memorandum

date May 24, 2013

to Jason Dose, City of Shelton

from Reema Shakra and Teresa Vanderburg, ESA

subject City of Shelton Shoreline Master Program Update: Cumulative Impacts Analysis and No Net Loss Report

INTRODUCTION

The City of Shelton is updating its existing Shoreline Master Program to comply with the Washington State Shoreline Management Act (SMA or the Act) (Revised Code of Washington 90.58) and Washington Administrative Code (WAC) implementing rules (WAC 173-26 also called the state’s Shoreline Master Program Guidelines). This report is an analysis of the cumulative impacts that may be expected to occur over time as the new Shoreline Master Program is implemented. This report also addresses whether the SMP achieves no net loss of shoreline ecological functions.

Why did the City Prepare this Report?

As part of this SMP Update effort, the City is required to evaluate the cumulative impacts of reasonably foreseeable future development to verify that the SMP’s proposed policies and regulations for shoreline management are adequate to ensure “no net loss” of shoreline ecological functions. The determination of no net loss is required by WAC 173-26-186. The proposed City of Shelton SMP provides standards and procedures to evaluate individual uses or developments for their potential to impact shoreline resources on a case-by-case basis through the permitting process. The purpose of this report is to determine if impacts to shoreline ecological functions are likely to result from the aggregate of activities and developments in the shoreline that take place over time. This report is prepared as a requirement of the City’s grant agreement with the state funding agency, the Washington Department of Ecology (SMA Grant No. G1100005). This analysis is not proposed for inclusion as regulatory code or as part of the Shelton Comprehensive Plan or the Shelton Municipal Code (SMC) development regulations, but may serve as a useful reference during SMP implementation.

The cumulative impacts to be addressed in this report are those expected to result from future development and uses within the SMA shoreline jurisdiction as regulated by the provisions outlined in the May 2013 Draft Shelton SMP.
What are the State Requirements?

According to the state SMP Guidelines (WAC 173-26-186), the City is required to evaluate and consider cumulative impacts of “reasonably foreseeable future development” on the shorelines of the state as follows:

“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 among development opportunities. 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.”

In addition, the guidelines (WAC 173-26-201) require evaluation of the effects caused by:

- Unregulated activities,
- Developments that are exempt from a shoreline substantial development permit, and
- Incremental impacts of residential bulkheads, residential piers, and runoff from newly developed properties.

The guidelines also require that particular attention be paid to platting or subdividing property and installation of infrastructure that could establish a pattern for future shoreline development. This memorandum contains a series of questions and answers designed to provide the required information.

Why is this Analysis Required?

The analysis provides a planning level assessment of the potential cumulative impacts that can be expected to occur if the proposed City of Shelton SMP (dated May 2013) is adopted and implemented as written. The assessment is limited to cumulative impacts of reasonably foreseeable future development in areas subject to SMA jurisdiction. City of Shelton’s regulated shorelines include approximately 11 miles of shoreline: three miles of marine shoreline, five miles of river shoreline, and three miles of lakeshore. There are 386 existing parcels that potentially could be regulated in some way by the SMP. Information on the number of developed versus vacant parcels potentially affected by the SMP is provided below in the section titled “Where will Foreseeable Future Development Occur.”

This analysis is focused on those allowed uses or developments that have the greatest potential for adverse impacts when considered in a long-range or aggregate manner. For example, commercial signs are regulated under the SMP but are not considered in this context based on their limited size and effect on shoreline functions. The discussion of “development exempt from shoreline permitting” is focused on those foreseeable activities listed in WAC 173-27-040 with the greatest potential for adverse cumulative impacts. Not all activities that may be exempt from substantial development permits are discussed (e.g., watershed restoration plans and projects; hazardous material remediation, etc.). Additionally, exempt development activities are still subject to compliance with the SMP policies (e.g., to minimize impacts) and other regulations in place that protect shoreline resources (e.g., critical area regulations) as appropriate. The diagram below (Figure 1) from Ecology illustrates the concept of the framework for achieving “no net loss” of ecological functions with impacts from new development reducing shoreline functions below the current existing condition and mitigation plus restoration increasing functions.

According to the SMP Guidelines (WAC 173-26-201), the assessment of cumulative impacts occurs at both the planning stage (a programmatic effort when the SMP is being developed) and at the permitting stage or the time individual development proposals are reviewed (a site-specific effort once the SMP is adopted and implemented). The Guidelines suggest that impacts of “commonly occurring and planned development” be assessed at the planning stage “without reliance on an individualized cumulative impacts analysis.” In contrast, developments
that have un-anticipatable or uncommon impacts, which cannot be reasonably identified at the time of SMP development should be evaluated via the shoreline substantial development and conditional use permit processes to ensure that all impacts are addressed and that there is no net loss of ecological function after mitigation.

**Figure 1. Diagram from Ecology illustrating how the SMP achieves no net loss.**

The objective of the analysis is to demonstrate that commonly occurring shoreline uses and developments within the City will not result in a net loss of shoreline ecological functions compared to ‘baseline’ conditions. This assumes that impacts will occur, but that there are adequate measures in place to mitigate them such that the post-development conditions are no worse overall than the pre-development conditions. For this planning level assessment, the baseline conditions are the conditions that are generally identified and described in the City’s Final Draft Inventory and Characterization Report (ESA and Herrera Environmental Consultants, 2013).

The City of Shelton SMP includes standards and procedures for evaluating the effects of specific development actions on a case-by-case basis at the time individual shoreline development proposals are reviewed. These project-level analyses will allow site-scale factors to be included in the assessment of baseline conditions to supplement the inventory information available for the City as a whole. To achieve no net loss, the SMP requires each project to mitigate impacts by avoiding, then minimizing adverse effects, then replacing damaged resources through compensatory mitigation efforts. The Draft SMP is the result of extensive review by the City’s Citizen Advisory Committee.
CURRENT CONDITIONS AND CIRCUMSTANCES

What is the Shoreline Inventory and Characterization Report?

The Final Draft Inventory and Characterization report prepared by ESA and Herrera Consultants (dated March 2013) is a technical document that describes the existing conditions of shorelines of the state in the City of Shelton and its urban growth area. The report is a required step in the SMP update process.

A total of six waterbodies in the City of Shelton and its urban growth area were identified and inventoried in the report as shorelines of the state. These include:

1. Oakland Bay
2. Johns Creek
3. Island Lake
4. Goose Lake
5. Goldsborough Creek
6. Mill Creek

Nearly 11 linear miles of shoreline were identified within the City of Shelton and its urban growth area. In addition to studying the waterbodies themselves, adjacent lands were studied as well, which included lands extending landward of the waterbody for 200 feet, floodways and floodplain areas, river deltas, and wetlands considered to be associated with the shoreline. One of the important areas of the marine waterbodies is the “nearshore” environment which includes shallow marine waters, mudflats, tidal areas, and beaches.

The inventory and characterization report describes existing conditions within the City shorelines and provides a map folio based upon Geographic Information System (GIS) data. The report describes existing land uses, such as residential uses, parks, development and water-dependent industries. It also evaluates existing natural shoreline processes and functions, such as forested riparian areas, wetlands, wildlife habitat and fish presence. The inventory report identifies areas suitable for restoration and additional public access. The report provided a foundation for revising the goals, policies, and regulations in the City’s SMP. It helped the City make informed decisions about incorporating the communities’ vision for the shorelines, accommodating growth, and addressing other shoreline policy objectives like promoting water-dependent uses. It also helped the City explore opportunities for conservation and restoration of natural areas.
What were the Major Findings of the Report?

Some of the findings of the inventory report are summarized below:

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND USE</td>
<td>Existing land uses in Shelton’s shoreline areas are mostly a mix of forestry, industrial, and residential. Industrial businesses are located mainly along Oakland Bay, Goldsborough Creek and Johns Creek. Residential properties are located along Goldsborough Creek, Johns Creek, Mill Creek and Island Lake. Most single-family homes on Island Lake have individual docks or piers. Forestry is located around Goose Lake.</td>
</tr>
<tr>
<td>WATER-DEPENDENT USES</td>
<td>Water-dependent uses typically include port industries, log booming and storage, shipping, marinas, docks, piers, boating facilities, outfalls, and aquaculture. The Simpson Lumber Company and Manke Timber Company mills and yards are located along Oakland Bay near the stream mouth of Goldsborough Creek. The Oakland Bay Marina, Pine Street Boat Launch, and Shelton Yacht Club are located to the north. A wastewater treatment facility with an outfall that extends 1,250 feet into Oakland Bay is located to the south. Single-family residential docks are located along Island Lake. These uses are all considered water-dependent uses.</td>
</tr>
<tr>
<td>PARKS AND PUBLIC ACCESS</td>
<td>There are a total of 12 acres of parks and public access points in Shelton’s shoreline area. There are pocket parks located along Goldsborough Creek but most do not provide access to the creek. Oakland Bay and Island Lake have public boat launches. Public access is encouraged on public lands that lie within the shoreline jurisdiction.</td>
</tr>
<tr>
<td>FISH AND WILDLIFE HABITAT</td>
<td>Shelton streams also support numerous species of native salmon and trout, several of which are listed under the Endangered Species Act. Many other wildlife species use Mason County shorelines as habitat. These include harbor seals, California sea lions, Stellar sea lions, mountain quail, western pearlshell, western toad, Pacific Pond Turtle, bats, seabirds, and waterfowl.</td>
</tr>
</tbody>
</table>
**CHARACTERISTIC**

**WATER QUALITY**

Water quality in Shelton has been identified as impaired or degraded. Water quality challenges for the shorelines in Shelton includes fecal coliform and high temperatures. Water quality issues in Oakland Bay include the presence of fecal coliform bacteria, dioxin, and wood and wood related chemicals. Island Lake has an invasive aquatic plant problem. Goose Lake was used as a disposal site in the 1930s and 1940s for paper mill waste.

**NEARSHORE FUNCTIONS AND COASTAL PROCESSES**

Waves generated by wind are the dominant driver of coastal processes in Mason County. Nearshore sediment supply is typically derived from eroding bluffs where sediment is transported down-drift by waves to form the varieties of shoreforms found in the County. Oakland Bay contains sheltered, low-energy shores that form highly complex coast lines. Erosion and sediment transport rates are very low in these environments. In the City of Shelton, flow and deposition of sediments from Goldsborough Creek interact with wave-transported sediments to form the sand and mud flats located in the inner harbor. Modifications to the natural shoreline in Shelton include bulkheads, riprap, dredging, stream channelization and historic fill.

**SURFACE WATER AND GROUNDWATER**

Shelton has natural surface water and groundwater resources. All three shorelines (Goldsborough, Johns and Mill Creek) fall below the Washington State minimum instream flow requirements during certain months of the year. These streams have been closed to further diversions for some or all of the year.

**RESTORATION**

The Department of Ecology will work with interested community members, environmental groups, and other agencies as part of the Oakland Bay Sediment Investigation to determine how potential cleanup actions could be integrated with habitat restoration projects in Oakland Bay and Shelton Harbor. In addition, the Squaxin Island Tribe is working with harbor land owners to develop a fish and wildlife restoration plan for the inner harbor. Habitat improvements could increase coho production in Goldsborough Creek.

A cleanup action plan is being conducted for sediment remediation related to the Goose Lake area and future development activities. Sediments at the lake contain multiple chemicals of concern associated with a former paper mill.
What are Shoreline Ecological Functions?

According to WAC 173-26-186, the City is required to review and amend its SMP so that it uses a process that identifies, inventories and ensures meaningful understanding of current and potential ecological functions provided by shorelines. Further, local master programs shall include policies and regulations designed to achieve “no net loss” of those shoreline ecological functions. As per WAC 173-26-201(3)(d)(i), shoreline functions include the following:

- **Hydrologic functions**: Transport of water and sediment across the natural range of flow variability; attenuating flow energy in rivers; attenuating wave and tidal energy in marine waters; recruitment and transport of large woody debris and other organic material; removing excessive nutrients and toxic compounds.

- **Shoreline vegetation**: Maintaining temperature; removing excessive nutrients and toxic compound, sediment removal and stabilization; attenuation of flow and wave energy; and provision of large woody debris and other organic matters.

- **Hyporheic functions**: Removing excessive nutrients and toxic compound, water storage, support of vegetation, and sediment storage and maintenance of stream base flows.

- **Habitat for native aquatic and shoreline-dependent birds, invertebrates, mammals, amphibians; and anadromous and resident native fish**: Habitat functions may include, but are not limited to, space or conditions for reproduction; resting, hiding and migration; and food production and delivery.

Aquatic areas waterward of the ordinary high water mark were evaluated during the SMP update process using a compilation of existing data. These data were provided by the Mason County and City of Shelton Joint Technical Advisory Committee (JTAC) and Mason County Citizens Advisory Committee (CAC) during a special session related to the aquatic designation. High value aquatic areas pinpointed by the JTAC and CAC members within Shelton and its UGA have been mapped and include the following:

1. Aquatic areas of Goldsborough Creek, upstream of State Route 101
2. Aquatic areas of Johns Creek

FUTURE DEVELOPMENT AND EFFECT ON SHORELINES

What is the City’s Shoreline Jurisdiction?

The definition of minimum shoreline jurisdiction is established by statue in RCW 90.58.030. “Shorelines of the state” means all of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them which meet one of the following criteria:

- Tidal waters and wetlands associated with them waterward to the extreme low tide mark;

- Rivers or streams downstream of a point where the mean annual flow is 20 cubic feet per second (cfs) or greater and the wetlands associated with those streams; and

- Lakes greater than 20 acres in size and wetlands associated with those lakes.

“Shorelines of Statewide Significance” in Shelton are defined as:

- Those areas of Puget Sound lying seaward from the line of extreme low tide.

"Shorelands” or "shoreland areas” means those lands extending landward for two hundred feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of this chapter; the same to be designated as to location
by the Department of Ecology. The City of Shelton shoreline environment designation map reflects this minimum shoreline jurisdictional area.

**How Will Future Development be Managed along the City’s Shorelines?**

The types of future development occurring on City shorelines will vary depending on the Shoreline Environment Designation (SED) assigned to each shore segment once the SMP is adopted. The City of Shelton’s Draft SMP assigned SEDs to shore segments based on three general factors:

1. the existing land use pattern;
2. the biological and physical character of the shoreline being considered for development; and
3. the goals and aspirations of the community as expressed through the comprehensive plan.

Designations are applied to both the waterbodies themselves and adjacent shorelands. The following shoreline environment designations were developed with input from both the JTAC and the CAC (see Chapter 4 of the Draft SMP for a complete description):

1. **Urban Industrial** for areas that are planned for high-intensity, water-oriented activities that are proximate to navigable channels with arterial roadway and/or rail service and with sufficient space to support water-dependent or water-related industrial activities; or areas that are characterized by intensive industrial development such as timber processing and transporting or other high-intensity uses that are water-dependent. Few uses are prohibited in this designation, allowing for a mix of commercial, industrial and recreation. Residential development is not allowed.

2. **Urban Multi-purpose** for areas of high intensity shoreline use including industrial, commercial, residential and recreational activity; areas that are designated in an adopted City plan for a mix of high intensity industrial, commercial, residential or recreational uses; or areas that are used for intensive port activity, excluding those areas used primarily for deep-draft, ocean going vessels. Similar to Urban Industrial, this designation allows a broad suite of uses except that non-water-oriented industrial is prohibited. Residential development is allowed.

3. **Residential** for areas that are predominantly developed with single-family or multifamily residential development; areas that are planned and platted for residential development, but are not predominantly characterized by critical areas and channel migration zones; areas with a proliferation of docks/piers and structural armoring; or areas that are developed with or planned for highly intensive recreational uses. Allowed uses are generally limited to agriculture, residential and recreation.

4. **Urban Goldsborough Creek** for areas of medium intensity shoreline use including a mix of residential, commercial, forestry, transportation or recreational development, located on Goldsborough Creek with significantly altered shoreline ecological functions and processes; or areas that are designated in an adopted City of Shelton plan for a mix of medium intensity residential, industrial, commercial, or recreational uses, located on Goldsborough Creek with significantly altered shoreline ecological functions and processes. Allowed uses are generally limited to commercial, forestry, recreation and residential.

5. **Conservancy** for areas that are unable to support new development or uses without significant adverse impacts to ecological functions or risk to human safety; areas that are ecologically intact and therefore currently performing an important, irreplaceable function or ecosystem-wide process that would be damaged by human activity; or areas that are considered to represent ecosystems and geologic types that are of particular scientific and educational interest. Allowed uses are generally limited to agriculture, forestry, recreation, and residential.

6. **Aquatic Harbor** for lands and waters waterward of the OHWM within Shelton Harbor in Oakland Bay that are intensively used for water-dependent industrial or commercial activities. This designation allows
a broad suite of water-related uses such as aquaculture, boating uses, commercial and industrial uses, transportation and major utilities. Water-dependent recreational development is also allowed.

7. **Aquatic Conservancy** for lands and waters waterward of the OHWM that are not currently intensively used for water-dependent industrial or commercial activities; streams documented to contain Endangered Species Act listed salmonids and marine habitats that are relatively undeveloped; freshwater shorelines that provide habitat for priority salmonid species and are relatively unaltered; high value estuaries that support federally listed salmonid rearing; documented presence of forage fish spawning; intact drift cell processes; important intertidal and subtidal beds of shellfish. Allowed uses are generally limited to aquaculture, boat launches, log storage and rafting, water-dependent recreational uses, transportation and major utilities. Single-use docks and piers are allowed in Island Lake and public docks and piers are allowed in Goose Lake.

The SEDs are designed so that the uses allowed on each shore segment are appropriate considering the ecological condition and sensitivity of the land and water. As a result, the type and intensity of uses allowed in areas designated Conservancy are tightly controlled since these areas are the most sensitive to future development and the most vital to protect. Existing and planned development patterns were considered as well to ensure the SEDs are compatible with existing and future land uses.

For each SED, the Draft SMP identifies:

1. **Permitted uses and developments** – Allowed uses and developments that are consistent with the SMA. Developments may require a shoreline substantial development permit if they meet certain cost thresholds, interfere with normal public use of the water or are not specifically listed as exempt per WAC 173-27-040 and Section 2.3 of the Draft SMP. Permitted uses must be consistent with the requirements of the Draft SMP and the Shoreline Management Act. Deviations from bulk, dimensional or performance standards may necessitate a Variance permit, which requires Ecology approval.

2. **Conditional uses** – Uses that may be authorized provided they meet certain criteria. Conditional Use Permits also require Ecology approval.

3. **Prohibited uses and developments** – These are uses and developments that are inconsistent with the SMA and which cannot be allowed through any permit or variance.
Where will Foreseeable Future Development Occur?

Ecology guidelines require the inclusion of reasonably foreseeable future development as part of the cumulative impacts analysis (WAC 173-26-186). According to the Ecology Handbook (Chapter 17 Cumulative Impacts Analysis, 2010), reasonably foreseeable future development is development that is likely to occur during the next 20 years based on the proposed shoreline environment designations, proposed land use density and bulk standards, and current shoreline development patterns.

Existing Development Pattern

To better evaluate modifications to the shorelines in the City and UGA, ESA conducted an aerial-photo analysis based on 2009 aerial imagery of properties located within the City’s shoreline jurisdiction. Each parcel in the shoreline jurisdiction was classified according to one or more of the following categories:

1. Armoring
2. Presence of overwater structures
   a. Float
   b. Residential dock/pier
   c. Industrial dock
   d. Marina
3. Location of primary structures:
   a. Primary structure is located less than 50 feet from the ordinary high water mark (OHWM)
   b. Primary structure is located 50 to 100 feet from the OHWM
   c. Primary structure is located greater than 100 feet from the OHWM
   d. Only parking area or impervious surface located within 200 feet of the OHWM
   e. Property not adjacent to water and over 200 feet from the OHWM
   f. Vacant property where no structures or development is present.

Determining whether properties were armored or unarmored along streams was challenging due to the presence of overhanging vegetation or other visual obstructions. Properties along Island Lake and Oakland Bay were more easily categorized. Ninety-four parcels (74 percent of total parcels) along Island Lake and 5 parcels (23 percent of total parcels) along Oakland Bay were determined to be armored.

Overwater structures were identified along Island Lake and Oakland Bay. In 2009, Island Lake had 74 docks/piers and 6 floats. Oakland Bay had 3 industrial docks/piers and 1 marina. According to 2012 Google imagery, Island Lake now has 79 docks/piers and 6 floats.

The following table shows the location of primary structures in relation to a shoreline’s ordinary high water mark. It depicts the number of parcels and percent of shoreline jurisdiction located in each category. The percentage values were calculated by dividing the total acres of parcels in each category by the total shoreline jurisdictional area of the corresponding waterbody.

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1 This analysis was also conducted as part of the Inventory and Characterization Report which covered a larger shoreline planning area that included the 100-year floodplain.
Table 1. Location of Existing Primary Structure on Shoreline Properties

<table>
<thead>
<tr>
<th>Waterbody</th>
<th>Less than 50 feet from OHWM</th>
<th>50 to 100 feet from OHWM</th>
<th>Greater than 100 feet from OHWM</th>
<th>Parking area or impervious surface only</th>
<th>Property not adjacent to shoreline or structure located greater than 200 feet</th>
<th>Vacant property</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of parcels</td>
<td>% of shoreline jurisdiction</td>
<td>Number of parcels</td>
<td>% of shoreline jurisdiction</td>
<td>Number of parcels</td>
<td>% of shoreline jurisdiction</td>
<td>Number of parcels</td>
<td>% of shoreline jurisdiction</td>
</tr>
<tr>
<td>Goldsborough Creek</td>
<td>4</td>
<td>4%</td>
<td>30</td>
<td>18%</td>
<td>69</td>
<td>30%</td>
<td>6</td>
</tr>
<tr>
<td>Goose Lake</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Island Lake</td>
<td>24</td>
<td>13%</td>
<td>42</td>
<td>28%</td>
<td>44</td>
<td>52%</td>
<td>5</td>
</tr>
<tr>
<td>Johns Creek</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>4%</td>
<td>52</td>
<td>68%</td>
<td>1</td>
</tr>
<tr>
<td>Mill Creek</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>5</td>
<td>50%</td>
<td>0</td>
</tr>
<tr>
<td>Oakland Bay</td>
<td>3</td>
<td>45%</td>
<td>0</td>
<td>0%</td>
<td>3</td>
<td>30%</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>12%</td>
<td>73</td>
<td>13%</td>
<td>173</td>
<td>42%</td>
<td>13</td>
</tr>
</tbody>
</table>

Note: Information based upon interpretation of 2009 aerial photographs and visual estimations at the parcel level.
As shown in Table 1, 42 percent of the shoreline jurisdiction in Shelton has primary structures located 100 feet or greater from the ordinary high water mark. About 28 percent of shoreline jurisdiction is identified as vacant. Vacant parcels are present along each shoreline waterbody, with the highest number of parcels along Goldsborough Creek and the highest number of acres on Goose Lake. The greatest percentage of vacant shoreline area is on Goose Lake (99%) and Mill Creek (50%).

**Reasonably Foreseeable Future Development**

There is development potential associated with most properties in the shoreline; however, vacant properties have the most potential to cause impacts to shoreline ecological functions. Redevelopment of existing properties, on the other hand, often provides opportunities to improve conditions.

Table 2 below shows the number of parcels, acreage amount and percentage of shoreline jurisdictional area considered to be vacant or developed by waterbody.

**Table 2. Vacant and Developed Properties by Waterbody**

<table>
<thead>
<tr>
<th>Waterbody</th>
<th>Vacant Properties</th>
<th>Developed Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Parcels</td>
<td>Acres</td>
</tr>
<tr>
<td>Goldsborough Creek</td>
<td>22</td>
<td>33</td>
</tr>
<tr>
<td>Goose Lake</td>
<td>2</td>
<td>43</td>
</tr>
<tr>
<td>Island Lake</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Johns Creek</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Mill Creek</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Oakland Bay</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>57</td>
<td>120</td>
</tr>
</tbody>
</table>

Around 28 percent of shoreline area is identified as vacant with the remaining 72 percent already developed with structures or impervious surfaces. Goose Lake has the highest percentage and acreage amount of vacant land. Goose Lake is currently under a cleanup order from Ecology. The current property owners are working with Ecology to formulate an acceptable cleanup plan. Long range plans for the Goose Lake area revolve around provision of parkland and public access around a large portion of the lake as well as visitor-serving commercial uses.

A GIS analysis was conducted to document the reasonably foreseeable future development that may occur on vacant properties along shorelines based on the underlying zoning requirements. The following table shows the underlying zoning for all properties considered vacant.
### Table 3. Vacant Properties in Shoreline Jurisdiction by Zoning District

<table>
<thead>
<tr>
<th>Zoning Designation</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>City of Shelton Zoning Districts (within City Limits)</strong></td>
<td></td>
</tr>
<tr>
<td>Goose Lake Commercial/Residential Mix</td>
<td>43</td>
</tr>
<tr>
<td>Valley Commercial/Residential</td>
<td>1.8</td>
</tr>
<tr>
<td>Downtown</td>
<td>0.01</td>
</tr>
<tr>
<td>Industrial</td>
<td>5.9</td>
</tr>
<tr>
<td>Neighborhood Residential</td>
<td>3.9</td>
</tr>
<tr>
<td><strong>Mason County Zoning Districts (Shelton Urban Growth Area)</strong></td>
<td></td>
</tr>
<tr>
<td>Commercial Industrial</td>
<td>8.9</td>
</tr>
<tr>
<td>General Commercial</td>
<td>16</td>
</tr>
<tr>
<td>Industrial</td>
<td>15</td>
</tr>
<tr>
<td>Mixed Use</td>
<td>1</td>
</tr>
<tr>
<td>Neighborhood Residential</td>
<td>24</td>
</tr>
</tbody>
</table>

Around 60 percent of the vacant properties are zoned to allow for residential uses. Most of the vacant properties on Goldsborough Creek are located in Shelton’s urban growth area and zoned Neighborhood Residential, Commercial Industrial and Industrial. Goose Lake properties are zoned Goose Lake Commercial/Residential Mix. Vacant properties along Island Lake are zoned Neighborhood Residential. Half of the vacant properties along Johns Creek are zoned Industrial and the other half are zoned Neighborhood Residential. A portion of the Neighborhood Residential zoned properties on Johns Creek are protected in perpetuity in an open space tract or entirely encumbered by mapped wetlands. Vacant properties on Mill Creek are predominately zoned General Commercial. Vacant properties on Oakland Bay are zoned Industrial and General Commercial.

Since the majority of vacant properties are zoned to allow for residential uses, the number of subdividable properties and residential housing units were determined based on the underlying zoning requirements. Properties classified as vacant were assumed to have the potential to develop up to the maximum allowed residential density or subdivide per minimum lot size, which are both listed by zoning district below:

- Goose Lake Commercial/Residential Mix – 4,500 square foot minimum lot size (no maximum residential density established)
- Valley Commercial/Residential – 6,000 square foot minimum lot size (no maximum residential density established)

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2 Properties entirely encumbered by wetlands or in an open space tract were removed from subsequent calculations that determined foreseeable future residential development.
- Downtown – residential uses are allowed in the upper floors of commercial buildings (no maximum residential density or minimum lot size established)
- Neighborhood Residential – 4,500 square foot minimum lot size and 3 units per acre minimum to subdivide; 1 triplex per lot (existing lots must be a minimum 3,000 square feet)
- Mixed Use (County zone) – 6,000 square foot minimum lot size to subdivide or 12 units per acre
- Neighborhood Residential (County zone) – 4,500 square foot minimum lot size and 4 units per acre minimum to subdivide; 1 triplex per lot

Vacant properties in zoning districts that establish an upper limit for residential densities could be developed to accommodate around 30 new residential units. Vacant properties that have the potential to subdivide as allowed by the underlying zoning could create approximately 590 parcels\(^3\). Since there are several zoning districts that do not establish an upper limit on residential densities, the foreseeable residential development would likely be higher than these values. Conversely, there are constraints that have not been taken into account that would likely limit future development. These include publically owned parcels (such properties may develop but not necessarily with residential uses), critical areas (only properties fully encumbered by wetlands were removed from these calculations), the percent of land necessary to build supporting infrastructure (roads, stormwater ponds), and the likelihood of actual development in the next 20 years (typically referred to as the market factor).

As an example, in the 2007 Buildable Lands Report for King County and its cities, local governments deducted 20 to 25 percent of the gross available single family residually zoned acres for critical areas, discounted 12 to 13 percent of the remaining acreage for infrastructure, and further discounted 14 to 18 percent of remaining acreage for market factor. This resulted in nearly half of the available gross acreage being deducted or discounted to forecast buildable lands. These deductions had been validated by analysis of actual development since 2002.

**How does Future Development Typically Affect Shorelines?**

Shoreline development can cause a number of adverse effects on shoreline ecological resources. Without adequate planning and mitigation, development in the shoreline may result in impacts such as the following:

- Removal of significant forested riparian vegetation which negatively affects habitat and riparian functions;
- Hardening of shorelines through construction of bulkheads or rip-rap armoring which eliminates natural beaches, increases wave energy and negatively affects the intertidal zone;
- Construction of jetties, groins and breakwaters which disrupt natural beach formation and shore drift and impact the intertidal zone;
- Construction of over-water structures which can shade aquatic environments, disrupt forage fish spawning areas, and negatively affect salmon habitat by removing forage areas (i.e. native eelgrass).
- Fill within floodplains or channel migration zones of large rivers resulting in flooding of downstream structures, disruption of flood flows, and avoidable damage to public health and safety.

The Shoreline Master Program (SMP) Handbook prepared by Ecology (Revised November 2012) describes the effects of unmanaged development on shorelines in the State of Washington (Publication No. 11-06-010). For example, Chapter 11 of the SMP Handbook describes the values of vegetation conservation, buffers and setbacks.

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\(^3\) The majority of the subdividable properties are located on large parcels on Goose Lake and Goldsborough Creek in Shelton’s UGA. According to the underlying zoning district, any development or subdivision in excess of three acres on Goose Lake must limit commercial and office uses to forty percent of the total floor area or lot area of the development; and must limit residential development to a minimum of 50 percent multifamily. The properties on Goldsborough Creek could be developed with single-family, multifamily or mixed use buildings.
for protection of native vegetation within the shoreline, as documented by the most current scientific and technical information available.

Vegetation helps to stabilize soils, filter pollutants and fine sediments, and contribute to improved water quality. Trees and shrubs provide habitat for many species and food sources for aquatic species as well. Stable banks and slopes reduce the occurrence of landslides and erosion, thereby reducing damage to structures and threats to life safety. Often, vegetated areas adjacent to water bodies are referred to as “shoreline buffers” and are established to protect the ecological functions of the shoreline and help to reduce the impacts of land uses on the waterbody.

Buffers provide a transition between the aquatic and upland areas. The shoreline vegetation conservation section [WAC 173-26-221(5)] defines vegetation conservation as “activities to protect and restore vegetation along or near marine and freshwater shorelines that contribute to the ecological functions of shoreline areas.” The benefits of buffers are discussed beginning on page 11 of Chapter 11 in the SMP Handbook:

The ecological benefits of buffers are discussed extensively in the following documents, which are briefly reviewed below. The first three documents were developed by the Aquatic Habitat Guidelines program, a partnership of state agencies, which conducted extensive reviews of the scientific literature for these documents. Ecology has participated in the development of the Aquatic Habitat Guidelines documents. The fourth document in the list was developed by the Washington Department of Fish and Wildlife.


In most cases adverse effects from development in the shoreline can be managed or offset through careful planning, compliance with appropriate regulations, use of best management practices and low impact development techniques, and effective compensatory mitigation measures. The Draft SMP employs all of these tools to prevent cumulative adverse impacts on shoreline functions.

PROTECTIVE PROVISIONS OF THE CITY’S SMP

How are Critical Areas Protected?

The City’s SMP integrates the City’s Critical Areas Ordinance, which includes regulations to protect frequently flooded areas, wetlands, geologically hazardous areas, fish and wildlife habitat conservation areas and other critical areas\(^4\). Use of the City’s Critical Areas Ordinance provides the foundation for achieving no net loss of critical area functions in the City’s shorelines.

The Draft SMP adopts the Critical Areas Ordinance (Shelton Municipal Code Title 21; Ordinance No. 1689-1206, adopted December 18, 2006) by reference (see Section 5.5.2). The Critical Areas Ordinance establishes buffer standards for wetlands, geologically hazardous areas and fish and wildlife habitat conservation areas (FWHCA). If buffers for critical areas are contiguous or overlapping, the buffers and setbacks that are the most protective of critical areas are applied. Table 4 below summarizes critical area regulations based on the Critical Areas Ordinance.

\(^4\)Shelton Municipal Code Title 21, last amended December 2006
<table>
<thead>
<tr>
<th>Critical Areas</th>
<th>Code Section</th>
<th>Summary of Regulations</th>
<th>Ecological Impacts Addressed</th>
</tr>
</thead>
</table>
| Wetlands      | SMC 21.64.130| Buffers vary depending on wetland category and number of wildlife function points:  
|               |              | • Category I: 100-225 feet  
|               |              | • Category II: 100-225 feet  
|               |              | • Category III: 80-150 feet  
|               |              | • Category IV: 50 feet  
|               |              | Wetland buffers, mitigation ratios, and monitoring requirements are generally consistent with Ecology recommendations.  
|               |              | The buffer standards presume the existence of a dense vegetation community in the buffer adequate to protect the wetland functions and values. When a buffer lacks adequate vegetation, the director may increase the standard buffer, require buffer planting or enhancement, and/or deny a proposal or buffer reduction or buffer averaging.  
|               |              | The Critical Areas Ordinance allows the following activities within wetlands or wetland buffers provided mitigation for wetland impacts are provided:  
|               |              | • Utility lines and facilities providing local delivery service (not allowed in Category I wetlands)  
|               |              | • Public and private roadways and railroad facilities  
|               |              | • Access to private development sites (not allowed in Category I wetlands and their buffers)  
|               |              | • Maintenance, repair or operation of existing structures or improved areas  
|               |              | • Stormwater conveyance or discharge facilities (only allowed in Category II, III and IV wetland buffers)  
|               |              | • On-site sewage disposal systems in the outer 25% of a Category II, III, or IV wetland buffer  
|               |              | • Outdoor recreational or educational activities (not allowed in Category I wetlands)  
|               |              | Water quality;  
|               |              | Habitat;  
|               |              | Shoreline vegetation;  
<p>|               |              | Hydrology (wetlands support stream base flows) |</p>
<table>
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<tr>
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</table>
| Geologically Hazardous Areas - Landslide Hazard Areas | SMC 21.64.210 | A buffer must be established from all edges of landslide hazard areas.  
- The buffer from the top of a slope must be equal to the greater of:  
  - The vertical distance from the toe of slope to the top of slope;  
  - The distance from the toe of slope upslope at a slope of two-to-one (horizontal to vertical) to a point that intersects with the site’s ground elevation; or  
  - 50 feet.  
- The buffer from the bottom of slope must be the greater of:  
  - The height of the slope; or  
  - 50 feet.  
The Critical Areas Ordinance allows the following activities on landslide hazard areas or their buffers only if no other feasible alternative is available:  
- Critical facilities and installations that produce, use or store hazardous materials only when consistent with certain design standards and documentation requirements;  
- Utility lines and pipes;  
- Roads, driveways, trails and walkways only when consistent with certain design standards and documentation requirements.  
Landslide hazard area buffers may be reduced to a minimum of ten feet based on analysis of specific development plans provided by a qualified professional that demonstrates that the reduction will adequately protect the proposed development, adjacent developments, and uses and other nearby critical areas. | Sediment transport; Net shore drift; Shoreline vegetation and habitat. |
| Fish and Wildlife Habitat Conservation Areas       | SMC 21.64.320 | A standard buffer equal to 150 feet must be established for Type S Waters (shorelines of the state). The standard buffer widths presume the existence of a dense native vegetation community in the buffer zone adequate to protect the stream functions and values at the time of the proposed activity.  
Stream-reach-based buffers may be administered as an alternative to the standard buffer based on the specific ecological functions provided by the stream segments. Stream-reach-based buffers are established for all shorelines of the state. Buffer management measures are required to be put into place depending on whether a development is considered minor alteration, major alteration, new | Riparian zones; Fish and wildlife habitat; Water quality |
<table>
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<tr>
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|               |              | development or substantial reconstruction. Management measures vary by stream segment. Some examples include enhancing existing vegetation, installing a fence and buffer sign, and adding channel complexity. The stream-reach-based buffers range from 0-200 feet. For example, developed areas in Oakland Bay are required to provide enhanced edge habitat at the upland/marine water interface. The enhanced edge must establish natural function through grade, substrate and native upland vegetation that provides shading and other functions. Johns Creek, downstream of Oak Park Plat, must provide a standard 150-foot buffer or 50-feet from the top of a 35% slope while existing small lots can rely on nonconforming provisions. In addition, low impact development standards are required. The Critical Areas Ordinance allows the following uses in streams and their buffers when all reasonable measures have been taken to avoid adverse effects on species and habitats, the alteration is limited to the minimum and compensatory mitigation is provided for all impacts that cannot be avoided:  
  - Stream restoration  
  - Road, trail, bridge, right-of-way crossings  
  - Outdoor recreational or educational activities  
  - Utility lines and facilities providing local delivery service  
  - Stormwater conveyance and discharge facilities and outfalls in a buffer  
  - Stream bank stabilization, shoreline protection, public or private launching ramps  
  - New public flood protection measures and expansion of existing measures  
  - New docks  
  - Launch ramps  
  - In-stream structures  
  - Shoreline dependent or oriented uses  
  - Clearing and grading when allowed as part of an authorized use or activity or as otherwise allowed in these standards |
How do Use and Modification Regulations Protect Ecological Functions?

As described above, reasonably foreseeable development within the City of Shelton shorelines is anticipated to be mostly residential development on vacant lands. Residential development would likely involve new residential construction, piers, docks or floats, shoreline armoring, and vegetation clearing. The City of Shelton Draft SMP establishes regulations that address the residential use as well as its associated shoreline modifications and construction activities. Table 5 summarizes the use and modification regulations established in the Draft SMP and the ecological impacts that would be addressed.

Table 5. Shoreline Use and Development Regulations

<table>
<thead>
<tr>
<th>Shoreline Use/Modification</th>
<th>Code Section</th>
<th>Summary of Regulations</th>
<th>Ecological Impacts Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Development</td>
<td>Draft SMP Sections 6.2 and 6.14.2 SMC 21.64.070.C.</td>
<td><strong>Use restrictions:</strong> Houseboats, floating homes and other overwater residential structures are prohibited. Residential development is also prohibited within a floodway. Residential development is allowed in all upland shoreline environment designations except for Urban Industrial. <strong>Subdivision regulations:</strong> New residential subdivisions and developments must be designed and built in a manner that avoids the need for future shoreline stabilization or flood control structures. Demand for stabilization in the future would be limited to existing structures that are threatened by erosion and new development on existing lots. Land that is located wholly within a critical area or buffer may not be subdivided for purposes of creating buildable parcels. Land that is located partially within a critical area or its buffer may be divided; provided, that each resulting lot has sufficient buildable area outside of the critical area or buffer with provision for drainage, erosion control, vegetation maintenance and related features that will not adversely affect the critical area or its buffer. Subdivisions must provide sufficient buildable area above the 100-year flood zone level within each resultant parcel. <strong>Buffers and setbacks:</strong> New residential development must comply with the critical area buffers established in the Draft SMP (see Table 4 above).</td>
<td>Riparian zones; Shoreline vegetation; Water quality; Saltwater and freshwater habitats; Sediment input and movement, water movement and organic input.</td>
</tr>
<tr>
<td>Shoreline Use/Modification</td>
<td>Code Section</td>
<td>Summary of Regulations</td>
<td>Ecological Impacts Addressed</td>
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<tr>
<td>Overwater Structures (piers, docks, buoys)</td>
<td>Sections 6.2 and 6.6.6.3</td>
<td>Piers, docks and buoys are permitted, conditionally permitted, or prohibited based on shoreline environment designations and the associated waterbody (i.e., Goose Lake). Piers, docks, and attached floats are prohibited in the Urban Goldsborough Creek and Conservancy designations (and the adjoining Aquatic designations). Applicants for single-use docks and piers must demonstrate that joint-use is not feasible. Mooring buoys must be used instead of docks and piers whenever feasible. Multi-family residences proposing to provide moorage facilities must construct a single, community moorage facility provided that the City may authorize more than one community moorage facility if a single facility would be inappropriate or undesirable given the specific environmental conditions of the site. The width of docks, piers, floats and lifts must be the minimum necessary and must be consistent with Washington Department of Fish and Wildlife and U.S. Army Corps of Engineers. The length of docks and piers in the marine environment must be the minimum necessary to prevent the grounding of floats and boats on the substrate during low tide.</td>
<td>Aquatic habitats</td>
</tr>
</tbody>
</table>
| Shoreline Stabilization | Section 6.21.2 | **New shoreline stabilization structures** are only allowed under the following circumstances:  
1. To protect an existing, primary structure where a geotechnical analysis documents that the structure is in danger from shoreline erosion caused by tidal action, currents, or waves and is not being caused by upland conditions, landslides or sloughing;  
2. In support of new nonwater-dependent development (including single-family residences) provided nonstructural measures are not feasible and erosion is not being caused by upland conditions;  
3. In support of new water-dependent development provided nonstructural measures are not feasible and erosion is not being caused by upland conditions;  
4. To remediate hazardous substances provided nonstructural measures are not feasible; or  
5. To protect projects for the restoration of ecological functions provided nonstructural measures are not feasible.  
**Existing structural shoreline stabilization** can be replaced in kind if there is a demonstrated need to protect principal uses or structures from erosion caused by currents, tidal action or waves:  
1. Replacements walls or bulkheads may not | Sediment input and movement, water movement and organic input. |
<table>
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<td><strong>Summary of Regulations</strong></td>
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<td>encroach waterward of the ordinary high water mark or existing structure unless there are overriding safety or environmental concerns.</td>
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<td>2. Where a net loss of ecological functions associated with critical saltwater habitats would occur by leaving the existing structure, it should be removed as part of the replacement structure.</td>
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<td>3. Soft shoreline stabilization measures that provide restoration of shoreline ecological functions may be placed waterward of the ordinary high water mark.</td>
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<tr>
<td>Subdivisions</td>
<td></td>
<td><strong>Subdivisions</strong> must be designed to assure that the lots created will not require structural shoreline armoring in order for reasonable development to occur.</td>
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<td></td>
<td>The size of the structural shoreline stabilization measure must be limited to the minimum necessary. Effects of stabilization structures, including replacement structures, on feeder bluffs or beach-sediment producing areas must be mitigated or avoided if possible.</td>
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<td>The shoreline stabilization regulations mirror the suggested standards in the WAC and are therefore assumed to be sufficient to prevent cumulative impacts on shoreline functions. The regulations place considerable limitations on new and expanded shoreline stabilization structures, which will substantially reduce future impacts to the marine and freshwater environments.</td>
<td></td>
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<tr>
<td>Vegetation Conservation</td>
<td>Section 5.7</td>
<td>The focus of these provisions is to limit vegetation clearing to the minimum necessary to accommodate approved shoreline development.</td>
<td>Marine and river riparian zones.</td>
</tr>
<tr>
<td></td>
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<td>Tree topping is prohibited. Pruning for safety and view protection is allowed provided it is conducted in a manner that minimizes harm to the health of the trees being pruned. In-stream natural features must be left in place unless they are a threat to public safety or are not enhancing shoreline function.</td>
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<td>The section also references SMC 21.64.380C (Critical Areas Ordinance) which requires a vegetation management plan for all established buffer areas. Buffer plantings are required if existing tree cover is less than a density of twenty, a dense screen of evergreen trees must be placed at the perimeter of a buffer, a plan for controlling invasive weeds is required and a 5-year monitoring and maintenance plan is required for non-single-family residential lots.</td>
<td></td>
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</table>
### Shoreline Use/Modification

<table>
<thead>
<tr>
<th>Code Section</th>
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<tr>
<td>Section 6.3, Table 6-3</td>
<td>The SMP includes a table referencing critical area buffers in SMC 21.64, establishing a 10-foot building setback, maximum impervious surfaces, and maximum structure heights for each shoreline environment designation. Maximum impervious surface limits are established for the Conservancy designation equal to 10%. Residential and Urban Goldsborough Creek designations must not exceed 50% impervious surfaces. Goose Lake is limited to 30%. Urban Multi-purpose and Urban Industrial designations must be consistent with zoning standards. Maximum building heights for Urban Goldsborough Creek, Conservancy and Residential designations are limited to 35 feet. Urban Industrial and Urban Multi-purpose designations have a maximum building height of 50 feet with an option for higher height limits with approval of a conditional use permit.</td>
<td>Riparian zones; Shoreline vegetation; Water quality; Saltwater and freshwater habitats.</td>
</tr>
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</table>

### OTHER EXISTING PROGRAMS

**What Other City Programs Protect Shorelines?**

There are a variety of regulatory programs, plans, and policies that work in concert with the City’s SMP to manage shoreline resources and regulate development near the shoreline. Various sections of the Shelton’s Municipal Code (SMC) are relevant to shoreline management.

**SMC Chapter 13.02 Stormwater Management Regulations:** The City of Shelton, in accordance with National Pollutant Discharge Elimination Systems (NPDES) and department of Ecology has developed protocol for a Stormwater Management Program (SWMP). The purpose of stormwater management, as stated in Chapter 13.02 of the SMC, is to “minimize water quality degradation and sedimentation in streams, ponds, lakes, wetlands and other water bodies” and “provide minimum development regulations and construction procedures which will preserve, replace or enhance…existing vegetation to preserve and enhance the natural qualities of land, wetlands and water bodies (SMC 13.02.020).” The City adopts the 2005 Department of Ecology Stormwater Management Manual for Western Washington. Stormwater management regulations include minimum requirements for pollution prevention during construction, control of pollutant sources, treatment of runoff, control of stormwater flow volumes, long-term operation and maintenance, and protection of wetlands. The manual also provides the methods for meeting requirements through best management practices (BMPs) for construction and long-term operation, as well as the procedure for determining which BMPs are appropriate for the specific site and construction methods.

SMC Chapter 13.02 also adopts minimum requirements for single-family residences, additions of less than 5,000 square feet of impervious surfaces and land disturbing activities of less than one acre. These requirements include establishing construction access routes, stabilization of exposed soils, BMPs to protect adjacent properties from sediment deposition, and erosion and sediment control BMPs.

**SMC Chapter 18.10 Flood Damage Prevention:** The purpose of Chapter 18.10 of the SMC is to promote public health, safety, and general welfare, and to minimize public and private losses due to flooding. In order to accomplish its purpose, this chapter includes methods and provisions for: restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in...
erosion or in flood heights or velocities; requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; controlling the alteration of natural floodplains, stream channels and natural protective barriers which help accommodate or channel floodwaters; controlling filling, grading, dredging and other development which may increase flood damage; and preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas. Chapter 18.10 outlines specific requirements, construction procedures, permitting and requirements for the development of lands located within areas subject to flood hazard.

SMC Chapter 21.08 SEPA Procedures and Policies: Most projects requiring a shoreline permit must also demonstrate compliance with the State Environmental Policy Act (SEPA). The SEPA process assures that environmental impacts, including compliance with SMP regulations, are identified, minimized and mitigated, where possible. The City adopts the state’s SEPA rules by reference (Chapter 197-11 WAC).

SMC Title 19 Subdivisions: The purpose of Title 19 is to regulate the subdivision of land and make appropriate provisions for public health, safety and general welfare, for open spaces, to facilitate adequate provision for water, sewerage, parks and recreation areas and other public requirements. Subdivisions must be consistent with the City of Shelton Comprehensive Plan, Municipal Code, Design and Construction Standards and Shoreline Master Program.

SMC Title 20 Zoning: The purpose of Title 20 is to provide uniform, equitable and reasonable standards to govern the usage of land and structures in the interest of health, safety and the general welfare. The Shelton zoning code regulates land uses through the establishment of 13 zoning districts. Each zoning district includes requirements on minimum lot sizes, maximum building heights and performance standards.

What State and Federal Regulations Protect Shorelines?

In addition to local regulations and non-regulatory organizations and agencies, a number of state and federal agencies have regulatory jurisdiction over resources in the City’s shoreline jurisdiction. As with local requirements, state and federal regulations apply throughout the City and significantly reduce the potential for cumulative impacts to shorelines. The major state and federal regulations affecting shoreline-related resources include, but are not limited to:

Endangered Species Act (ESA): The federal ESA addresses the protection and recovery of federally listed species. The ESA is jointly administered by the National Oceanic and Atmospheric Administration (NOAA) Fisheries (formerly referred to as the National Marine Fisheries Service), and the United States Fish and Wildlife Service (USFWS).

Clean Water Act (CWA): The federal CWA requires states to set standards for the protection of water quality for various parameters, and it regulates fill, excavation, and dredging in waters of the U.S., including wetlands. Certain activities affecting wetlands in shoreline jurisdiction or work in the adjacent rivers may require a permit from the U.S. Army Corps of Engineers and/or Washington State Department of Ecology under Section 404 and Section 401 of the CWA, respectively. Further, permits regulating aquaculture in marine waters are also within the purview of the CWA and the Corps of Engineers.

Federal Emergency Management Agency (FEMA) National Flood Insurance Program: Communities that participate in the National Flood Insurance Program receive federally backed flood insurance. In order to participate, a community must adopt and enforce floodplain management regulations to reduce future flood damage. The Federal Emergency Management Agency is responsible for mapping the country’s flood hazard areas.

Hydraulic Project Approval (HPA): The Washington Department of Fish and Wildlife (WDFW) regulates activities that use, divert, obstruct, or change the natural flow of the beds or banks of waters of the state and which may affect fish habitat. Projects in the shoreline jurisdiction requiring construction below the ordinary high water mark could require an HPA from WDFW. Projects creating new impervious surface that could substantially increase stormwater runoff to waters of the state may also require approval.
Rivers and Harbors Act: Any work or project that may affect or obstruct navigable waters requires a Section 10 permit under the Rivers and Harbors Appropriation Act of 1899. The U.S. Army Corps of Engineers reviews and authorizes projects with either a standard individual permit, letter-of-permission, nationwide permit, or regional permit.

National Pollutant Discharge Elimination System (NPDES): Ecology regulates activities that result in wastewater discharges to surface water from industrial facilities or municipal wastewater treatment plants. NPDES permits are also required for stormwater discharges from industrial facilities, construction sites of one or more acres, and municipal stormwater systems that serve census-defined Urbanized Areas (more than 50,000 people and population densities greater than 1,000 per square mile).

Washington State Forest Practices Act: The Act governs activities related to the growing, harvesting, or processing of timber on non-federal lands. There are four classifications of forest practice: Classes I-IV. All forest practices are regulated by the Department of Natural Resources with the exception of Class IV which is administered by Mason County. Rules under the act are designed to protect public resources such as water quality and fish habitat while maintaining a viable timber industry. A forest practice permit is required whenever more than 5,000 board feet of merchantable timber is harvested from an area or property that is greater than two acres in size.

What Role do Non-regulatory Programs Have in Protecting Shorelines?

During the SMP Update Process, the City developed a Restoration Plan that provides recommendations for restoring the City’s shorelines as well as a framework under which shoreline restoration can be successfully achieved (ESA et al., 2013). The Restoration Plan builds on and incorporates information from the Final Draft Shoreline Inventory and Characterization Report (ESA and Herrera Environmental Consultants, 2013) and other ongoing local and regional efforts to understand and manage the City’s shorelines. As required by the state guidelines established in WAC 173-26-201, the Restoration Plan includes the following key elements of the shoreline restoration planning process:

- Identification of degraded areas, impaired ecological functions, and sites with potential for ecological restoration.
- Identification of existing and ongoing projects and programs that are currently being implemented which are designed to contribute to local restoration goals (such as capital improvement programs [CIPs]).
- Identification of additional projects and programs needed to achieve local restoration goals, and implementation strategies including identifying prospective funding sources for those projects and programs.
- Establishment of overall goals and priorities for restoration of degraded areas and impaired ecological functions.
- Identification of timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals.
- Establishment of mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals (e.g., monitoring of restoration project sites).

The Restoration Plan identifies site-specific restoration opportunities along marine and freshwater shorelines. Examples of restoration actions identified in the plan include riparian plantings, addition of large woody debris, removal of fish passage barriers, development of a control plan for invasive aquatic species, and removal of bluff armoring. As components of the plan are implemented voluntarily or as mitigation for development impacts, the City expects to see a gain in shoreline ecological functions, which will counteract some of the effects of past and expected future development to improve conditions over time.
The following table describes non-regulatory programs/organizations that are active in planning and implementing restoration efforts in Shelton and Mason County.

**Table 6. Summary of Existing Restoration Partners and Programs**

<table>
<thead>
<tr>
<th>Agency or Organization</th>
<th>Mission</th>
<th>Potential Role</th>
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<tbody>
<tr>
<td>Squaxin Island Tribe Natural Resource Department</td>
<td>Works to sustain and enhance tribal resources; participates in natural resources enhancement and protection programs.</td>
<td>Partner for water quality monitoring and restoration projects.</td>
</tr>
<tr>
<td>Island Lake - Lake Management District</td>
<td>Raises funds necessary to eliminate Eurasian Milfoil from Island Lake in order to restore the recreational and aesthetic needs of property owners and other lake users by employing the best techniques based on environmental safety and efficacy without adversely impacting the fishery and wildlife habitat requirements. Monitors for recurrence of Eurasian Milfoil or emergence of other lake plants that could adversely impact the lake and recommends and fund removal of these plants throughout the life of the LMD. Maintains an advisory committee of neighborhood representatives to direct the efforts and funds of the LMD.</td>
<td>Partner for aquatic weed removal projects, collects data on aquatic weeds.</td>
</tr>
<tr>
<td>City of Shelton</td>
<td>The City of Shelton water utility actively promotes water conservation through educational information provided in monthly utility billings and provision of reduced rate rain barrels to residential customers, The City of Shelton Department of Waste Reduction and Recycling actively promotes the use of reduced rate compost bins to its residential customers in order to reduce waste as well as improve the water holding capacities of soils over time through compost amendments applied at home. The City of Shelton Community Development Department actively works with the Mason County Noxious Weed Board to identify and eliminate noxious weeds (such as giant hogweed and knotweed) adjacent to waterways. The Department works with the Mason Conservation District to promote voluntary enhancement and improvement to shoreline residential properties. The Department encourages and provides educational materials to residential customers regarding the benefits of residential rain gardens.</td>
<td>Collects data on water quality issues, obtains grant funding for restorative actions and provides educational materials to residents regarding water quality and habitat issues.</td>
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### Agency or Organization

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<tr>
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<th>Mission</th>
<th>Potential Role</th>
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<tr>
<td><strong>Oakland Bay Action Plan</strong> <em>(prepared by Mason County Public Health)</em> <em>(2007)</em></td>
<td>Development of a community plan by a committee of citizens, business representatives and staff from city, county, state and tribal government that aims to: Reduce water pollution. Ensure the county’s waters remain safe for swimming, fishing and all activities important to the culture, heritage and economy of the area.</td>
<td>The Oakland Bay Clean Water Advisory Committee coordinates many efforts within the region to help improve water quality within Oakland Bay.</td>
</tr>
<tr>
<td><strong>Mason Conservation District</strong></td>
<td>The Mason Conservation District assists residents of Mason County by providing a link between landowners, industry, and government agencies. They also provide technical and financial assistance to residents willing to implement conservation Best Management Practices.</td>
<td>The Mason Conservation District provides a resource for landowners interested in providing voluntary restoration actions in all areas, with an emphasis on shoreline areas.</td>
</tr>
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**GENERAL ASSESSMENT OF NO NET LOSS**

The City of Shelton Draft SMP *(dated May 2013)* provides a comprehensive update to the existing SMP goals, policies and regulations and establish more uniform management of the City’s shorelines consistent with the Ecology guidelines. The new shoreline environment designation system is consistent with the Ecology recommended system and derives from the conclusions from the Final Draft Shoreline Inventory and Characterization Report *(ESA and Herrera Environmental Consultants, 2013)*. In addition, the City of Shelton Restoration Plan *(ESA et al., 2013)* identifies opportunities to improve or restore ecological functions that have been impaired as a result of past development activities. Together, these reports document the existing conditions within the City’s shorelines at the time of this SMP Update.

This analysis was guided by the three factors identified in the Ecology guidelines for evaluating cumulative impacts and no net loss:

- Current circumstances affecting the shorelines and relevant natural processes;
- Reasonably foreseeable future development and use of the shoreline; and
- Beneficial effects of any established regulatory programs under other local, state, and federal laws.

In concert with implementation of restoration actions and preservation of existing ecological functions in the city, the regulatory provisions of the Draft SMP *(May 2013)* would generally serve to maintain the overall condition of shoreline resources over time. The proposed SMP provides a new system of shoreline environment designations that establishes more uniform management of the city’s shoreline. The updated development standards and regulation of shoreline modifications provides more protection for shoreline processes. The updated standards and regulations limit activities that would result in adverse impacts to the shoreline environment. The restoration planning effort would provide the City with opportunities to improve or restore ecological functions that have been impaired as a result of past development activities. In addition, the proposed SMP is meant to compliment several city, county, state and federal efforts to protect shoreline functions and values.
REFERENCES


