hazards.
Policy 10.4  The ecological functions of watercourses, wetlands, and habitat conservation areas should be maintained and protected from the potential impacts associated with development.

Policy 10.5  The City shall consider best available science during the development and implementation of critical areas regulations. Regulations will be updated periodically to incorporate new information and, at a minimum, every seven years as required by the Growth Management Act.

4.5.2 Utilities Element

Water Quality Policies

Policy 2.8  The City shall aggressively promote and support water conservation on Mercer Island and shall participate in regional water conservation activities. The goal of the City’s efforts shall be a significant and lasting reduction in Mercer Island’s peak water consumption. In 1999 the City decided to participate in SPU’s 1% Water Conservation Initiative, and continues to receive information and assistance in reducing water consumption in City facilities and in the community.

Stormwater Policies

Policy 4.2  The City shall actively promote and support education efforts focusing on all facets of stormwater management.

4.5.3 Shoreline Goals and Policies

Conservation Element

Policy 4.a.  Public and private cooperation should be encouraged in site preservation and protection.

As part of the City of Mercer Island’s efforts to abide by these goals and policies, the City supports several volunteer efforts, such as Mountains to Sound Greenway sponsored events, Open Space Conservancy Trust, Forest Stewardship, Forest Stewardship training, Adopt-a-Park and EarthCorps.

4.6 Open Space Conservancy Trust

The Open Space Conservancy Trust, established by Mercer Island City Council in 1992, “was created for the express purpose of receiving and holding such real property, as
transferred for open space purposes; for protecting, maintaining and preserving the Open Space Properties; and insuring that the development and use of the Open Space Properties are both consistent and compatible with the intent and purpose of the Trust and the guidelines and polices enacted.” The trust is led by a seven member volunteer board consisting of six citizens appointed by the Mayor and one City Council member. The trust currently holds Pioneer Park as its sole property.


### 4.7 Mountains to Sound Greenway Trust

Mountains to Sound (MTS) Greenway Trust, a nonprofit organization founded in 1991, assists local, state, and federal agencies to acquire open space lands for permanent protection in order to create a 100-mile connected green corridor along Interstate 90.

Within the City of Mercer Island, MTS organizes and leads volunteers to improve City parks by removing invasive plants (primarily ivy) and planting native trees and shrubs. Mercer Island Parks and Recreation has teamed up with MTS and a number of other groups and organizations to host several volunteer events throughout the year.


### 4.8 Forest Stewardship and Adopt-A-Park Programs

Citizens of Mercer Island donate countless hours to maintain the City’s open spaces and parks through picking up litter, cutting ivy, planting and trail maintenance and repair. Forest Stewardship provides opportunities for citizens to be active with City-sponsored projects or work individually with other volunteers. Forest Stewardship training provides the skills to become Forest Stewards who are qualified to run volunteer projects on the island on behalf of the Parks and Recreation Department.

The City’s Adopt-a-Park program allows local schools or services groups to adopt a City park. The program benefits schoolchildren, who learn valuable stewardship skills, and the public who benefit from the restoration efforts.

Contact Information: [miparks@mercergov.org](mailto:miparks@mercergov.org), [http://www.ci.mercer-island.wa.us/Page.asp?NavID=1515](http://www.ci.mercer-island.wa.us/Page.asp?NavID=1515)

### 4.9 EarthCorps

EarthCorps is a non-profit organization that provides environmental restoration service programs for young adults. These one-year programs provide opportunities to learn conservation and develop skills in leading volunteers. EarthCorps works with Mercer Island Parks and Recreation to organize and lead restoration projects, such as removing invasive plants and planting native species.
5 LIST OF ADDITIONAL PROJECTS AND PROGRAMS TO ACHIEVE LOCAL RESTORATION GOALS

The following series of additional projects and programs are generally organized from the larger watershed scale to the City-scale, including City projects and programs and finally non-profit organizations that are also active in the Mercer Island area.

5.1 Unfunded WRIA 8 Projects

The 2005 Final Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan does not identify any specific projects along the Mercer Island shoreline, but does include the following general recommendations to reduce predation on outmigrating juvenile chinook salmon in its “Action Start-List for Migratory Areas”:

- Encourage salmon friendly shoreline design during new construction or redevelopment by offering incentives and regulatory flexibility to improve bulkhead and dock design and revegetate shorelines. Increase enforcement and address nonconforming structures over long run by requiring that major redevelopment projects meet current standards.
- Discourage construction of new bulkheads; offer incentives (e.g., provide expertise, expedite permitting) for voluntary removal of bulkheads, beach improvement, riparian revegetation.
- Support joint effort by NOAA Fisheries and other agencies to develop dock/pier specifications to streamline federal/state/local permitting; encourage similar effort for bulkhead specifications.
- Promote value of light-permeable docks, smaller piling sizes, and community docks to both salmon and landowners through direct mailings to lakeshore landowners or registered boat owners sent with property tax notice or boat registration tab renewal. Offer financial incentives for community docks in terms of reduced permit fees, loan fees/percentage rates, taxes, and permitting time, in addition to construction cost savings.
- Develop workshop series specifically for lakeshore property owners on lakeside living: natural yard care, alternatives to vertical wall bulkheads, fish friendly dock design, best management practices for aquatic weed control, porous paving, and environmentally friendly methods of maintaining boats, docks, and decks. Related efforts include creation of a website to convey workshop material, an awareness campaign, “Build a Beach,” to illuminate impact of bulkheads on development of sandy beaches.
• Restore shoreline in Lake Washington Section 1: work with private property owners to restore shoreline in Section 1. Use interpretive signage where possible to explain restoration efforts.

5.2 Recommended Projects - Public

The following is developed from a list of opportunity areas identified within the Final Shoreline Analysis Report (The Watershed Company 2009) and is intended to contribute to improvement of impaired functions on public property. The list of recommended projects was created after reviewing the City’s CIP list and assessing field conditions during the shoreline inventory and characterization phase.

*Luther Burbank Park*

Two restoration projects listed in the City’s CIP include:

• Luther Burbank Shoreline Restoration (Summer 2008): removing non-native plant species, replant native vegetation, create recreation access beaches, develop habitat and maintain trail opportunities, stabilize soft banks.

• Luther Burbank Off-Leash Area (OLA) (2008): design and construct minor drainage, surfacing, shoreline, landscaping and fencing improvements in OLA.

*Street-Ends (Landings) and Residential Shoreline Properties*

There are two projects listed in the City’s 2007-2008 6-Year Capital Improvement Program. Both projects are currently planned for implementation in 2013.

• Groveland Beach Park: Remove invasive vegetation, replace worn playground elements, and prepare shoreline improvements.

• Clarke Beach Park: Remove concrete retaining wall/bulkhead at Clarke Beaches.

• Many of the parks, street-ends and residential shoreline properties along the shoreline have the potential for improvement of ecological functions through: 1) reduction or modification of shoreline armoring, 2) reduction of overwater cover and in-water structures (grated pier decking, pier size reduction, pile size and quantity reduction, moorage cover removal), 3) improvements to nearshore native vegetative cover, and/or 4) reductions in impervious surface coverage.

*Open Space – Vegetation Management*

Many parks located on Mercer Island are heavily invaded by non-native invasive species that will eventually damage and destroy forest canopies. Opportunities exist to provide vegetation and property management in existing open space areas. This will improve shoreline and upland habitat areas within the City.
5.3 Recommended Projects - Private

Generally, restoration opportunities which have been identified are focused on City property, including parks, open spaces, and street-ends. Many other restoration opportunities exist throughout the City on private property. These opportunities would include many of the same issues as listed above, but would likely occur only through voluntary means or through re-development proposals.

*General:* Many shoreline properties have the potential for improvement of ecological functions through: 1) reduction or modification of shoreline armoring, 2) reduction of overwater cover and in-water structures (grated pier decking, pier size reduction, pile size and quantity reduction, moorage cover removal), 3) improvements to nearshore native vegetative cover, and/or 4) reductions in impervious surface coverage. Similar opportunities would also apply to undeveloped lots which may be used as community lots for upland properties or local street-ends and utility corridors. Other opportunities may exist to improve either fish habitat or fish passage for those properties which have streams discharging to Lake Washington.

An example of how shoreline armoring might be reduced on some lots along the City’s residential areas is depicted below (Figure 4). This example displays before and after images of a lot in which the existing bulkhead is partially pulled back to create a shallow cove beach combined with natural materials. This example combines the effort to improve habitat conditions with improved access and aesthetics.

*Restoration of Multiple Contiguous Properties:* Through grant funding sources, restoration opportunities may be available to multiple contiguous shoreline properties, including residential lots that are interested in improving shoreline function. Restoring shoreline properties that are connected to one another would provide significantly more benefits than a more piecemeal approach. Therefore, priority should be given to restoration projects which involve multiple lots (such as accelerated permit processes).

5.4 Public Education/Outreach

The Final Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan includes a table outlining 53 “Outreach and Education Actions” with target audiences for each action ranging from the general public, to shoreline property owners in general, to lakeshore property owners specifically, to businesses, to youth, and others. The complete list of WRIA 8 “Outreach and Education Actions” is included as Appendix B.
Figure 4: Partial bulkhead removal example project
6 PROPOSED IMPLEMENTATION TARGETS AND MONITORING METHODS

As previously noted, the City’s shoreline zone is occupied by single- and multi-family residences, and public recreation/open spaces. Therefore, efforts should be made to improve shoreline ecological function through the promotion of restoration and healthy practices at all levels, from large-scale marina users to single-family property owners. The City of Mercer Island already has a very active environmental community with a restoration and education focus. Continued improvement of shoreline ecological functions on the shoreline requires a more comprehensive watershed approach, which combines upland and shoreline projects and programs.

The following table (Table 2) outlines a possible schedule and funding sources for implementation of a variety of efforts that could improve shoreline ecological function, and are described in previous sections of this report.

Table 2. Implementation Schedule and Funding for Restoration Projects, Programs and Plans.

<table>
<thead>
<tr>
<th>Restoration Project/Program</th>
<th>Schedule</th>
<th>Funding Source or Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 WRIA 8 Participation</td>
<td>Ongoing</td>
<td>The City is an active member of the WRIA 8 Forum. Membership at this time entails a commitment of staff and elected official time.</td>
</tr>
<tr>
<td>4.2 Comprehensive Plan Policies</td>
<td>Ongoing</td>
<td>The City makes a substantial commitment of staff time in the course of project and program reviews to determine consistency and compliance with the recently updated Comprehensive Plan. The next Comprehensive Plan update will occur in 2010.</td>
</tr>
<tr>
<td>4.3 Critical Areas Regulations</td>
<td>Ongoing</td>
<td>The City makes a substantial commitment of staff time in the course of project and program reviews to determine consistency and compliance with their recently updated Critical Areas Regulations.</td>
</tr>
<tr>
<td>Restoration Project/Program</td>
<td>Schedule</td>
<td>Funding Source or Commitment</td>
</tr>
<tr>
<td>----------------------------</td>
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<td>------------------------------</td>
</tr>
<tr>
<td>4.4 Stormwater Planning</td>
<td>Ongoing</td>
<td>Currently, staff time and materials are the only City resource commitments. The City currently follows its 2008 Stormwater Management Program which implements the City’s Phase II NPDES permit and reports annually to Ecology. The City is also involved in the implementation of the 2005 Surface Water Master Plan, which goals includes flood reduction, water quality improvements and aquatic habitat improvements. The City also is in full compliance with NPDES permit requirements for Phase II cities.</td>
</tr>
<tr>
<td>4.5 Public Education</td>
<td>Ongoing</td>
<td>Currently, staff time and materials are provided in developing public education and outreach efforts, which are highlighted in the Comprehensive Plan policy statement based on the goal of natural resource protection. These items help guide City staff and local citizen groups in developing mechanisms to educate the public and broaden the interest in protecting and enhancing local environmental resources.</td>
</tr>
<tr>
<td>4.6 Open Space Conservancy Trust</td>
<td>Ongoing</td>
<td>Currently, staff time and materials to support these groups are part of the City’s resource commitments. The Mountains to Sound Greenway Trust also has a contractual agreement with the City for Volunteer Management Services. These groups consist of volunteers appointed by the Mayor.</td>
</tr>
<tr>
<td>4.7 Mountains to Sound Greenway Trust</td>
<td>Ongoing</td>
<td>Currently, staff time and materials to support these groups are the only City resource commitments. These groups consist of volunteers and are supported by the City’s Parks and Recreation Department.</td>
</tr>
<tr>
<td>4.8 Forest Stewardship and Adopt-A-Park</td>
<td>Ongoing</td>
<td>Currently, staff time and materials to support this group is part of the City’s resource commitments. EarthCorps also has a contractual agreement with the City for Volunteer Management Services. These groups consist of volunteers and are supported by the City’s Parks and Recreation Department.</td>
</tr>
<tr>
<td>4.9 EarthCorps</td>
<td>Ongoing</td>
<td>Currently, staff time and materials to support this group is part of the City’s resource commitments. EarthCorps also has a contractual agreement with the City for Volunteer Management Services. These groups consist of volunteers and are supported by the City’s Parks and Recreation Department.</td>
</tr>
<tr>
<td>5.1 Unfunded WRIA 8 Projects - Public</td>
<td>As funds and opportunity allow</td>
<td>The City Council passed a resolution in 2005 expressing its approval and support for the Lake Washington/Cedar/Sammamish Watershed Chinook Salmon Conservation Plan. Projects will be funded by the City, partnering agencies and non-profit organizations, and grants as projects and funding opportunities arise.</td>
</tr>
<tr>
<td>5.2 Recommended Projects - Public</td>
<td>As funds and opportunity</td>
<td>Projects identified in this section would likely be implemented either when grant funds are obtained,</td>
</tr>
<tr>
<td>Restoration Project/Program</td>
<td>Schedule</td>
<td>Funding Source or Commitment</td>
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<td>-----------------------------</td>
</tr>
<tr>
<td>5.3 Recommended Projects - Private</td>
<td>allow</td>
<td>when partnerships are formed between the City and other agencies or non-profit groups, or as may be required by the critical areas regulations and the Shoreline Master Program during project-level reviews by the City.</td>
</tr>
<tr>
<td>5.4 Public Education/Outreach</td>
<td>As funds and opportunity allow</td>
<td>On-going and future education efforts should be coordinated with the City and partnering agencies, including funding sources (grant funding, monetary donations, volunteer hours)</td>
</tr>
</tbody>
</table>

City planning staff will track all land use and development activity, including exemptions, within shoreline jurisdiction, and will incorporate actions and programs of the Parks and Utilities departments as well. A report will be assembled that provides basic project information, including location, permit type issued, project description, impacts, mitigation (if any), and monitoring outcomes as appropriate. Examples of data categories might include square feet of non-native vegetation removed, square feet of native vegetation planted or maintained, reductions in chemical usage to maintain turf, linear feet of eroding bank stabilized through plantings, linear feet of shoreline armoring removed, or number of fish passage barriers corrected. The report would also update Tables 1 and 4 above, and outline implementation of various programs and restoration actions (by the City or other groups) that relate to watershed health.

The staff report will be assembled to coincide with Comprehensive Plan updates and will be used, in light of the goals and objectives of the Shoreline Master Program, to determine whether implementation of the SMP is meeting the basic goal of no net loss of ecological functions relative to the baseline condition established in the Shoreline Analysis Report (The Watershed Company 2009). In the long term, the City should be able to demonstrate a net improvement in the City of Mercer Island’s shoreline environment.

Based on the results of this assessment, the City may make recommendations for changes to the SMP.

7 Restoration Priorities

The process of prioritizing actions that are geared toward restoration of Mercer Island’s shoreline areas involves balancing ecological goals with a variety of site-specific constraints. Briefly restated, the City’s environmental protection and restoration goals
include 1) protecting watershed processes, 2) protecting fish and wildlife habitat, and 3) contributing to chinook conservation efforts. Constraints that are specific to Mercer Island include a highly developed residential shoreline along Lake Washington with several large areas of public open space/access. While some areas may already offer fairly good ecological functions (e.g. portions of Luther Burbank Park shoreline), they tend to include some additional opportunities to further enhance ecological functions. These goals and constraints were used to develop a hierarchy of restoration actions to rank different types of projects or programs associated with shoreline restoration. Programmatic actions, like continuing WRIA 8 involvement and conducting outreach programs to local residents, tend to receive relatively high priority opposed to restoration actions involving private landowners. Other factors that influenced the hierarchy are based on scientific recommendations specific to WRIA 8, potential funding sources, and the projected level of public benefit. Restoration projects on public property, such as those identified in Section 5.2, have received a high priority ranking due to their availability to be funded by a variety of sources, such as CIP program, Parks Department, local grants, and non-profit groups.

Although restoration project/program scheduling is summarized in the previous section (Table 2), the actual order of implementation may not always correspond with the priority level assigned to that project/program. This discrepancy is caused by a variety of obstacles that interfere with efforts to implement projects in the exact order of their perceived priority. Some projects, such as those associated with riparian planting, are relatively inexpensive and easy to permit and should be implemented over the short and intermediate term despite the perception of lower priority than projects involving extensive shoreline restoration or large-scale capital improvement projects. Straightforward projects with available funding should be initiated immediately for the worthwhile benefits they provide and to preserve a sense of momentum while permitting, design, site access authorization, and funding for the larger, more complicated, and more expensive projects are under way.

7.1 Priority 1 – Continue Water Resource Inventory Area (WRIA) 8 Participation

Of basic importance is the continuation of ongoing, programmatic, basin-wide programs and initiatives such as the WRIA 8 Forum. Continue to work collaboratively with other jurisdictions and stakeholders in WRIA 8 to implement the Final Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan. This process provides an opportunity for the City to keep in touch with its role on a basin-wide scale and to influence habitat conditions beyond its borders, which, in turn, come back to influence water quality and quantity and habitat issues within the City.

7.2 Priority 2 – Public Education and Involvement

Public education and involvement has a high priority in the City of Mercer Island due to the predominance of residential development along the shoreline. Recent outreach
efforts by other jurisdictions, such as the handbook Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington (City of Seattle 2008), have begun to change the perception of shoreline aesthetics, use, and ecological health. This and other outreach efforts (i.e. workshops, websites, example projects) are clear motivating and contributing factors for restoration activities on private property.

While many opportunities for shoreline restoration exist within City parks (see Section 5.2), multiple other opportunities also exist along community-owned properties and private marinas. Whether the focus is on single-family residential, community-owned, or marina properties, providing education opportunities and involving the public is key to success, and would possibly entail coordinating the development of a long-term Public Education and Outreach Plan (Section 5.2). This could also include focusing on gaining public support for restoration along City parks.

Specific projects from the Action Start List include developing a workshop series and website that is tailored to lakeshore property owners, and that promotes natural yard care, alternatives to vertical bulkheads, fish-friendly dock design, best management practices for aquatic weed control, porous paving, and environmentally friendly methods of maintaining boats, docks, and decks. Collaborative efforts with other jurisdictions (i.e City of Seattle) could be completed to meet the Action Start List goals. Additionally, design competitions and media coverage could be used to promote the use of “rain gardens” and other low impact development practices that mimic natural hydrology. A home/garden tour or “Street of Dreams” type event might serve to showcase these landscape/engineering treatments.

7.3 Priority 3 – Reduce Shoreline Armoring along Lake Washington, Create or Enhance Natural Shoreline Conditions

The preponderance of shoreline armoring and its association with impaired habitat conditions, specifically for juvenile chinook salmon, has been identified as one of the key limiting factors along Lake Washington (Kerwin 2001). Nearly 78 percent of the shoreline within the City of Mercer Island is armored at or below the ordinary high water mark (The Watershed Company 2009). While there are no specifically identified projects in the Final Lake Washington/ Cedar/ Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan that are located within Mercer Island, there are many opportunities listed in this Restoration Plan which focus on the potential reduction in shoreline armoring and subsequent restoration and enhancement of shoreline ecological functions.

However, emphasis should also be given to future project proposals that involve or have the potential to restore privately-owned shoreline areas to more natural conditions. The City should explore ways in which to assist local property owners, whether through
financial assistance, permit expedition, or guidance, to team together with restoration of multiple contiguous lots.

Recommendations from the Action Start List reflect this focus and encourage salmon friendly shoreline design during new construction or redevelopment by offering incentives and regulatory flexibility to improve bulkhead and dock design and revegetate shorelines. Other recommendations from the List that support this priority include: 1) increasing enforcement that addresses nonconforming structures over the long run by requiring that major redevelopment projects meet current standards; 2) discouraging construction of new bulkheads and offer incentives (e.g., provide expertise, expedite permitting) for voluntary removal of bulkheads, beach improvement, riparian revegetation; 3) utilizing interpretive signage where possible to explain restoration efforts.

7.4 Priority 4 – Reduction of In-water and Over-water Structures

Similar to Priority 3 listed above, in-water and over-water structures, particularly piers, docks, and covered moorages, have been identified as one of the key limiting factors in Lake Washington (Kerwin 2001). Pier density along the City’s shoreline is 48 piers per mile – slightly higher than the lake-wide average of 36 piers per mile (Toft 2001), but inline with other jurisdictions around Lake Washington. The density of residential development along the City’s lakeshore is the main reason for the slightly higher-than-average pier density. While the pier density along residential shorelines is much higher than what is typically found along City-owned park property, the overall footprint of each public pier is generally much greater than is found along single-family residential sites. Opportunities exist for reduction in pier size and overall shading impacts through pier modifications on public sites.

Although no specific privately-owned project sites to reduce in-water and over-water structures within residential areas are identified here, future project proposals involving reductions in the size and/or quantity of such structures should be emphasized. Such future projects may involve joint-use pier proposals or pier reconstruction and may be allowed an expedited permit process.

Action Start List Recommendations in support of Priority 4 include: 1) supporting the joint effort by NOAA Fisheries and other agencies to develop dock/pier specifications that streamline federal/state/localpermitting; 2) promoting the value of light-permeable docks, smaller piling sizes, and community docks to both salmon and landowners through direct mailings to lakeshore landowners or registered boat owners sent with property tax notice or boat registration tab renewal; and 3) offering financial incentives for community docks in terms of reduced permit fees, loan fees/percentage rates, taxes, and permitting time, in addition to construction cost savings. Similarly, the WRIA 8
Salmon Conservation Plan identified a future project (C302) to explore opportunities to reduce the number of docks by working with private property owners.

### 7.5 Priority 5 – Restore Mouths of Tributary Streams, Reduce Sediment and Pollutant Delivery to Lake Washington

Although most of the watercourses and their basins located within the City are outside of shoreline jurisdiction, their impacts to shoreline areas should not be discounted. Several of these streams have the potential to provide fish and wildlife habitat. For juvenile chinook, once they enter Lake Washington, they often congregate near the mouths of tributary streams, and prefer low gradient, shallow-water habitats with small substrates (Tabor and Piaskowski 2002; Tabor et al. 2004; Tabor et al. 2006). Chinook fry entering Lake Washington early in the emigration period (February and March) are still relatively small, typically do not disperse far from the mouth of their natal stream, and are largely dependent upon shallow-water habitats in the littoral zone with overhanging vegetation and complex cover (Tabor and Piaskowski 2002; Tabor et al. 2004). The mouths of creeks entering Lake Washington (whether they support salmon spawning or not), as well as undeveloped lakeshore riparian habitats associated with these confluence areas, attract juvenile chinook salmon and provide important rearing habitat during this critical life stage (Tabor et al. 2004; Tabor et al. 2006).

Later in the emigration period (May and June), most chinook juveniles have grown to fingerling size and begin utilizing limnetic areas of the Lake more heavily (Koehler et al. 2006). As the juvenile chinook salmon mature to fingerlings and move offshore, their distribution extends throughout Lake Washington. Although early emigrating chinook fry from the Cedar River and North Lake Washington tributaries (primary production areas) initially do not disperse around all of Mercer Island, some salmon fry from the Cedar River are known to depend on nearshore habitats along the southern shore of Mercer Island. Later in the spring (May and June), however, juvenile chinook are known to be well distributed throughout both limnetic and littoral areas of Lake Washington, and certainly utilize the shoreline habitats along Mercer Island.

Action Start List Recommendations in support of Priority 5 include: 1) addressing water quality and high flow impacts from creeks and shoreline development through NPDES Phase 1 and Phase 2 permit updates, consistent with Washington Department of Ecology’s 2001 Stormwater Management Manual, including low impact development techniques, on-site stormwater detention for new and redeveloped projects, and control of point sources that discharge directly into the lakes; and 2) Protecting and restoring water quality and other ecological functions in tributaries to reduce effects of urbanization. This involves protecting and restoring forest cover, riparian buffers, wetlands, and creek mouths by revising and enforcing critical areas ordinances and Shoreline Master Programs, incentives, and flexible development tools.
7.6 Priority 6 – Improve Water Quality and Reduce Sediment and Pollutant Delivery

Although most of the City’s watercourses and their basins are located outside of shoreline jurisdiction, their impacts to shoreline areas should not be discounted. Several of these watercourses have the potential to provide fish habitat in their lower sections and wildlife habitat throughout. They are also a common receiving body for non-point source pollution, which in turn delivers those contaminants ultimately to Lake Washington. Mercer Island started a Water Quality Monitoring effort in 2001 with technical assistance from the King County Water and Land Resources Division that analyzes a variety of water quality factors affecting Lake Washington.

Many actions provided in the WRIA 8 Salmon Conservation Plan focus on addressing water quality and stormwater controls, including:

- Implement Phase 2 NPDES permit requirements
- Address stormwater impacts from transportation projects involving new or expanded roadways
- Encourage low impact development through regulations, incentives, education and training, and demonstration projects
- Improve Enforcement of Existing Land Use and Other Regulations

These recommendations emphasize the use of low impact development techniques, on-site stormwater detention for new and redeveloped projects, and control of point sources that discharge directly into surface waters. They involve protecting and restoring vegetative cover, riparian buffers, wetlands, and creek mouths by revising and enforcing critical areas ordinances and Shoreline Master Programs, incentives, and flexible development tools.

7.7 Priority 7 – Improve Riparian Vegetation, Reduce Impervious Coverage

Similar to the priority listed above to improve water quality and reduce sediment and pollutant delivery, improved riparian vegetation and reduction in impervious surfaces are emphasized throughout the WRIA 8 Salmon Conservation Plan. These factors correspond directly to the emphasis to increase use of Low Impact Development techniques. Actions which involve improvements to riparian vegetation and reductions in impervious surface coverage are likely to take place on both public and private development. The City’s Parks and Recreation Department is committed to providing improved shoreline landscapes by incorporating areas of native riparian vegetation. Private development should be encouraged to utilize low impact development techniques such as the planting of native trees and use of porous paving.
7.8 **Priority 8 – Reduce Aquatic Non-Native Invasive Weeds**

While not specifically listed in the WRIA 8 Salmon Conservation Plan, reduction of aquatic invasive weeds from Lake Washington, particularly Eurasian watermilfoil and white water lily, is of particular concern across many jurisdictions with Lake Washington shoreline. Not only are aquatic weeds a problem for boats and swimmers, but they also tend to reduce dissolved oxygen to lethal levels for fish, hampering foraging opportunities. Long-term control of aquatic non-native invasive plants in Lake Washington will be very difficult to achieve without coordinated inter-jurisdictional collaboration.

7.9 **Priority 9 – Acquisition of Shoreline Property for Preservation, Restoration, or Enhancement Purposes**

The City should explore opportunities to protect natural areas or other areas with high ecological value or restoration potential via property acquisition. Mechanisms to purchase property would likely include collaboration with other stakeholder groups including representatives from local government, businesses and the general public in order to develop a prioritized list of actions. Properties throughout the more developed shoreline areas within the City may be available for acquisition both for preservation but also to act as a showcase for restoration potential.

7.10 **Priority 10 – City Zoning, Regulatory, and Planning Policies**

City Zoning, Regulatory, and Planning Policies are listed as being of lower priority in this case simply because they have been the subject of a thorough review and have recently been updated accordingly. Notably, the City’s Critical Areas Ordinance was updated (November 2005) consistent with the Best Available Science for critical areas, including those within the shoreline area. However, as noted in the WRIA Implementation Monitoring Report (WRIA 8 2008a), both Shoreline Master Programs and Critical Areas Ordinances are highly linked to the implementation of plan recommendations. For the time being, it is considered more important to capitalize on this Restoration Plan by focusing on implementing projects consistent with the updated SMP policies. Unimplemented or unused policies, by themselves, will not improve habitat. As time goes by, further review and potential updating of these policies may increase in priority. Policy-related items in this category as listed in previous sections include Comprehensive Plan Policies (Section 4.2), Critical Areas Regulations (Section 4.3), and Stormwater Planning (Section 4.4).

The City received its final NPDES Phase II permit in February 2007 from Ecology. The NPDES Phase II permit is required to cover the City’s stormwater discharges into regulated lakes and streams. Under the conditions of the permit, the City must protect and improve water quality through public education and outreach, detection and elimination of illicit non-stormwater discharges (e.g., spills, illegal dumping,
wastewater), management and regulation of construction site runoff, management and regulation of runoff from new development and redevelopment, and pollution prevention and maintenance for municipal operations.

The City conducts all of the above at some level already, but significant additional effort may be needed to document activities and to alter or upgrade programs. The City has various programs to control stormwater pollution through maintenance of public facilities, inspection of private facilities, water quality treatment requirements for new development, source control work with businesses and residents, and spill control and response. Monitoring may be required as part of an illicit discharge detection and elimination program, for certain construction sites, or in waterbodies with a Total Maximum Daily Load (TMDL) Plan for particular pollutants. General water quality monitoring concerns include: a) stormwater quality; b) effectiveness of best management practices; and c) effectiveness of the stormwater management program.
8 REFERENCES

City of Mercer Island. 2007. City of Mercer Island Capital Improvement Program.


9 LIST OF ACRONYMS AND ABBREVIATIONS

AASF .................. Adopt-A-Stream Foundation

cfs .................. cubic feet per second

CIP ..................... Capital Investment Program

GMA ..................... Growth Management Act

NGPA .................... Native Growth Protection Area

NGPE ..................... Native Growth Protection Easement

OHWM .................. ordinary high water mark

WDFW ..................... Washington Department of Fish and Wildlife
APPENDIX A

CITY OF MERCER ISLAND
RESOLUTION 1347
RATIFYING THE WRIA 8 CHINOOK SALMON CONSERVATION PLAN
CITY OF MERCER ISLAND
RESOLUTION NO. 1347

A RESOLUTION RATIFYING THE WATER RESOURCE INVENTORY
AREA (WRIA) 8 CHINOOK SALMON CONSERVATION PLAN

WHEREAS, in March 1999, the National Oceanic and Atmospheric Administration (NOAA) Fisheries listed the Puget Sound Chinook salmon evolutionary significant unit as a threatened species under the Endangered Species Act (ESA); and

WHEREAS, in November 1999, the United States Fish and Wildlife Service (USFWS) listed the Puget Sound bull trout distinct population segment as a threatened species under the ESA; and

WHEREAS, under the ESA, it is illegal to take a listed species, and the ESA defines the term “take” to include actions that could harm listed species or their habitat; and

WHEREAS, under the ESA, Section 4(f), NOAA Fisheries (for Chinook salmon) and USFWS (for bull trout) are required to develop and implement recovery plans to address the recovery of the species; and

WHEREAS, an essential ingredient for the development and implementation of an effective recovery program is coordination and cooperation among federal, state, and local agencies, tribes, businesses, researchers, non-governmental organizations, landowners, citizens, and other stakeholders as required; and

WHEREAS, Shared Strategy for Puget Sound, a regional non-profit organization, has assumed a lead role in the Puget Sound response to developing a recovery plan for submittal to NOAA Fisheries and the USFWS; and

WHEREAS, local jurisdictions have authority over some habitat-based aspects of Chinook survival through land use and other policies and programs; and the state and tribes, who are the legal co-managers of the fishery resource, are responsible for addressing harvest and hatchery management in WRIA 8; and

WHEREAS, in WRIA 8, habitat actions to significantly increase Chinook productivity trends will be helpful, in conjunction with other recovery efforts, to avoid extinction in the near term and restore WRIA 8 Chinook to viability in the long term; and

WHEREAS, Mercer Island supports cooperation at the WRIA level to set common priorities for actions among partners, efficient use of resources and investments, and distribution of responsibility for actions and expenditures;

WHEREAS, 27 local governments in WRIA 8 jointly funded development of The WRIA 8 Steering Committee Proposed Lake Washington/Cedar/Sammanish Watershed Chinook

Resolution No. 1347
Salmon Conservation Plan (the Plan), published February 25, 2005 following public input and review; and

WHEREAS, while the Plan recognizes that salmon recovery is a long-term effort, it focuses on the next 10 years and includes a scientific framework, a start-list of priority actions and comprehensive action lists, an adaptive management approach, and a funding strategy; and

WHEREAS, Mercer Island has consistently implemented habitat restoration and protection projects, and addressed salmon habitat through its land use and public outreach policies and programs over the past five years; and

WHEREAS, it is important to provide jurisdictions, the private sector and the public with certainty and predictability regarding the course of salmon recovery actions that the region will be taking in the Lake Washington/Cedar/Sammamish Watershed, including the Puget Sound nearshore; and

WHEREAS, if insufficient action is taken at the local and regional level, it is possible that the federal government could list Puget Sound Chinook salmon as an endangered species, thereby decreasing local flexibility.

NOW, THEREFORE, BE IT RESOLVED BY THE MERCER ISLAND CITY COUNCIL AS FOLLOWS:

Section A: The Mercer Island City Council hereby ratifies The WRIA 8 Steering Committee Proposed Lake Washington/Cedar/Sammamish Watershed Chinook Salmon Conservation Plan, dated February 25, 2005, a copy of which is on file with the Mercer Island City Clerk (the Plan). Ratification is intended to convey the city’s approval of the Plan.

Section B: Mercer Island recognizes that negotiation of commitments and assurances/conditions with appropriate federal and state agencies will be an iterative process. Full implementation of this Plan is dependent on the following:

1. NOAA Fisheries will adopt the Plan, as an operative element of its ESA Section 4(f) recovery plan for Puget Sound Chinook salmon.

2. NOAA Fisheries and USFWS will:
   a) take no direct enforcement actions against Mercer Island under the ESA for implementation of actions recommended in or consistent with the Plan,
   b) endorse the Plan and its actions, and defend Mercer Island against legal challenges by third parties, and
   c) reduce the regulatory burden for Mercer Island activities recommended in or consistent with the Plan that require an ESA Section 7 consultation.
3. Federal and state governments will:
   a) provide funding and other monetary incentives to support Plan actions and monitoring activities,
   b) streamline permitting for projects implemented primarily to restore salmonid habitat or where the actions are mitigation that further Plan implementation,
   c) offer programmatic permitting for local jurisdiction actions that are consistent with the Plan,
   d) accept the science that is the foundation of the Plan and support the monitoring and evaluation framework,
   e) incorporate actions and guidance from the Plan in future federal and state transportation and infrastructure planning and improvement projects, and
   f) direct mitigation resources toward Plan priorities.

Section C: This resolution does not obligate the Mercer Island City Council to future appropriations beyond current authority set forth in its 2005-2006 biennial budget. All future appropriations are subject to review and approval by the then seated City Council.


Bryan Cairns, Deputy Mayor

ATTEST:

Allison Spietz, City Clerk
APPENDIX B

PROPOSED OUTREACH AND EDUCATION ACTIONS
Draft Proposed Outreach & Education Actions for the Cedar Population (Tier 1 and 2 Subareas)  
(by WRIA 8 Public Outreach Committee)

<table>
<thead>
<tr>
<th>Proj #</th>
<th>Habitat Condition</th>
<th>Desired Outcome</th>
<th>Target Audience</th>
<th>Proposed Action</th>
<th>Priority</th>
<th>Proven Track Record/ Model</th>
<th>Level of Financial Commit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C701</td>
<td>Riparian vegetation displaced by lawn, invasives, or exotics; water quality compromised by garden chemicals, metals, sediment; higher water use at times when flows lowest.</td>
<td>Protect &amp; restore riparian vegetation to provide sources of large woody debris/pools/riffles; protect &amp; restore water quality, maintain instream flows.</td>
<td>Shoreline property owners and general public</td>
<td>Update and distribute streamside living materials such as Streamside Savvy, Salmon Friendly Gardening Practices, or Going Native. Distribute to all shoreline property owners and make available at City Hall, libraries, and retail establishments such as home &amp; garden centers.</td>
<td>High</td>
<td>Ongoing or have been distributed in past.</td>
<td>Low-Medium</td>
</tr>
<tr>
<td>C702</td>
<td>Riparian vegetation displaced by lawn, invasives, or exotics; water quality compromised by landscape practices; higher water use at times when flows lowest.</td>
<td>Protect &amp; restore riparian vegetation to provide sources of large woody debris/pools/riffles; protect &amp; restore water quality, maintain instream flows.</td>
<td>Shoreline property owners</td>
<td>Offer shoreline property owners a workshop in streamside living. Include tips on landscape design/maintenance appropriate for riverside properties and shoreline stabilization (alternatives to vertical wall bulkhead design). Feature designers and contractors who have both experience and recognition in salmon friendly design.</td>
<td>High</td>
<td>Seattle Public Utilities and Snohomish County Streamside Stewardship Courses, Issaquah’s Creekside Living workshops</td>
<td>Low</td>
</tr>
<tr>
<td>C703</td>
<td>Smaller parcels lost to development or possible habitat degradation without financial incentives to conserve that are offered to owners of larger parcels.</td>
<td>Protect good salmon habitat that could provide source of shelter, pools, riffles, food.</td>
<td>Shoreline property owners</td>
<td>Expand use tax credit incentives to encourage protection of smaller properties not currently eligible for existing programs.</td>
<td>High</td>
<td>Public Benefits Rating System, Open Space Current Use Tax (CUT)</td>
<td>Variable (Low budget)</td>
</tr>
<tr>
<td>C704</td>
<td>Channel confinement from bulkheads, levees, and armoring; loss of riparian vegetation.</td>
<td>Soften shorelines, restore floodplain connectivity and channel complexity.</td>
<td>Shoreline property owners</td>
<td>Reduce permit fees for shoreline stabilization if design is salmon friendly (employing alternatives to dikes, levees, revetments, and vertical wall bulkheads). Also reduce permit fees (where applicable) for streamside restoration and removal &amp; replacement of non-native vegetation.</td>
<td>High</td>
<td></td>
<td>Low</td>
</tr>
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<td>Proj #</td>
<td>Habitat Condition</td>
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<td>Level of Financial Commit.</td>
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<tr>
<td>C705</td>
<td>Riparian vegetation displaced by lawn, invasives, or exotics; water quality compromised by garden chemicals, metals, sediment. Higher water use at times when flows lowest.</td>
<td>Protect &amp; restore riparian vegetation; protect &amp; restore water quality, maintain instream flows, stabilize slopes with native riparian vegetation. Increase likelihood of achieving these goals by bringing on board industry with a large influence over the landscapes within watershed.</td>
<td>Landscape Contractors</td>
<td>Offer educational opportunities to landscape designers/contractors on riparian design/naturescaping, local plant sourcing, proper installation techniques, invasive species, efficient watering techniques and use of compost to build healthy soils, control erosion and reduce need for supplemental irrigation. Augment training to accommodate English as Second Language participants.</td>
<td>High</td>
<td>Washington Assoc. of Landscape Professionals (WALP) trainings</td>
<td>Low - Medium (industry supported)</td>
</tr>
<tr>
<td>C706</td>
<td>Reduced forest cover; increased impervious areas/lack of infiltration/ground water recharge</td>
<td>Protect forest cover, reduce impervious surface area, increase infiltration back into soil and ground water recharge, decrease water use.</td>
<td>Design &amp; Building Professionals</td>
<td>Provide education to architects, landscape architects, engineers, and developers on sustainable building/design practices. Work with professional associations to highlight building practices that maintain watershed health. Include Low Impact Development, importance of maintaining canopy cover and limiting impervious surfaces.</td>
<td>High</td>
<td>City of Seattle Business &amp; Industry Venture, King County Green Building, LEEDS, Construction Works and other Solid Waste Division outreach programs</td>
<td>Low – Medium</td>
</tr>
<tr>
<td>C707</td>
<td>Reduced forest cover; increased impervious areas/lack of infiltration/ground water recharge</td>
<td>Control stormwater runoff to more closely mimic natural hydrology, reduce paving and impervious areas, increase infiltration, protect forest cover</td>
<td>Design &amp; Building Professionals</td>
<td>Use recognition as a means to encourage more salmon sustainable designs and construction. In addition to professional association awards, expand recognition to include merit awards celebrated by popular magazines read by a broader sector of the general public. Promote through design competitions and media coverage the use of “rain gardens” and other low impact development practices that mimic natural hydrology. Combine a home/garden tour or “Street of Dreams” type event featuring these landscape.</td>
<td>High</td>
<td>AIA, ASLA, Sunset Magazine, and Seattle Times Home and Garden awards, King County EnviroStars</td>
<td>Low – Medium</td>
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<tr>
<td>Proj #</td>
<td>Habitat Condition</td>
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<td>C708</td>
<td>Insufficient flow</td>
<td>Maintain instream flows</td>
<td>High-end water users, general public</td>
<td>Extend availability of water conservation incentive programs (such as rebates for efficient toilets, appliances, free indoor conservation kits, or free landscape irrigation audits) to decrease household and commercial water consumption.</td>
<td>High</td>
<td>Smart &amp; Healthy Landscapes, Water Cents</td>
<td>Low</td>
</tr>
<tr>
<td>C709</td>
<td>Water quality compromised by garden chemicals, metals, sediment. Higher water use at times when flows lowest.</td>
<td>Protect water quality from degradation by pesticides and soil erosion, maintain instream flows by reducing water used for irrigation, increase organic content in soils to increase water holding capacity</td>
<td>General public</td>
<td>Target Natural Yardcare Neighborhoods Program to include more communities in the Cedar sub-basin. Expand curricula to offer more landscaping guidelines specific to shoreline residences.</td>
<td>High</td>
<td>Ongoing program</td>
<td>Medium - High</td>
</tr>
<tr>
<td>C710</td>
<td>Water quality degraded by cleaners, oils, grit, and paint; stream flows reduced by excessive water use</td>
<td>Protect and restore water quality and maintain flows</td>
<td>General Public</td>
<td>Coordinate with local business community to encourage the use of commercial car washes. (Water quality and salmon conservation could provide a new marketing angle; car dealerships could offer car wash coupons as bonus with car purchase.). Require that car kits be used for all parking lot fund raiser car washes, or offer carwash coupons or as more eco-friendly alternative funding source.</td>
<td>High</td>
<td>Puget Sound CarWash Association Coupon Program.</td>
<td>Variable - Low</td>
</tr>
<tr>
<td>C711</td>
<td>All conditions listed above Water quality degraded by toxics and garden chemicals; channel confinement; loss of riparian buffer; use of large woody debris, pools, riffles, reduced channel complexity; riparian vegetation displaced by lawn; high water use when flows lowest.</td>
<td>Increase public watershed literacy awareness of effects on water quality and habitat conditions.</td>
<td>General Public, but in particular, residents of Cedar sub-basin who may not be aware of existence of salmon right within urban area</td>
<td>Support and encourage efforts of Cedar River Naturalist Program to promote voluntary stewardship by focusing on education, monitoring, and maintenance of restoration sites (e.g. Cavanaugh Pond). Continue and expand messaging about how everyday personal actions affect salmon, the Cedar River, and entire watershed.</td>
<td>High</td>
<td>Ongoing program with successful track record since 1998</td>
<td>Low - Medium</td>
</tr>
<tr>
<td>Proj #</td>
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<td>C712</td>
<td>Water quality degraded by toxics</td>
<td>Keep toxics out of water by providing safer alternative</td>
<td>General Public</td>
<td>Increase outreach about availability and locations of Hazardous Waste Collection sites and special collection events.</td>
<td>High</td>
<td>King County Local Hazardous Waste Management Program</td>
<td>Low (cheaper than dealing with illegal dumping)</td>
</tr>
<tr>
<td>C713</td>
<td>Water quality degraded by toxics, pesticides, metals, increased nutrient loads, sediments, loss of riparian buffer</td>
<td>Protect and restore water quality</td>
<td>General Public</td>
<td>Publicize emergency call numbers for public to report water quality and quantity problems, non-permitted vegetation clearing, non-permitted in-stream grading, and wood removal incidents.</td>
<td>High</td>
<td>Seattle Public Utilities Surface Water Pollution Prevention Hotline and website</td>
<td>Low</td>
</tr>
<tr>
<td>C714</td>
<td>Riparian vegetation displaced by lawn, invasives, and exotics, providing little food value, no source of LWD, or soil stability (sedimentation of gravel beds). Increased water use when flows lowest; increased use of pesticides on less resistant exotics</td>
<td>Restore native riparian vegetation to provide cover and terrestrial food source, reduce soil erosion and sedimentation in gravel beds, protect and restore water quality, maintain instream flows</td>
<td>Shoreline Property Owners and Community</td>
<td>Increase number of native plant salvages. Integrate these salvage opportunities into naturscaping classes; class participants can take home native plants for immediate use both within and surrounding sensitive areas.</td>
<td>High</td>
<td>King and Snohomish County Native Plant Salvage Programs, WSU Cooperative Extension Native Plant Salvage Project partnership with Puget Sound Action Team, Thurston &amp; Mason Counties.</td>
<td>Low</td>
</tr>
<tr>
<td>C715</td>
<td>Channel confinement and loss of channel complexity from bulkheads, levees, and armoring; loss of riparian vegetation</td>
<td>Reduce channel confinement, restore riparian vegetation, and floodplain connectivity and channel complexity</td>
<td>Shoreline property owners, general Public</td>
<td>Demonstration Project. Locate property owner in publicly accessible (or viewable) area willing to remove bulkhead, levee, or stream bank armoring and replace it with more ecologically friendly design. Publicize efforts through various means. Demonstration project should contain elements that can be done by average shoreline property owner. Provide information on costs and advantages of alternate treatments.</td>
<td>High – Medium-</td>
<td>Variable</td>
<td>Variable</td>
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<tr>
<td>C716</td>
<td>Lack of large woody debris</td>
<td>Overcome public fear and resistance to providing and</td>
<td>Shoreline property owners,</td>
<td>Increase public awareness about the value of large woody debris and native vegetation for flood protection, salmon habitat, and healthy streams. Convey through</td>
<td>High-Medium</td>
<td>Existing King County and US Forest</td>
<td>Low</td>
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<td></td>
<td>maintaining woody debris along shorelines and subsequent source of cover, pools, riffles</td>
<td>general public</td>
<td>media (local newspapers, community newsletters); signage along publicly accessible “model” shoreline; and brochures such as King County’s <em>Large Woody Debris and River Safety</em> and US Forest Service <em>Large Woody Material: The Backbone of a Stream</em>. Distribute to all shoreline property owners and to more of general public, especially recreational boaters. Brochures on LWD and boater safety could be made available at appropriate locations such as: the Renton Community Center (where some tubers put in or pull out), the Henry Moses Pool and Water Park, the Renton Public Library (also on the river), and retail locations where inner-tubes, canoes, and kayaks are sold or rented. <em>Where there is right-of-way or permission from private owners, consider installing kid-friendly signage which addresses the potential dangers that LWD can pose to boaters – along with the value it provides to salmon and the health of the river.</em> Where possible, locate signs at popular “put-in” and “take-out” spots along the river.</td>
<td>Service brochures</td>
<td></td>
<td></td>
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<tr>
<td>C717</td>
<td>All conditions listed above.</td>
<td>Reduce channel confinement, restore riparian vegetation, and floodplain connectivity and channel complexity</td>
<td>Shoreline property owners</td>
<td>Explore possibility of adding a disclosure to Real Estate Sales Agreement describing shorelines as sensitive areas, subject to rules and regulations of City and County. Look to model set by King County.</td>
<td>High – Medium</td>
<td>King County Dept. of Development and Environmental Services</td>
<td>Medium</td>
</tr>
<tr>
<td>C718</td>
<td>Water quality compromised by toxics, pesticides, metal fines, and nutrient overloads</td>
<td>Protect and restore water quality.</td>
<td>General Public</td>
<td>Work with auto parts retailers and gas stations to increase potential for collection of used motor oil/transmission fluids. Distribute Water Quality poster series which depicts impacts of everyday practices: washing car, driving car without maintenance, leaving pet wastes unattended, and improperly using lawn chemicals. Promote</td>
<td>High-Medium</td>
<td>Yes, King County Local Hazardous Waste Management <em>EnviroStars</em> program</td>
<td>Medium</td>
</tr>
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<tr>
<td>C719</td>
<td>Channel confinement reduced channel complexity, loss of riparian vegetation</td>
<td>Increase public watershed literacy awareness of effects on water quality and habitat conditions,</td>
<td>Community</td>
<td>Increase citizen involvement in voluntary stewardship programs, focusing on restoration projects to meet the needs of the conservation plan through restoration, education, monitoring and restoration site maintenance</td>
<td>High – Medium</td>
<td>Various: Cedar River Naturalists, Sammamish ReLeaf, Stream Team; Water Tenders</td>
<td>Medium</td>
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<tr>
<td>C720</td>
<td>Water quality degraded by sediment, diminished ground water recharge, flashiness of floods and resultant bed scour</td>
<td>Protect and restore forest cover, increase infiltration, decrease intensity of flood conditions, protect water quality from sediment</td>
<td>General public</td>
<td>Increase outreach efforts about the benefits of trees and basin-wide forest coverage to protect water quality. Clarify issues about hazard trees. Offer seedlings (perhaps provided by a timber company) to replant after potentially hazardous trees are removed. Enlist the help of nurseries/home &amp; garden centers on this education campaign. (Potential new Fathers’ Day gift idea: Buy and plant a tree each year for a dad who loves salmon).</td>
<td>High in rural areas; Medium in urban/suburban areas.</td>
<td>Yes, Sammamish ReLeaf; Mountains-to-Sound Greenway; City tree ordinances.</td>
<td>Variable - Medium</td>
</tr>
<tr>
<td>C721</td>
<td>All conditions listed.</td>
<td>Protect forest cover, wetlands, headwaters, critical salmon habitat; increase public support for land acquisition and restoration projects, as well as landuse policies.</td>
<td>Shoreline property owners, general public</td>
<td>Identify and encourage shoreline neighborhood and community stewardship associations to foster the ethic of voluntary stewardship. Use these groups to build a bridge between property owners, agencies, and locals governments. Promote watershed health through grassroots messaging. Increased potential for media coverage when efforts initiated at community level.</td>
<td>Medium</td>
<td>Friends of Rock Creek Valley, Friends of Cedar River Watershed, Cedar River Council, Lake Forest Park Stewardship Foundation,</td>
<td>Low</td>
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<tr>
<td>C722</td>
<td>Loss of forest cover, organic content in soils, increase in impervious areas and increased run-off, degraded water quality flashiness during flood conditions.</td>
<td>Protect forest cover, reduce impervious area and runoff, increase infiltration, protect and restore water quality, maintain instream flows</td>
<td>Design/ Build Industry</td>
<td>Create a campaign that tracks demand among community residents for purchasing green homes and remodeling with green building strategies.</td>
<td>Medium</td>
<td>Green Car Program</td>
<td>Low</td>
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<tr>
<td>C723</td>
<td>Degraded water</td>
<td>Cultivate ethic of Youth</td>
<td>Link education and community service stewardship</td>
<td></td>
<td>Medium</td>
<td>Environmental</td>
<td>Low</td>
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<tr>
<td>C724</td>
<td>quality, instream flows, habitat quality</td>
<td>environmental stewardship; increase watershed awareness and links between manmade habitat and environmental health.</td>
<td>General public</td>
<td>projects. Expand to community outreach to community/technical colleges &amp; universities.</td>
<td>Medium</td>
<td>Portal Seattle, Mercer Slough Interns, N. Shore Utility Tour, Water Tenders.</td>
<td>Low</td>
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<tr>
<td>C725</td>
<td>Riparian vegetation displaced by lawn, invasives, or exotics, providing little food value, source of large woody debris, or soil stability. Water quality compromised by garden chemicals, metals, sediment. Higher water use at times when flows lowest.</td>
<td>Replace lawn and other lower ecological value plantings with riparian buffers and native plants</td>
<td>General public and Shoreline property owners</td>
<td>Encourage neighborhood garden tours of salmon friendly gardens. Help residents visualize alternatives to traditional (and often less eco-friendly) landscape treatments. Offer neighbors assistance with publicity, signage, and volunteer docents. Coordinate with neighborhood garden clubs.</td>
<td>Medium – Low</td>
<td>Existing neighborhood garden tours. Volunteer docents by King County Master Recycler Composters and WSU Master Gardeners.</td>
<td>Low</td>
</tr>
<tr>
<td>C726</td>
<td>All conditions discussed above.</td>
<td>Increase awareness about effects of habitat on salmon and watershed health; increase support for land acquisition and restoration efforts as well as landuse policies; inspire shoreline property owners to make changes on their own property.</td>
<td>General public, but in particular Shoreline property owners</td>
<td>Create local informational TV spots that could run on the government cable channels. Focus on those habitat conditions threatening salmon that are affected by our daily personal practices, landscape design and management practices. Showcase good designs to provide models to emulate.</td>
<td>Medium – Low</td>
<td>Salmon Information TV, C-TV,</td>
<td>Variable</td>
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<td>C727</td>
<td>All conditions discussed above</td>
<td>Increase watershed literacy and understanding of effects of habitat on salmon</td>
<td>Business Community and General Public</td>
<td>Coordinate with businesses along Cedar that can help with outreach goals. For example, Ivar’s Seafoods could promote key messages about salmon conservation on their menus or through game cards. This seafood chain also has other restaurants located within WRIA 8 so it could be cost effective for them to do such a promotion.</td>
<td>Medium</td>
<td>Yes</td>
<td>Low</td>
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<tr>
<td>C728</td>
<td>Water quality degraded by toxics and metal fines.</td>
<td>Reinforce to students and the community the relationship between what goes down storm drain and watershed health via an affordable and easily implemented program.</td>
<td>General Public</td>
<td>Expand storm-drain stenciling program locally and basin-wide. Track locations and dates in a Cedar Basin database.</td>
<td>Medium - Low</td>
<td>Yes</td>
<td>Low</td>
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<tr>
<td>C729</td>
<td>Channel confinement, loss of riparian buffer: sources of large woody debris, pools, riffles; reduced channel complexity,</td>
<td>Inspire shoreline property owners to make changes on their own property by providing good examples; increase public support for land acquisition and restoration efforts as well as landuse policies.</td>
<td>Shoreline property owners and general public</td>
<td>Use government cable channels to follow progress of the site specific restoration projects. Use of video to document projects before, during, and after restoration. Distribute resulting programs to libraries, schools, and communities groups.</td>
<td>Low</td>
<td>Salmon Information TV</td>
<td>Variable</td>
</tr>
<tr>
<td>C730</td>
<td>All conditions discussed above.</td>
<td>Improve watershed awareness and</td>
<td>Youth</td>
<td>Focus environmental/science curricula on local watershed issues, with particular emphasis on key</td>
<td>Low-Future</td>
<td>Yes</td>
<td>Medium</td>
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<td>possibly prevent future habitat degradation by instilling a better understanding of interrelationship between habitat, daily actions, and watershed health.</td>
<td>factors limiting the Cedar Chinook population.</td>
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### Draft Proposed Outreach & Education Actions for Lake Washington
(by WRIA 8 Public Outreach Committee)

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<td>C729</td>
<td>Shoreline hardening, riparian vegetation displaced by lawn, invasives, or exotics with low ecological value, overwater structures creating sharp light contrast, water quality degraded by effects of landscape practices</td>
<td>Increase awareness that the lakeshore is also a nursery for juvenile salmon. It's possible to make “home improvements” that can benefit both property owner and salmon. [people pets, and planet]</td>
<td>Lakeshore property owners</td>
<td>Promote concept of living with the lake, instead of just on it through public messaging. Foster idea of sharing the shoreline with other species that inhabit the lakeshore. Carry out through workshops, literature, and development of education and marketing campaigns</td>
<td>High</td>
<td>Lakeside Living Workshop Series; King County Lake Stewardship Program</td>
<td>Variable</td>
</tr>
<tr>
<td>C730</td>
<td>Shoreline hardening, riparian vegetation displaced by lawn, invasives, or exotics with low ecological value, overwater structures creating sharp light contrast, water quality degraded by effects of landscape practices</td>
<td>Reduce conditions favored by predator species; protect &amp; restore water quality.</td>
<td>Lakeshore property owners</td>
<td>Offer lakeshore property owners a series of workshops on lakeshore living: natural yard care; reduction of lawn size, shoreline buffer planting design/noxious weed management; alternatives to vertical wall bulkheads; salmon friendly dock design; aquatic weed management; environmentally friendly methods of maintaining boats, docks, decks; porous paving options</td>
<td>High</td>
<td>WRIA 8/KCD Lakeshore Property Owner Workshops, Seattle Public Utilities and Snohomish County Creek Stewardship Programs, City of Issaquah’s Creekside Living Program, Natural Yard Care Neighborhoods</td>
<td>Medium-High</td>
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<td>C731</td>
<td>Forsted parcels threatened by development, (even though difficult to build on); creek mouths degraded or unrecognizable (culverted); riparian vegetation replaced by invasives infested along shoreline</td>
<td>Protect and/or restore forest land, critical areas such as wetlands and shallow water rearing habitat. Promote watershed health through grassroots messaging.</td>
<td>Community, but especially lakeshore property owners.</td>
<td>Identify and encourage shoreline neighborhood and community stewardship associations. Use to foster the ethic of voluntary stewardship, set examples for other neighbors to follow, enlist community support to acquire and restore habitat, and to build a bridge between property owners, agencies, and local governments. Increase potential for media coverage when efforts initiated at community level.</td>
<td>High</td>
<td>Lake Forest Park Stewardship Foundation, Save Lake Sammamish, Denny Creek Neighborhood Association</td>
<td>Low</td>
</tr>
<tr>
<td>C732</td>
<td>Riparian vegetation displaced by lawn, invasives, or exotics; water quality compromised by garden chemicals, metals, sediment; elevated water temperatures due to increased water use at times when flows lowest.</td>
<td>Protect and improve rearing and migratory habitat; protect and restore water quality</td>
<td>Lakeshore property owners, general public</td>
<td>Update where necessary salmon-friendly educational materials such as <em>Salmon Friendly Gardening Practices</em>, <em>Going Native, Watershed Waltz and Sammamish Swing</em> booklets. Print and distribute to the following prioritized audiences: 1) lakeshore property owners 2) Public places such as libraries, city halls, community centers and where permitted, at home improvement centers and other major retail establishments.</td>
<td>Medium-High</td>
<td>Yes</td>
<td>Low-Medium</td>
</tr>
<tr>
<td>C733</td>
<td>Riparian vegetation displaced by lawn, invasives, or exotics; water quality compromised by garden chemicals, metals, sediment.; elevated water temperatures due to increased water use at times when flows lowest.</td>
<td>Protect &amp; restore shoreline buffer plantings to provide source of food &amp; shelter; protect &amp; restore water quality, maintain baseflows of feeder streams in order to provide source of cooler water</td>
<td>Lakeshore property owners</td>
<td>Modify more for “lakeshore living” the existing “Streamside Living Welcome Wagon” program in which residents welcome new homeowners to the neighborhood and provide information concerning “salmon friendly” yard care, lakeshore planting tips, water-wise gardening.</td>
<td>Medium</td>
<td>WaterTenders Streamside Living Welcome Wagon</td>
<td>Low-Medium</td>
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<tr>
<td>C734</td>
<td>Solid overwater surfaces that create sharp light contrast and dark shadows,</td>
<td>Reduce severity of predation on juveniles</td>
<td>Lakeshore property owners</td>
<td>Explain about mutual value of mesh docks, smaller piling sizes, and community docks to salmon and property owners: Reduced predation for fish; reduced maintenance for homeowners, opportunity to watch small</td>
<td>High</td>
<td></td>
<td>Medium</td>
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<td>C735</td>
<td>conditions favored by predators.</td>
<td>Reduce severity of predation on juveniles by reducing number of docks.</td>
<td>Lakeshore property owners</td>
<td>fish swimming under the dock, and architectural interest provided by new salmon-friendly elevated dock bridges. Outreach could be carried out, for example, by creating a boat owner education campaign. Mailings could be sent with boat registration tab renewal or with property tax notice for shoreline property owners; by literature at marine, sporting goods and hardware stores, at boat shows; and through workshops to homeowners and marine construction industry. Coordinate outreach through appropriate licensing agencies.</td>
<td>High</td>
<td>Pro Bono advertising campaign development – The Coalition for Drug Free America ad campaign. Bert the Salmon campaigns.</td>
<td>Variable, but low able to get Pro Bono assistance.</td>
</tr>
<tr>
<td>C736</td>
<td>Sharp light contrast and dark hiding spots created by overwater structures, conditions favored by predators</td>
<td>Create sandy, shallow water habitat needed by juveniles.</td>
<td>Lakeshore property owners</td>
<td>Offer financial incentives for community docks in terms of reduced: permit fees, loan fees/percentage rates, taxes and permitting time, in addition to reduced construction costs.</td>
<td>High</td>
<td></td>
<td>low</td>
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<td>C737</td>
<td>Steep shoreline gradient with coarse aggregate caused by wave action on vertical wall bulkheads</td>
<td>Reduce conditions favored by predator species.; increase shoreline buffer vegetation and sources for large and small woody debris</td>
<td>Lakeshore property owners</td>
<td>Utilize niche marketing to promote a “Build a Beach” campaign. Clarify how hardened shorelines prevent the development of shallow, sandy beaches and how alternative treatments can provide these amenities. Of benefit to salmon and to homeowners desiring more easily accessible shallow beach and aesthetics of a cove. Work with media (including design and lifestyle magazines) and real estate community (articles in real estate sections of papers) as well as construction, and design industry professionals.</td>
<td>High</td>
<td></td>
<td>Variable, but low able to get Pro Bono assistance.</td>
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<td></td>
<td>Lack of shelter provided by large and small woody debris due to lack of shoreline vegetation; steep dropoffs from shoreline hardening</td>
<td></td>
<td>Lakeshore property owners</td>
<td>Alternative marketing campaign: work with advertising industry and media. Do a play on “Child Haven” promotion. Fry Haven? Contrast picture of a sandy shallow shoreline containing woody debris hiding Chinook juveniles with that of a deep gravelly shoreline with evil looking predator species lurking, gobbling up young Chinook. [A “Chinook need safe places too” idea]. Possibly graphics in style of Finding Nemo. Create a marketing niche with landscape related industries to inform property owners about feeding requirements of out-migrating salmon off their beach. Validate need for native vegetation along the shoreline in</td>
<td>High</td>
<td></td>
<td>Various Bert the Salmon Ad campaigns</td>
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<td>C738</td>
<td>Lack of appropriate shoreline vegetation, shoreline hardening by vertical wall bulkheads and rip rap walls; docks that create stark light contrast and hiding spots for predators.</td>
<td>Reduce conditions favored by predator species by &quot;softening&quot; shoreline; increase shoreline buffer vegetation and sources for large and small woody debris, replace the many docks with more salmon friendly designs.</td>
<td>Lakeshore property owners</td>
<td>Demonstration Project. Locate property owner in publicly accessible (or viewable) area willing to remove bulkhead, or shoreline armoring and replace it with more ecologically friendly design. Similarly, renovate existing dock with more salmon-friendly design. Publicize efforts through various means. Demonstration project should contain elements that can be done by average shoreline property owner. Provide information on costs and advantages of alternate treatments.</td>
<td>Medium – High</td>
<td>Redmond River Walk, Juanita Beach, Classic Nursery, Lark Forest Park Stewardship projects</td>
<td>Medium</td>
</tr>
<tr>
<td>C739</td>
<td>Coarse substrate, steep slope, dark hiding spots for predators caused by bulkheads and solid surface docks.</td>
<td>Reduce conditions favored by predator species; increase shoreline buffer vegetation and sources for large and small woody debris</td>
<td>Lakeshore property owners, general public</td>
<td>Document video progress on a range of restoration projects from planning to post-construction. Air on government cable channels, in shoreline property owner classes and for libraries, schools, communities groups.</td>
<td>Medium</td>
<td>Variable</td>
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<tr>
<td>C740</td>
<td>Coarse substrate, steep slope, dark hiding spots for</td>
<td>Overcome resistance of shoreline property</td>
<td>Lakeshore property owners,</td>
<td>Combine recreation and education. Organize a Bulkhead Alternatives and Salmon Friendly Dock Design tour to see good examples of design on a residential scale.</td>
<td>Low</td>
<td>King County and People for Puget Sound</td>
<td>Variable</td>
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<td>C741</td>
<td>Shoreline hardening, riparian vegetation displaced by lawn, ivasives, or exotics with low ecological value, overwater structures creating sharp light contrast, water quality degraded by effects of landscape practices</td>
<td>Protect and improve water quality; habitat quality - or- Protect &amp; restore riparian vegetation to provide terrestrial food source and shelter; protect&amp; restore water quality, maintain instream flows upstream to provide source of cooler water</td>
<td>Landscape Contractors</td>
<td>Offer professional workshops to landscape designers &amp; contractors on environmentally-friendly lakeshore landscaping. Include topics such as shoreline buffer function and design, native plant selection, installation techniques, use of compost to build healthy soils, and noxious weed control. Determine need for training for non-English speaking participants</td>
<td>Medium – High</td>
<td>Washington Assoc of Landscape Professionals (WALP) Trainings by King County Local Hazardous Waste Management Program</td>
<td>Low</td>
</tr>
<tr>
<td>C742</td>
<td>Riparian vegetation displaced by lawn. Water quality compromised by garden chemicals, metals, sediment.</td>
<td>Increase shoreline planting; reduce lawn size to at least have buffer between lawn and shore.</td>
<td>Lakeshore property owners</td>
<td>Work with landscape, design, and real estate industries to sell benefit of “privacy” to homeowners. With restoration of shoreline buffer planting homeowners can increase privacy without sacrificing views. Promote idea of “framed views” as a more sophisticated landscape aesthetic.</td>
<td>Medium - High</td>
<td>1998 Lake Sammamish Shoreline Prop owners workshop Pilot Program</td>
<td></td>
</tr>
<tr>
<td>C743</td>
<td>Lack of shoreline buffer vegetation, increased water use when levels lowest;</td>
<td>Increase native vegetation and source of shelter and food for fish;</td>
<td>Lakeshore property owners, Community</td>
<td>Increase number of native plant salvages where landowners can take plants back to their yards. Publicize opportunity to drop off unwanted native plants at various parks surrounding the lake.</td>
<td>Low – Lake Washington</td>
<td>King County Native Plant Salvage Program</td>
<td></td>
</tr>
<tr>
<td>Proj #</td>
<td>Habitat Condition</td>
<td>Desired Outcome</td>
<td>Target Audience</td>
<td>Proposed Action</td>
<td>Priority</td>
<td>Proven Track Record/Model</td>
<td>Level of Financial Commit.</td>
</tr>
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</tr>
<tr>
<td>C744</td>
<td>Lack of appropriate shoreline vegetation</td>
<td>Increase shoreline vegetation and reduce non-native vegetation &amp; spread of invasives</td>
<td>Lakeshore property owners</td>
<td>Reduce permit fees (where applicable) for shoreline restoration, removal &amp; replacement of non-native vegetation</td>
<td>Low-Med</td>
<td>Sammamish</td>
<td>Low</td>
</tr>
<tr>
<td>C745</td>
<td>Water quality degraded by toxics, pesticides, increased nutrient loads, sediment from construction sites; loss of riparian vegetation</td>
<td>Protect and improve water quality</td>
<td>General Public</td>
<td>Publicize emergency call numbers for public to report water quality problems, water diversion from lake for irrigation, non-permitted vegetation clearing, or tree overspray (pesticide) related incidents.</td>
<td>High</td>
<td>King County Water &amp; Land Division, Seattle Public Utilities Hotlines</td>
<td>Low</td>
</tr>
<tr>
<td>C746</td>
<td>Reduced forest and canopy cover; increased impervious areas, decreased infiltration; more flashiness of floods due to intensity of runoff</td>
<td>Protect and improve water quality; reduce quantity of water entering lake: during flood conditions can mix with sanitary sewer flows and enter lake.</td>
<td>General public, but property owners in particular</td>
<td>Increase outreach concerning the benefits of trees and basin-wide forest coverage to protect water quality. Include such actions as significant tree ordinance and information that links canopy cover to storm water issues. Provide clarification on hazardous tree issues. Offer seedlings to replant after hazard trees are removed. Coordinate with commercial nurseries to expand outreach about benefits of trees to salmon.</td>
<td>Medium-High</td>
<td>Sammamish ReLeaf; Mountains-to-Sound Greenway; City tree ordinances, King County Forestry Program</td>
<td>Low</td>
</tr>
<tr>
<td>C747</td>
<td>Elevated lake temperatures, lack of cool water sources from feeder streams, insufficient flows in feeder streams to provide source of cooler water, lack of ground water recharge, water</td>
<td>Protect forest cover, reduce paving and impervious areas, increase infiltration and conditions that mimic natural hydrology, protect water quality</td>
<td>Design, engineering, and construction industries</td>
<td>Provide education to architects, landscape architects, engineers, and developers on sustainable building/design practices. Work with professional associations to highlight building practices that maintain watershed health, importance of maintaining canopy cover and limiting impervious surfaces. Provide incentives to builders that demonstrate a use ecologically sensitive designs and/or techniques. Provide professional workshop and tours focusing on</td>
<td>Medium - High</td>
<td>WALP Trainings by King County Local Hazardous Waste Management Program</td>
<td>Variable</td>
</tr>
<tr>
<td>Proj #</td>
<td>Habitat Condition</td>
<td>Desired Outcome</td>
<td>Target Audience</td>
<td>Proposed Action</td>
<td>Priority</td>
<td>Proven Track Record/Model</td>
<td>Level of Financial Commit.</td>
</tr>
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</tr>
<tr>
<td></td>
<td>quality, habitat quality</td>
<td></td>
<td></td>
<td>sustainable building/design practices to architects, landscape architects, engineers and developers. Build partnerships with professional associations to highlight the benefits of practices that maintain watershed health.</td>
<td></td>
<td>Concrete Council for Sustainable Development outreach on pervious pavement.</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Promote through design competitions and media coverage the use of “rain gardens” and other low impact development practices that mimic natural hydrology. Combine a home &amp; garden tour or “Street of Dreams” type event featuring these landscape and engineering treatments.</td>
<td></td>
<td>Port Blakely Communities, Issaquah partnerships, Built Green, Sustainable Seattle, LEEDS</td>
<td>Low</td>
</tr>
<tr>
<td>C748</td>
<td>Reduced forest cover, increased impervious area, decreased infiltration and ground water recharge, water quality degraded by runoff</td>
<td>Protect and improve water quality and quantity to more closely mimic natural hydrology</td>
<td>Developers, Architects, Engineers Building Professionals</td>
<td>Use recognition as a means to encourage more salmon sustainable designs and construction. Coordinate with professional association awards, in addition to popular magazine merit awards. Continue to recognize businesses that carry out procedures or use products that protect watershed health.</td>
<td>Medium</td>
<td>AIA, ASLA, Sunset Magazine, and Seattle Times Home and Garden awards, King County Enviro Stars.</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Promote through design competitions and media coverage the use of “rain gardens” and other low impact development practices that mimic natural hydrology. Combine a home/garden tour or “Street of Dreams” type event featuring these landscape/engineering treatments.</td>
<td></td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>C749</td>
<td>Water quality degraded by metals, toxins, pesticides, and nutrient overloads</td>
<td>Protect and improve water quality</td>
<td>General Public</td>
<td>Create a program that addresses impact of car maintenance and offers alternatives that help protect watershed health and water quality.</td>
<td>Medium</td>
<td>King County Local Hazardous Waste Mgmt Program Water Quality Consortium, Businesses for Clean Water</td>
<td>variable</td>
</tr>
<tr>
<td>Proj #</td>
<td>Habitat Condition</td>
<td>Desired Outcome</td>
<td>Target Audience</td>
<td>Proposed Action</td>
<td>Priority</td>
<td>Proven Track Record/Model</td>
<td>Level of Financial Commit.</td>
</tr>
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</tr>
<tr>
<td>C750</td>
<td>Water Quality degraded by toxics and metal fines</td>
<td>Protect and restore water quality</td>
<td>General Public</td>
<td>Build partnerships and seek outreach opportunities with commute trip reduction programs to convey the impacts of automobiles on water quality and salmon habitat. Encourage alternative transportation choices.</td>
<td>Medium</td>
<td>Commute Trip Reduction Programs</td>
<td>Low - Medium</td>
</tr>
<tr>
<td>C751</td>
<td>Water Quality degraded by toxics and metal fines degraded by metals and toxins</td>
<td>Protect and restore water quality</td>
<td>General Public, schools/non-profits and Charity groups – and business that offer to host a carwash.</td>
<td>Coordinate with local business community to encourage the use of commercial car washes over washing at home on street or in parking lots. Encourage alternatives to charity cash washes via commercial car wash coupon books or extend car wash kits throughout entire watershed. Make requirement that all charity car washes use coupons or car wash storm drain kit. Distribute “alternative community fundraising idea” brochure to volunteer fundraisers.</td>
<td>Medium - High</td>
<td>Yes, various cities' car wash kit programs. Puget Sound Carwash Association</td>
<td>Low</td>
</tr>
<tr>
<td>C752</td>
<td>Water quality degraded by metals and toxins</td>
<td>Protect and restore water quality</td>
<td>Businesses, property management companies, homeowners associations.</td>
<td>Educate and support retail business and homeowner associations on stormwater best management practices specifically related to parking lot cleaning, storm drain maintenance, and boat cleaning.</td>
<td>Medium</td>
<td>Ongoing programs by various jurisdictions within WIRA, e.g. Issaquah, Redmond</td>
<td>Low</td>
</tr>
<tr>
<td>C753</td>
<td>Reduced baseflows from streams that feed into lake and subsequent elevated water temperatures in lake</td>
<td>Protect and restore sources of cool water</td>
<td>High end water users and general public</td>
<td>Extend availability of water conservation incentive programs such as rebates for efficient toilets, appliances, soaker hoses, free indoor conservation kits, or free landscape irrigation audits to decrease household and commercial water consumption.</td>
<td>High</td>
<td>Smart &amp; Healthy Landscapes, Water Cents, and other utility incentive programs</td>
<td>Low</td>
</tr>
</tbody>
</table>
March 30, 2010

Travis Saunders
City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040

Dear Travis Saunders;

Thank you for your continued and diligent work on the City’s SMP Update products. It is appreciated and respected. In order to successfully assist the City through the final step of having an approved and updated SMP, Ecology shares the following concerns with the present draft SMP.

**Setbacks and Vegetated Buffers**

Ecology has concerns that the existing language prescribing vegetated buffers could result in only 25% of the total area adjacent to OHWM being vegetated. As the City’s SMP appropriately states, “Shorelands directly impact water quality as surface and subsurface waters are filtered back into the lake.” Ecology recommends that the code language clarify that the vegetated cover should not be limited to one small area or corner of a lot; rather, it is intended to be extended across the face of the lot adjacent to OHWM. With this clarification, the buffer could provide the expected functional water quality benefits. This could be worded, something like: “the vegetated portion of the setback shall average 20 feet in depth from OHWM and across 75% of the entire lot adjacent to Lake Washington, up to a maximum of 60 feet across the shoreline. The first 5 feet, landward from OHWM, of that area will consistent of native vegetation.” The 75% allows for a pathway (25%) to the water and the optional limit of 60 feet across the shoreline provides a limit for shoreline landowners with lots wider than 60 feet.

**Dock Specifications**

Ecology also has concerns with the dock requirements of the proposed SMP. Although Ecology appreciates the continued work on the SMP, remember that the locally adopted SMP must illustrate no net loss in order for Ecology to approve this program. A fundamental requirement of the SMP guidelines is the concept of Mitigation Sequencing (Avoidance, Minimization, and Mitigation). Impacts from existing docks cannot be avoided; but they can be minimized by the grating requirement. This inclusion of grated decking for “repair” and “replacement” is an important piece of the City achieving no net loss. Although it is true that the City can contribute to its achievement of no net loss with the addition of grating to existing docks that do not have grating, it does not necessarily hold true that expanding the
size of new single family docks to 1000 square feet can achieve no net loss with only the addition of grating. Based on a formal biological opinion on jeopardy of endangered species, the ACOE requires that new piers on Lake Washington include fully grated decking with at least 60% open area. The ACOE also limits the overwater coverage to 480 square feet for single-family docks. Basically, Ecology accepts the ACOE standards for residential piers and docks in Lake Washington. If the City wants more flexibility to expand acceptable dock sizes, minimizing and mitigating the multiple impacts of larger docks needs to also be included. For example, the additional inclusion of denser and larger vegetated buffers and the addition of overhanging trees could help assure against no net loss of ecological function. As an example, I have enclosed a piece from Kirkland’s cumulative impacts analysis displaying their effort to identify potential impacts of new docks and then reference the City’s proposed regulations that address those impacts in the updated SMP.

The one-to-one trade-off for grated areas on “new” docks to reduce “effective” “new” dock area is not a straight-across equivalency. New piers are required by the ACOE to be fully grated, as well as a suite of other conditions listed on the attached ACOE Table 3 of the Regional General Permit standards for Lake Washington. These standards are intended to avoid the multiple impacts of new docks to species, water quality and navigation interests. The City is also required to have multiple conditions in place to begin to assure no net loss of ecological function with the addition of “new” and larger sized docks. Basically, the outright allowance of 1000 square foot docks is inconsistent with both avoidance and minimization of impacts and the recent standards set by neighboring jurisdictions on Lake Washington.

If you have any questions regarding the subjects in this letter or would like a presentation or meeting on any topic in this letter, please feel free to contact me at 425-649-4309. Ecology’s role is to provide support, direction and input on the draft SMP, with the overall objective to have an approved SMP update that adequately reflects local conditions and protects against any overall net loss of ecological functions.

Sincerely,

Barbara Nightingale, Regional Shoreline Planner
3190 160th Avenue SE
Bellevue, WA 98008

BN:cja

Enc

Cc: Geoff Tallent, SEA Section Manager
Example of achieving “No Net Loss” through dock specifications in the recently adopted City of Kirkland SMP

New docks have multiple impacts. These include impacts to: aquatic vegetation, juvenile salmon, sediment movement, chemical contamination and external lighting impacts. All of these impacts need to be addressed and avoided, minimized or mitigated. The following is an example, based on the City of Kirkland’s Cumulative Impacts Analysis, on how these additional impacts of piers and docks can be avoided, minimized and mitigated by regulations in the City’s SMP and how it can be demonstrated in the Cumulative Impacts Analysis Report.

The proposed regulations have specifically been crafted to avoid and minimize the following specific potential impacts as outlined below:

1. **Growth of aquatic vegetation**: Overwater cover is minimized through size and height; restrictions for new piers (SMP 83.270(4) and 83.280(5)), restricting size of replacement structures (SMP 83.270(5) and 83.280(8)) and requiring grated decking (SMP 83.270 and SMP 83.270).
2. **Juvenile salmon migration**: Impacts to juvenile salmon migration are mitigated via the same provisions listed under #1 above. Additionally new piers must be mitigated through the addition of shoreline vegetation (SMP 83.270(4)(g) and SMP 83.280(7)).
3. **Sediment movement**: Piles and floats are restricted in the nearshore area (SMP 83.270(4) and SMP 83.280(5)). The use of jetties or groins are prohibited in most environments except they are allowed only with a Conditional Use Permit (SMP 83.170).
4. **Chemical contamination**: Piers and other structures shall be constructed of materials that will not adversely affect water quality (SMP 83.270(5) and SMP 83.280(5)).
5. **External lighting impacts**: Placement and direction of external lighting is restricted to minimize impacts (SMP 83.470).
<table>
<thead>
<tr>
<th><strong>General Approach</strong></th>
<th>Proposed Army Corp Rules for Residential Overwater Structures (RGP3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The Army Corp regulates total area of the pier as well as width, length, configuration of the main pier and any attached floats, ramps, and ells.</td>
</tr>
<tr>
<td><strong>Where Allowed</strong></td>
<td>No structure can be installed within 100 feet of the mouth of a river, stream or creek.</td>
</tr>
<tr>
<td><strong>General Configuration</strong></td>
<td>Only piers and ramps are allowed within the first 30 feet from shore. All floats and ells must be 30 feet waterward of OHW. No skirting is allowed on any structure.</td>
</tr>
</tbody>
</table>
| **Overall Size**    | Total Allowed Surface Coverage (includes all floats, ramps, and ells) is as follows:  
  - Single property owner: 480 sq. ft.  
  - Two property owners (residential): 700 sq ft.  
  - Three or more residential property owners: 1000 sq. ft. |
| **Length**          | There are no direct regulations of length except through maximum area requirements. Any proposed pier that extends further waterward than adjacent piers is reviewed on a case-by-case basis. Piers determined to have an adverse effect on navigation will not be authorized. |
| **Width**           | Piers can not exceed a width of 4 feet. |
| **Height**          | The bottom of all structures except floats must be at least 1.5 feet above OHW. |
| **Extensions, Floats, Eills and Ramps** | As mentioned previously, all floats and ells must be 30 feet waterward of OHW. No skirting is allowed on any structure. Floats must be in water with depths of 10 feet or more at the landward end of the float. They may be up to 6' wide by 20' long and must contain a minimum of 2 feet of grating down the center. Eills must be in water with depths of 9 feet or greater at the landward end of the ell and may be built in the following manners: (Currently problematic as some docks are limited to 8 foot depth under current Seattle regs.)  
  a) Up to 6' wide by 20' long with a 2-foot strip of grating down the center.  
  b) Up to 6' wide by 26' long with grating providing 60% open area over the entire ell.  
  c) One 2' wide by 20' long, fully grated finger ell is allowed.  
Ramps must not exceed a width of 3 feet and must be fully grated. |
| **Pier Grating**    | Piers must be fully grated with at least 60% open area. |
Table 3. Army Corps of Engineers Regional General Permit (RGP) 3 Regulations for residential piers

<table>
<thead>
<tr>
<th>Mitigation</th>
<th>Other grating rules are outline in Extension, Floats, Ells and Ramps above.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Existing habitat features such as woody debris or substrate material can not be removed.</td>
</tr>
<tr>
<td></td>
<td>Plantings for 10 feet on either side of OHW are required for entire length of property if site is appropriate. If pier is shared, all co-owners must execute plantings.</td>
</tr>
<tr>
<td></td>
<td>• No chemical fertilizers, herbicides and pesticides can be used in the planting area.</td>
</tr>
<tr>
<td></td>
<td>• A 6 foot path without vegetation is allowed for access to the pier.</td>
</tr>
<tr>
<td></td>
<td>• A minimum of 2 trees and 3 willow plants is required; otherwise there appears to be a lot of flexibility in the planting plan.</td>
</tr>
<tr>
<td></td>
<td>• The plantings must be maintained for the life of pier with a 100% survival rate required in first and second year and a 100% survival rate for tree and an 80% survival rate for remaining plants in years 3-5.</td>
</tr>
<tr>
<td></td>
<td>• Monitoring reports for planting due annually for 5 years</td>
</tr>
<tr>
<td></td>
<td>Status reports on impact reduction construction must be submitted 12 months after permit is issued. They are due annually until the Corp accepts as-build drawings.</td>
</tr>
<tr>
<td></td>
<td>Construction must abide by work windows for bald eagles and listed fish species.</td>
</tr>
<tr>
<td></td>
<td>Work disturbing soil in substrate, bank or riparian area must occur in the dry whenever practical.</td>
</tr>
<tr>
<td></td>
<td>Equipment should be operated out of water whenever possible, should minimize disturbance of soils and should be maintained in clean condition. Proper sediment control must also be used.</td>
</tr>
<tr>
<td></td>
<td>Disturbance of bank vegetation should be limited. When disturbed, it must be replaced with native vegetation.</td>
</tr>
<tr>
<td></td>
<td>Structures within 100 feet of a wetland must avoid impacts to the wetland to the maximum extent possible.</td>
</tr>
<tr>
<td>Existing Piers</td>
<td>Existing structures within 30 feet of OHW may need to be removed to receive a permit unless they facilitate water access.</td>
</tr>
<tr>
<td>Other</td>
<td>Regulations regarding spacing of pilings, treatment of materials, mooring piles and maintenance are also detailed.</td>
</tr>
</tbody>
</table>
# 2010 King County Noxious Weed List

## Class A Noxious Weeds
*eradication required throughout Washington State including King County*

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>buffalobur</td>
<td>Solanum rostratum</td>
</tr>
<tr>
<td>common crupina</td>
<td>Crupina vulgaris</td>
</tr>
<tr>
<td>cordgrass, common</td>
<td>Spartina anglica</td>
</tr>
<tr>
<td>cordgrass, dense flower</td>
<td>Spartina densiflora</td>
</tr>
<tr>
<td>cordgrass, salt meadow</td>
<td>Spartina patens</td>
</tr>
<tr>
<td>cordgrass, smooth</td>
<td>Spartina alterniflora</td>
</tr>
<tr>
<td>dyers woad</td>
<td>Isatis tinctoria</td>
</tr>
<tr>
<td>eggleaf spurge</td>
<td>Euphorbia oblongata</td>
</tr>
<tr>
<td>false brome</td>
<td>Brachypodium sylvaticum</td>
</tr>
<tr>
<td>floating primrose-willow</td>
<td>Ludwigia peploides</td>
</tr>
<tr>
<td>flowering-rush</td>
<td>Butomus umbellatus</td>
</tr>
<tr>
<td>garlic mustard</td>
<td>Alliaria petiolata</td>
</tr>
<tr>
<td>giant hogweed</td>
<td>Heracleum mantegazzianum</td>
</tr>
<tr>
<td>goatsrue</td>
<td>Galega officinalis</td>
</tr>
<tr>
<td>hawkweed, European</td>
<td>Hieracium sabaudum</td>
</tr>
<tr>
<td>hawkweed, yellow devil</td>
<td>Hieracium floribundum</td>
</tr>
<tr>
<td>hydrilla</td>
<td>Hydrilla verticillata</td>
</tr>
<tr>
<td>johnsongrass</td>
<td>Sorghum halepense</td>
</tr>
<tr>
<td>knapweed, bighead</td>
<td>Centaurea macrocephala</td>
</tr>
<tr>
<td>knapweed, Vochin</td>
<td>Centaurea nigrescens</td>
</tr>
<tr>
<td>kudzu</td>
<td>Pueraria montana var. lobata</td>
</tr>
<tr>
<td>meadow clary</td>
<td>Salvia pratensis</td>
</tr>
<tr>
<td>purple starthistle</td>
<td>Centaurea calcitrapa</td>
</tr>
</tbody>
</table>
- **reed sweetgrass**
  - **Glyceria maxima**
- **ricefield bulrush**
  - **Schoenoplectus mucronatus**
- **sage, clary**
  - **Salvia sclarea**
- **sage, Mediterranean**
  - **Salvia aethiopis**
- **shiny geranium**
  - **Geranium lucidum**
- **silverleaf nightshade**
  - **Solanum elaeagnifolium**
- **Spanish broom**
  - **Spartium junceum**
- **spurge flax**
  - **Thymelaea passerina**
- **Syrian bean**
  - **Zygophyllum fabago**
- **Texas blueweed**
  - **Helianthus ciliaris**
- **thistle, Italian**
  - **Carduus pycnocephalus**
- **thistle, milk**
  - **Silybum marianum**
- **thistle, slenderflower**
  - **Carduus tenuiflorus**
- **variable-leaf milfoil**
  - **Myriophyllum heterophyllum**
- **velvetleaf**
  - **Abutilon theophrasti**
- **wild four o'clock**
  - **Mirabilis nyctaginea**

### Class B Noxious Weeds
*(control required in King County)*

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austrian fieldcress</td>
<td><em>Rorippa austriaca</em></td>
</tr>
<tr>
<td>blackgrass</td>
<td><em>Alopecurus myosuroides</em></td>
</tr>
<tr>
<td>blueweed, viper's bugloss</td>
<td><em>Echium vulgare</em></td>
</tr>
<tr>
<td><strong>Brazilian elodea</strong></td>
<td><em>Egeria densa</em></td>
</tr>
<tr>
<td><strong>bugloss, annual</strong></td>
<td><em>Anchusa arvensis</em></td>
</tr>
<tr>
<td><strong>bugloss, common</strong></td>
<td><em>Anchusa officinalis</em></td>
</tr>
<tr>
<td>camelthorn</td>
<td><em>Alhagi maurorum</em></td>
</tr>
<tr>
<td><strong>common reed (non-native genotypes)</strong></td>
<td><em>Phragmites australis</em></td>
</tr>
<tr>
<td><strong>Dalmatian toadflax</strong></td>
<td><em>Linaria dalmatica ssp. dalmatica</em></td>
</tr>
<tr>
<td><strong>fanwort</strong></td>
<td><em>Cabomba caroliniana</em></td>
</tr>
<tr>
<td><strong>gorse</strong></td>
<td><em>Ulex europaeus</em></td>
</tr>
<tr>
<td>grass-leaved arrowhead</td>
<td><em>Sagittaria graminea</em></td>
</tr>
<tr>
<td>hawkweed, oxtongue</td>
<td><em>Picris hieracioides</em></td>
</tr>
<tr>
<td><strong>hawkweed, mouseear</strong></td>
<td><em>Hieracium pilosella</em></td>
</tr>
<tr>
<td><strong>hawkweed, orange</strong></td>
<td><em>Hieracium aurantiacum</em></td>
</tr>
<tr>
<td><strong>hawkweed, polar</strong></td>
<td><em>Hieracium atratum</em></td>
</tr>
</tbody>
</table>
hawkweed, queen-devil Hieracium glomeratum
hawkweed, smooth Hieracium laevigatum
hawkweed, yellow Hieracium caespitosum
hoary alyssum Berteroa incana
knapweed, black Centaurea nigra
knapweed, brown Centaurea jacea
knapweed, diffuse Centaurea diffusa
knapweed, meadow Centaurea jacea x nigra
knapweed, Russian Acroptilon repens
knapweed, spotted Centaurea stoebe
kochia Kochia scoparia
lepyrodiclis Lepyrodiclis holosteoides
longspine sandbur Cenchrus longispinus
loosestrife, garden Lysimachia vulgaris
loosestrife, purple Lythrum salicaria
parrotfeather Myriophyllum aquaticum
perennial pepperweed Lepidium latifolium
perennial sowthistle Sonchus arvensis
policeman's helmet Impatiens glandulifera
rush skeletonweed Chondrilla juncea
saltcedar Tamarix ramosissima
spurge, leafy Euphorbia esula
sulfur cinquefoil Potentilla recta
swainsonpea Sphaerophyta salsula
tansy ragwort Senecio jacobaea
thistle, musk Carduus nutans
thistle, plumeless Carduus acanthoides
thistle, Scotch Onopordum acanthium
water primrose Ludwigia hexapetala
white bryony Bryonia alba
wild chervil Anthriscus sylvestris
yellow floating heart Nymphoides peltata
yellow nutsedge Cyperus esculentus
yellow starthistle Centaurea solstitialis

*Brazilian elodea is designated for control throughout King County except in Lake Washington, Lake Sammamish, Lake Union and Lake Fenwick.
### Class C Noxious Weeds
*(control required in King County)*

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>absinth wormwood</td>
<td>Artemisia absinthium</td>
</tr>
<tr>
<td>hairy willow-herb</td>
<td>Epilobium hirsutum</td>
</tr>
<tr>
<td>hawkweed, common</td>
<td>Hieracium lachenalii</td>
</tr>
<tr>
<td>hawkweeds, non-native and invasive</td>
<td>Hieracium spp.</td>
</tr>
</tbody>
</table>

### Non-Regulated Noxious Weeds
*(non-designate B and C noxious weeds, control recommended but not required in King County)*

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>blackberry, evergreen</td>
<td>Rubus laciniatus</td>
</tr>
<tr>
<td>blackberry, Himalayan</td>
<td>Rubus armeniacus</td>
</tr>
<tr>
<td>butterfly bush</td>
<td>Buddleia davidii</td>
</tr>
<tr>
<td>common fennel (except bulbing variety azoricum)</td>
<td>Foeniculum vulgare</td>
</tr>
<tr>
<td>common groundsel</td>
<td>Senecio vulgaris</td>
</tr>
<tr>
<td>common St. Johnswort</td>
<td>Hypericum perforatum</td>
</tr>
<tr>
<td>common tansy</td>
<td>Tanacetum vulgare</td>
</tr>
<tr>
<td>curly-leaf pondweed</td>
<td>Potamogeton crispus</td>
</tr>
<tr>
<td>Eurasian watermilfoil</td>
<td>Myriophyllum spicatum</td>
</tr>
<tr>
<td>field bindweed</td>
<td>Convolvulus arvensis</td>
</tr>
<tr>
<td>fragrant water lily</td>
<td>Nymphaea odorata</td>
</tr>
<tr>
<td>hairy whitetop</td>
<td>Cardaria pubescens</td>
</tr>
<tr>
<td>herb Robert</td>
<td>Geranium robertianum</td>
</tr>
<tr>
<td>hoary cress</td>
<td>Cardaria draba</td>
</tr>
<tr>
<td>houndstongue</td>
<td>Cynoglossum officinale</td>
</tr>
<tr>
<td>ivy, Atlantic</td>
<td>Hedera hibernica</td>
</tr>
<tr>
<td>ivy, English</td>
<td>Hedera helix 'Baltica',</td>
</tr>
<tr>
<td></td>
<td>Hedera helix 'Pittsburgh',</td>
</tr>
<tr>
<td></td>
<td>Hedera helix 'Star'</td>
</tr>
<tr>
<td>knotweed, Bohemian*</td>
<td>Polygonum bohemicum</td>
</tr>
<tr>
<td>knotweed, giant*</td>
<td>Polygonum sachalinense</td>
</tr>
<tr>
<td>knotweed, Himalayan*</td>
<td>Polygonum polystachyum</td>
</tr>
<tr>
<td>knotweed, Japanese*</td>
<td>Polygonum cuspidatum</td>
</tr>
<tr>
<td>lawnweed</td>
<td>Soliva sessilis</td>
</tr>
</tbody>
</table>
myrtle spurge
old man's beard
oxeye daisy
poison-hemlock
reed canarygrass
Scotch broom (required SR-2, I-90 E. of MP 34)
spurge laurel
thistle, bull
thistle, Canada
wild carrot
yellow archangel
yellow flag iris
yellow toadflax

Euphorbia myrsinites
Clematis vitalba
Leucanthemum vulgare
Conium maculatum
Phalaris arundinacea
Cytisus scoparius
Daphne laureola
Cirsium vulgare
Cirsium arvense
Daucus carota
Lamiastrum galeobdolon
Iris pseudacorus
Linaria vulgaris

*Control of Bohemian, Japanese, giant and Himalayan knotweed is required on the Green River and its tributaries (defined as Type S, F or N aquatic areas in KCC 21A.24.355) upstream of the Auburn City Limits, including but not limited to Newaukum Creek, Soos Creek, Big Soos Creek, Jenkins Creek, Covington Creek, and Crisp Creek. Control of these invasive knotweed species is required up to the ordinary high water mark (or up to the top of the bank if the ordinary high water mark cannot be identified) and in the adjacent buffer area as specified in KCC 21A.24.358.

King County Weeds of Concern
(This list is for educational purposes only; these species are not classified as noxious weeds in Washington State. These species often impact and degrade native plant and animal habitat. Control is recommended where possible and new plantings are discouraged.)

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>bittersweet nightshade</td>
<td>Solanum dulcamara</td>
</tr>
<tr>
<td>buttercup, creeping</td>
<td>Ranunculus repens</td>
</tr>
<tr>
<td>buttercup, tall</td>
<td>Ranunculus acris</td>
</tr>
<tr>
<td>common hawthorn</td>
<td>Crataegus monogyna</td>
</tr>
<tr>
<td>English holly</td>
<td>Ilex aquifolium</td>
</tr>
<tr>
<td>English laurel</td>
<td>Prunus laurocerasus</td>
</tr>
<tr>
<td>European mountain-ash</td>
<td>Sorbus aucuparia</td>
</tr>
<tr>
<td>hedge bindweed, morning glory</td>
<td>Calystegia sepium</td>
</tr>
</tbody>
</table>
Spotted jewelweed  

**King County Noxious Weed List**

- Complete King County Weed List
- Class A Noxious Weeds
- Class B Noxious Weeds
- Class C Noxious Weeds
- Non-Regulated Noxious Weeds
- Weeds of Concern List

**Download Brochure**

- 2010 King County Noxious Weed List

**Related Information**

- Agricultural Topics
- Yard and Garden Topics
- Animals and Plants

**Agencies**

- Water and Land Resources Division
- Development Environmental Services

Program offices are located at 201 S. Jackson St., Suite 600, Seattle, WA 98104. To contact a staff member at the King County Noxious Weed Control Program, please call 206-296-0290 or by reach them by email.
April 15, 2010

Travis Saunders  
City of Mercer Island  
Sent via e-mail: Travis.Sauders@mercergov.org

**RE: Shoreline Master Program Update – Comp Plan Comments**

Travis,

At the Planning Commission meeting on March 17th the Commission recommended revising Policy #3 of the circulation elements section of the Comp Plan to read, “Encourage shoreline circulation systems that provide alternative routes and modes of travel, including non-motorized travel.” Sound Transit request that the Commission reconsider this change.

The I-90 corridor does not circulate traffic around the City’s shorelines, and therefore it is not clear that the I-90 corridor is even considered part of the “shoreline circulation system”. The revision we suggest would keep the language referencing non-motorized travel and add a sentence to address transit in the I-90 corridor. In accordance with this suggestion Policy #3 would read:

“Encourage shoreline circulation systems that provide alternative routes and modes of travel, including non-motorized travel. Within the I-90 corridor, encourage movement of people and goods by means of transit.”

Thank you for continuing to work with Sound Transit to address our concerns with the current draft of Mercer Island’s updated SMP. Please feel free to contact me at (206) 398-5135 if you have any questions.

Sincerely,

Ellie Ziegler  
Sound Transit