

City of Mukilteo

# Shoreline Master Program

December 2011



Photo by J. Bruce Arink



## 2011 SHORELINE MASTER PROGRAM

### ACKNOWLEDGEMENTS

A special thanks goes out to all those who helped and participated in the 2011 update of the City's Shoreline Master Program.

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City of Mukilteo, Washington  
2011 SHORELINE MASTER PROGRAM

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# Chapter 1: Introduction

## Mukilteo's Shoreline in a Regional Context

The City of Mukilteo is located 25 miles north of Seattle with shorelines on the eastern side of Possession Sound or which represents Mukilteo's western shoreline. Figure 1 Regional Context. The northern shoreline and most heavily developed is on the western most portion of Port Gardner Bay adjacent to the City of Everett's western most shoreline.

## Shoreline Management Act and 2003 WAC 173-26 Guidelines

The Washington State Shoreline Management Act (SMA) of 1972 (RCW 90.58), as implemented through WAC 173-26, requires all counties and municipalities located along the shorelines of Washington or with waters of statewide significance to develop *Shoreline Master Programs (SMPs)*. In 1995, state legislature required the Department of Ecology (DOE) to review and revise its *Shoreline Guidelines* (WAC 173-26) in order to ensure consistency with the Washington Growth Management Act (GMA). The legislation also required certain counties and their municipalities to update their *SMPs* as set forth in SSB 6012, with additional updates to be conducted every seven years thereafter.

WAC 173-26 requires *SMPs* to include:

- Master Program Policies to translate broad, state-wide goals into local directives;
- Master Program Regulations, including Environment Designations as well as General and Specific Use Regulations; and
- Administrative Provisions regarding administration of a permit system for proposed "substantial development" within the regulated shoreline area.

**Figure 1: City of Mukilteo Vicinity Map**



Local governments may either integrate their *SMP* policies and regulations into their local *Comprehensive Plan* policies and implementing regulations, or they may prepare a stand-alone *Shoreline Master Program*. The City of Mukilteo has chosen to integrate the policies into the *Comprehensive Plan* and regulations into the Mukilteo Municipal Code (MMC) as Title 17B. This document includes the *Comprehensive Plan* policies and the regulations section of the MMC is as separate document for ease of use.

The ten governing principles of the *Shoreline Guidelines* (WAC 173-26) have been used to develop the *Mukilteo SMP*. These principals are summarized below:

1. The WAC guidelines are subordinate to the Shoreline Management Act.
2. The *SMP* guidelines are intended to reflect the policy goals of the Act.
3. All relevant goals must be addressed in the planning policies of the *SMPs*.
4. The planning policies of the *SMPs* may be achieved by a number of means, only one of which is the regulation of development.
5. The goals of the Act, implemented by the planning policies of the *Comprehensive Plan* and *SMP*, may not be achievable by development regulation alone. (Regulatory actions should not infringe upon private property rights, thus other local or regional efforts and funding will be needed to achieve a more comprehensive approach.
6. The territorial jurisdictions of the *SMP's* planning function and regulatory function (applies only to the 200-foot jurisdiction) are legally distinct. The planning function may look beyond the territorial limits of shorelines of the state.
7. The planning policies and regulatory provisions of *SMPs*, comprehensive plan and development regulations shall be integrated and coordinated in accordance with GMA and other laws where possible.
8. The Act makes protection of the shoreline environment an essential statewide goal. Local *SMPs* must: address shoreline ecological functions; include policies, regulations, and mitigation standards/restoration to achieve "no net loss;" include regulations that ensure that exempt development, in the aggregate, will not result in a net loss; include goals and policies providing for restoration of impaired ecological functions; and, evaluate and consider cumulative impacts of future development.
9. Local governments have reasonable discretion to balance the various policies and to modify *SMPs* to reflect changing circumstances consistent with the policy and use preference of RCW 90.58.020, these Guidelines (WAC 173-26), and other programs.
10. Local governments, in adopting and amending *SMPs* shall:
  - a. Use a systematic interdisciplinary approach;
  - b. Consult with federal, state, regional, or local agencies with respect to any environmental impact;
  - c. Consider all plans, studies, surveys, inventories, and systems of classification by governments, individuals, or organizations dealing with shorelines of the state;
  - d. Conduct further research, inventories, and interviews as necessary;
  - e. Utilize all available hydrology, geography, topography, DOE, economics, and other pertinent data; and

- f. Employ data and computer techniques to store, index, analyze, and manage information gathered.

## Purpose of Mukilteo's SMP

The Mukilteo shoreline planning area has been subject to a series of activities over time, including shipping, railroad, timber harvest, filling, and dredging. These major activities impacted the shoreline early on in Mukilteo history. Within the City of Mukilteo, population is projected to increase to 22,000 persons by 2025. With just over 2,000 additional people and similar growth in employment the city is nearing build-out. Collectively, these factors are not likely to alter the basin conditions that contribute to the ecological functions within the area except development adjacent to the airport. The advent of the Growth Management Act (GMA), the Mukilteo Comprehensive Plan, the Harbour Pointe Master Plan, and the critical area codes has protected much of the remaining undeveloped areas surrounding the drainages by placing them in parks and open space, which offers a significant opportunity to cumulatively enhance the streams and shoreline functions. In combination with these actions, the City of Mukilteo will assist in protecting its shoreline further through implementation of this updated *2011 Shoreline Master Program (SMP)* and will integrate the program as required by the Growth Management Act (GMA) into the Mukilteo *Comprehensive Plan (Comp. Plan)* and regulations in the Mukilteo Municipal Code (MMC).

An explanation of Mukilteo's 2011 update process is contained in Chapter 9.

## Jurisdictional Limits





Under the SMA, "shorelands" or "shoreland areas" refer to those lands extending landward for two hundred (200) feet in all directions as measured on a horizontal plane from the ordinary high water mark (OHWM); floodways and contiguous floodplain areas landward 200 feet from such floodways; and all wetlands and river deltas associated with the streams (greater than 20 cfs), lakes, and tidal waters. According to the SMA, the shorelines within the City of Mukilteo that lie "seaward from the line of extreme low tide" are shorelines of statewide significance. All are subject to Title 17B MMC and the same to be designated as to location by the department of ecology. The shoreline boundary is shown on Figure 2, a 200-foot shoreline zone where this *SMP* plan and shoreline codes are in effect.

The City of Mukilteo's shoreline jurisdiction is located in Sections 4, 9, 16, 17, 20, 21, 22, 33, and 34, Townships 28 and 29 North, Range 4 East, Willamette Meridian, known of as the Mukilteo Quadrangle. Lake Serene, located outside the current city limits, but within the MUGA, is 43 acres in size and has been covered under this *SMP*, as well as Snohomish County's Draft SMP. If the MUGA shoreline and Lake Serene are annexed into the City, the regulations in the Mukilteo Municipal Code 17B will apply.

**Figure 2: Shoreline Jurisdiction Overlay**

Note: The Shoreline Jurisdiction Overlay as shown is only an approximation. It is accurate to within 50 feet. If a property lies within the shoreline overlay area, a survey must be prepared to determine whether the property is within 200 feet of the ordinary high water mark. If a property falls within the 200 foot Shoreline Jurisdiction, any proposed development shall comply with the requirements of the Mukilteo Shoreline Master Plan and Chapter 17B, Waterfront Development and Shoreline Management Regulations.

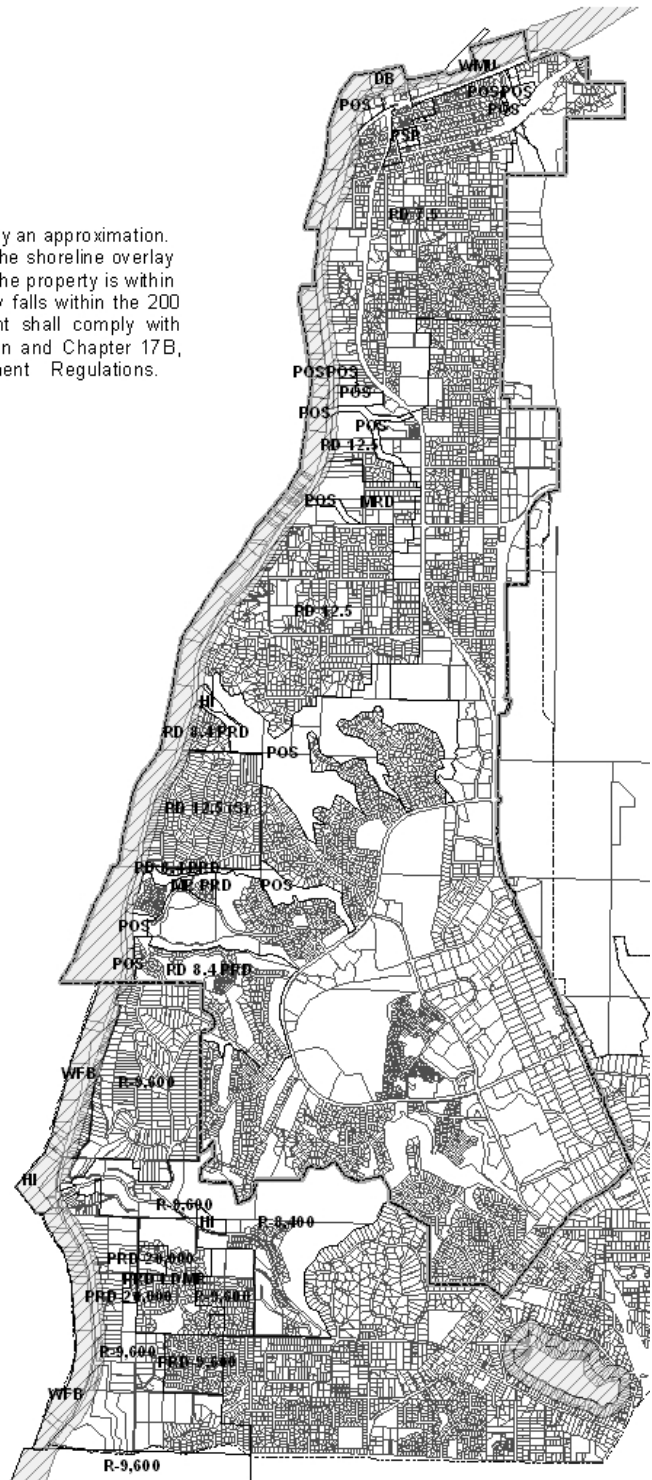
**Legend**

-  Mukilteo City limits
-  MUGA Outline
-  Shoreline Overlay
-  Parcel lines



Refer to the zoning map for descriptions of zoning districts.

\\PLANNING\GIS\Source\PROJECTS\2006\Shoreline\2006 Shoreline Designations - Figure 2.mxd









**Figure 3: Shoreline Jurisdiction Overlay, Northern City Limits to Olympic View Ravine**

Note: The Shoreline Jurisdiction Overlay as shown is only an approximation. It is accurate to within 50 feet. If a property lies within the shoreline overlay area, a survey must be prepared to determine whether the property is within 200 feet of the ordinary high water mark. If a property falls within the 200 foot Shoreline Jurisdiction, any proposed development shall comply with the requirements of the Mukilteo Shoreline Master Plan and Chapter 17B, Waterfront Development and Shoreline Management Regulations.

**Legend**

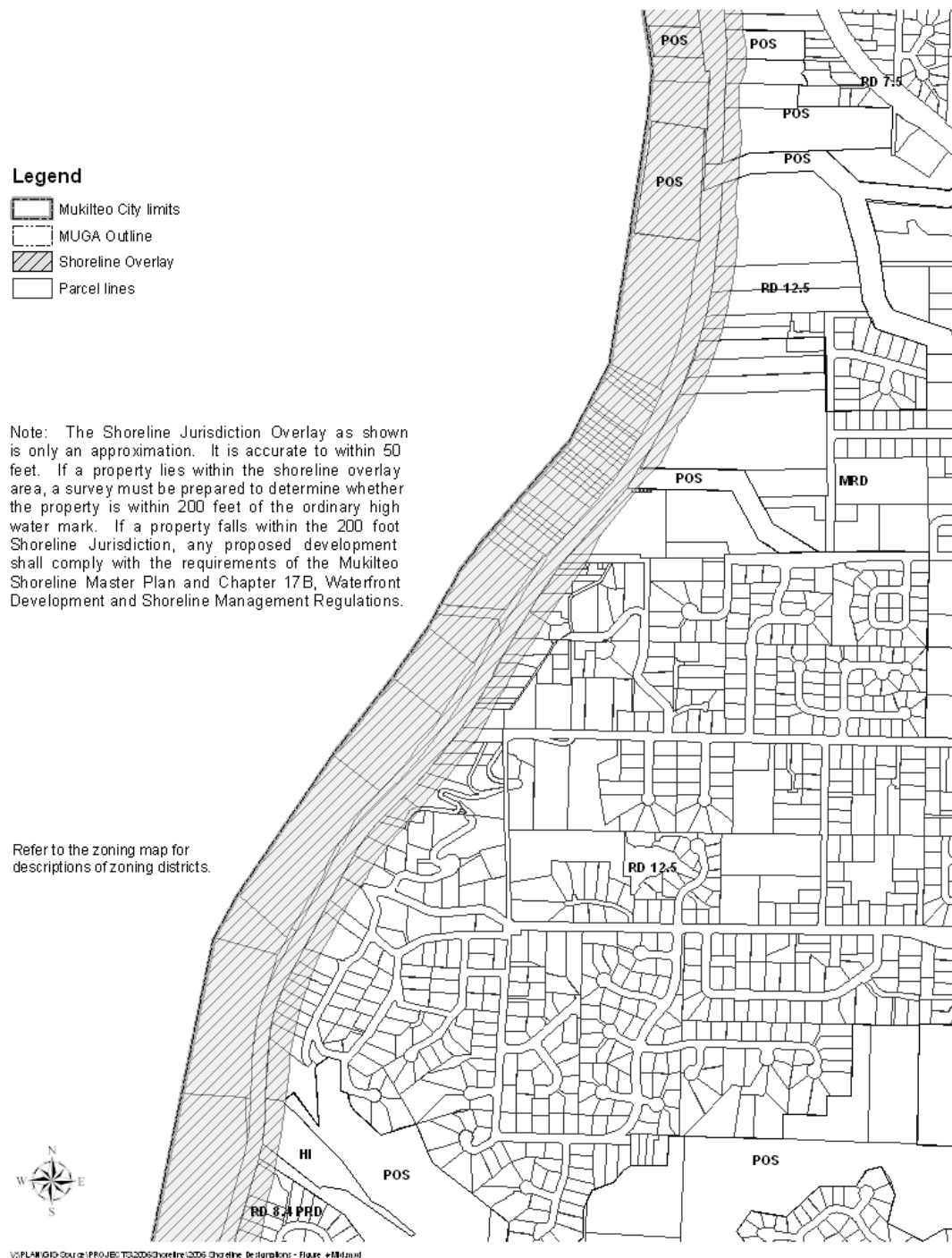
-  Mukilteo City limits
-  MUGA Outline
-  Shoreline Overlay
-  Parcel lines

Refer to the zoning map for descriptions of zoning districts.

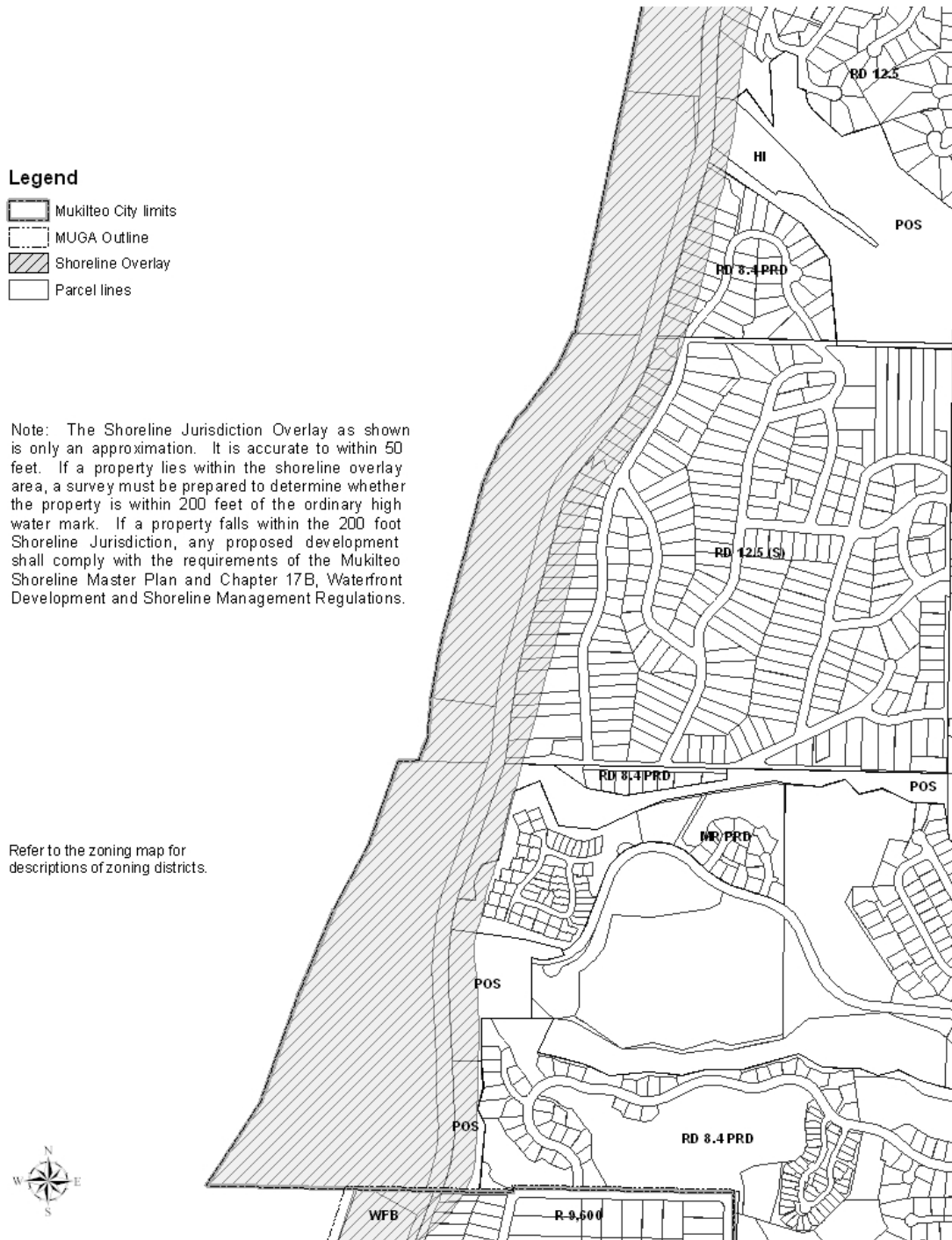


\\PLANNING\GIS\PROJECTS\2006\Shoreline\2006 Shoreline Designations - Figure 3 Northward

**Figure 4: Shoreline Jurisdiction Overlay, Olympic View Ravine to Big Gulch**

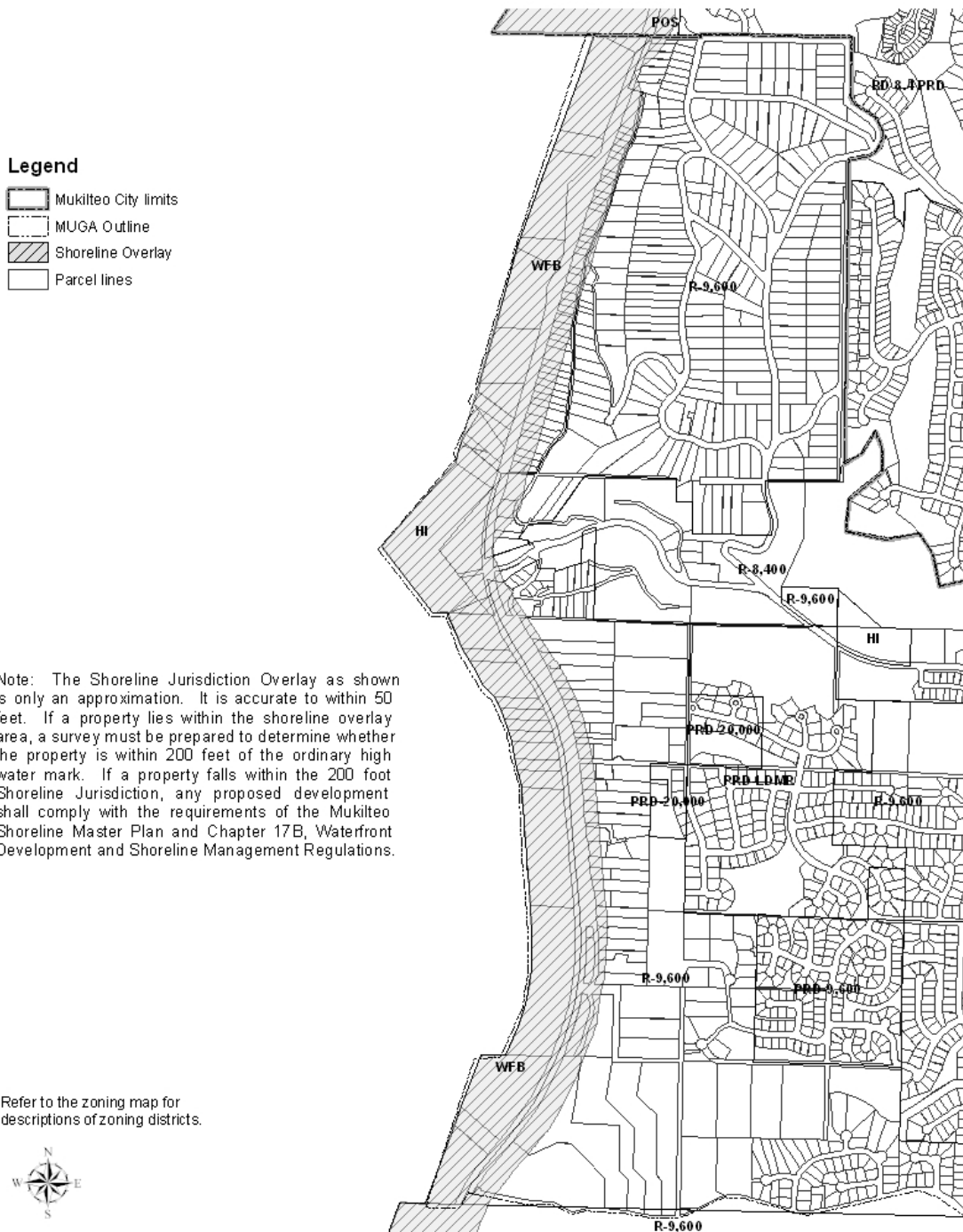


**Figure 5: Shoreline Jurisdiction Overlay, Big Gulch to Southern City Limits**



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**Figure 6: Shoreline Jurisdiction Overlay, Southern City Limits to MUGA Limits**



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## Relationship to Other Plans

The 2003 DOE *Shoreline Guidelines* are intended to resolve some of the conflicts between planning under the Growth Management Act (GMA) and planning for shorelines. Previously, *SMPs* and *Comprehensive Plans* were typically written and adopted as separate documents with potentially separate or overlapping goals and policies. Integration of all planning policies and regulations became required by the State Legislature under the 1997 Regulatory Reform Act. The 2003 DOE *Shoreline Guidelines* support this integrated approach.

Consistent with the GMA, the City of Mukilteo guides development through planning documents, which include policies and through codified regulations contained in the MMC. These planning documents include:

- *2010 Comprehensive Plan and related Functional Plans (adopted as part of the Comprehensive Plan), including the:*
  - *Parks, Open Space, and Recreation Plan*
  - *Transportation Plan*
  - *Bicycle, Pedestrian and Trails Plan*
  - *Shoreline Master Program*
  - *Habitat Management Plan*
  - *Capital Facilities Plan*
- *Land Use Regulations*
  - *Zoning Code – MMC 17B Waterfront Development and Shoreline Management Regulations*
  - *Development Standards (e.g. Best Management Practices) and Enforcement*

In addition to the *SMP* and regulations MMC 17B, several other documents were developed in support of the *SMP*:

- Shoreline Inventory and Characterization
- Restoration Plan
- Cumulative Impact Analysis
- Historical Use of the Shoreline

The 1991 GMA required counties and municipalities to undertake a 10-year update of *Comprehensive Plans* by December 1, 2004. As a part of this process, the City of Mukilteo added a “Critical Areas and Shoreline Element” to the 2004 *Mukilteo Comprehensive Plan*. This element contains detailed policies related to the management of Mukilteo’s shorelines. These same policies can be found in Chapter 3 of this document. This *Draft SMP* represents the City’s approach to integrate the *SMP* into both the *Mukilteo Comprehensive Plan* and the *Mukilteo Municipal Code 17B*, while also having separate documents or functional plans for ease of use.



# Mukilteo's 2011 SMP Update

The original City of Mukilteo *SMP* was adopted in 1974. Due to two small and two large annexations, the City of Mukilteo is now regulated by two separate shoreline programs. This *SMP Update* is intended to:

- Respond to recent shoreline concerns and knowledge;
- Ensure that habitat issues are addressed by identifying and utilizing the most current Best Available Science (BAS) for shorelines and critical areas;
- Identify needed shoreline acquisition, enhancement, and restoration opportunities;
- Integrate the SMP with Mukilteo's Comprehensive Plan and regulations for ease of use;
- Address the most current regulatory solutions; and
- Demonstrate consistency with the 2003 DOE Shoreline Guidelines.

## Update Process

The City of Mukilteo has prepared this *Draft Shoreline Master Program* for public review and comment. Public and agency comments on this *Draft SMP* are meant to assist the City of Mukilteo staff in finalizing this *SMP* update.

Best Available Science (BAS) has been used to characterize the shoreline and develop this *SMP* for the City of Mukilteo. BAS is based on research and studies conducted by qualified individuals using documented methods that lead to verifiable results and conclusions. In the absence of such, BAS can rely on existing studies, existing literature, and best professional judgment.

The work leading up to the release of this draft document has been a multi-year effort and has primarily entailed the collection of existing, as well as new inventories, data, and mapping, some done for the City of Mukilteo and those being done by other agencies and tribal governments. Additional data was collected where existing data was incomplete, thought to have changed, or where data did not previously exist. In addition, during 2004-2007 the City worked cooperatively with WRIA 7 and 8 as well as Snohomish County through the Marine Resources Advisory Committee (MRC) to develop a detailed shoreline inventory and an enhanced forage fish and substrate inventory. City staff and specialists have compiled, analyzed, and prioritized possible actions and recommended regulatory changes to develop this *SMP* for the City of Mukilteo. The Puget Sound Action Plan and Agenda were used to compare priority actions and were found to be consistent. In addition, early projects in the shoreline will be monitored, and changes to improve shoreline functions will be made over time as required by adaptive management.

During this staff-intensive portion of the process, the Mukilteo Planning Commission has served and will continue to serve as the central opportunity for public input. Periodic discussions have also been held with the Mukilteo City Council to provide information on progress, preliminary findings, and tentative direction. Listed below are the publicly noticed sessions held with the Planning Commission and City Council to date:

- June 21, 2001 – Mukilteo Planning Commission Work Session
- April 18, 2002 – Mukilteo Planning Commission Meeting

- July 1 and 15, 2002 – Mukilteo City Council Meetings
- May 16, 2005 – Mukilteo City Council Meeting to direct staff to develop a Draft SMP
- Winter 2007 – Mukilteo City Council Meeting presenting the Preliminary Draft SMP for public review and directing the Planning Commission to hold Public Hearings
- 2009 – Planning Commission and City Council Meetings
- April 2010 – Mukilteo Planning Commission Work Session
- June 14, 2010 – Mukilteo City Council, Planning Commission, and Parks and Arts Commission Joint Work Session
- November 18, 2010 – Planning Commission Public Hearing
- January 20, 2011—Planning Commission Public Hearing (continued)

Along the way, there have also been more informal avenues for public input, including the Snohomish County MRC “Beach Expo” day each year during 2001 through 2010. The process and documents can be obtained by accessing the City of Mukilteo website: [www.ci.mukilteo.wa.us](http://www.ci.mukilteo.wa.us).

## Finalization of the 2011 SMP Update

This document represents City staff and consultants efforts’ to prepare an update to the Shoreline Master Program (SMP) for the City of Mukilteo. As a draft document, it does not currently represent the Mayor’s or City Council’s views or approval. This document will be evaluated, commented upon, and changed as needed through Mukilteo’s usual public process, which began with public hearings by the Mukilteo Planning Commission and is now being followed with public hearings by the City Council. The *Draft Shoreline Master Program* was then reviewed and amended by the State of Washington Department of Ecology (DOE). It was only upon DOE’s approval that the SMP is now considered a final document. The requirement for DOE’s review and approval differs from how other functional plans obtain final approval by City Council through the Comprehensive Plan update process.

## Document Organization

This 2011 Mukilteo *Shoreline Master Program (SMP)* contains ten chapters and additional supporting documents. The various chapters provide an overview of Mukilteo’s shoreline environment, definitions of the city’s environment designations, and numerous goals and policies. Additionally, by State mandate, Mukilteo’s *SMP* includes a regulatory component. The regulatory component addresses issues of concern regarding specific land uses or activities within the shoreline, and issues related to shoreline modification in order to protect and enhance the unique ecological functions of the shoreline resource. The components that make up the 2011 Mukilteo *SMP* include:

- *Shoreline Master Program (SMP or Shoreline Plan)* (this document)
- The Mukilteo *Comprehensive Plan –Critical Areas & Shoreline Element* (contained in this document)
- *Mukilteo Municipal Code Title 17B* Waterfront Development and Shoreline Management Regulations.

Other supporting documents include:

- Inventory and Characterization

- Restoration Plan
- Cumulative Impacts Analysis
- Historical Uses of the Shoreline

Other documents include:

- User Guide
- No Net Loss Report
- Takings Memo

The sections contained in this document include:

- Chapter 1: Introduction
- Chapter 2: Shoreline Environment Designations
- Chapter 3: Goals & Policies – Shoreline Elements
- Chapter 4: Administration and Permit Procedures
- Chapter 5: Inventory – Characteristics
- Chapter 6: Shoreline Protection, Enhancement and Restoration
- Chapter 7: Cumulative Impacts Analysis Summary
- Chapter 8: Public Access
- Chapter 9: Public Input Process
- Chapter 10: Capital Improvements
- Appendix A: Definitions

The Inventory and Characterization is a separate supporting document, which contains the technical biological analysis of the following three shoreline environments that are regulated under the SMP:

- Shorelines (marine/aquatic)
- Streams
- Freshwater lakes (Lake Serene)

If the reader is interested in developing along the shoreline, please refer to the Mukilteo Municipal Code Title 17B Waterfront Development and Shoreline Management Regulations.

## Chapter 2: Shoreline Environment Designations

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The City of Mukilteo's shoreline is divided into "Environment Designations," as required by the Shoreline Management Act. The City has seven (7) designations, each of which reflects distinctly different shoreline areas. These include:

- Urban Waterfront
- Urban Waterfront Park
- Urban Conservancy
- Urban Railroad
- Aquatic Urban
- Aquatic Urban Conservancy
- Urban Lakefront

These Environment Designations were developed based on a review of existing development patterns, biological and physical characteristics of the shoreline, and goals and aspirations of the community as expressed through the City's *Comprehensive Plan* and Washington State's *Shoreline Guidelines* (WAC 173-26-211).

These Environment Designations include either the upland property 200 feet inland from the Ordinary High Water Mark (OHWM) or the aquatic/marine tidelands and water areas lying waterward of Ordinary High Water Mark (OHWM) out to the edge of the City of Mukilteo's legal jurisdiction at the middle of Possession Sound or Port Gardner Bay. The Urban Lakefront environment designation encompasses both upland and freshwater areas of Lake Serene. Designation policies, included below, provide direction for the development and interpretation of regulations.

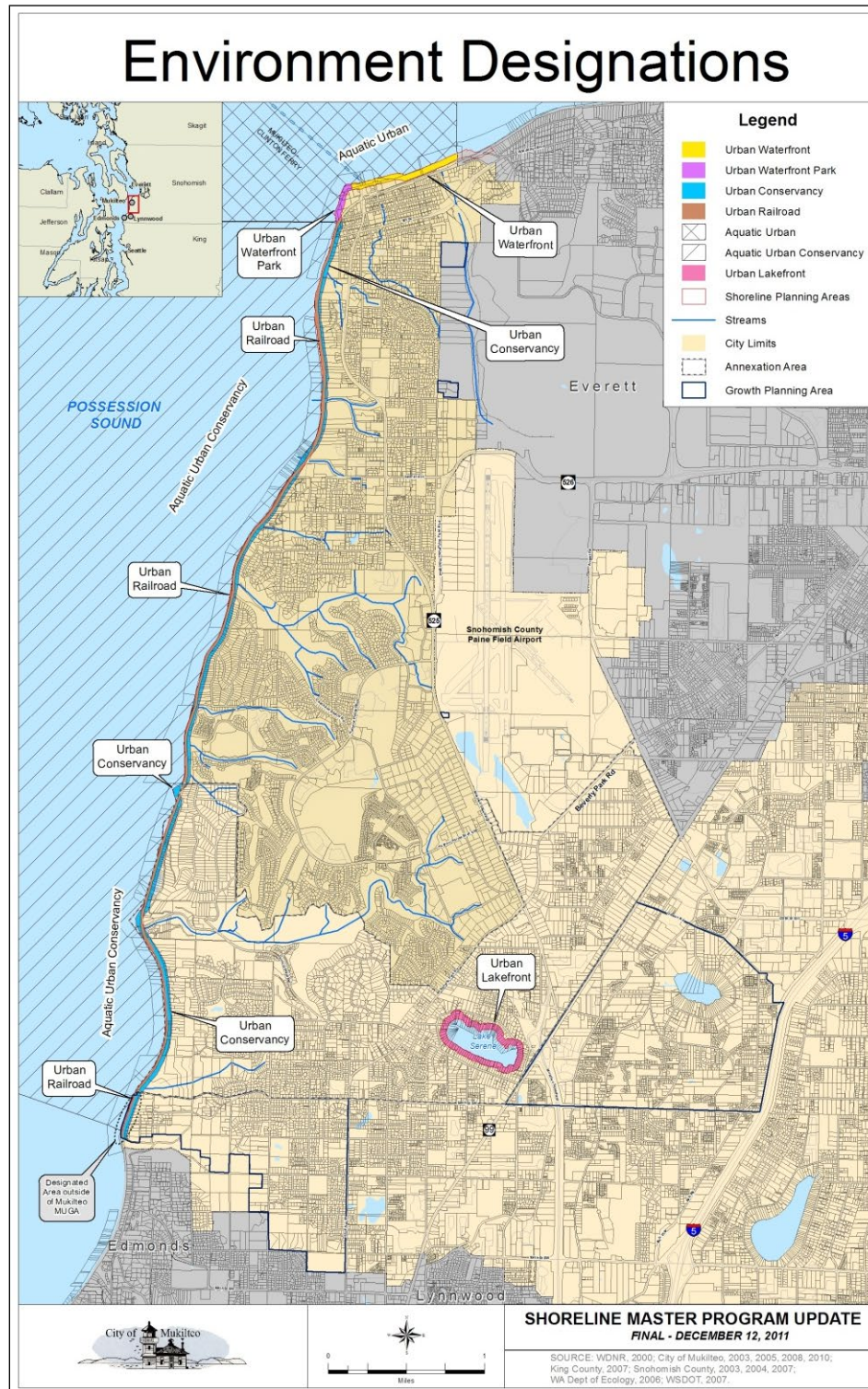
Each Environment Designation includes a Purpose Statement, Classification Criteria, and is designated. The corresponding adopted development regulations and definitions are contained in MMC 17B Waterfront Development and Shoreline Management Regulations. The Environment Designations are designed to work together with the City of Mukilteo Comprehensive Plan – Shoreline policies and these are complemented by the Zoning Districts.

Any area within the 200-foot shoreline jurisdiction that is not mapped and/or designated is automatically assigned an Urban Conservancy designation.

### Mapping

An official City of Mukilteo Shoreline Map is on file at the City of Mukilteo Planning Department.

**Figure 7: City of Mukilteo Shoreline Environment Designations**







# Urban Waterfront Shoreline Environment

## Purpose

The purpose of the Urban Waterfront Environment Designation is to provide for development and redevelopment of high-intensity, water-oriented commercial and recreational activities, transportation, and essential public facilities, while protecting existing ecological functions and improving ecological functions in areas that have been previously degraded.

## Classification Criteria

The Urban Waterfront Environment consists of the land upland of the Ordinary High Water Mark that are currently occupied by, or planned for occupancy by water-dependent/water related/water enjoyment uses, including water-dependent/water-related transportation, mixed-use commercial and parks and recreational uses.

## Area Designated

The Urban Waterfront Environment designation includes properties within the Waterfront Mixed Use (WMU) and Downtown Business zone. Urban Waterfront includes the area along the south side of BNSF Railroad tracks including Front Street starting at the Losvar Condominiums and eastward through and to the eastern portion of the former Tank Farm.

# Urban Waterfront Park Shoreline Environment

## Purpose

The purpose of the Urban Waterfront Park Environment Designation is to provide for redevelopment of an urban waterfront park including the western portion of Front Street, including establishment of the park as a key component of community waterfront access.

## Classification Criteria

The Urban Waterfront Park Environment Designation consists of the lands upland of Ordinary High Water mark that are currently occupied by, or planned for occupancy by water-dependent/water related uses, including parks, open space, and recreational uses.

## Area Designated

The Urban Waterfront Park Environment Designation includes property within the Open Space (OS) Zone that comprises Mukilteo Lighthouse Park and the western portion of Front Street. The Urban Waterfront Park Environment Designation encompasses Mukilteo Lighthouse Park (the lighthouse and former State Park).

# Urban Conservancy Shoreline Environment

## Purpose

The purpose of the Urban Conservancy Environment Designation is to protect and improve, wherever possible, the ecological functions of the shoreline in an urban setting, while allowing for the necessary retention and modification of the existing BNSF Railroad lines in order to optimize the freight, passenger, and commuter rail service corridor; stream, stormwater, culverts, and sewer outfalls; existing residences; and a variety of water-oriented public access and recreational activities together with their related structures.

## Classification Criteria

Areas which include one or more of the following characteristics:

- A length of shoreline that is already, or has the potential to achieve, proper ecological functioning along the backshore
- The upland ecosystem has been altered by the construction and on-going use of railroad tracks

## Area Designated

The Urban Conservancy Environment Designation includes properties within the following zoning districts:

- Residential Zones: RD-7.5, RD-8.4, RD-12.5, RD 12.5(S), MRD, and MR-PRD
- Heavy Industrial Zone: HI (Mukilteo Water District Wastewater Treatment Plant)
- Open Space Zone: OS

# Urban Railroad

## Purpose

The purpose of the Urban Railroad Environment designation is to identify the 100-foot right-of-way for the Burlington Northern Santa Fe railroad along Mukilteo's shoreline. (The railroad also owns associated tidelands along the western shoreline that is covered under the Aquatic Urban Conservancy environment designation). This designation will provide for high-intensity transportation uses, under Essential Public facilities regulations, while were possible restoring the ecological functions, and allowing for safe public access to the water via underpasses, bridges or pedestrian overpasses/bridges.

## Classification Criteria

The railroad use was introduced in the 1890's filling and following the shoreline of Puget Sound from Everett to Seattle. The designated right-of-way was provided by federal law and privileges.

There are very few cases (e.g. Naketa Beach) where rights were acquired from private landowners and in exchange, they provide access over the railroad right-of-way in perpetuity.

The railroad provides regional freight connections, hosts Sound Transit commuter rail, and Amtrak trains. The railroad improvements disturb the shoreline environment, cut off freshwater and saltwater estuaries along the Puget Sound tributaries. The majority of the western shoreline is armored by the railroad, except at the mid-portion Lighthouse Park, Naketa Beach, Ship Wreck Point or Hulk Creek, Picnic Point Park and Meadowdale Park or Lund's Gulch. The railroad generally consists of 100 feet of right-of way, with large cut granite blocks (often referred to as Chinese walls, as the "Chinese laborers," cut and fitted these large stacked blocks into nearly vertical walls forming the bed for the tracks) or large rip-rap to allow for two parallel tracks. Where only a single track existed just south of Lighthouse Park to Naketa Beach, BNSF during 2010 rebuilt revetment and installed a second track as part of the improvements required for Sound Transit Commuter Rail. In one case the tracks cut-off a portion of the shoreline just north of Picnic Point Park and south of Shipwreck Point – Hulk Creek. Typically, not all of the 100 foot right-of-way is currently being used.

## **Area Designated**

The proposed Urban Railroad Environment designation includes the area between the base of the hillside out 100 feet as shown on the Snohomish County Assessor data and maps from the northern property of Meadowdale Park to the southern end of Mukilteo Lighthouse Park. The remainder of BNSF right-of-way is not included within the shoreline jurisdiction of the City of Mukilteo along the northern waterfront. As the railroad leaves Mukilteo's boundaries on the east it again enters the shoreline jurisdiction of the City of Everett.

# **Aquatic Urban Shoreline Environment**

## **Purpose**

The purpose of the Aquatic Urban Environment Designation is to allow the removal, maintenance or construction of high-intensity, water-oriented uses that require piers/docks for operations or for access to the water including essential public transportation facilities, industrial uses, recreational, and commercial/mixed-use development. Existing over-water structures within this zone, which is located along the north end of the city limits, include the Mukilteo Ferry Terminal facilities (existing and proposed), NOAA pier, Silver Cloud Pier, POE Fishing & Day Moorage pier and floats, and the public boat launch at Lighthouse Park.

## **Classification Criteria**

The Aquatic Urban Environment Designation consists of the marine waters waterward of the Ordinary High Water mark that are currently occupied by, or planned for development or redevelopment by water-dependent/water related/water enjoyment uses, including water-dependent/water-related transportation, mixed-use commercial, existing commercial and multi-family development and parks and recreational uses.

## **Area Designated**

The proposed Aquatic Urban Environment designation includes all of the water waterward of the Ordinary High Water Mark out to the middle of Possession Sound or Port Gardner Bay, including the shoreline, nearshore and marine environments, starting along the shoreline from the eastern boundary of the City to the south boundary of Lighthouse Park.

## **Aquatic Urban Conservancy Shoreline Environment**

### **Purpose**

The purpose of the Aquatic Urban Conservancy Environment designation is to protect, restore, and improve, wherever possible, the ecological functions of the aquatic environment while allowing for the existing facilities such as stormwater culverts, sewer outfalls, and existing bulkheads protecting private property or BNSF Railroad tracks. This zone includes the marine waters the length of the shoreline south of Lighthouse Park to the south where the Lund's Gulch/Meadowdale Beach Park Tidelands occur south of Norma Beach.

### **Classification Criteria**

The Aquatic Urban Conservancy Environment designation consists of the marine waters waterward of the Ordinary High Water Mark that are currently occupied by, or planned for development or redevelopment by single family development, utility outfalls, BNSF Railroad tracks and parks and recreational uses.

## **Area Designated**

The proposed Aquatic Urban Conservancy Environment designation includes all of the water waterward of the Ordinary High Water Mark out to the middle of Possession Sound including the shoreline, nearshore and marine environments, starting along the shoreline south of Lighthouse Park to the south where the Meadowdale Beach Park Tidelands occur south of Norma Beach, which primarily consists of low-density single-family residential development and parkland upland of the marine waters.

## **Urban Lakefront Shoreline Environment**

### **Purpose**

The purpose of the Urban Lakefront Environment designation is to protect, restore, and improve, wherever possible, the ecological functions of the freshwater environment of Lake Serene, while allowing existing single-family development and park and lake recreational uses to continue to occur along with associated docks.

## **Classification Criteria**

The Urban Lakefront Environment designation consists of both the upland single-family development and re-development, park development and associated in-water docks occurring on Lake Serene.

## **Area Designated**

Lake Serene uplands 200 feet of the Ordinary High Water Mark (OHWM), and all of the freshwater of the lake encompassing Lake Serene.

## Chapter 3: Goals and Policies – Shoreline Elements

This chapter of the Mukilteo Shoreline Master Program contains seven (7) shoreline elements as listed in RCW 90.58.100(2). These are economic development, public access, circulation, shoreline land use, conservation, historical/cultural values, and flood hazard reduction. For each element there are goals and policies that apply to all shoreline uses and modifications in the City of Mukilteo.

Goals are broad expressions of the City of Mukilteo's broad interests related to shorelines whereas policies are legally enforceable. These are the bridges between goals and regulations, translating the general intent into more specific regulations. The Shoreline regulations which are applied jointly with the below-listed goals and policies are contained in a separate document, Mukilteo Municipal Code Title 17B –Waterfront Development and Shoreline Management Regulations.

**Table 1: Shoreline Master Plan Goals and Policies**

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<b>Shoreline Master Plan Goals</b>								
<b>GD 1:</b> Preserve the existing, owner-occupied, residential quality of life of each neighborhood and throughout the residential portion of the City by keeping high volumes of traffic out of residential neighborhoods.			✓	✓				
<b>GD 2:</b> Encourage City entryways, commercial development, and redevelopment near the urban waterfront to reflect the waterfront atmosphere of the City.	✓			✓				
<b>GD 3:</b> Ensure compatibility of adjacent land uses through the use of buffer, landscaping, and quality building design to maintain property values, safe living environments, and the City's unique identity and distinctive entryways.				✓		✓		
<b>GD 4:</b> Promote economic development and redevelopment to provide for a tax base that is balanced so the tax burden is shared among residential, commercial, and industrial properties.	✓			✓				



Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<b>GD 5:</b> Provide public infrastructure and services that are cost-effective, efficient, and sensitive to the environment; and that balance the use of private vehicles, cars/vanpools, public transit and non-motorized modes of transportation—including a comprehensive system of bicycle and pedestrian routes—for the movement of people and goods.		✓	✓					
<b>GD 6:</b> Protect and enhance the City’s critical areas, habitats, and shoreline management zones to support fish and wildlife resources and provide physical and visual access opportunities.		✓	✓	✓	✓			
<b>GD 7:</b> Provide a system of parks, recreational, and cultural facilities that incorporates both public entities (City, County, State, Port of Everett, and schools), private assets to expand opportunities within the City, views of the water and mountain scenery and public access along the shoreline.		✓			✓	✓		
<b>General Shoreline Policies</b>								
<b>SH 1:</b> Work with the Port of Everett, the City of Everett, Snohomish County, BNSF, and other entities, or private landowners to develop direct linkages to the waterfront, to provide a diversity of recreational opportunities, and to restore ecological function or natural ecosystems by using Best Available Science (BAS), innovative and Best Management Practices (BMP) approaches.	✓	✓		✓	✓			
<b>SH 2:</b> Sites or structures having historic, cultural, scientific, or educational value shall be inventoried and preserved by integrating them into re-development concepts.						✓	✓	

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<b>SH 3:</b> Proposed development shall be regulated and conditioned as necessary to protect the public's health, safety, and welfare, as well as the land and its vegetation and wildlife, and to protect property rights while implementing the policies of the Shoreline Management Act.				✓				✓
<b>Environmental Conservation Policies</b>  Preservation of the shoreline's ecological functions is required by the Shoreline Management Act (SMA). However, there are times when impacts that would harm the fragile shorelines of the state cannot be avoided. In these instances, these harmful impacts must be mitigated in order to assure that there is no net loss of ecological function necessary to sustain shoreline natural resources. The following policies assure, at a minimum, no net loss of the ecological functions that are necessary to sustain shoreline natural resources.								
<b>SH 4:</b> Protect the City's critical areas, habitats, management zones and aquatic resources to ensure no net loss.				✓	✓		✓	✓
<b>SH 5:</b> Through the use of shoreline master program policies and regulations, zoning, environmental review and the critical area ordinances, ensure that the shoreline is developed in such a manner as to protect and restore the quality of the natural environment to ensure no net loss of ecological functions, to reflect natural constraints, to protect and restore degraded ecological functions and ecosystem-wide processes, giving special emphasis to aquatic resources.				✓	✓		✓	✓
<b>SH 6:</b> Restore and enhance to the greatest extent feasible critical areas, nearshore areas, and stream corridors which are ecologically and aesthetically degraded so that they function as continuous watershed networks, while giving special emphasis to restoring ecological functions to aquatic resources.				✓	✓		✓	

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<b>SH 7:</b> Monitor shoreline conditions to determine the effectiveness of management actions. Use adaptive management methods to: <ul style="list-style-type: none"> <li>Promote the stewardship of nearshore habitat for eelgrass and kelp, forage fish spawning, salmonid smolts and juveniles, and shore or water-dependent birds.</li> <li>Promote the stewardship of water quality and stabilize flows of upland streams that feed the nearshore environment.</li> <li>Promote access for fish and other wildlife at the mouth of the three major watersheds – Japanese Gulch, Big Gulch, and Picnic Point Creek and for sea-run cutthroat at Smuggler’s and Norma Creeks.</li> <li>Protect and restore sediment transport processes toward a more natural condition.</li> </ul>				✓	✓		✓	
<b>SH 8:</b> The planting and establishment of shoreline riparian vegetation shall be required where feasible to increase ecological functions.				✓	✓		✓	
<b>SH 9:</b> Ensure that new development does not reduce water quality.				✓	✓		✓	
<b>Public Access and Recreation Policies</b>  Preservation and maintaining public use of the shoreline for recreational opportunities, including but not limited to parks, tidelands, beaches and recreational areas is one of the fundamental goals of the Shoreline Management Act. This section provides policies for public access and recreation in the shoreline management zone of Mukilteo.								
<b>SH10:</b> Provide a system of parks and recreational facilities that incorporates both public (City, County, State, Port of Everett, and schools) and private assets to expand opportunities within the City and public		✓	✓	✓				

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
access along the shoreline.								
<b>SH11:</b> Shoreline development should provide waterfront access as part of the development, expansion, or redevelopment. If public access is not feasible for reasons of public safety or site security, require mitigation that will add to the public's enjoyment of the shoreline.		✓		✓				
<b>SH12:</b> Wherever possible, provide opportunities for the public to walk and visit the tidelands where terrain and shore conditions permit access and where impacts to ecological functions can be avoided.		✓			✓			
<b>SH13:</b> Where possible, maintain or increase visual access to views of the water where topography, private ownership, or the BNSF railroad tracks prevent direct access.		✓	✓					
<b>SH14:</b> The City should acquire, or otherwise make available to the public, shoreline properties and tidelands that would provide for public access.		✓		✓	✓			
<b>SH15:</b> Encourage cooperation and joint use between public and private agencies and landowners to increase and diversify recreation opportunities at the shoreline.	✓	✓		✓				
<b>Use and Circulation Policies</b>  The City uses land use and circulation policies to consider how the general distribution and location of uses on the shoreline and adjacent uplands should be distributed. The policies in this section should be used when considering any land use changes or development proposals that include housing, business, industry, or transportation.								
<b>SH16:</b> Limit new development within the shoreline jurisdiction (SMP shoreline jurisdiction is 200 feet landward from the Ordinary High Water Mark (OHWM)) to	✓		✓	✓				

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
water-dependent, water-related or water-enjoyment uses, public access, activities being done solely to restore ecological functions, or to essential regional public facilities that cannot feasibly be located elsewhere.								
<b>SH17:</b> With the exception of pedestrian, bicycle, and emergency vehicle access, ferry vehicle staging, shared parking spaces, vehicle circulation and parking systems which are not related shoreline-dependent uses shall be located as far from the shoreline as possible and should utilize off-site parking options such as park-and-ride facilities.		✓	✓					
<b>SH18:</b> Public transportation systems shall be integrated through the Multimodal/Intermodal station in the Urban Waterfront Environment. Mixed-use development, recreational uses and the Multimodal/Intermodal station should be used to promote re-development of the waterfront area in accordance with the City's "Zoning and Design Standards for the Waterfront Mixed-Use District".	✓	✓	✓	✓				
<b>SH19:</b> Link public transportation systems to the waterfront, recreation uses, and Multimodal/Intermodal station in a manner that is compatible with shorelines management objectives and results in the least disruption to the shoreline environment.	✓	✓	✓					
<b>SH20:</b> Development and redevelopment including essential public facilities, shall mitigate impacts to ecological functions and the temporary loss of habitat, as well as provide restoration to ecological functions.	✓		✓	✓	✓			
<b>SH21:</b> Except for water-oriented development, track upgrades for freight, passenger and commuter rail, or other			✓		✓			

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
essential public facilities, shoreline development shall be prohibited in the urban conservancy environment.								
<b>Shoreline Modification Policies</b>  Shoreline modifications are those actions that modify the physical configuration of qualities of the shoreline area, usually through the construction of a physical element. Shoreline modification activities are generally construction actions undertaken in preparation for, or in support of, a shoreline use. This section provides policies for shoreline modification actions within Mukilteo. These actions include: Upland Clearing, Grading, and Fill, Dredging and Dredge Disposal, In-Water Fill, Shoreline Stabilization, Beach Enhancement, and Piers and Docks.								
<b>SH22:</b> Allow structural shoreline modifications only where they are needed to protect existing primary structures, for allowed water-oriented and water dependent uses, track upgrades for freight, passenger and commuter rail, or essential regional public facilities that cannot be located elsewhere, or where necessary to restore ecological functions. The need for shoreline stabilization shall be documented through a geotechnical engineering report.	✓		✓	✓				✓
<b>SH23:</b> To modify or replace existing stabilization structures in or along the shoreline, except for modifications necessary to upgrade rail lines for freight, passenger or commuter rail service, the property owner must demonstrate necessity due to eminent danger and where possible the structures shall be redeveloped to restore ecological functions.	✓		✓	✓				✓
<b>SH24:</b> Shoreline modifications that would cause significant negative ecological impacts are not allowed. When assessing the potential ecological impacts, special attention should be given to sediment transport and maintenance of natural beach conditions.				✓	✓			✓

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<b>Critical Area Policies</b>  This section contains critical area policies that apply to all uses, developments, and activities that may occur within the Mukilteo shoreline jurisdiction regardless of what Mukilteo Shoreline Master Program environment designation they may occur in. Critical areas for the purposes of the Mukilteo Shoreline Master Program include the following areas and ecosystems: Wetlands, Geologically Hazardous Areas, Critical Saltwater Habitats, and Flood Hazard Areas.								
<b>CA1:</b> Regulate steep slopes limiting and conditioning development, based upon technical engineering studies, for steep slopes (as defined by the Mukilteo Municipal Code), for unstable soil, and liquefaction areas designated as having potential soil stability problems for building.				✓	✓		✓	✓
<b>CA2:</b> Encourage retention/replanting of native vegetation and use of drought tolerant plant species, as well as encourage the use of native plants to protect slide prone slopes.				✓	✓		✓	
<b>CA3:</b> Regulate areas designated as 100-year floodplains on the most current Federal Flood Insurance Maps to ensure their proper use and to satisfy requirements for the flood insurance eligibility.				✓			✓	✓
<b>CA4:</b> Protect threatened or endangered species as mandated by the Federal and State regulations.					✓		✓	
<b>CA5:</b> Protect wetlands such as bogs, marshes, swamps, creeks, ravines, and other natural surface water runoff and detention areas to mitigate and to maintain their functional values.				✓	✓		✓	
<b>CA6:</b> Protect areas with a critical recharge effect on aquifers or groundwater that assists with maintaining stream flow year-round or are used for potable water.				✓	✓		✓	✓



Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<b>CA7:</b> Retain and enhance the existing water quality of the Sound and the various creeks and drainage areas within the City by adopting appropriate regulations.				✓	✓		✓	
<b>CA8:</b> Review and revise the Critical Area Ordinances, as needed for clarity, to improve administration, and to ensure consideration of property rights and use of best available science (BAS).				✓	✓		✓	
<b>CA9:</b> Critical area regulations shall be limited to that portion of the property containing the resources or functions regulated by the critical area ordinance.				✓	✓		✓	
<b>CA10:</b> Provide guidance for corrective actions to mitigate or cleanse those discharges that pollute waters of the state, including Puget Sound or waters entering Puget Sound.					✓		✓	
<b>Urban Waterfront Use Policies Priority of Land and Water Uses Policies</b>								
<b>UW1:</b> Priority shall be given to water-dependent uses, including ferry terminals and boat launches, in the Urban Waterfront Environment. Water-related and water-enjoyment uses shall be given second priority.		✓	✓	✓				
<b>UW2:</b> Non-water-oriented uses shall not be allowed except as part of mixed-use developments or in existing developed areas supporting water-dependent uses, provided that non-water-oriented uses may also be allowed in limited situations where there is no direct access to the shoreline.		✓		✓				
<b>UW3:</b> Non-water-dependent uses that are auxiliary to, and necessary for, Multimodal/Intermodal public transportation			✓	✓				

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
systems that include water-dependent public transportation shall be allowed, provided no other feasible alternative exists.								
<b>UW4:</b> The creation of a pedestrian-friendly streetscape shall include on-street parking to provide a buffer for pedestrian uses on the sidewalks. Thus, on-street parking is considered acceptable in the 200 foot area of the shoreline jurisdiction, even though it is not a water-dependent/water-related use.	✓	✓	✓	✓				
<b>Design Standards Policies</b>								
<b>UW5:</b> Aesthetic objectives of the waterfront area shall be actively implemented through the WMU zoning code regulations. These regulations include requirements pertaining to sign control, appropriate development siting, parking lot location and screening, and architectural standards.	✓		✓	✓	✓	✓		
<b>Nearshore Enhancement and Restoration Policies</b>								
<b>UW6:</b> Beach softening (modification of riprap) and the enhancement of natural vegetative buffers that is compatible with pedestrian views and access along the shoreline and while retaining public safety and infrastructure protection is required.		✓		✓	✓			
<b>UW7:</b> Enhancement and restoration efforts directed toward improving ecological functions along the nearshore using Best Available Science are required of all new development or redevelopment activities. All overwater structures will conform to Best Management Practices (BMPs) to ensure salmonids can use the nearshore corridor along this shoreline and to avoid or minimize impacts to forage fish spawning beaches and				✓	✓		✓	

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
eelgrass beds are not impacted.								
<b>UW8:</b> All land uses and any development or structures in navigable waters or their tidelands shall be located and designed to minimize interference with surface navigation, to consider impacts to public views, and to allow for the safe, unobstructed passage of fish and wildlife – particularly those species dependent on migration along the nearshore by using BMPs to avoid and minimize impacts.		✓	✓	✓	✓		✓	
<b>UW9:</b> Shoreline uses and modifications shall be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.				✓	✓		✓	
<b>UW10:</b> Uses that cause significant negative ecological impacts to critical saltwater and freshwater streams should not be allowed. Where those uses are necessary to achieve the objectives of RCW 90.58.020, their impacts shall be mitigated according to the sequence defined in WAC 173-26-020, Habitat Stewardship.				✓	✓		✓	
<b>UW11:</b> Public lands stewardship should promote habitat protection and ecological functions.		✓		✓	✓		✓	
<b>Public Access Policies</b>								
<b>UW12:</b> Since Mukilteo Landing is the area of Mukilteo's shoreline where the most human activity will occur, visual and physical public access to the water and shoreline are high priorities. All new and redevelopment projects as specified in the 1995 Multimodal/Intermodal Plan and the WMU zoning district are required to provide such	✓	✓	✓	✓				

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
public access, except where the City determines that the public access is not feasible due to public safety or site-security concerns. In that case, off-site public access mitigation will be required.								
<b>Docks and Pier Policies</b>								
<b>UW13:</b> New over-water structures should be allowed only for water-dependent uses, transportation facilities of state-wide significance, public access, scientific purposes, or ecological restoration. The size of any new over-water structure should be limited to the minimum necessary to support the structure's intended use and should have shared pedestrian access. In order to reduce the impacts of shoreline development and increase the effective use of water resources, multiple and/or joint use of over-water facilities is encouraged.		✓	✓	✓	✓		✓	
<b>Flood Plain and Minimizing Flood Plain Damage Policies</b>								
<b>UW14:</b> Recognize the north waterfront area west of the old Tank Farm pier (approximately at Loveland Avenue if it was extended north) as being in the FMA floodplain zone								✓
<b>UW15:</b> Recognize all structures, especially Essential Public Facilities (EPFs), on the northwest waterfront shall be designed with a first floor level at least 19 feet above sea level to accommodate a sea level raise of up to eight (8) feet over a 50-year period and the current 14-15 foot elevation level is required or by using Best Available Science (BAS) to determine design criteria.				✓				✓

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<b>Urban Waterfront and Urban Waterfront Park Use Policies</b>								
<b>UW16:</b> Consider amending the existing building height calculation methodology for the waterfront area only to account for anticipated sea level rise in the future.	✓			✓				✓
<b>UW17:</b> Reduce the likelihood of flood damage through various design techniques which allow for natural geohydrologic processes during flood events.				✓				✓
<b>Urban Conservancy Use Policies</b>								
<b>Urban Conservation Land and Water Uses Policies</b>								
<b>C1:</b> Shoreline uses should be limited to new or redeveloped water-dependent recreational and educational facilities, transportation facilities, utilities and minimal improvements to, but no expansion of, existing residential development within the 200-foot SMP jurisdiction or west of the railroad tracks at Naketa Beach. New residential development within the 200 foot SMP jurisdiction will only be allowed on existing platted lots. New shoreline uses, including new residential development, which cause significant negative ecological impacts to critical saltwater and freshwater habitats, should not be allowed.			✓	✓	✓			✓
<b>C2:</b> Non-conforming uses shall not be allowed to expand and sewage systems should be upgraded to provide secondary level treatment, or the use should be discontinued.				✓	✓			
<b>C3:</b> Existing bulkheads can be replaced, but they shall be the minimum size necessary to protect the primary structure from eminent				✓	✓		✓	✓

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
danger and should be placed no further seaward than the toe of the existing bulkhead.								
<b>C4:</b> Essential regional public facilities that cannot feasibly be located elsewhere may be allowed, but they shall mitigate shoreline impacts by restoring natural shoreline habitat where feasible.			✓	✓	✓		✓	
<b>Uses Detrimental to the Environment Policies</b>								
<b>C5:</b> Uses and activities that cause significant ecological impacts or limit ecological functions of the shoreline shall not be allowed.				✓	✓		✓	
<b>Nearshore Enhancement or Restoration Policies</b>								
<b>C6:</b> During development and redevelopment activities, efforts shall be made to restore ecological functions using Best Available Science. Upland stream connections that provide sediment or natural beach nourishment shall be maintained where possible, and the marine riparian habitat corridor shall be reestablished wherever possible.					✓		✓	
<b>Public Access Policies</b>								
<b>C7:</b> All residential uses shall preserve visual access to, and normal public use seaward of the OHWM of the shoreline		✓		✓	✓			
<b>C8:</b> For non-residential uses, shoreline restoration and public access shall be required of all new development and for redevelopment on previously developed shorelines; i.e., the railroad line (when permissible), sewer plant and utilities.		✓		✓	✓			

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<b>Habitat Stewardship Policies</b>								
<b>C9:</b> Public land stewardship should promote the protection and restoration of habitat protection and ecological functions.		✓			✓			
<b>Public/Recreational Uses Policies</b>								
<b>C10:</b> Public access and public recreation uses shall be limited to passive recreation.		✓			✓			
<b>Aquatic Environment &amp; Use Policies</b>								
<b>AQ 1:</b> Ensure that utilization of the aquatic environment and its natural resources occurs with minimal adverse impacts to natural systems, water quality, quality of the aquatic, marine, nearshore and shoreline environments and the public's use of the aquatic waters and shoreline.		✓		✓	✓			
<b>AQ 2:</b> Preserve to the greatest extent feasible the scenic aesthetic quality of the open aquatic environment and vistas.		✓			✓			
<b>AQ 3:</b> New over-water structures should: <ul style="list-style-type: none"> <li>• Be prohibited in the Aquatic Urban Conservancy environment.</li> <li>• Have the minimum size necessary to provide for research, public access or essential public facilities in the urban aquatic environment.</li> </ul>		✓		✓	✓		✓	
<b>AQ 4:</b> The Aquatic Urban and Aquatic Urban Conservancy environments should be focused on maintaining and restoring aquatic marine and nearshore and shoreline-associated wetland habitats.					✓			✓
<b>AQ 5:</b> All development, activities and uses on navigable waters or their beds should:		✓	✓	✓	✓			



Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<ul style="list-style-type: none"> <li>Be located and designed to minimize interference with surface navigation</li> <li>Consider impacts to public views</li> <li>Allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration</li> <li>Use low impact development techniques where feasible to minimize impacts on the aquatic environment.</li> </ul>								
<b>AQ 6:</b> Uses that cause significant ecological impacts to critical marine waters should be discouraged. Where those uses are necessary to achieve the objectives of RCW 90.58.020, impacts shall be mitigated through avoidance and with a mitigation sequencing development review process.	✓				✓			
<b>AQ 7:</b> Development of underwater pipelines and cables on first and second-class tidelands should include adequate provisions to ensure against substantial or irrevocable damage to the environment.	✓				✓			
<b>AQ 9:</b> The water quality of the marine environments should be protected by eliminating septic, carbon and heavy metal releases into the aquatic environment.					✓			
<b>AQ 10:</b> Restore or improve riparian vegetation upland in the freshwater shoreline and marine nearshore to enhance ecological value and functions.					✓			
<b>Aquatic Urban Environment and Use Policies</b>								
<b>AQ 11:</b> Minimize impacts of pier pilings, overwater structures, and ferry and boat moorage and launch operations and promote development that protects ecological functions of the marine environment.					✓			

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<b>AQ 12:</b> Filling, dredging and additional revetment into the marine environment shall be allowed only for existing structure repair or new essential public facilities and for new or improved public access.	✓	✓						
<b>AQ 13:</b> The City should evaluate along with the City of Everett, Port of Everett and tribes of the Point Elliott Treaty whether a marine stewardship or protection area should be proposed for a portion of the Mukilteo northern shoreline. The evaluation should be closely coordinated with the Tulalip Tribe and the Snohomish County Marine Resources Committee.					✓	✓	✓	
<b>AQ 14:</b> Evaluate the feasibility of integrating a dive park in Mukilteo's northern shoreline and secondarily the south end of Lighthouse Park so that neither would disturb aquatic resources and would limit impacts to the nearshore, forage fish spawning sites, and eelgrass resources.		✓					✓	
<b>Aquatic Urban Conservancy Environment Use and Policies</b>								
<b>AQ 8:</b> Abandoned and neglected structures or structures with overwater residential uses that are a hazard to public health, safety, and welfare should be removed or restored to a usable condition consistent with the provision of this program.				✓	✓			
<b>Urban Railroad Environment and Use Policies</b>								
<b>URR1:</b> The principal permitted use within the railroad right-of-way shall be for north and south tracks, switching and safety structures. Any additional tracks shall obtain an Essential Public Facilities Permit and shall provide	✓	✓	✓					

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
mitigation for environmental impacts and improve pedestrian access to the water where public lands are available or use easements can be obtained.								
<b>URR2:</b> Structures, seawalls, revetment and culverting associated with the railroad shall have appropriate permits and shall be regulated under MMC 17B. Any construction, including fencing exceeding six feet in height shall have administrative approval or shall be included in an Essential Public Facilities permit.				✓	✓			
<b>URR3:</b> Parking, construction access and maintenance structures and lay-down areas shall not be permitted unless there is no feasible location outside the shoreline jurisdiction.				✓	✓			
<b>Urban Lakefront Environment and Use Policies</b>								
<b>LkS 1:</b> Aquatic weed and algal control shall occur when native plant communities and associated habitats are threatened or where water dependent uses are restricted by the presence of weeds or algal blooms. Vegetation management shall emphasize the most environmentally sensitive methods.	✓				✓			
<b>LkS 2:</b> Control of aquatic weeds by hand pulling or mechanical harvesting with disposal of the collected weeds in an appropriate, identified upland site is normal maintenance and repair thus does not require the issuance of a shoreline substantial development permit.				✓	✓			
<b>LkS 3:</b> The control of aquatic weeds by de-rooting, rotovating or other method which disturbs the bottom sediment or benthos shall				✓				

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
be considered development that requires issuance of a substantial development permit.								
<b>LkS 4:</b> All docks shall be constructed and maintained to meet International Building Code requirements and shall use Best Available Science practices and shall be kept in safe and sound condition. Abandoned or unsafe docks shall be removed or repaired promptly by the property owner(s). Where any such structure constitutes a hazard to the public, the City may, following notice to the owner, abate the structure and impose a lien equaling the cost of the actual abatement and staff time processing the notice and lien if the owner fails to do so within ninety (90) days of the notice.		✓		✓				
<b>LkS 5:</b> Materials and coatings of all dock members shall conform to applicable state, city and International Building Code material standards. The use of toxic substances, including creosote, and degradable materials, which includes some plastic and foam products, are prohibited.		✓		✓	✓			
<b>LkS 6:</b> The construction of new or expanded docks should be allowed only if the docks are to be multi-use docks in order to limit the proliferation and reduce the amount of over-water coverage over time.		✓		✓	✓			
<b>LkS 7:</b> Dock pilings shall be installed to extend at least one foot above extreme high water level. Floats shall have stops that keep the floats off the bottom during low water levels. The design of pilings and floats should take into consideration the affect climate change and other factors will have on future water levels.				✓				

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<b>LkS 8:</b> The length of new or expanded docks on Lake Serene shall be limited and designed to ensure and maximize: <ul style="list-style-type: none"> <li>• Navigability</li> <li>• Safe use of the open water</li> <li>• The public's enjoyment.</li> </ul>		✓	✓	✓				
<b>LkS 9:</b> Dock design shall limit the impact to the nearshore using a minimum width access from the shore out 10 feet over the water and using light penetrating materials.		✓		✓				
<b>LkS 10:</b> All new dock construction and major maintenance of existing docks shall require re-vegetation with native plants of the first 10-25 feet of upland along the shoreline to assist with improving water quality.		✓		✓	✓			
<b>LkS 11:</b> Overhead wiring or plumbing shall not be permitted on docks and lighting shall be limited to the upland with cut-off fixtures to limit light spillage onto the lake's water surface.				✓	✓			
<b>LkS 12:</b> Water quality monitoring and public education programs on lakeside living for property owners should be created through the city's stormwater utility. The programs should promote low impact development, re-establishment of natural vegetation and other more sustainable techniques.					✓		✓	
<b>LkS 13:</b> Acquisition of headwater property and retention of the headwaters to Lake Serene shall be promoted as a preventative measure to assist in maintaining a high water quality of the lake.				✓	✓			
<b>LkS 14:</b> Increased densities adjacent to Lake Serene, even with sanitary sewers, shall be	✓			✓	✓			

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<p>allowed only if the:</p> <ul style="list-style-type: none"> <li>Amount of existing impermeable surface coverage is not increased;</li> <li>Existing building height limits are maintained or decreased; and</li> <li>Quality of stormwater currently released into Lake Serene, both individually and collectively, is significantly improved.</li> </ul>								
<b>Habitat Management Policies</b>								
<b>HA1:</b> Consider the environmental impacts of policy, regulatory and service decisions in the context of the City's commitment to providing a high quality of life in a sustainable environment through programs, capital projects and day to day management that emphasizes conservation and sustainability.				✓	✓			
<b>HA2:</b> Native vegetation on undeveloped land should not be removed unless: <ul style="list-style-type: none"> <li>a city development application has been submitted and approved; or</li> <li>the removal is permitted by Mukilteo Municipal Code; or</li> <li>is required for the protection of the public health, safety and welfare.</li> </ul>				✓	✓			
<b>HA3:</b> Avoid clearing of native vegetation that maintains slope stability and reduces erosion, use riparian habitat to shade shorelines, buffer wetlands and stream corridors, and protect aquatic habitat, such as eelgrass.				✓	✓			
<b>HA4:</b> Preserve areas with natural or scenic values to achieve open space amenities and to maintain natural habitat corridors.					✓			

Shoreline Master Plan Goals and Policies	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
<b>HA8:</b> Protect and enhance surface water quality by treating the water flow to remove nutrients (especially phosphorous), heavy metals and other pollutants before being released into streams, rivers, lakes and natural wetlands.					✓			
<b>HA9:</b> Protect and enhance natural streams, lakes and shoreline habitat, protecting water quality, fish and wildlife habitats, and features that include natural hydraulic and ecological functions, recreational resources and aesthetics.					✓		✓	
<b>HA11:</b> Avoid impacts to critical habitats and restore and enhance degraded or lower quality critical habitats during the land use development process or provide required mitigation.				✓	✓			
<b>HA12:</b> Cooperate with other local and county governments, state, and federal agencies and nonprofit organizations to protect and enhance the environment and forward the concepts of sustainability.				✓	✓			
<b>HA13:</b> Promote and lead educational programs to raise public awareness of environmental issues, encourage respect for the environment and show how individual actions and the cumulative effects of a community's actions can have significant effects on the environment.							✓	
<b>HA14:</b> Support public education of citizens, community groups, and nonprofit organizations to protect and improve surface and ground water resources by increasing the public's awareness of potential impacts on water bodies and water quality, encouraging					✓		✓	



Shoreline Master Plan <b>Goals and Policies</b>	Economic Development	Public Access	Circulation	Lane Use	Conservation	Historic & Cultural	Scientific & Educational	Flood Damage
proper use of fertilizers and chemicals on landscaping and gardens, and encouraging proper disposal of materials by residents and businesses.								

## Chapter 4: Administration and Permit Procedures

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### Program Administration

Washington's Shoreline Management Act establishes a local/state partnership in administering permits. The City of Mukilteo has the primary responsibility for initiating the planning required by the act and administering the regulatory program. The Washington State Department of Ecology's (DOE) role is to act primarily in a supportive and review capacity with an emphasis on providing assistance to local government *and* on insuring compliance with the policies and provisions of the Shoreline Management Act.

All development within the shorelines of the state must be consistent with the policies of the SMA and the requirements of the local SMP. A project that is consistent with zoning, etc., but inconsistent with SMP requirements cannot be approved.

Development that meets specific thresholds is considered substantial development and requires a Substantial Development Permit (SDP). An SDP is required for all development with a total cost or fair market value exceeding \$5,000, or development which materially interferes with normal public use of the water or shorelines of the state (regardless of cost), except for development that is categorically exempt by the Shoreline Management Act RCW 90.58.030(3)(e) & WAC 173-27-040(2) from permit requirements.

Within the City of Mukilteo, project review for new development or re-development within the 200-foot shoreline jurisdiction requires an SDP. SDPs fall into two categories: administrative approval or those requiring a public hearing by the Hearing Examiner. All proposed uses and development occurring within the shoreline jurisdiction must conform to Chapter 90.58 RCW, the Shoreline Management Act, and this *SMP* whether or not a permit is required.

The City of Mukilteo may condition the approval of permits if needed to ensure consistency of the project with the act and the local master program. SDPs are reviewed and processed by the City of Mukilteo and subsequently sent to DOE for filing.

Certain kinds of development are exempt from SDP requirements. (*Note: Activities exempt from the requirement to obtain a SDP must comply with the policies of the SMA and substantive requirements of the local master program.*).

Exemptions are set forth in WAC 173-27-040 and RCW 90.58.030(3)(e), 90.58.140(9), 90.58.147, 90.58.355, and 90.58.515. Exemptions include development such as normal maintenance or repair of existing structures, construction of most single-family residences, and some watershed restoration projects. All exempted uses and developments must be consistent with the policies and provisions of the *SMP* and the SMA. The city may attach conditions of approval to exempt development or uses as necessary to assure consistency of the project with the *SMP* and the SMA. Further, a proposed development may be found exempt from requirements for an SDP but may still require a variance or conditional use permit.

Under certain circumstances, local governments can allow deviations from *SMP* requirements through variance or conditional use permits (CUPs).

A Conditional Use Permit (CUP) is any development or use that is listed as a conditional use in the *SMP* or is an unlisted use, must obtain a conditional use permit even though the development is otherwise listed as exempt. The conditional use provision allows for the consideration of uses that would otherwise not be permitted outright. The Permitted Use Matrix found in MMC Title 17B indicates which uses are conditional. In authorizing a conditional use, special conditions may be attached to the permit by the City of Mukilteo or DOE to prevent undesirable effects of the proposed use and/or to assure consistency of the project with the *SMP* and the SMA.

A variance is when a development or use is proposed that does not comply with the bulk, dimensional, and performance standards of the *SMP*, such development or use can only be authorized by approval of a shoreline variance. An objective of a variance is to grant relief from specific bulk, dimensional, or performance standards when there are extraordinary circumstances relating to the physical character or configuration of property such that the strict implementation of the *SMP* will impose unnecessary hardships on the applicant or thwart the policies set forth in RCW 90.58.020.

## Role of the Department of Ecology

DOE has two duties relative to permits:

1. As the repository of shoreline permits for the whole state, DOE files permits received from local government; and
2. Conducts substantive review on conditional use permits and variances to check for compliance with the policies and procedural requirements of the local *SMP* and the Shoreline Management Act.

## Permit Process

All shoreline permits are processed by the City of Mukilteo according to the procedures; development regulations; and definitions contained in MMC Title 17B Waterfront Development and Shoreline Management Regulations. Following the decision on all permit applications, applications are sent to the Department of Ecology. DOE must approve, approve with conditions or deny each conditional use permit and variance. DOE does not have direct approval authority over the more common SDPs - if they are found inconsistent with the local *SMP* and the SMA, DOE may file an appeal with the Shorelines Hearings Board.

**Application:** The permit application must include a detailed site plan, a vicinity map, text describing the location of the proposed use(s), proposed and existing structures, utilities, fill, information on the natural shoreline environment, local shoreline designation information, and location of the OHWM. A SEPA checklist is also often required. Mukilteo Municipal Code Title 17B lists the requirements for a complete application.

**City review and decision:** Technical review of the proposal and compliance may require one or more cycles of revision(s) until the proposed development meets the *SMP*, MMC 17B and development standards; SEPA review is also undertaken during this time frame. A staff report containing recommendations for the decision maker(s) is developed and as necessary a Public Hearing is scheduled with the Hearing Examiner. After the public comment period, the City makes a

decision on the permit application. All SEPA requirements must be met prior to the decision. Upon a final City decision, all approved permits and denied permit applications are filed with DOE.

**DOE review:** DOE has authority to approve or deny CUPs and Variances. If DOE disagrees with a local government decision on an SDP, the agency must appeal to the Shorelines Hearings Board. Citizens may also appeal local or state permits decisions.

**Appeals:** Local SMPs may contain provisions for a local appeals process. At the state level, requests for review are heard by the Shorelines Hearings Board, a quasi-judicial body created to hear permit appeals by aggrieved parties. Permits may be upheld, reversed or remanded to the local government with instructions to issue a new permit consistent with the SHB Order.

**Filings of permits:** Local governments submit permits to DOE after a final local decision, including any local appeal period. A local decision is not considered final until all local appeals have been resolved or exhausted.

**Construction:** Construction is not authorized until 21 days after the "date of filing" or until all review proceedings (upon appeal) are terminated [RCW 90.58.140(5).] A pre-construction meeting is typically scheduled between the City staff, applicant, and lead contractor to go over conditions of the permit(s) once DOE approves the project.

## Making Future Updates to the 2011 Mukilteo SMP

Per RCW 90.58.080 the City is required to review and update their Shoreline Master Program at least once every seven years after approval of their GMA-compliant Master Program. The purpose of the review is:

- (a) To assure that the master program complies with applicable law and guidelines in effect at the time of the review; and
- (b) To assure consistency of the master program with the City's and development regulations adopted under chapter 36.70A RCW, if applicable, and other local requirements.

Adoption of an amendment to the City's existing Shoreline Master Program (SMP) or adoption of an entirely new Master Program shall following the most current requirements of RCW 90.58.

## Chapter 5: Inventory – Characteristics

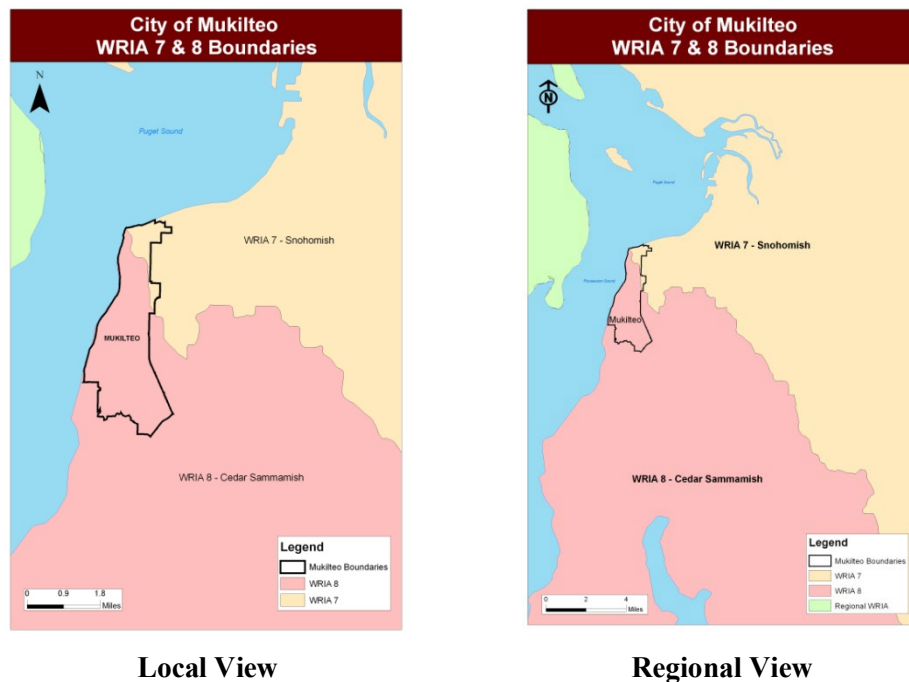
This chapter contains a summary of technical data on Mukilteo's shoreline and forms the basis for the *Shoreline Master Program (SMP)* actions described in the separate supporting document. The technical work is summarized from the following documents:

- Mukilteo *Shoreline Technical Analysis*, Anchor Environmental, October 2003
- Snohomish County Marine Resources Advisory Committee (MRC) – *Draft Candidate Sites for Protection and Restoration*, April 2004
- *WRIA (Water Resources Inventory Area) 7 and 8 Action Plan* – Chapter 6 Nearshore, 2005
- *Action Agenda, Puget Sound Partnership, 2008*
- *Mukilteo Draft Shoreline Master Program Inventory and Characterization*, April 2010

### The Regional Study Area

The shorelines of Mukilteo are contained within the WRIA 7 and 8 nearshores. The City's watersheds flowing north (the northern shoreline) are located within WRIA 7 and the watersheds flowing west (the western shoreline) are located in WRIA 8. Mukilteo is the northernmost boundary of WRIA 8 and contains a significant portion of the nearshore within this WRIA. Figure 8 shows the relationship of Mukilteo to the remainder of WRIA 7 & 8.

**Figure 8: WRIA 7 & 8 MAPS**



Multiple regional efforts are currently underway to evaluate and improve the region's shoreline environment. Much of the focus of WRIA 7 & 8 efforts is on streams, rivers (Snohomish River), and Lake Washington. King County has undertaken the majority of work related to the marine environment as part of the Puget Sound Technical Group and the scientific or environmental work associated with siting the Brightwater Sewer Treatment Plant. In addition, Governor Gregoire and the Puget Sound Partnership, the U.S. Army Corps of Engineers (the Corps) and the Washington Department of Fish and Wildlife (WDFW) are leading the Puget Sound Nearshore Ecosystem Restoration Program (PSNERP) to identify criteria to select and fund large-scale projects within Puget Sound. The umbrella effort for Snohomish County's Nearshore has been undertaken by the Northwest Straits Commission - Snohomish County Marine Resources Advisory Committee (MRC). The MRC efforts parallel many of Mukilteo's efforts and have been very valuable in determining habitat values in a broader comparative context in WRIA 7 & 8. The multiple efforts to improve the shorelines in Puget Sound will also assist in both regulatory actions and enhancement/restoration projects.

## Shoreline Geology and Topography

The geology of Mukilteo comprises quaternary glacier and interglacial deposits consisting primarily of Vashon till over sand and gravel deposits (TetraTech/KCM 2001). The primary surface soil type in Mukilteo is in the Alderwood-Everett series, which is derived from glacial till. This soil is classified as generating moderately high runoff because the clay/hardpan layers restrict percolation and restrict surface drainage to Puget Sound, which results in a high landslide hazard. The majority of the western shoreline is in a high landslide hazard area, which is caused by a combination of high runoff, steep slopes, and non-permeable geology.

Elevations in the City of Mukilteo range from mean sea level to approximately 500 feet. The Harbour Pointe and Paine Field areas to the east of the marine shoreline are situated on a broad, upland plateau. Many hills terminate in bluffs and steep slopes overlooking Puget Sound. The northern shoreline area (e.g., former USAF Tank Farm facility) was built on fill material overlying original shoreline beach deposits.

Mukilteo's hilly topography slopes both west and north towards Puget Sound and is bisected with many creeks and streams that have cut deep ravines and gullies through the underlying glacial deposits, which has created wooded open spaces that protect the numerous watersheds. These watersheds include Japanese Gulch, Brewery Creek and State Park Tidegate, Goat Trail Creek, Mukilteo Olympic View Creek, Naketa Beach Creek, Smuggler's Gulch Creek, Big Gulch Creek, Chennault drainage, Upper and Lower Chennault Creeks, Hulk Creek, Picnic Point Creek, Norma Creek, and Lund's Creek. In addition to these creeks and streams, Lake Serene is perched upland from the Sound in the southern portion of the City.

## Biological Resources and Physical Characteristics

This section provides contextual information on shoreline physical and biological resources as it describes conditions along three distinct shoreline areas, which have been termed the Urban Waterfront, Urban Waterfront Park, and Urban Conservancy Environment Designations. The Urban Waterfront Park Environment Designation runs the length of Mukilteo Lighthouse Park, and the Urban Waterfront Environment Designation runs north from the north end of Mukilteo Lighthouse Park around Possession Point to the eastern city limits. The Urban Conservancy Environment

Designation runs south from the southernmost boundary and tidelands of Mukilteo Lighthouse Park to the southern city limits. The resources are also characterized into the MUGA area to Lund's Gulch and Meadowdale Park. Chapter 2 describes these shoreline areas and their environment designations in more detail and Chapter 3 provides broad policies and specific policies that apply to each environment designation.

A basic concept in the preparation of an *SMP* is the use of scientific and technical information for development of a "shoreline characterization" (i.e., shoreline inventory) and subsequent analysis. A more detailed *Shoreline Inventory and Characterization* for the City of Mukilteo can be found as a supporting document to this *SMP*. The inventory also includes a general assessment of land uses, landslide hazard areas, soils, wetlands and streams, parks and open space, wildlife, aquatic resources, and sediment drift cell information.

For the purposes of this analysis, the nearshore is defined as the interface between marine and upland ecosystems. The seaward boundary of the nearshore is the outer limit of the photic zone (approximately 20 ft. MLLW, or the depth beyond which there is insufficient photosynthetically active radiation [PAR] for active photosynthesis). The landward boundary of the nearshore is up to the top of the slope. This is typically beyond the 200-foot shoreline jurisdiction along the western shoreline of the City.

The nearshore and shoreline environments provide four primary functions for a variety of aquatic organisms, including salmonids (Williams and Thom 2001, Simenstad et al. 1999, Aitkin 1998). These functions are:

- Migratory corridors
- Nursery habitats
- Production
- Feeding

## Urban Waterfront and Urban Waterfront Park Environment Designation

### Sediment

In general, substrates along the Mukilteo shoreline can be characterized as cobble/gravel in a sand matrix. Within the Urban Waterfront and Urban Waterfront Park Environment Designations, substrates also include bulkheads, riprap, wood debris, and shell hash. The slope of the shoreline along the Urban Waterfront Designation is generally steep and drops off quickly, which makes it less available to juvenile salmonids than the more gently sloped beaches of the Urban Waterfront Park Designation.

Japanese Gulch Creek is the primary source of sediment to this portion of the shoreline and there are no significant feeder bluffs that provide sources of sediment to this area of the shoreline. There is no appreciable net shore drift in the Urban Waterfront or Urban Waterfront Park Designation, and there is an indication of accreted beach from the USCG Lighthouse to the former USAF Pier. The shoreline west of Mukilteo Lighthouse Park also shows a small area of accreted beach.

## **Beaches and Backshore**

Beach areas occur between east of the Tank Farm property in Everett and where Japanese Gulch Creek drains to the shoreline, between the former U.S. Air Force Pier and the existing Washington State Ferry Terminal, and at Mukilteo Lighthouse Park. The only backshore areas with marine riparian vegetation zones occur along Mukilteo Lighthouse Park, and a length of about 1,000 feet east of the former U.S. Air Force Tank Farm pier. Shoreline armoring has affected recruitment of new beach materials in this area. Exceptions occur where drainages carry limited material to the nearshore resulting in the formation of small deltas and at two new beach enhancement sites: 1) Port of Everett Rail/Barge Facility in Everett and 2) Mukilteo Lighthouse Park.

## **Banks and Bluffs**

The presence of the BNSF Railroad line since the late 1800s effectively precludes the bluffs from providing significant sources of sediment to the beach. The only remaining ability to supply sediment sources to the beach is via flows through the drainages and culverts under the rail line.

## **Aquifer**

The northwestern portion of the Tank Farm overlies the Intercity Plateau aquifer. This area was identified as a significant recharge area for the aquifer; however, it is likely that shallow groundwater passes through the site beneath existing pavement and discharges to the shoreline (Herrera 2003).

## **Flooded Areas**

According to mapping developed by the Federal Emergency Management Agency (FEMA) in 1999, little of the City of Mukilteo falls in the 100-year floodplain. The boundary of the 100-year floodplain is confined to areas within and around Mukilteo Lighthouse Park and the Urban Waterfront area of downtown Mukilteo.

## **Streams/Creeks**

There are two streams/creeks, Japanese Gulch Creek and Brewery Creek, which occur within the Urban Waterfront Designations. Both are culverted under the BNSF Railroad tracks and are generally steeply sloped, with erosion resulting due to improper surface water drainage. Table 12 of the *Mukilteo Inventory and Characterization* identifies the existing conditions of Japanese Gulch and Brewery Creeks. Japanese Gulch Creek is a good candidate for stream restoration and day-lighting. Fish passage improvements were completed in the winter of 2010.

## **Wetlands**

The open channel portions of the two creeks located within the Urban Waterfront Designation, Japanese Gulch Creek and Brewery Creek, classify as riparian wetlands, but neither are contained within the shoreline jurisdiction as they are both culverts. The Japanese Gulch corridor is heavily vegetated with various plant species, and narrow riparian vegetation occurs along the creek itself. A Category 2 wetland/detention with dual functions was identified in Japanese Gulch Creek east of the



stream and south of Mukilteo Lane outside the shoreline jurisdiction. No wetlands associated with Brewery Creek have been identified.

## **Wildlife Habitat (Terrestrial)**

Several wildlife species have been identified as occurring in Japanese Gulch, which provides habitat and functions (e.g., feeding, rearing, nesting, refuge) for a range of wildlife species including deer, coyote, raptors, various small mammals, and numerous passerine birds (City of Mukilteo 1995). In addition, a bald eagle, Canada geese, seabirds (unidentified), and great blue heron have been observed in the area (T. McKenzie and WDFW).

## **Urban Conservancy Environment Designation**

### **Sediment**

In general, substrates along the Mukilteo shoreline can be characterized as cobble/gravel in a sand matrix. Riprap and hardpan occur along the majority of the Urban Conservancy Designation. Although the intertidal slope along the Urban Conservancy Designation is relatively steep, the lower intertidal/shallow subtidal slope of the shoreline is gentler than along the Urban Waterfront Designation.

Bluffs along the shoreline were the likely primary source of sediments to the shoreline prior to the construction of the BNSF Railroad line in the late 1880s/early 1900s. To protect the rail line, a fitted stone seawall was constructed in the foreshore area. This seawall and the subsequent culverting of drainages into Possession Sound have resulted in effectively eliminating the primary source of sediment supply to the City of Mukilteo shoreline. Streams are the remaining source of sediment supply to the shoreline, although a very small contribution of sediment supply occurs from periodic landslides. The result is low sediment transport volumes and fewer net-shore drift indicators. These conditions have resulted in “sediment-starved” beaches along the Urban Conservancy Designation (DOE 1992).

Net shore drift along the Urban Conservancy shoreline is generally north and northeastward around Elliot Point. Net shore drift along the Urban Conservancy’s western shoreline is driven by southerly and southwesterly waves (DOE 1992).

### **Beaches and Backshore**

Although drainages to the shoreline are culverted under the BNSF Railroad line, limiting the amount of sediment supply to the shoreline, it is evident that a few small beach deltas have formed along the shoreline. The formation of small delta beaches is discussed above. There are also four areas of accreted beach within the Urban Conservancy Designation, which are in locations where drainages likely supply sediment to the shoreline. There are no overwater structures occurring in the Urban Conservancy Designation that could affect beaches by modifying the flow, sediment supply to beaches, or sediment characteristics.

## **Banks and Bluffs**

Within the City of Mukilteo, the majority of the shoreline occurs immediately adjacent to steep bluffs. Stressors on banks and bluffs include development activities, passive human intrusion, and changes in hydrology.

## **Aquifer**

Based on existing information, there are no known or identified aquifers that occur within the Urban Conservancy Designation.

## **Flooded Areas**

According to mapping developed by the Federal Emergency Management Agency (FEMA) in 1999, little of the City of Mukilteo falls within the 100-year floodplain. The Flood Insurance Rate Maps (FIRM) indicate that the marine waters in the nearshore areas of the Urban Conservancy Designation are designated as areas that fall within the 100-year flood boundary.

## **Streams**

There are 10 streams/creeks that occur within or drain into the Urban Conservancy Designation. All are culverted under the BNSF Railroad tracks and most are steeply sloped, with erosion resulting from improper surface water drainage. Table 11 of the *Mukilteo Inventory and Characterization* identifies the existing conditions of the streams that occur within the Urban Conservancy Designation. Open channel portions of the creeks and drainages within the Urban Conservancy Designation have been classified and mapped as part of critical area ordinances.

## **Wetlands**

There is an intertidal mudflat/marsh or intertidal lagoon north of Picnic Point Creek and Park. Specific wetland mapping between the railroad tracks and uplands will be one on a project basis.

## **Wildlife Habitat (Terrestrial)**

Very little data is available on wildlife habitat, species, or functions within the Urban Conservancy Designation. It is possible, but unconfirmed, that similar wildlife species known to occur in Japanese Gulch also could occur in the other forested gulches or ravines within the City. Bald eagle nests have been identified within the Urban Conservancy Designation north of 84<sup>th</sup> Street and near Harbour Heights Parkway.

# Urban Railroad Environment Designation

## Sediment

In general, substrates along the Mukilteo shoreline can be characterized as cobble/gravel in a sand matrix. Riprap and hardpan occur along the majority of the Urban Railroad Designation. The intertidal slope along the Urban Railroad Designation is relatively steep.

Bluffs along the shoreline were the likely primary source of sediments to the shoreline prior to the construction of the BNSF Railroad line in the late 1880s. To protect the rail line, a fitted stone seawall was constructed in the foreshore area. This seawall and the subsequent culverting of drainages into Possession Sound have resulted in effectively eliminating the primary source of sediment supply to the City of Mukilteo shoreline. Streams are the remaining source of sediment supply to the shoreline, although a very small contribution of sediment supply occurs from periodic landslides. The result is low sediment transport volumes and fewer net-shore drift indicators. These conditions have resulted in “sediment-starved” beaches along the Urban Railroad Designation (DOE 1992).

Net shore drift along the Urban Railroad shoreline is generally north and northeastward around Elliot Point. Net shore drift along the Urban Railroad’s western shoreline is driven by southerly and southwesterly waves (DOE 1992).

## Banks and Bluffs

Within the City of Mukilteo, the majority of the shoreline occurs immediately adjacent to steep bluffs. Stressors on banks and bluffs include development activities, passive human intrusion, and changes in hydrology.

## Streams

There are 10 streams/creeks that occur within or drain into the Urban Railroad Designation. All are culverted under the BNSF Railroad tracks and most are steeply sloped, with erosion resulting from improper surface water drainage. Table 11 of the *Mukilteo Inventory and Characterization* identifies the existing conditions of the streams that occur within the Urban Railroad Designation. Open channel portions of the creeks and drainages within the Urban Railroad Designation have been classified and mapped as part of critical area ordinances.

# Aquatic Urban Environment Designation

## Aquatic Habitats

Eelgrass Meadows and Macroalgae. Eelgrass and macroalgae are sparse within the Aquatic Urban Designation. Eelgrass (*Zostera marina*) meadows begin on the eastern portion of the Tank Farm site and continue east into Everett. In addition, two small patches of eelgrass were identified in the intertidal zone on both sides of the NOAA Fisheries pier (Norris 2000). In the area where Washington State Ferries (WSF) is considering relocating its ferry terminal, brown algae (*Laminaria*

*saccharina*) and green algae have been identified in addition to four very small and isolated patches of eelgrass. Macroalgae (green algae [*Ulva lactuca*]) has been documented near the NOAA Fisheries pier (Anchor Environmental 2003, unpublished), and additional macroalgae (mostly *Ulva* and *Enteromorpha*) has been identified on the nearshore mudflat between the outlet of Japanese Gulch Creek and the proposed Port of Everett Rail/Barge Facility.

*Marine Riparian Zones.* There is very little riparian vegetation established along the Aquatic Urban Designation. Due to culverting under the Tank Farm site, the only naturally occurring stream riparian vegetation is between 5<sup>th</sup> Street and Mukilteo Lane (outside of the 200-foot shoreline zone). In addition, the lack of marine riparian zones precludes opportunities for vegetation to provide a pollution abatement function often found along natural marine shorelines. Re-development of the Tank Farm site can improve both the stream and nearshore riparian environments.

## Salmonids

The shoreline in the Aquatic Urban Designation has characteristics to support Chinook, chum, sockeye, and pink salmon as well as steelhead and bull trout migration. Coho and chum have been observed in the lower reach of Japanese Gulch Creek. Cutthroat trout are also likely to occur in the creeks where Coho have been observed.

## Forage Fish

Sand lance spawning is documented from east of the existing WSF Ferry Terminal at the Silver Cloud Pier. Sand lance spawning is also documented east of the Tank Farm, at the Port of Everett Rail/Barge Facility site. There are no documented surf smelt or herring spawning or holding areas within the Aquatic Urban Designation.

## Other Fin Fish

A variety of other fin fish are likely to occur and/or utilize the nearshore environment. Representative species of fish that were observed at the WSF Terminal and at Mukilteo Lighthouse Park are identified in Table 10 of the *Mukilteo Inventory and Characterization*.

## Shellfish

A wide variety of substrates provide habitat for different types of shellfish. Table 11 of the Mukilteo Inventory and Characterization lists shellfish and the habitat and shoreline zones they typically inhabit. The WDFW PHS maps (WDFW 2003) and recent MRC research and Port of Everett Rail/Barge Facility studies indicate that intertidal clams occur within the Tank Farm extending east into Everett. Although the PHS maps do not indicate the presence of intertidal clams in the remaining portion of the Urban Waterfront Designation, the lower intertidal beach substrate is sand and gravel that tend to support bivalve populations. Dungeness crabs occur along the entire Urban Waterfront Designation shoreline, but fewer along the rocky substrates of Lighthouse Park.

## **Epibenthic/Benthic Infauna**

No quantitative information exists on benthic communities along the Mukilteo Shoreline. Based on physical conditions along the beach from the eastern end of the former USAF Pier extending into and past Mukilteo City limits into Everett, this beach area is likely to support a more diverse and abundant benthic community than the western portion of the Urban Waterfront Designation encompassed by Lighthouse Park.

## **Marine Mammals**

Harbor seals have been observed being hauled out on the beach by the WSF Terminal and condominiums west of the WSF Terminal. The closest Steller sea lion breeding area is on Race Rock, approximately 70 miles southwest of Vancouver Island, BC. A California sea lion haul out is located on log booms at the Port of Everett. Small numbers of California sea lions are observed on navigation buoys in the region (WDFW 2000). It is possible that Steller sea lions occasionally haul out along the Mukilteo shoreline planning area, but there is no documentation to quantify this possibility.

## **Aquatic Urban Conservancy Environment Designation**

### **Aquatic and Riparian Habitats**

Beaches and backshore areas occur at Shipwreck Point, Picnic Point Ravine, and Lund's Gulch. In addition, a small delta is forming at Big Gulch. No other marine riparian vegetation zones exist along the Aquatic Urban Conservancy Designation; therefore, the creation of additional riparian areas would be very beneficial.

### **Eelgrass Meadows**

Three general aquatic plant communities occur in the Aquatic Urban Conservancy Designation. Algal species, such as sea lettuce and rockweed, in addition to other green, brown, and red algae have formed an algal community. Overlapping with this algal community and extending further seaward is a kelp community consisting of species such as bull kelp. There is a brown algae (*Laminaria saccharina*) bed located immediately offshore of Elliot Point (McKenzie, personal observation 2001). Eelgrass is abundant along the Aquatic Urban Conservancy Designation (Pentec 1996, Sound Transit 1999, Tsyland 2002). Except for at Naketa Beach, few human-induced activities are likely to occur that would adversely affect eelgrass in this area due to the steep bluff on the western shoreline and the presence of the BNSF Railroad along the shoreline, which restricts access to and development along the shoreline.

### **Marine Riparian Zones**

Riparian vegetation occurs seaward of the BNSF Railroad tracks at Picnic Point and Lund's Gulch, at a small area at Big Gulch, where stream gravel has accreted, and at Shipwreck Point, where vessels left behind from a shipwrecking business located there in the 1930s-1960s act as barriers to sediment movement. This results in a delta with a foreshore beach and a backshore supporting

shrubs and trees. Development upland and within the watersheds suggests possible nutrient loading and contamination; however, water quality data is limited for all streams that discharge along the Urban Conservancy Designation. The lack of marine riparian zones precludes opportunities for this habitat feature to provide pollution abatement functions.

## Salmonids

Three streams that drain into the Aquatic Urban Conservancy Designation have Coho and cut-throat trout. Coho and chum have been observed in the lower reach of Big Gulch Creek and Lund's Gulch Creek. Cutthroat trout are also likely to occur in this creek. Other streams that either support or could support cutthroat trout are Smuggler's Gulch, Upper and Lower Chennault Creeks, Picnic Point Creek, and Lund's Gulch Creek. None of the streams or creeks has the characteristics to support Chinook, sockeye, or pink salmon, steelhead, or bull trout because the drainages are too small and they lack suitable habitat; however, these species use the nearshore.

## Forage Fish

Sand lance and surf smelt spawning have been documented at Picnic Point. No herring spawning has been documented along the Aquatic Urban Conservancy Designation (WDFW 2003).

## Other Fin Fish

A variety of other fin fish are likely to occur and/or utilize the nearshore environment. See Table 10 of the *Mukilteo Inventory and Characterization* for a list of species that are likely to occur in the marine water along the Urban Conservancy Designation.

## Shellfish

The WDFW PHS maps (WDFW 2003) do not indicate the presence of intertidal clams along the Aquatic Urban Conservancy Designation; however, the lower intertidal beach substrate is sand and gravel that would tend to support bivalve populations. The lowering of the beach profile along the Aquatic Urban Conservancy Designation due to installation of riprap and bulkheads has resulted in the removal of sand and gravel. Currently, only glacial till remains. Glacial till in the upper intertidal area may be too consolidated to allow bivalve colonization. A subtidal geoduck bed occurs offshore in the southern portion of the Aquatic Urban Conservancy Designation. Dungeness crab occurs along the entire Aquatic Urban Conservancy shoreline. Pandalid shrimp are also documented to occur offshore within this designation (WDFW 2003).

## Epibenthic/Benthic Infauna

No quantitative information exists on benthic communities in the Aquatic Urban Conservancy Designation. The beach profile along this shoreline has become steeper over time with the construction of the BNSF Railroad line seawall. In some places, this has resulted in substrates being compacted, which may preclude certain types of benthic organisms from colonizing the substrates. However, further offshore, between about 0 and -10 ft. MLLW, substrates appear to be unconsolidated gravel and sand, which are likely to support a variety of benthic organisms. In

addition, the presence of eelgrass along the majority of the Aquatic Urban Conservancy Designation would likely support epibenthic production.

## **Marine Mammals**

No data is available on marine mammal occurrences or use of marine waters along the Aquatic Urban Conservancy Designation.

## **Urban Lakefront Environment Designation**

Key management issues for Lake Serene discussed in this section include:

- Preservation and improvement of water quality in the context of degradation increased contaminant inputs from surface water runoff
- Preservation and enhancement of native aquatic vegetation
- Preservation and enhancement of native woody vegetation in the nearshore environment
- Alteration of key habitat characteristics caused by shoreline modifications (docks, piers and bulkheads)

Preservation and improvement of water quality is the key management issue for Lake Serene. Additional development pressures throughout the Lake Serene watershed has increased contaminant input and modified natural water quality processes. Increased impervious surface in upland areas as well as alteration and loss of wetland habitat around the lake have eliminated areas for nutrient storage and cycling, biotic uptake and altered the basin's natural water and sediment transport regimes. Under natural conditions, Lake Serene would have had very minimal sediment input, but road construction, residential development and changes in peak flow have increased sediment delivery to the lake, which is potentially a reason for the higher levels of phosphorus measured since 2006 (Snohomish County, 2008).

Preservation of a native community of aquatic vegetation throughout the lake bottom substrate is a key issue for Lake Serene. Aquatic vegetation stabilizes sediments during mixing periods and other disturbances, reducing the amount of phosphorus and other limiting nutrients released into the epilimnion. Actions taken in 2005 to control Eurasian water milfoil have proven highly successful, as scuba surveys in subsequent years have shown a water milfoil-free environment. Preservation of the native aquatic vegetation and further actions to prevent and control invasive species should be priorities for Lake Serene.

Preservation of existing woody vegetation along the lakeshore is a key issue for Lake Serene. Shoreline vegetation provides habitat for numerous wildlife species, and additionally provides shelter to the lake from excessive wind mixing and reduces the potential for releasing phosphorus trapped in the lake substrate and hypolimnion into the epilimnion during seasonal lake mixing periods. Although mixing events between the bottom and top waters are common in Lake Serene, the phosphorus releasing impacts of these events are largely controlled by the dense aquatic vegetation present throughout much of the lake bottom substrate. Implementation and enforcement of the City's CAO regulations pertaining to buffer standards for all land use development activities are critical to ensuring good water quality in Lake Serene. In addition, the City should consider other

means, including incentives programs, to preserve and enhance native woody vegetation in the shoreline environment.

Shoreline modifications are another significant concern along the Lake Serene shoreline. The proliferation of residential docks, piers, and bulkheads along the lakeshore has reduced the quality of the nearshore habitat. Much of the dense woody vegetation that originally lined the Lake Serene shoreline has been replaced by structurally simple docks and bulkheads causing a decrease in woody debris, overhanging vegetation, and detrital inputs. Docks and piers create artificial shading that reduces the amount of light available to phytoplankton and aquatic macrophytes, which can decrease primary productivity and ultimately reduce fish and invertebrate diversity (Kahler, 2001).

Bulkhead construction has also eliminated shoreline vegetation. Bulkheads can change the slope, configuration, and/or substrate composition of the shoreline by cutting off upland sediment supply and increasing erosion on neighboring properties without bulkheads. In very low energy environments like Lake Serene, these effects tend to be localized, but they can still have adverse implications for aquatic habitat (Kahler, 2000).

Historically, docks and piers were constructed of chemically wood treated wood, which is a source of polycyclic aromatic hydrocarbons (PAHs) and heavy metals. These preservatives can leach into the water column and become toxic to aquatic organisms. The majority of docks are likely to be built with chemically-treated wood on Lake Serene and it is expected that most new docks will be constructed using alternative, less harmful materials such as metal.



## Chapter 6: Shoreline Protection, Enhancement, and Restoration

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### Introduction

This restoration plan provides additional information regarding shoreline restoration opportunities in the City's shoreline jurisdiction, including Lake Serene in the City's potential annexation area. This discussion supplements and updates the information provided in the City's *Preliminary Draft Shoreline Master Program* (2007). The Lake Serene area is located in unincorporated Snohomish County and within the City's Municipal Urban Growth Area (MUGA) referred to as the South Mukilteo Annexation Area. A citizen's group gathered over 2,000 signatures from the South Mukilteo PAA property owners in favor of annexation into the City. In addition, citizens south of 148<sup>th</sup> Street have requested to be annexed by the City of Mukilteo. The cities of Mukilteo and Lynnwood are working on where to split the Meadowdale Gap Area (City of Mukilteo, 2010).

### No Net Loss and Restoration

The Washington State Shoreline Management Act (RCW 90.58) policy of achieving both shoreline utilization and protection is reflected in the provision that "permitted uses in the shorelines of the state shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the DOE and environment of the shoreline area and any interference with the public's use of the water." In RCW 90.58.020, the legislature finds that the shorelines of the state are among the most valuable and fragile of its natural resources, and that there is a great concern throughout the state relating to their utilization, protection, restoration, and preservation.

To this end, RCW 90.58.100 requires that shoreline master programs include:

- A conservation element for the preservation of natural resources, including but not limited to scenic vistas, aesthetics, and vital estuarine areas for fisheries and wildlife protection, and
- An historic, cultural, scientific, and educational element for the protection and restoration of buildings, sites, and areas having historic, cultural, scientific, or educational values.

The guidelines for implementing the SMA suggest that "no net loss" of ecological function can be achieved primarily through regulatory mechanisms, including mitigation requirements with restoration incentives, and voluntary actions also playing an important role in achieving no net loss of ecological functions. DOE's Shoreline Master Program Guidelines (Chapter 173-26 WAC) define restoration as "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 (WAC 173-26-020[27]).

This chapter serves as the basis for *SMP* actions from which enhancement and restoration projects can be selected, but should not be interpreted to discourage or disallow other opportunities that could be undertaken in the future. The first section provides general recommendations regarding nearshore enhancement/restoration, while the second section provides options for potential site-specific enhancement projects, as Mukilteo's shoreline was heavily impacted by the railroad, commercial and industrial development before the SMA was adopted in 1974. In most cases, enhancement project

actions will need to be undertaken by the state or multiple agencies as opportunities arise with redevelopment or as related to the Essential Public Facilities (EPFs). These projects are consistent with the policies, environmental designations, and regulations contained in this SMP.

## Potential Shoreline Enhancement and Restoration Projects by Drainage Basin

More specific opportunities exist for improving both public access to the City's shoreline and ecological functions within the City's shoreline planning area. Two regional efforts provide the framework for developing this section of the *City of Mukilteo Shoreline Master Program*.

The first of these efforts is the Snohomish County Marine Resources Advisory Committee's work on identifying and prioritizing potential nearshore enhancement/restoration sites in Snohomish County (Snohomish County MRC – Edwards 2004). Secondly, during 2004, WRIA 8 worked on identifying projects for the *WRIA 8 Watershed Recovery Plan*. These efforts have complemented the City's efforts undertaken in conjunction with this *SMP*, and thus are incorporated into this chapter to create the *City of Mukilteo Restoration Plan*.

Following are project descriptions for protection, enhancement, and restoration of shorelines within Mukilteo and its MUGA area. In combination, these present opportunities for restoration and enhancement for shorelines. Use of this information does not preclude or limit the identification of projects that may result from project experience or new scientific data gained.

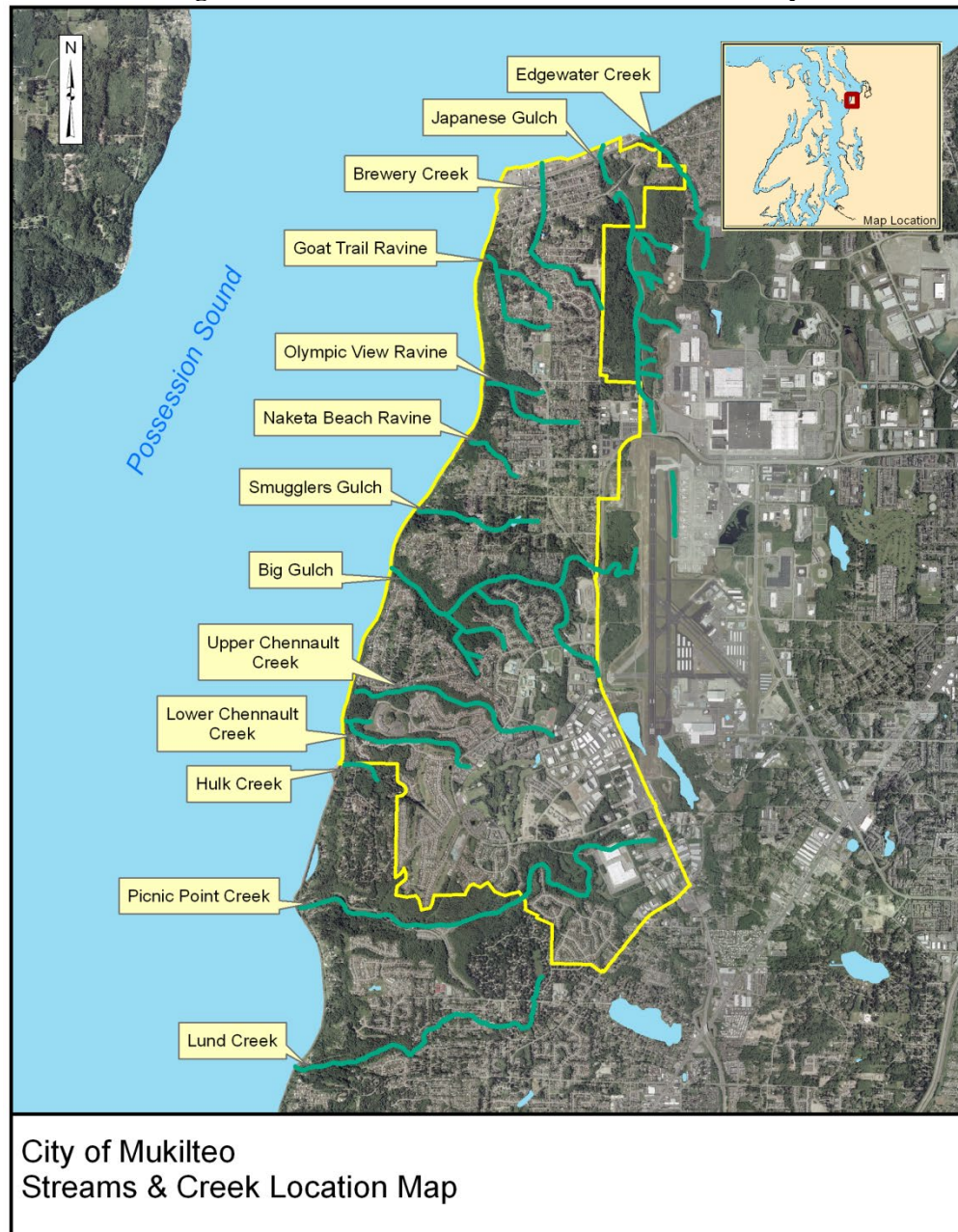
## General Recommendations in the WRIA 8 Watershed Recovery Plan

The following general recommendations are based on the *2005 Water Resources Inventory Area (WRIA) 8 Watershed Conservation Plan*, Volume II – Chapter 13. This document provides the general direction for restoration projects.

1. Protect remaining feeder bluffs that supply sediment and support littoral habitat creation. BNSF Railroad has armoring along all of Mukilteo's bluffs. Sand and gravel material should be added to the nearshore.
2. Reduce bank hardening, especially in areas where the armoring falls within the tidal zone and/or separates a sediment source from the nearshore environment. Such actions would help restore natural shoreline accretion and depletion processes and support littoral habitat creation.
3. Protect remaining Marine Riparian Vegetation (MRV) to maintain overhanging cover and terrestrial inputs (e.g., leaf litter, invertebrates) for marine species and their prey through critical area and clearing ordinances.
4. Plant vegetation along the shoreline near the Mean Higher High Water (MHHW) line to provide overhanging cover and terrestrial inputs (e.g., leaf litter, invertebrates) for marine species and their prey.
5. Reduce number and coverage of overwater structures (e.g., docks, piers) in order to reduce segmentation of the shoreline and effects on both habitat-forming processes and marine species behavior.
6. Protect or re-connect small stream mouths to create pocket estuaries.

7. Re-connect backshore areas (e.g., marshes, wetlands) to contribute to shoreline habitat diversity and terrestrial inputs.
8. Protect sediment and water quality, especially near commercial and industrial areas from fuel spills, discharge of pollutants, removal of septic systems, limiting fill and dredging, etc.

**Figure 9: Mukilteo Stream and Creek Location Map**





**Figure 10: Summary of Urban Waterfront Enhancement Projects**



**Shoreline Enhancement Plan - Urban Waterfront and Urban Waterfront Park**



**Figure 11: Summary of Urban Conservancy Enhancement Projects**





**Figure 12: Summary of Urban Growth Area Enhancement Projects**





**Shoreline Enhancement Plan - Mukilteo Urban Growth Area**



## Urban Waters 1 & 2 (WRIA 7 & 8)

### Japanese Gulch Creek & Tidelands

Site Type:	Enhancement and Restoration
Shoreline Environmental:	Urban Waterfront
Watershed:	WRIA 7 (Snohomish)
Drainage Basin Size:	615 acres in Mukilteo 1,000 acres City of Everett
Shoreline Length:	2,922 lineal feet
Shore Units/Sub-Reach:	4700-4702
Presence of Fish:	Coho and chum fish bearing with blockages
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>2004</p> </div> <div style="text-align: center;">  <p><u>2009</u></p> </div> </div>	

### Site Description

This site is a sand and gravel accretion beach that is protected from wave action by the old U.S. Air Force pier. Prior to industrial and military development at this site, the beach was one of the most productive clam beds in the region, and people continue to harvest shellfish in this area despite potential contamination from stormwater. The shoreline has riprap along the entire length of the old Tank Farm. Japanese Gulch Creek, which is a Type 3 stream, flows out onto the beach through a culvert under the Tank Farm and the BNSF Railroad. Coho and chum salmon have been known to enter the stream during

fall runs. Above the railroad tracks, the creek flows through a vertical pipe at 5th Street, which prevents upstream fish migration.

The Japanese Gulch watershed has good forest cover north and south of 5th Street; however, the east side is predominantly alder after clearing and re-grading in the 1970s. The sub-tidal area along the western edge of the U.S. Air Force pier is heavily used by gravid female Dungeness crab. Eelgrass is present on the easternmost portion of the Tank Farm along the sub-tidal shelf and in patches in the lower intertidal portion. Several large-scale re-development projects are planned to replace the Mukilteo Tank Farm. These include a Mukilteo multi-modal transportation center that includes the relocated Ferry Terminal and the new Sound Transit Commuter Rail facility. A rail-barge transfer facility was added on the east side of the Tank Farm in the City of Everett. Other mixed-use development and park uses with waterfront access are also planned.

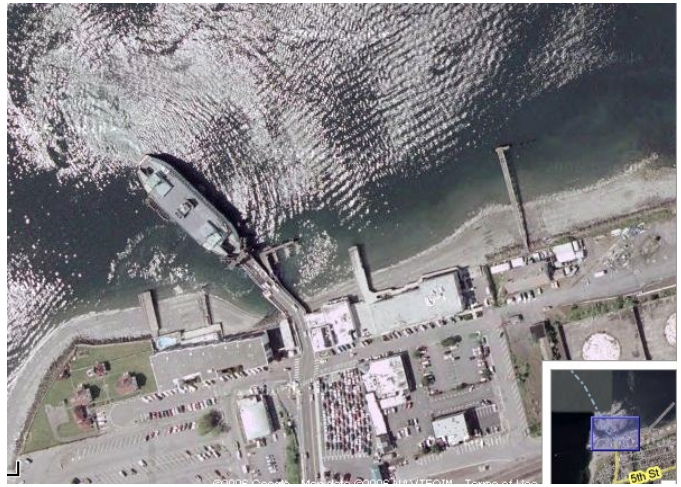
## Potential Projects

Improve the nearshore environment along the Tank Farm by:

1. Removing creosote piles and riprap that has fallen onto the nearshore.
2. Providing beach enhancement east of the Tank Farm pier to restore the shallower beach profile (Mount Baker Terminal construction included beach enhancement in 2008).
3. Restoring the nearshore at the existing terminal after the ferry is relocated.
4. Daylight Japanese Gulch Creek where it flows under the Tank Farm, if feasible, and allowing a reduction in the riparian buffer as an incentive to daylighting.
5. Improve water quality and public health signage for recreational shellfish harvesting.
6. Protect and enhance riparian buffers and upland forest cover within the Japanese Gulch Creek drainage basin.
7. Remove blockages to fish at 5th Street/Mukilteo Boulevard (three phases funded).
8. Consider pocket estuary or wetland enhancement, or reduce conflict with detention.
9. Establish more consistent stream flows and improve in-water habitat.



## Brewery Creek & Tidelands

Site Type:	Enhancement	
Shoreline Environmental	Urban Waterfront	
Watershed:	WRIA 7 (Snohomish)	
Drainage Basin Size:	292 acres	
Shoreline Length:	740 lineal feet	
Shore Units/Sub-Reach:	4703	
Presence of Fish:	Non-fish bearing	

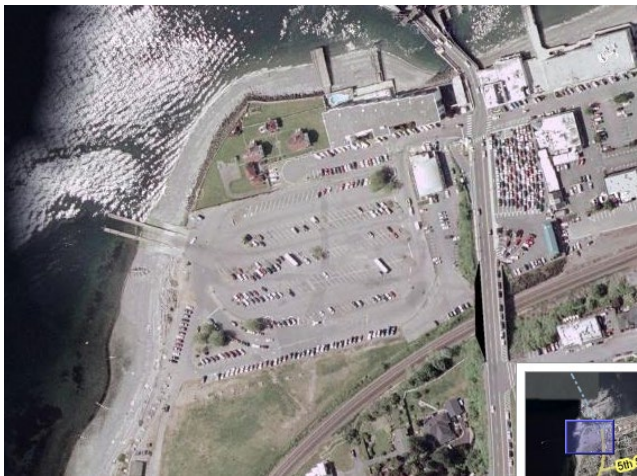
### Site Description

Brewery Creek is a small Type 4 and 5 stream that drains the older northern and western portion of Mukilteo. Presently, there are no fish present south of Mukilteo Lane, where the stream is culverted and has steep gradients. Brewery Creek is culverted intermittently in the older portion of north Mukilteo. Located in a natural ravine with a stream drop of 1 foot in elevation for every 10 feet and with a drop of 90 feet from the upper bank to stream in some places, adjacent development has been setback from the top of the slope. In most cases, riparian vegetation has remained relatively undisturbed. Unfortunately, however, existing legal platted lots (old “paper plats” from the late 1800s or early 1900s, with no regard for natural features) lie within the stream corridor. There may be lots that should not be developed even under reasonable use provisions because significant impact to the stream would be likely. In the lower area between the BNSF Railroad tracks and Puget Sound, Brewery Creek is culverted under the Tank Farm along Park Avenue. Sand lance spawning under an overwater walkway is documented just west of the stream where bulkheads were moved back to allow for a more natural beach profile when the Silver Cloud Inn was developed.

### Potential Projects

1. Enlarge the culvert to 48 inches with a tide gate to handle a 100-year storm event.
2. Work with Washington State Ferries to relocate the ferry terminal/dock to reduce propeller wash in this area of the shoreline.
3. Work with the Port of Everett to improve and enlarge the fishing pier for improved public access.
4. Improve the beach profile for sand lance spawning.
5. Explore designating a dive park and/or marine management area off of Park Avenue Community Beach east of the new Multimodal facility.

## Mukilteo Lighthouse Park & Tidelands

Site Type:	Enhancement & Restoration (completed)	
Shoreline Environmental	Urban Waterfront Park	
Watershed:	WRIA 8	
Drainage Basin Size:	70 acres	
Shoreline Length:	2,913 lineal feet	
Shore Units/Sub-Reach:	2475-2476/8.0	
Presence of Fish:	Non-fish bearing	

### Site Description

Mukilteo Lighthouse Park was transferred from the Washington State Parks Department to the City of Mukilteo in 2002. This park features more than 1,000 feet of sand and gravel beach. Marine riparian vegetation was limited to small patches of Nootka rose, dune ryegrass, and gumweed. Former park facilities along the shoreline included a fair-weather public boat launch, scenic view parking spaces, restrooms, picnic tables, fire pits, and a paved walking path. The Lighthouse Park Master Plan, which includes beach restoration as a major element, was adopted in February 2004. Phases 1 and 2 of the Master Plan improvements have been implemented, including construction of public picnic shelters and play equipment, installation of native vegetation and driftwood along the upper beach, and installation of several interpretive signs and kiosks. A large, continuous and dense patch of eelgrass is situated off the southern beach; several other patches of eelgrass are found to the west on the western sub-tidal shelf.

### Potential Project

The City will be applying for state matching funds to implement Phases 3 and 4 of the Master Plan to complete improvements in the central portion and eastern edge of the park, including removing the asphalt parking area and installing a great lawn and a pedestrian access off of SR525.

# Big Gulch Creek Outfall

Site Type:	Enhancement & Restoration
Shoreline Environmental	Urban Conservancy
Watershed:	WRIA 8
Drainage Basin Size:	1,600 acres
Shoreline Length:	1,341 lineal feet
Shore Units/Sub-Reach:	2481/8.05
Presence of Fish:	Coho and Chum salmon bearing

## Site Description

Big Gulch Creek is a Type 3 stream that drains the largest drainage area within the City of Mukilteo and its urban growth area. This drainage is a complex system with many headwater wetlands in the upper reaches and slope wetlands connecting directly to the creek within the ravine; these wetlands provide the creek with flows throughout the year. The portion of the drainage within the ravine has relatively mature upland forest cover.

The lower reaches of the stream are used by Coho and chum salmon, and sea-run cutthroat. The stream flows under the BNSF railroad tracks to the beach through a 60-inch corrugated metal culvert. The Mukilteo Water and Wastewater District owns and operates a sewage treatment plant located on the south bank of the lowest reach of Big Gulch Creek. The City of Mukilteo owns most of the undeveloped open space within the drainage except for private property north of the creek at the base of the ravine. The headwaters of Big Gulch Creek drain the west end of Paine Field Airport.

Chemical spills in the vicinity of Paine Field in 1993, 1996, and 2000 resulted in downstream fish kills, including nine to ten Coho salmon in 2000. Puget Sound anglers and local residents have demonstrated a stewardship commitment for Big Gulch Creek by conducting stream surveys, planting Coho salmon, and counting returning salmon.


Eelgrass extends northward from the stream outfall. Eelgrass beds are also present south of the accreted beach area and creek outfall. The beds are typically two strips of eelgrass along the sub-tidal portion of Marine View Drive. The tidelands are held in private ownership or by BNSF Railroad, except for one Snohomish County parcel from south of Naketa Beach and south to Possession View Tidelands.

## Potential Projects

1. Improve in-water habitat and control stream flows.

2. Eliminate fish blockages or mitigate with fish passage projects.
3. Acquire private property north of stream outlet and explore concept of a pocket estuary or freshwater wetland east of the railroad tracks.
4. Improve the connectivity of Big Gulch Creek with the nearshore by replacing the existing railroad culvert with a large open bottom culvert or trestle.
5. Beach enhancement and additional marine riparian planting may be required when surface water or sewer outfall improvements are made, if warranted from the project's impacts.
6. Provide access over the BNSF Railroad when possible with a pedestrian overpass connection and provide beach enhancement and additional riparian vegetation planting if able to obtain BNSF approval to allow public access to their tidelands.

## Upper and Lower Chennault Beach Creeks, and Possession View Park and Tidelands

Site Type:	Enhancement & Restoration	
Shoreline Environmental	Urban Conservancy	
Watershed:	WRIA 8	
Drainage Basin Size:	777 acres	
Shoreline Length:	948 lineal feet	
Shore Units/Sub-Reach:	2484/8.05	
Presence of Fish:	Non fish bearing	

### Site Description


The Upper Creek flows through a 24-inch (2-foot) concrete culvert perched one foot high. The Lower Creek flows through two 42-inch concrete culverts that are not perched. These streams are in good condition, within ravines approximately 50 feet deep, but have high flow incisions and side slope failures along these creeks. The City owns 7.4 acres of upland parkland and 52 acres of tidelands between Upper and Lower Chennault Beach Creeks. The eelgrass bed(s) on the subtidal shelf along with four bands of eelgrass on the intertidal area comprise one of the larger beds along the western shoreline. Lower Chennault Creek has a small amount of accretion in the intertidal shoreline, but there is no riparian vegetation associated with this since there is no upper shore area.

### Potential Project

1. The City envisions an opportunity to provide access to the beach using a pedestrian overpass/underpass near Lower Chennault Beach. An upland beach area would need to be created through beach enhancement. Marine riparian vegetation could then be planted. An underpass might allow for a pocket estuary to be created on the east side of the railroad tracks. Access to the beach would be limited to low tides. Pedestrians would need to be channeled to a designated trail system to protect streamside vegetation and a riparian buffer on the north side of the stream.



## Norma Creek

Site Type:	Enhancement and Restoration	
Shoreline Environmental	Urban Conservancy	
Watershed:	WRIA 8	
Drainage Basin Size:	939 acres	
Shoreline Length:	7,300 lineal feet	
Presence of Fish:	Coastal cutthroat trout, Coho salmon	

### Site Description

Norma Creek is the outlet stream of Lake Serene. The stream starts at the lake's northwestern shore, north of the public boat launch, and conveys flows via a short channel before entering a long culvert that passes under Serene Road and Beverly Park Road. The culvert outlet is at the 138th Street SW and 48th Place W intersection, where a large wetland contributes flow to the stream. At 59<sup>th</sup> Avenue W., Norma Creek receives additional flow from a tributary stream. Norma Creek extends approximately one mile from 59<sup>th</sup> Avenue W to Puget Sound through a steep, deeply incised ravine. Several left-bank tributary streams to Norma Creek are mapped within the lower basin, passing through smaller ravines to the south of the main stem ravine. At Norma Beach, the stream cuts through steep coastal bluffs and flows through a culvert under the railroad tracks to enter Puget Sound.

The upper reaches of the Norma Creek basin consist of suburban residential neighborhoods and commercial development along the east and west side of the Highway 99 corridor. The lower reaches of the stream are mostly undeveloped.

Maintaining or reducing phosphorus inputs in Lake Serene from current levels will further support the water quality and integrity of Norma Creek. Approximately one mile downstream of Lake Serene, Norma Creek supports spawning habitat for coastal cutthroat trout and reported populations of Coho salmon. The upper portions of the stream are likely too steep to support salmonids.

The quality of salmon habitat in Norma Creek is limited by excessive peak flows that scour the streambed and deposit excess sediments in the lower reaches. Development of the basin has contributed to poor water quality in Norma Creek, particularly high levels of fecal coliform.

## Potential Projects

Restoration opportunities for Norma Creek include:

1. Daylight Norma Creek at the Lake Serene outflow to improve water quality and habitat.
2. Retain existing native vegetation where it is present along the shoreline.
3. Protect and restore wetlands adjacent to Lake Serene that serve to improve water quality in Norma Creek.
4. Revegetate eroded stream banks to reduce sources of sediment.
5. Upgrade the stormwater system in areas where runoff is contributing to erosion in Norma Creek. Several stormwater system upgrades, stream restoration, and fish blockage removal projects have been identified at locations outside of the shoreline area (Snohomish County Drainage Needs Report December 2002).

## Chapter 7: Cumulative Impacts Analysis Summary

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### Opportunities and Constraints

Uses and habitats within the Urban Waterfront and Urban Waterfront Park Environment Designation, as well as the Urban Conservancy, Aquatic Urban, Aquatic Urban Conservancy, Urban Railroad, and Urban Lakefront Environment Designations can be found in the *Mukilteo Inventory and Characterization*. In addition, these tables identify potential opportunities and constraints for improving shoreline functions and public access.

### Introduction

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

RCW 90.58.020 also states, 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. Comprehensive Planning under the Growth Management Act and zoning are the most widely used tools that are companioned with the Shoreline Master Program. The Comprehensive Plan provides a guide to control and assure the designation of uses appropriate waterfront lands.

The preservation of land for water-dependent uses must be viewed on a statewide basis and not limited to local communities. Any program to preserve areas for water-dependent uses needs to be based on a scientifically sound inventory of sites.

According to the shoreline guidelines, WAC 173-26-186(8)(d), the City SMP 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 require evaluation of the effects caused by:

- Unregulated activities
- Development that are exempt from a shoreline substantial development permit



- 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.
- Mukilteo's *Shoreline Master Program* incorporates what is a reasonable future, economics, characteristics of development impacts and the timing associated with the City's future shoreline. The pattern of redevelopment within the urban waterfront is the most significant change and the *SMP* is meant to guide that change. Other issues relate to the railroad, sewer treatment plants and outfalls, other utilities and existing legally platted lots, or re-development of single-family homes have also been considered.

## Summary of Cumulative Impacts

Shorelines of the state within the City of Mukilteo and its annexation area are largely developed in residential, commercial, and water-dependent uses. Outside of the marine Aquatic Urban Environment, there are few opportunities for new development within shoreline jurisdiction, with the exception of Segment A. Within this northern shoreline, initial planning efforts for Mukilteo Landing are underway. Table 2 identifies the changes that are expected to occur on the northern shoreline of Aquatic Urban Environment. With a reduction in the number of piles and overwater coverage, as well as the opportunity for beach enhancement and stream day-lighting, the condition of the northern shoreline of Mukilteo will be improved. With the water-dependent and water-oriented elements of development in mind, the *SMP* was developed to allow for these elements while ensuring that shoreline functions and resources are considered and that shoreline mitigation for all required impacts occurs.

**Table 2: Summary of Cumulative Impacts for Mukilteo's Urban Waterfront and Urban Waterfront Park Environment Designations**

	Existing Condition	Future Condition	Total (+/-)	% Change	Net Benefit (+) or (-)
No. of Pilings	4,662	1,098	-3,564	-76%	+
Pier Overwater Coverage (sf)	247,710	218,260	-29,450	-11.8%	+
Rip Rap /Sea Wall Shoreline (lineal feet)	22,225	19,975	-2,250	-10%	+
Beach Enhancement (lineal feet)	4,075	6,325	+2,250	+55%	+
Shoreline Eelgrass (square feet) *	—	—	—	—	—
Forage Fish Spawning Sites	4	5	+1	25%	+

\*Note: Accurate data is not available on eelgrass beds.

The results of this analysis clearly shows that there will be a net benefit to the shoreline in Mukilteo as re-development within the Urban Waterfront and Urban Waterfront Park Environment Designation takes place.

The net benefit in Urban Conservancy and Aquatic Urban Conservancy Environment along the western shoreline if BNSF adds a third track is less clear and depends on mitigation, due to further impacts to the nearshore that is currently impacted and often only a narrow shelf.

Within marine shoreline segments B, C, and D, as well as within the Lake Serene shoreline area, changes in development will primarily be the result of redevelopment activities. Due to the existing environmental constraints of large lots and the few undeveloped lots in residential areas of the marine shoreline, it is anticipated that residential density will not increase significantly above current levels. On the limited number of vacant residential lots within the marine Segment B, C, and D Shorelines, development of residential structures may trigger the shoreline variance process due to the presence of critical areas (primarily steep slope areas) within the undeveloped lots.

The proposed *SMP* provides a new system of shoreline environment designations that establishes more uniform management of the City's shoreline. The system of shoreline environment designations and use regulations in the proposed *SMP* is consistent with the established land use pattern, as well as the land use vision planned for in the City's comprehensive plan, zoning, and other long-range planning documents. Based on this consistency it is unlikely that substantial changes in the type of shoreline land uses will occur in the future.

The updated development standards and regulation of shoreline modifications provides more protection for shoreline processes. The updated standards and regulations are more restrictive of activities that would result in adverse impacts to the shoreline environment. In addition, the *Shoreline Restoration Plan* developed as part of the *SMP* Update provides the City and other agencies with opportunities to improve or restore ecological functions that have been impaired as a result of past development activities. Furthermore, the proposed *SMP* is meant to compliment several City, state, and federal efforts to protect shoreline functions and values.

Based on assessment of these factors, the cumulative actions taken over time in accordance with the proposed *SMP* are not likely to result in a net loss of shoreline ecological functions from existing baseline conditions. This conclusion is based on an assessment of the three factors identified in the DOE guidelines for evaluating cumulative impacts:

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

As a point of emphasis, it is expected that the ecological functions in Segment A "Urban Waterfront" and "Aquatic Urban" environments will improve due to restoration efforts proposed for over 4,000 lineal feet along the shoreline with re-development and shoreline enhancement. In concert with implementation of these restoration actions and additional restoration actions throughout the city, the regulatory provisions of the *SMP* would serve to improve the overall condition of shoreline resources in the city.

## Summary Findings

The proposed *Shoreline Master Program* contains many positive regulatory changes that address cumulative impacts. In summary, the *SMP* prohibits:

- *Bulkheads, except replacements, that are subject to wave run-up*
- *Landfill, except for public access/recreation, restoration, or mitigation purposes*
- *Piers outside of the Urban Waterfront environment*

- *Removal of vegetation on steep/unstable slopes within the shoreline*

The *Shoreline Master Program* requires:

- *Public access; unless not practicable due to security issues*
- *Protection of nearshore habitats*
- *Cumulative impact assessments and a requirement that new projects result in no net loss*
- *Backshore vegetation enhancement where possible*

Because of Mukilteo's urban waterfront, past development had degraded the shoreline, then re-development occurring in this shoreline designation area does not constitute a net loss of ecological functions. The minor site-specific impacts can be avoided or reasonably mitigated in association with the process of project environmental review and beach enhancement, the day-lighting of Japanese Gulch Creek and re-vegetation of the backshore will improve the ecological functions along the shoreline.

## Causes of Shoreline Impacts

Over time the most likely impacts to the Mukilteo shoreline could come from various forms of shoreline development including shoreline armoring, overwater structures and pilings, ramps, stormwater and wastewater inputs, disruption of the tidal zone, and loss of riparian vegetation. How these forms of development can impact the shoreline environment is described below. The subsequent sections review the likely impacts on 6 elements of the environment consistent with adopted SEPA policy and procedures.

- **Shoreline armoring.** Shoreline armoring can alter beach sediment size/type, decrease sediment abundance, increase wave energy, and reduce water quality from flow alteration and accumulation of drift material, including macro algae blooms. Shoreline armoring can alter plant and animal assemblages, including loss of eelgrass and copepods, increase beach scouring and lowering of beach line, create loss of shallow nearshore habitat and connectivity, and alter shoreline hydrodynamics and drift.
- **Over-water structures and pilings.** Over-water structures can cause altered beach sediment size/type, decreased sediment abundance, light limitation/alteration, declines in water quality from flow alteration, and accumulation of drift material. Over-water structures can alter plant and animal assemblages and alter access to shallow nearshore corridors.
- **Boat Ramps.** The presence of boat ramp, stairways and other similar structures can alter beach sediment size/type as well as sediment distribution patterns. Ramps can also alter plant and animal assemblages and alter shoreline hydrodynamics and drift.
- **Stormwater-wastewater inputs.** Uncontrolled stormwater-wastewater inputs can cause low dissolved oxygen, contaminant loading, nutrient and toxics loadings, physical scouring from increased runoff, increased shoreline erosion from poor stormwater conveyance/maintenance, and alteration of beach hydrodynamics. Uncontrolled stormwater-wastewater inputs can alter plant and animal assemblages, including increased macro algae blooms e.g. leaf lettuce, damage habitat due to eelgrass declines from smothering, anoxia, shading, forcing habitat shifts due to blooms, and accumulation of nutrients.
- **Disruption of tidal zone.** Land filling and dredging below the MHHW line may result in altered beach sediment size/type, decreased sediment abundance, and increased wave energy. Land filling and dredging can alter plant/animal assemblages, and result in loss of shallow nearshore corridor, loss of riparian habitat, beach scouring and/or lowering, and loss of connectivity.

- **Loss of riparian vegetation.** Effects of riparian vegetation loss can include increased temperature and reduced organic input (food web). Loss of riparian vegetation can reduce shade, increase erosion, and reduce the availability and function of large woody debris, including organic material availability. These stressors to the shoreline environment may be the result of individual actions or as part of system developments, such as residential development and development of streets and utilities.

On a shoreline planning level scale, and taking into account the drainages into the Mukilteo shoreline, activities in the City's shoreline jurisdiction contribute to past, present, and future opportunities and constraints for maintenance, restoration, and protection of ecological conditions and fish and wildlife habitat. The Mukilteo shoreline planning area has been subject to a series of activities and actions over time including shipping, railroad, timber harvest, munitions depot, fisheries harvest, and filling and dredging. In the City of Mukilteo, population is projected to increase to 22,000 persons by 2025, and additional land may be annexed down to 148th Street, as well as part of the Meadowdale Gap Area that includes Norma Beach. Collectively, these activities are likely to alter basin conditions that impact ecological functions. However, the City has taken proactive measures to protect much of the remaining undeveloped critical areas and has identified them as open space, offering significant opportunity to cumulatively enhance and restore shoreline functions. Finally, there are several developments proposed in the Urban Environment Designation (within City limits and Everett City limits), which could provide an opportunity for shoreline development and some shoreline/nearshore restoration.

One of the greatest impacts to the nearshore that exists today is the number of creosote piles that are present along the developed shoreline from Lighthouse Park to the old Tank Farm Pier. There are 4,087 creosote pilings out of a total of 4,154 pilings (excluding the Rail-Barge facility) or 98%. Their removal will be a significant remediation for the nearshore environment. The following table provides a sense of magnitude of the issue. As redevelopment occurs, these piles will either be replaced with steel or concrete piles or removed. However, there are existing development projects that are on piles and these have not been included in the overall count as many of them are under structures and there is no access to provide the count of piles holding up enclosed structures. In addition, the Port of Everett Rail-Barge Transfer Facility also adds 550 steel and concrete pilings along the nearshore. Again, the summary chart is to provide a sense of magnitude and what could occur over a long period of time as the waterfront is transformed or redeveloped and whether there will be a positive net benefit with this redevelopment.

Information on the quality, quantity and location of this limited resource needs to be specific enough to identify conflicting uses so that rational policy choices can be made.

Local master programs are required to evaluate and consider cumulative impacts associated with future development on shoreline ecological functions and other shoreline functions.

Cumulative impacts to the shoreline environment may result from a wide range of possible actions. Consistent with the guidelines, an appropriate evaluation of cumulative impacts on ecological functions will consider reasonably foreseeable future development and use of the shoreline that is regulated by the shoreline master program, as well as actions that are caused by unregulated activities and development exempt from permitting.

To ensure "no net loss of ecological functions" and protection of other shoreline functions and/or uses, master programs must 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:

- *current circumstances affecting the shorelines and relevant natural processes;*
- *reasonably foreseeable future development and use of the shoreline;*
- *beneficial effects of any established regulatory programs under other local, state, and federal laws;*
- *unregulated activities,*
- *development exempt from permitting, and*
- *effects such as the incremental impact of bulkheads, piers, or runoff from newly developed properties.*

However, there are practical limits when evaluating impacts that are prospective and sometimes indirect. To accommodate for these the City has relied on the use of evaluation, measurement, estimation, or quantification of impacts consistent with the guidance of RCW 90.58.100(1) and WAC 173-26-201(2)(a).

The above guidelines provide a way for the master program policies and regulations to be developed to assure that the known commonly occurring and foreseeable cumulative impacts do not cause a net loss of ecological functions of Mukilteo's shoreline. If enhancement is incorporated with the planned redevelopment, the net affect will likely be positive for Mukilteo's urban waterfront shoreline, since the shoreline has been so heavily impacted in the past.

## Effects of the Proposed Actions

The effects of a proposed action on the marine ecosystem, and human community include the present and future effects added to the effects that have taken place in the past. Such cumulative effects must also be added to effects (past, present, and future) caused by all other actions that affect the same resource.

Cumulative effects on a given resource, in this case the shoreline ecosystem, and human community are rarely aligned with political or administrative boundaries. Resources typically are demarcated according to agency responsibilities, i.e. state, county, and city boundaries. Because natural resources are not usually so aligned, each political entity actually manages only a piece of the affected resource or ecosystem.

For the purposes of Mukilteo's shoreline planning process, cumulative impact and effects are as defined in the National Environmental Policy Act (NEPA) (40 CFR § 1508.7).

### *Sec. 1508.7 - Cumulative impact.*

*Effects and impacts as used are synonymous. Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.*

In the granting of all permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if variances were granted to other developments 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.

Overwater structures: discharges of dredged or fill material into waters of the United States, including wetlands, should not occur unless it can be demonstrated that such discharges, either individually or cumulatively, will not result in unacceptable adverse effects on the aquatic ecosystem (Guidelines: EPA CFR 40 Part 230, December 24, 1980).

Stormwater management is fundamental to water quality. The addition of impervious surfaces increases flow quantities and decreases the travel time of water through the environment, increasing pollution concentrations and erosion. Natural processes often determine if habitat is available and other aquatic components relate to the quality of habitat available. Vegetation and water quality play a direct role in maintaining habitat.

The introduction to Section 230.10(a) recognizes that the level of analysis required may vary with the nature and complexity of each individual case. Similarly, Section 230.6 ("Adaptability") makes clear that the Guidelines:

*It is unlikely that the Guidelines will apply in their entirety to any one activity, no matter how complex. It is anticipated that substantial numbers of permit applications will be for minor, routine activities that have little, if any, potential for significant degradation of the aquatic environment.*

It is important to recognize, however, that in some circumstances even small or temporary fills result in substantial impacts, and that in such cases a more detailed evaluation is necessary. These minor impacts would not result in a net loss of ecological functions but in combination could result in a net loss.

Shoreline ecosystems have been found to be so resilient and adaptive to change. By their very fluid nature, shorelines change over time. But, if the components of the environment (environmental values) are sustained, then the values will be sustained. These components are the ecological functions that work individually and together to create a functioning shoreline environment. Thereby using the "ecological functions necessary to sustain shoreline resources" as the measure assures that the relevant components of any particular shoreline are identified and can be protected through implementation of the *Shoreline Master Program*.

WAC 173-26-201(2)(c) implements the Act's policy on protection of shoreline natural resources through protection and restoration of ecological functions necessary to sustain these natural resources. The concept of ecological functions recognizes that any ecological system is composed of a wide variety of interacting physical, chemical and biological components, that are interdependent in varying degrees and scales, and that produce the landscape and habitats as they exist at any time. Ecological functions are the work performed or role played individually or collectively within ecosystems by these components.

WAC 173-26-201(2)(c) requires the shoreline master program contain policies and regulations that assure, at minimum, "no net loss of ecological functions" necessary to sustain the shoreline's natural resources. To achieve this standard while accommodating appropriate and necessary shoreline uses and development, the master program establishes and applies the following:

1. Environment designations with appropriate use and development standards;
2. Provisions to address the impacts of specific common shoreline uses, development activities and modification actions;
3. Provisions for the protection of critical areas within the shoreline; and
4. Provisions for mitigation measures and methods to address anticipated impacts.

It is the aggregate effect of all four components that provides for necessary and appropriate development while assuring no net loss of shoreline ecological functions.

The environment designation system's division of the jurisdiction into areas for particular types and intensities of development is the basic layer of the system. The current character of an area in comparison to the future character, established in a proposed environment designation for that area, generally determine the range and degree of potential impacts to shoreline ecological functions resulting from

development in that setting. The environment designation system also is intended to assure that, at least at the broadest level, like areas will be treated alike, a basic fairness issue.

The City of Mukilteo is nearly built out and along the shoreline there will be a limited number of urban land uses and few undeveloped areas will remain on the shoreline.

The urban conservancy shoreline is planned for residential development, typically landward from top-of-slope, while the urban waterfront is planned to undergo intense development pressure from essential public facilities such as the multi-modal station, recreation, waterfront access, and mixed-use re-development.

## Proposed/Completed Nearshore Projects

- New Washington State Ferry Terminal
- Proposed pedestrian bridge at Sounder Station (outside the shoreline area)
- Port of Everett rail/barge transfer facility (Completed)
- NOAA expansion and re-development
- Re-development of Mukilteo Lighthouse Park
- Removal of Tank Farm Pier
- Replacement of BNSF double tracks in some locations
- Possible triple-tracking by BNSF

## Cumulative Effects of these Projects

- Beach enhancement and backshore re-vegetation
- Day-lighting of Japanese Gulch Creek
- Short-term construction activities:
  - Removal and installation of piles will create a disturbance via in-water noise and vibration
    - In-water work will be limited to periods of time when sensitive species are least present
  - Installation of piling and anchoring systems for new piers will cause turbidity
    - Dispersed through wave action
  - Effects of traffic, noise, and dust to community
  - High probability of encountering archaeological resources
  - Increased noise and air pollution
- Long-term effect of projects:
  - Increased human activity along waterfront will affect salmonid, bald eagle, and marbled murrelet use of nearshore habitat
  - Removal of Tank Farm Pier creosote pilings and addition of non-toxic in-water structures for rail/barge transfer facility and new ferry terminal facility will have a positive impact on water quality
  - New stormwater treatment facilities will improve water quality of Possession Sound
  - No expected effects to topography, geology, soils, or hydrology
  - Cumulative effects on wildlife include fragmentation of habitat

- Creation of an active, people-oriented waterfront including traffic improvements, parking structure, waterfront promenade, residential and commercial development, improvements to area open space and recreational facilities.
- Improved access between residential, commercial, and recreational areas
- Increased economic activity and employment
- Re-location of tribal and non-tribal fishing and harvesting to be nearer to Elliott Point

## Water-Dependent Development

The Coastal Zone Management Act (CZMA) requires participating states to give priority consideration to water-dependent uses when planning major facilities in the coastal zone. It encourages states to develop policies to balance the competing demands on finite coastal resources, such as sites suitable for water-dependent uses, and to implement these policies by:

1. Preserving existing water-dependent uses (i.e. Washington State Ferries)
2. Reserving appropriate vacant lands for water-dependent uses
3. Designating lands for re-development with water-dependent uses

The Shoreline Management Act (Act) establishes the concept of preferred uses of shoreline areas. According to RCW 90.58.020, “uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the state’s shorelines.” If alteration of the natural condition of the shorelines is allowed, priority is given to the following uses:

1. Single-family residences
2. Ports
3. Shoreline recreational uses
4. Industrial and commercial developments that are particularly dependent upon their location on, or use of, the shorelines
5. Other developments which will provide an opportunity for substantial numbers of people to enjoy the shorelines

While the Act does not categorically prohibit all non-water-dependent uses, water-dependent uses are nevertheless preferred. The concept of use preferences is particularly applicable to shorelines under intense development pressure for essential public facilities and port- and harbor-related industrial activity where shorelines are limited and extremely valuable.

## Scope of Assessment

The evaluation of cumulative impacts requires that discussions of cumulative impacts reflect the severity of the impacts and their likelihood of occurrence.

The following three elements are necessary for an adequate cumulative analysis:

1. Either a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the City (i.e., the list approach); or a summary of projections contained in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions (i.e., the plan approach).
2. The assessment of cumulative impacts must examine reasonable options for mitigating or avoiding any significant cumulative effects of the master program.



3. Review of a non-project proposal should include a consideration of other existing regulations and plans, and any under development.

The master program policies and regulations should use the permitting or conditional use permitting processes to ensure that all impacts are addressed and that there is “no net loss of ecological function of the shoreline after mitigation” (WAC 173-26-201).

## Setting and Assumptions

One of the principal goals of the Master Program and the City’s Comprehensive Plan is to allow for redevelopment of mixed-use structures that compliment the multimodal station and is complementary to Mukilteo’s 100-year-old historic lighthouse. Elements of this redevelopment are:

- Ferries
- Sounder and pedestrian bridge
- Port of Everett rail/barge transfer facility
- NOAA expansion

## Regulation

In addition to governing Federal and State laws, i.e. Endangered Species Act, Clean Water Act, Model Toxics Control Act, etc. the City has adopted specific environmental policies and regulations that apply to all uses, developments and activities that may occur within the shoreline jurisdiction regardless of the Master Program environment designation. They are to be implemented in conjunction with the specific use policies and regulations found in this *Shoreline Master Program*.

The Shoreline Management Act (SMA) mandates the preservation of the ecological functions of the shoreline by preventing impacts that would harm the fragile shorelines of the state. When impacts cannot be avoided, impacts must be mitigated to assure “no-net-loss of ecological function” necessary to sustain shoreline resources (WAC 173-26-201(2)).

The environmental protection policies and regulations address general environmental impacts and critical areas. General environmental impacts include effects upon the elements of the environment listed in the State Environmental Policy Act (SEPA) (WAC 197-11-600 and WAC 197-11-444).

The City’s SEPA laws and the proposed *SMP* include the following requirements:

- The General Policies include analysis of impacts, including cumulative impacts, mitigation, bonding, and monitoring as well as stipulating regulations protecting “critical areas” including wetlands, geologic sensitive areas, frequently flooded areas, and fish and wildlife habitat conservation areas. Critical areas are also protected under the City’s Critical Areas regulations.
- The Master Program is to be implemented in concert with the City’s Critical Areas Ordinance and uses mitigation sequencing to protect the environment: Avoid, Minimize, Rectify, Reduce, Compensate (WAC 173-26-201(2)(e)). The adverse impacts of shoreline developments and activities on the natural environment shall be minimized during all phases of development (design, construction, operation, and management).
- Development and use within, and management of, the shoreline areas shall result in “no net loss of ecological functions.” Mitigation compensates for adverse impacts caused by a particular

development or activity. Enhancement is to achieve overall improvement in shoreline ecological processes and functions over time.

- Shoreline developments or activities that serve to enhance ecological functions and/or values and those that protect and/or contribute to the long-term restoration of properly functioning conditions (PFCs) for proposed, threatened and endangered (PTE) species are consistent with the fundamental goals of this *Shoreline Master Program* and shall be encouraged.

In addition, the following environmental regulations have been adopted in the draft *SMP*:

1. Shoreline development and activity shall be located, designed, constructed, and managed in a manner that avoids, minimizes, rectifies, reduces, and compensates adverse impacts to the environment. The preferred mitigation sequence (avoid, minimize, rectify, reduce, compensate) shall follow that listed in WAC 173-26-020(2)(e)).
2. In approving shoreline developments, the City shall ensure that shoreline development, use, and/or activities will result in “no net loss of ecological functions” necessary to sustain shoreline resources, including loss that may result from the cumulative impacts of similar developments over time. To this end, the City may require modifications to the site plan, and adjust and/or prescribe project dimensions, and intensity of use as deemed appropriate. If impacts cannot be avoided through design modifications, the City shall require mitigation commensurate with the project’s adverse impacts and at a rate prescribed in the regulations.
3. Identified significant short-term, long-term, or cumulative adverse environmental impacts lacking appropriate mitigation shall be sufficient reason for permit denial.
4. On-site compensatory mitigation shall be the preferred mitigation option, except where off-site mitigation can be demonstrated to be more beneficial to fish and wildlife resources.
5. If off-site mitigation, including beach enhancement, is implemented, the applicant must demonstrate, to the satisfaction of the Shoreline Administrator/Planning Director that the mitigation site will be protected in perpetuity. This may be accomplished through various means, including but not limited to, dedication of a permanent easement to the City or approved non-profit agency.
6. Where mitigation for loss of or impact to wetlands or fish and wildlife resources is required, an enhancement plan shall be required. Enhancement plans shall be prepared by a professional wildlife biologist or fisheries biologist as determined appropriate by the Planning Director. The enhancement plan shall contain at a minimum:
  - a. A discussion of measures to preserve existing habitats and opportunities to restore habitats that were degraded prior to the proposed land use activity.
  - b. A discussion of proposed measures which mitigate the impacts of the project and established success criteria.
  - c. An evaluation of the anticipated effectiveness of the proposed mitigation measures.
  - d. A discussion of proposed management practices which will protect fish and wildlife habitat after the project site has been fully developed, including proposed monitoring and maintenance programs.
  - e. As a condition of approval, the City should require periodic monitoring for up to five years from the date of completed development to ensure the success of required mitigation. The monitoring period will be extended if the success criteria set forth in the approved mitigation plan fail to be accomplished.

## Development Potential

Re-use and re-development of existing historic structures is encouraged, and the proposed *SMP* may result in some limited expansion of existing structures and the limited ability to construct new water-oriented and overwater structures or piers. Non-water-dependent uses will be allowed upland of the OHWM and overwater in association with a mixed-use development.

## Upland Geology and Soils

Within the Urban Conservancy environment, development of single-family residential structures and associated utilities, landscaping, access, and other typical improvements will result in temporary impacts to soils, with accompanying risk of erosion.

Commercial and other non-residential development anticipated within the Historic Urban environment will likely result in greater proportional impervious surface site coverage and intensity of site development than is generally associated with residential development, with accompanying greater potential for erosion.

Most of Mukilteo's shoreline (90%+) has the railroad tracks and steep and unstable slopes that meet the designation criteria for Geologically Sensitive Areas under the 2006 Mukilteo Critical Areas Ordinance (CAO) (MMC 17.52A). The CAO establishes requirements for geotechnical evaluation of proposals that may impact or be impacted by geologically sensitive areas. Minimum setback requirements and other standards that minimize and mitigate geological impacts apply. Any activities that increase the threat of landslide or erosion of geologically sensitive areas are prohibited by the CAO. Mukilteo's clearing and grading ordinance (MMC15.16) includes requirements for use of appropriate construction BMPs to limit direct and indirect impacts of erosion and associated downstream water quality impacts.

Within the Urban Conservancy environment, the *Shoreline Master Program* and Critical Areas Ordinance requires a varied setback from the shoreline for residential uses in the Urban Conservancy environment, based upon the top of slope, with the effect of further limiting encroachment within geologically sensitive areas. This setback can be reduced under certain conditions, but it is assumed that all new residential development in this environment will occur at a setback that minimizes impacts to, or from, geologically sensitive areas. Steep slopes of 40% or greater are not suitable for placing structures or locating intense activities or uses due to the inherent threat to public health and safety.

No specific setbacks are proposed in the *Shoreline Master Program* for mixed-use or essential public facilities within the Urban Waterfront environment. Development is required to conform to the City's flood hazard mitigation ordinance and special constructions standards are required. Alteration of shoreline-associated bluffs are not allowed by the policies of the *Shoreline Master Program*, except when it is conclusively demonstrated that such work is necessary to prevent imminent damage to existing development. It is likely that some construction of new or replacement slope stabilization measures or rip-rap will be required to protect some of the existing structures in the Urban Waterfront environment. With the higher residential density potential assumed under existing shoreline regulations, increased impervious surface and potential for erosion would likely occur as opposed to the regulations of the proposed *Shoreline Master Program*. Impacts to or from geologically sensitive areas are assumed to be minimal under either the existing or proposed regulatory systems.

A certain level of erosion is natural to the Puget Sound area. Erosion is the primary source of sand and gravel found on beaches including accretion beaches (gravel bars). Under the existing *Shoreline Master*

*Program*, extensive “hardening” of feeder bluff areas by BNSF would eventually starve beaches down drift of the bluff, resulting in lowered beach profiles and the potential for increased erosion. Changes in the beach substrate would likely result in habitat impacts.

Under the proposed *SMP*, the following new regulations are proposed:

- New development or the creation of new lots should not cause any foreseeable risk from geologic conditions to people or improvements during the life of the development.
- Development will only be permitted in locations where no slope protection (i.e. bulkheads, rip-rap, retaining walls, etc.) is necessary, or where non-structural protection (i.e. soft shore vegetated buffers) is sufficient for the life of the project.
- Proposals will be designed and constructed in a manner that does not increase or result in slope instability or sloughing.
- When no alternatives, including relocation or reconstruction of existing structures, are found to be feasible and less expensive than the proposed stabilization measure, stabilization structures or measures to protect existing primary residential structures may be allowed in strict conformance with WAC 173-26-231 shoreline modification requirements, and then only if no net loss of ecological functions will result.

In geologically sensitive areas, such as marine bluffs, development is prohibited in the sensitive area and buffer. Limited development for public access may be allowed, for which the City may require geotechnical review and impose conditions to ensure that proposals do not increase the risk of hazard. By being limited to public access stairs, proliferation will be minimized. Special studies may be required by the City’s Critical Areas regulations. Conditions could include limited access width, depth onto beach, associated armoring and number of access points.

Clearing is limited to the minimum necessary. Removal of invasive species is allowed as part of an enhancement or restoration project. Development must be consistent with the City’s clearing, grading and erosion control standards. Application submittals for grading permits must address re-vegetation, and methods of nearshore and riparian corridor protection. Very limited tree and shrub removal along shoreline is allowed with new development.

## Transportation/Circulation

With the potential construction of 20 (under the proposed *Master Program*) or 30 (under existing regulations) new homes and four new non-residential structures within Mukilteo’s shoreline jurisdiction, increased traffic will result. The City’s existing Transportation Plan establishes level-of-service standards for the existing transportation network. The City’s Transportation Plan has evaluated the impacts of growth through the year 2020 based upon development opportunities presented in the Comprehensive Plan and the *SMP*.

## Air Quality

In response to the nation’s growth and increased air pollution brought about by urbanization, industrial development, and the increasing use of motor vehicles, the Environmental Protection Agency, under the authority of the federal government, passed the Clean Air Act. The purpose of the Clean Air Act is to protect and enhance the quality of the nation’s air resources and to promote the public health, welfare, and

productive capacity of its population. Under the Clean Air Act, the Mukilteo waterfront area, as well as the urbanized areas of Snohomish, King, and Pierce Counties, is within a Carbon Monoxide and an Ozone maintenance area.

The nearshore of Mukilteo is heavily impacted by transportation and freight mobility. Carbon monoxide (CO) emissions are generated by vehicles, the Mukilteo-Clinton ferry, the Sound Transit Commuter Rail Facility, the Burlington Northern Santa Fe freight shipping lines, and the Everett Rail-Barge Transfer Facility. Each of these sites emits CO emissions from the combustion of diesel and fossil fuels. As of current, CO emissions emitted from the waterfront include:

- Vehicles idling at the ferry terminal
- Diesel-powered ferries that idle during loading and unloading
- The Sound Transit commuter trains are powered by cleaner diesel engines, but are a source of CO emissions when the train idles for several minutes between scheduled service runs
- The Everett Rail-Barge Transfer Facility includes a diesel-powered train, diesel-powered tug boats, and an electric, rail-mounted gantry crane. While the train does emit CO, steps were taken to mitigate for these impacts by the installation of an electric-powered crane that would not be a source of CO emissions.

According to a 2006 Department of Ecology air quality map, these combined vehicle emissions meet DOE's standards for both CO emissions and the 1-Hour Ozone Maintenance area air quality conditions. However, DOE revoked the 1-Hour Ozone Maintenance Area criteria as of June 15, 2005, and replaced it with a new 8-Hour Ozone Maintenance Area. It has not been determined whether the Mukilteo waterfront meets the new 8-Hour Ozone Maintenance criteria. As projects come on-line, additional studies will be required to determine if the proposed improvements to the City of Mukilteo waterfront meet the 8-Hour Ozone Maintenance Area criteria. In addition, discussions at the state and local level are being held regarding adopting a new law concerning idling vehicles. If this potential legislation is adopted, new air quality standards may be implemented or requirements for use of smaller, auxiliary engines may be required for Mukilteo Ferry Terminal and Commuter Rail operations.

## Upland Biological Resources

The *Mukilteo Inventory and Characterization* describes shoreline habitat in detail. Important upland biological resources include bald eagle nest sites and breeding territories.

## Marine Biological Resources

Important marine resources within Mukilteo's shoreline jurisdiction include eelgrass beds, forage fish spawning areas, shellfish beds, and backshore wetlands.

Critical salt-water habitats provide important rearing and nursery areas for valuable recreational and commercial species. They provide habitat for many marine plants, fish and animals. These habitats should be protected because of their importance to the marine ecosystem of both the City and the State of Washington. Developments within or adjacent to the shoreline jurisdiction where critical salt water habitats exist, should not directly or indirectly change the composition of the beach and bottom substrate. Habitat enhancement and restoration projects may change beach or bottom substrata only when appropriate to restore or enhance these habitats.

All projects must be designed to minimize impacts on critical saltwater habitats and the shoreline environment. Impacts to critical saltwater habitat functions must be mitigated to result in equal or better ecological function. This may be accomplished by providing off-site mitigation or by financially participating in or supporting beach enhancement.

## Visual Resources

The aesthetic qualities of Mukilteo's shoreline are essential to the character of our existing community and make a significant contribution to the appeal that draws new development to the waterfront area. Though aesthetic functions are difficult to measure quantitatively, most observers would agree that features such as native vegetation, views of the water to the north and west, the Cascade Mountains to the east, and of the Olympic Mountains to the west along with the historic nature of the shoreline development are of critical aesthetic importance and merit determined measures to ensure these view corridors. The proposed *Shoreline Master Program* recognizes the visual importance of the shoreline, and includes several provisions to protect visual resources, including height restrictions, limitations on clearing of native vegetation on steep slopes, and prohibition of aquaculture. Some impairment of existing views is inevitable as shoreline parcels become developed with new homes or other structures. Cumulatively, however, under the proposed *Shoreline Master Program* the additional impacts to visual resources are not likely to be significant if the structure alignment guidelines are followed.

## Historic and Cultural Resources

The waterfront area that the City now occupies was frequented by Native Americans, and intact archaeological resources represent a record of their occupation and use of the Mukilteo shoreline. While many of the shell middens and burial sites that once occurred in the area have been disturbed or buried, either by development or through natural processes such as beach erosion, it is probable that intact resources still remain.

The proposed *Shoreline Master Program* promotes a balance between the desire to protect historic character and allow for re-development and the careful stewardship of sensitive shoreline resources. While allowing some new development and re-development, the proposed policies of the *Shoreline Master Program* are intended to ensure such development minimizes impacts to sensitive shoreline areas, and does not result in a net loss of shoreline function.

- National Historic Preservation Act: Area of Potential Effects (APE) for proposed projects in Mukilteo. Horizontal APE is approx. .75 miles long and .25 mile in length. Vertical APE is 10-30 ft. for excavation of stormwater vaults, and max. 100-150 ft. for drilled support columns.
  - High probability areas: base of bluff line at the southern boundary of the APE, crest of sand berm that follows lines of Front Street, and near the mouths of Japanese Gulch Creek and Brewery Creek.
- Survey of historic buildings and structures per Historic Property Inventory Forms: none are eligible for listing in National Register of Historic Places (except for the Lighthouse, which is already listed).

## Hazardous Materials

Hazardous materials include chemicals or substances such as petroleum products, pesticides, solvents, wood preservative, cleaners, and other potentially toxic or volatile materials. Threats to ground or surface waters from these types of materials are generally greater around intensely urban or industrial land uses. The Tank Farm site was a DOE cleanup site (or brownfield) for five years and was final 5-22-2006..

Commercial use, storage, and disposal of most hazardous materials is tightly regulated by the Washington State Department of Ecology.

## Water Quality

Marine water quality can be impacted by urban runoff carrying pesticides, hydrocarbons, fertilizer, sediment, or other non-point sources of contaminants generated by commercial and residential development and land uses. Such impacts will likely incrementally increase with anticipated development under the proposed *Shoreline Master Program*. The limited density and requirements for shoreline re-vegetation under the proposed *Shoreline Master Program* may help mitigate some of these impacts. Similar impacts can be expected with the higher densities and more intensive land uses permitted under existing shoreline regulations.

## Drainage

All shoreline development, use and activities shall utilize best management practices (BMPs) to minimize any increase in surface runoff and to control, treat and release surface water runoff to protect the quality and quantity of surface and groundwater. Such measures may include but are not limited to catch basins or settling ponds, installation and required maintenance of oil/water separators, vegetated bioswales, interceptor drains and landscaped buffers. All development must be in accordance with the adopted surface water manual. Re-development in accordance with the adopted surface water management manual may result in improvements to the stormwater infrastructure.

## Energy and Other Utilities

Development under the existing shoreline regulations would result in a greater cumulative consumption of energy resources such as electrical power or petroleum products than would development under the proposed *Shoreline Master Program*. In either scenario, the potential energy needs are within existing capacity, and no significant cumulative impacts to energy resources are anticipated. Other utilities, such as telephone service, cable television, sewer, and water are already established with ample capacity for the anticipated development within shoreline jurisdiction. Additional demands placed on these resources under either re-development scenario are insignificant relative to growth in the surrounding non-shoreline community.

## Housing

No net loss of existing housing is likely with either development scenario.

## Public Services

Public services may include fire and police protection, human services, schools, libraries, or hospital services. Similar residential densities allowable under the existing and proposed shoreline regulations would place similar demands on these services. Re-development of the waterfront was planned under both *Shoreline Master Programs*. The growth allowed with the Washington State Ferries compact alternative is greater than the upland alternative that consumes the majority of the site. The majority of the mixed-use development occurs outside the shoreline zone south of Front Street. The Urban Waterfront represents most of the cumulative impacts to the shoreline, except for expansion of railroad activities.

## Recreation

Under Mukilteo's proposed *Shoreline Master Program*, a greater emphasis is placed on providing public shoreline access than under the existing shoreline regulations, and is required of certain development activities, especially with commercial development in the Urban Waterfront environments. Providing public access along the waterfront will likely result in a higher demand on existing and new recreational facilities such as the promenade, parks, and beach access. The cumulative benefit of waterfront re-development is accrued by providing added recreational opportunities.

## Noise

Noise emanating from a shoreline use or activity, along with noise generated by the railroad operations and train horn noise, have a significant impact on waterfront activities and park uses, as well as residential uses upland in the Old Town area. Noise related to transportation uses are exempt and substantial study was done in the EIS for the Port of Everett Rail-Barge Facilities and will also be addressed in the Washington State Ferries EIS for relocation of the ferry terminal.



## Chapter 8: Public Access

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Shoreline public access is the physical ability of the general public to reach and touch the water's edge or the ability to have a view of the water and the shoreline from upland locations. There are a variety of types of public access, include docks and piers, boat launches, pathways and trails, promenades, street ends, picnic areas, beach walks, viewpoints and others.

An important goal of the Shoreline Management Act is to protect and enhance public access to the state's shorelines. Specifically, the SMA states:

***RCW 90.58.020:*** "The public's opportunity to enjoy the physical and aesthetic quality of the natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally.

"Alterations of the natural conditions of the shorelines of the state, in those limited instances when authorized, shall be given priority for ... development that will provide an opportunity for substantial numbers of people to enjoy the shorelines of the state."

Public access and use of the shoreline is supported, in part, by the Public Trust Doctrine. The essence of the doctrine is that the waters of the state are a public resource owned by and available to all citizens equally for the purposes of navigation, conducting commerce, fishing, recreation and similar uses and that this trust is not invalidated by private ownership of the underlying land. The doctrine limits public and private use of tidelands and other shorelines to protect the public's right to use the waters of the state. The Public Trust Doctrine does not allow the public to trespass over privately owned uplands to access the tidelands. It does however; protect public use of navigable water bodies.

Requiring public access on privately owned property as a condition of development has been the subject of considerable legal review. Our state Constitution and the U.S. Constitution provide both the authority for conducting the activities necessary to carry out the Shoreline Management Act and significant limitation on that authority. While the SMA stresses the need for public access, our state and the U.S. Constitution provide for the protection of certain private property rights. Where public access is required as a permit condition, the courts have stated that there must be a rational and roughly proportionate connection between the project's impact on public access and the public access requirement.

### Relevant Planning Documents

This public access chapter is preceded by several planning efforts to maintain and enhance public access to the shoreline of Mukilteo. The public access policies and strategies included in this Master Plan build on those established in past planning documents.

Relevant policies and development guidelines from the 2010 Comprehensive Plan and the 2007 Parks, Open Space, and Recreation Plan have been incorporated into this Master Plan.

**2010 Comprehensive Plan:** The Mukilteo Comprehensive Plan contains the City's vision for the future of Mukilteo. Included in this document are the City's goals and policies for land use, parks and recreation, shorelines, economic development, transportation, capital facilities, and potential annexations.

**2007 Parks, Open Space, and Recreation Plan:** To comply with the Washington State Growth Management Act (GMA), a Parks, Open Space, and Recreation Plan (Park Plan) has been prepared that reflects the goals and policies adopted in the Mukilteo Comprehensive Plan. The Park Plan is a useful tool to articulate the open space and recreational policies presented in the Comprehensive Plan and to help set priorities. Finally, this functional plan provides a foundation from which to establish the capital budget and allocate funds to complete the proposed projects.

**2009 Bicycle, Pedestrian and Trails Plan:** The Trails Plan was created as a vision for Mukilteo's future bicycle and pedestrian trails system. Included in this document are the City's goals and policies for trails, a trail inventory, and a capital facilities plan prioritizing bicycle and pedestrian pathway needs.

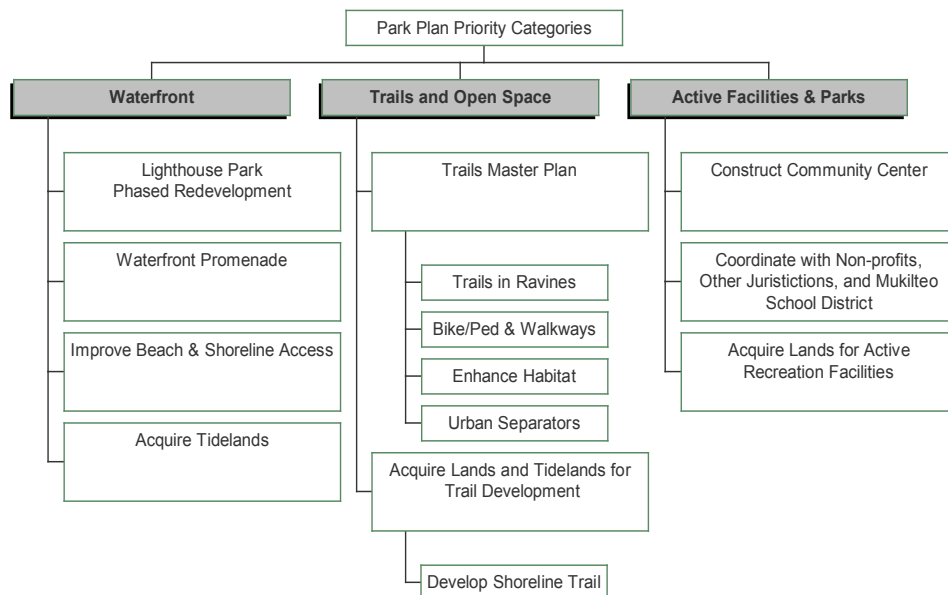
## Public Access Vision Statement

Mukilteo's vision for the future of parks and recreation combines three priorities:

- ***Waterfront:*** increased access to the waterfront through re-development
- ***Trails and Open Space:*** pedestrian trail construction to provide open space access and to connect with the network of bike and pedestrian paths through town
- ***Active Recreation and Cultural Facilities:*** providing quality active recreation and cultural facilities and fields

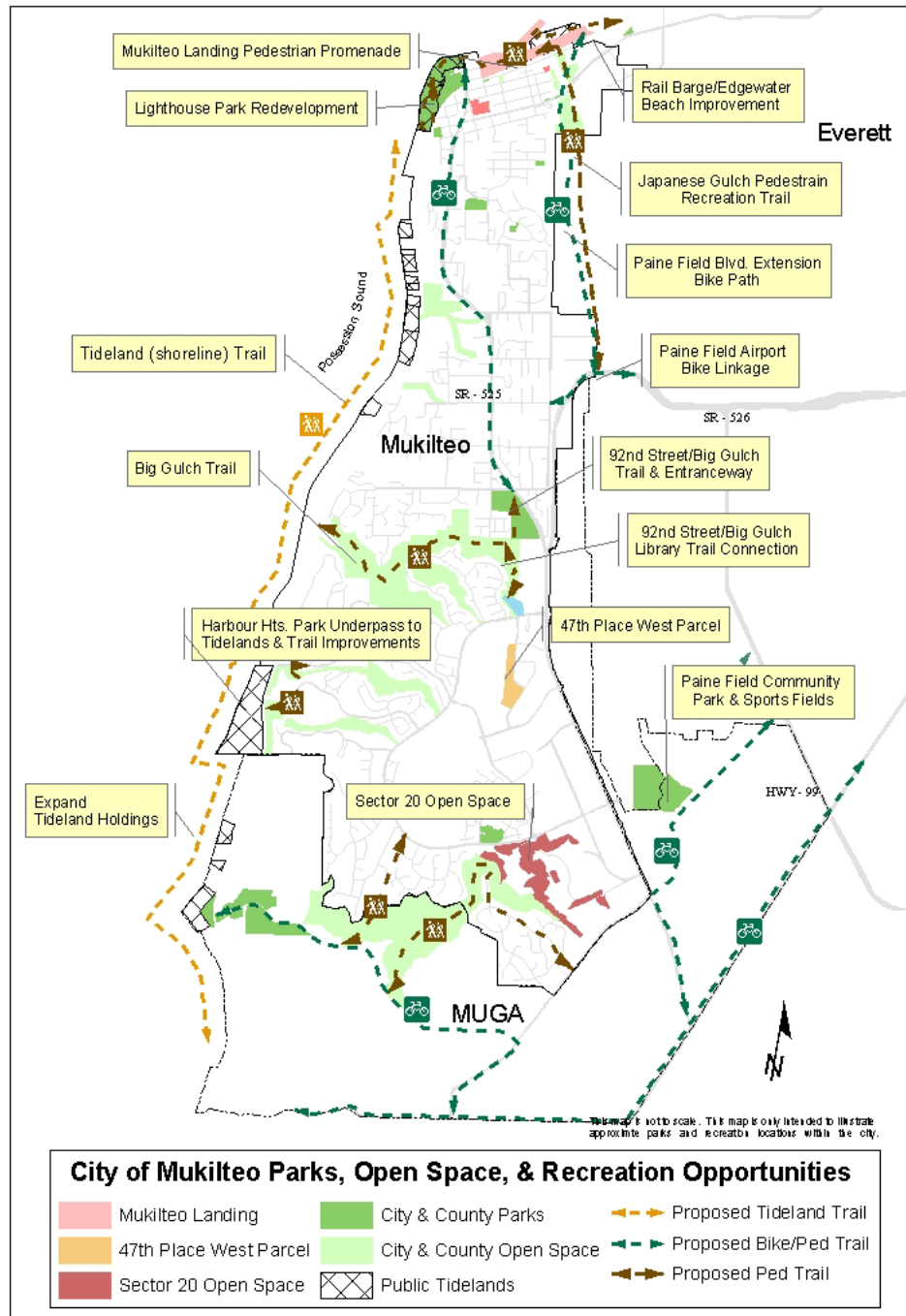
Land acquisition plays an essential role in achieving the vision for each priority category, because there is a limited amount of large land parcels available to add to the City's parks and open space inventory. Even tidelands play an important function in providing additional waterfront access, despite access being available only a portion of each day.

**Figure 13: Park Plan Priority Categories**



The Parks, Open Space, and Recreational Opportunities Map (Figure 14) represents potential opportunities in the above categories. This map indicates where future opportunities exist to enhance the park system through the development of existing facilities and potential future land acquisition.

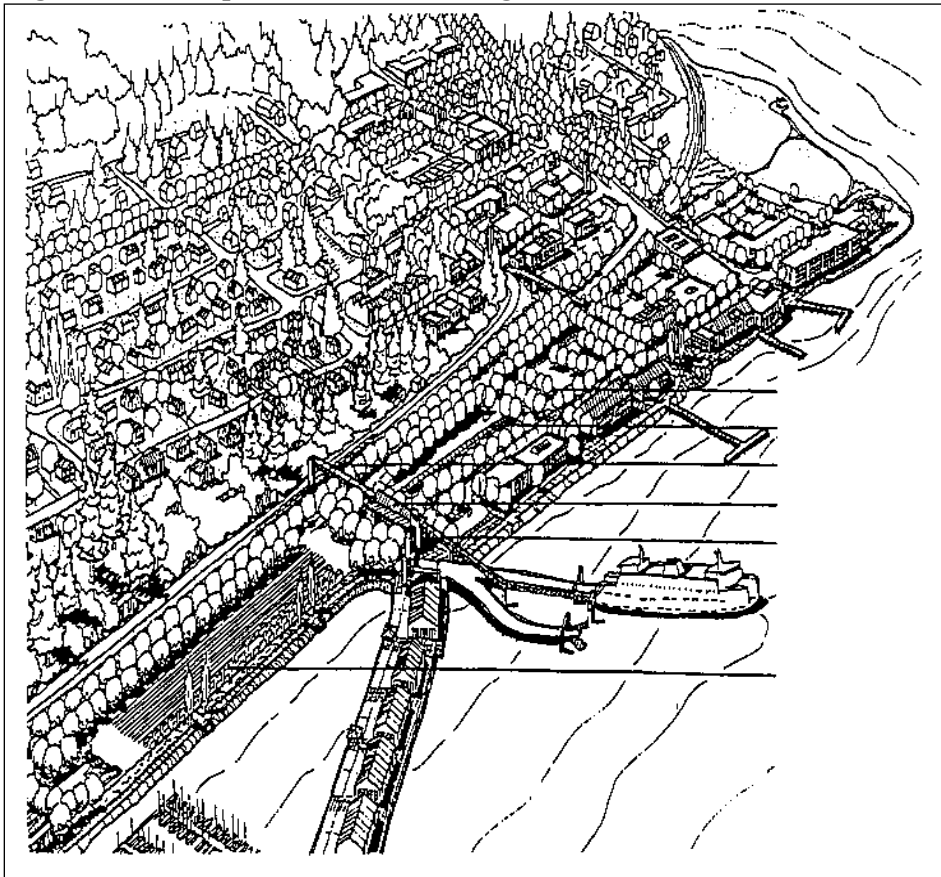
**Figure 14: Parks, Open Space and Recreation Opportunities Map**



## Waterfront Access

Mukilteo has reached a major turning point in waterfront access with the addition of large, highly visible waterfront resources from federal, state and county governments. The City received the lighthouse from the federal government in 2001 and Lighthouse Park from Washington State Parks in 2003. The Mukilteo Lighthouse Park Master Plan adopted in February 2004 is an important component in the re-development of the waterfront area. The U.S. Air Force intends to turn over control of the Tank Farm to the Port of Everett. An updated Multi-modal Master Plan for re-development is under consideration; which will allow a consortium of agencies to direct improvements along the waterfront. Figure 15 illustrates conceptual enhancements proposed under this plan.

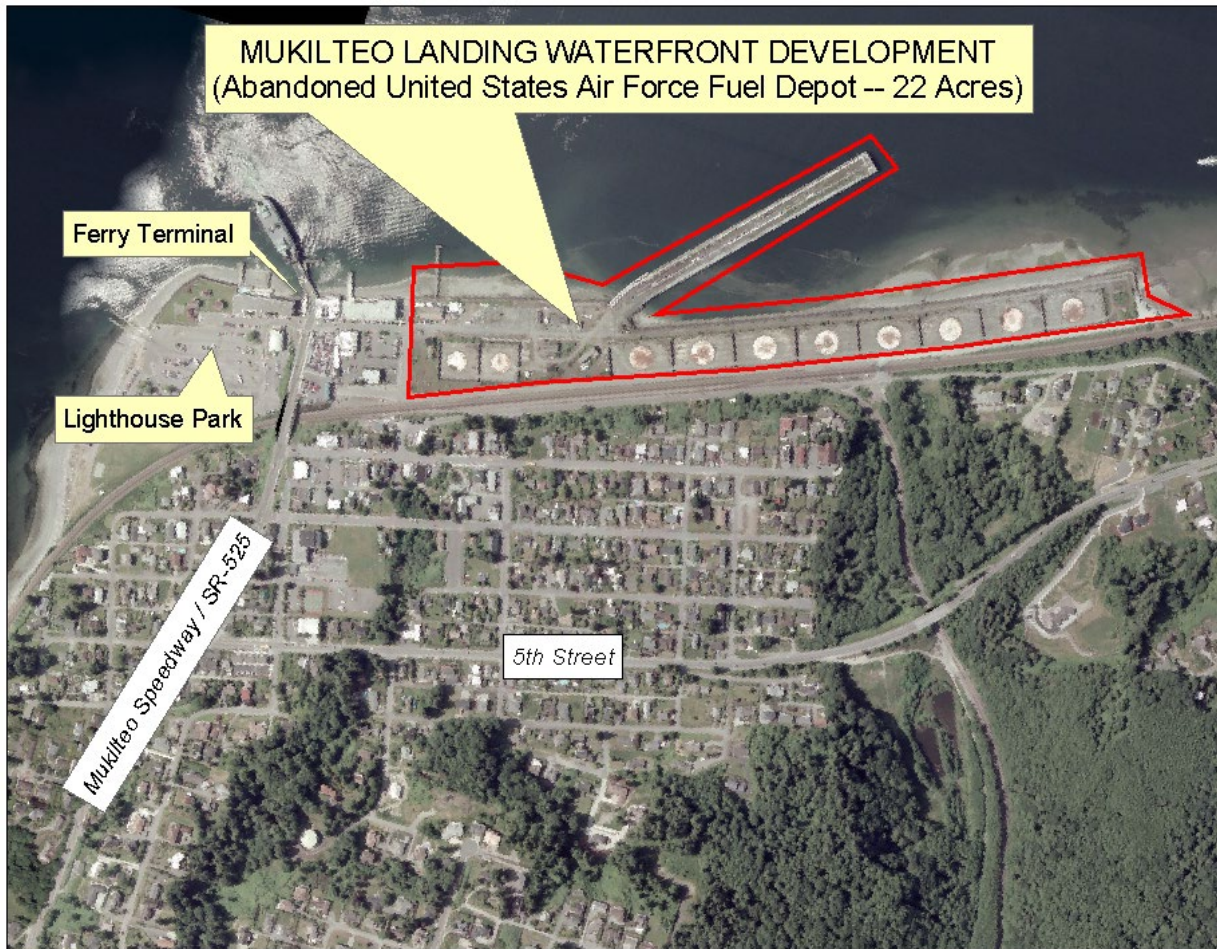
**Figure 15: Conceptual Waterfront Design, from the 1995 Multi-modal Plan**



Re-development will provide a pedestrian waterfront promenade along 3,000 lineal feet of the north shoreline adjacent to Port Gardner Bay wrapping around Lighthouse Park. The promenade will return public access to the waterfront, an asset cut-off nearly sixty years ago. Following this Multi-modal Master Plan, Mukilteo's waterfront will become a prime Snohomish County attraction and provide recreational opportunities for residents and visitors, specifically a walking promenade along the shoreline, access to the waterfront and linkages to parks and open spaces.

Significant progress in redeveloping the waterfront has begun. In 1995, the Multi-modal Master Plan was adopted for the waterfront area. Figure 16 (below) illustrates the waterfront re-development area. The transfer of the Mukilteo Lighthouse and the former State Park to the City allowed joint operation of these important recreation and historical assets as a single complex – Lighthouse Park.

**Figure 16: Overview of Waterfront Redevelopment Area**



In February of 2004, City Council adopted the Lighthouse Park Master Plan after several years of work and public input. Figure 18 is a conceptual diagram adapted from the Lighthouse Park Master Plan that shows the planned improvements for Lighthouse Park.

Together, the Multi-modal Plan and Lighthouse Park Master Plan form the blueprint for providing public access to the waterfront and shoreline in the northern part of the city.



**Figure 17: Overview of Improvements from the Lighthouse Park Master Plan with Boat Launch Alternative**



## Trails and Open Spaces along the Shoreline

Within Mukilteo, several natural ravines link upland areas to the Puget Sound. Local residents refer to these ravines as “gulches.” Due to the lack of development potential, Mukilteo’s gulches are ideal locations for passive recreation, specifically as access corridors to the shoreline, and they provide another important component of open space.

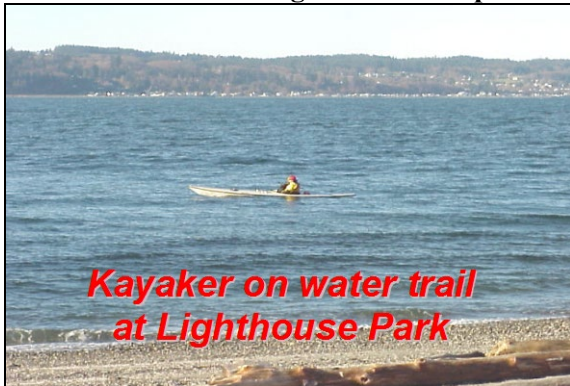
Citizens have expressed concerns about the availability of trails. Others have expressed an interest in the City taking on an active stewardship role of the gulches and maintaining or enhancing tree and vegetative buffers. The City also has a responsibility for stewardship of critical area habitats along stream corridors, surrounding wetlands, and along the shoreline.

The City is taking steps to meet these public demands. The City accepted large donations of open space from Snohomish County. Following the direction expressed by citizens, the City has developed a 2009 Bicycle, Pedestrian, and Trails Plan that explores the development of trails and trail connections throughout the community. An opportunity for new trail construction in Big Gulch presented itself as partial mitigation for Mukilteo Water District’s sewer line replacement project that runs through Big Gulch. Mitigation measures imposed on future developments within the city may increase the trail inventory. Additionally, the City is conceptualizing the development of a shoreline trail. If this idea is implemented it will also increase the total trail inventory.

Pedestrian trails can include several types including expanded sidewalk systems, nature trails, bike trails, and water trails. A unique trail system that parallels Mukilteo’s coastline is the Washington State Water Trail, which extends along the Puget Sound. A Level of Service (LOS) has not yet been developed for this resource. Below are several examples of pedestrian trails in Mukilteo.



**Figure 18: Examples of Trail Types Found in Mukilteo**



Water Trail in front of Lighthouse Park



Portion of Mukilteo's Existing Sidewalk System



Bicycle Trail Next to Paine Field Blvd.



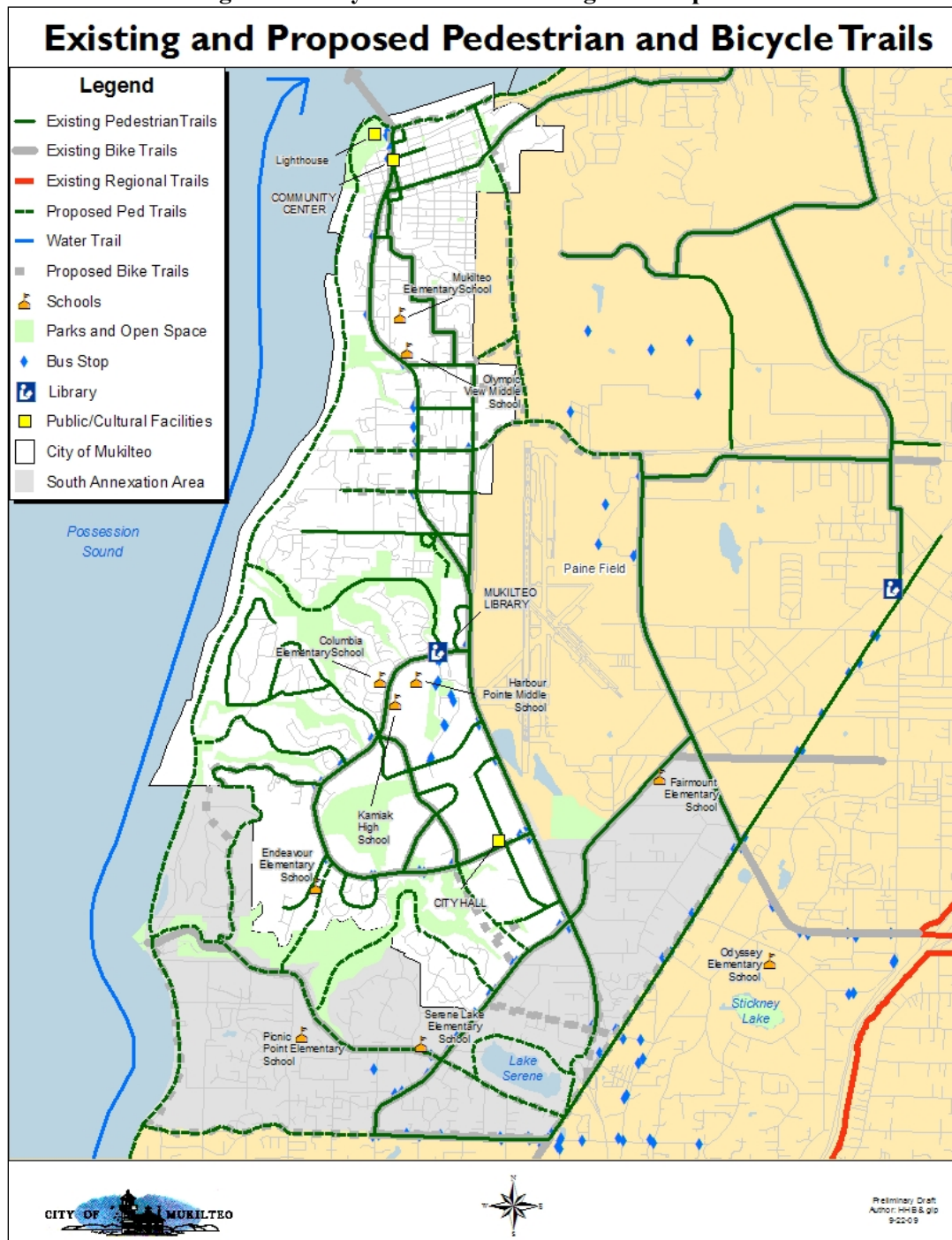
Bicycle Trail on the Mukilteo Speedway



Nature Trail Next to the Library

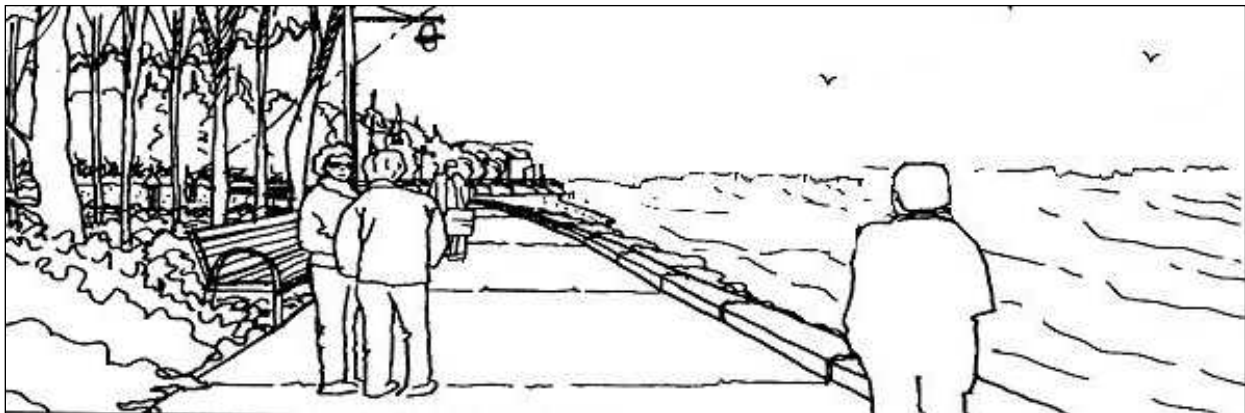


Figure 19: City of Mukilteo Existing and Proposed Trails



The City hopes to add additional pedestrian trails. Specifically, the City intends to develop a waterfront promenade and construct soft trails through the gulches to the water. The promenade will be developed as part of the waterfront re-development as described previously. An illustration of the promenade, adapted from the Multi-modal Plan, that looks toward the west is presented below in Figure 20. A trail through Big Gulch as part of Mukilteo Water District's sewer line replacement project has provided the first opportunity for the City to develop a major pedestrian trail in Big Gulch. As a stated goal, the City would like to acquire more tidelands as opportunities arise. As a long-term vision, tideland acquisition could lead to developing a shoreline trail along the coastline. The City also plans to add additional bike paths to connect existing bike paths within the city and region.

**Figure 20: Conceptual Promenade Drawing (west-facing view) from the Multi-modal Plan**



## Shoreline Priorities and Implementation

The three priorities of this plan for public access: waterfront, trails and open space, and active facilities and parks, have been determined to be the highest parks and recreation needs for the City of Mukilteo, both currently and into the future. Tables 3 and 4 identify each of these priority areas and present specific projects associated with each one. In each priority area, land acquisition and re-development is essential to achieve the City's long-term vision for parks, open space, and recreational facilities for the community. By accomplishing projects under each of these categories, the City of Mukilteo's park system will provide diverse recreational opportunities. Each priority has its own distinct list of projects that can stand alone. Thus, the projects can be undertaken at the same time and may compete for funding separately.

### Priority 1: Waterfront

Re-development of the waterfront is a high priority for the City. Proposed waterfront projects addressed in this plan have local and regional importance. The first project priority is renovating Lighthouse Park. As we have seen, the Lighthouse is an important landmark in Mukilteo. Acquiring tidelands will put beaches back into public holdings and allow residents to walk the shoreline at low tide. Other priority projects are tied to large-scale regional projects, such as relocating the Ferry Terminal, improving shoreline access, and restoring marine habitats. Table 3 highlights specific projects and a timeline to accomplish them.

**Table 3: Waterfront Redevelopment Timeline**

Waterfront Development Projects	Year																			
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Lighthouse Park Redevelopment																				
▪ Phase I (construct beach enhancements, promenade, restrooms, picnic & play area)																				
▪ Phase II (improve Front St. access)																				
▪ Phase III (connect upper & lower downtown)																				
▪ Phase IV (relocate boat ramp & parking lot)																				
Shoreline Access																				
▪ Improve beach/shoreline access to publicly owned tidelands																				
Beach / Shoreline Improvements																				
▪ Enhance Riparian and Marine Habitat (as opportunities occur)																				
▪ Acquire tidelands (on-going)																				

The Lighthouse Park Master Plan Phase 1 outlines four attributes to improve public access:

1. Improve the southern portion of Lighthouse Park including the construction of a new internal access road.
2. Install picnic facilities, restrooms, play area, and sand volleyball courts.
3. Develop a new water-view parking area and turnaround.
4. Beach restoration that includes 1,500l.f. re-planting the marine riparian area with native vegetation, placing drift logs along the shore, and creating channels.

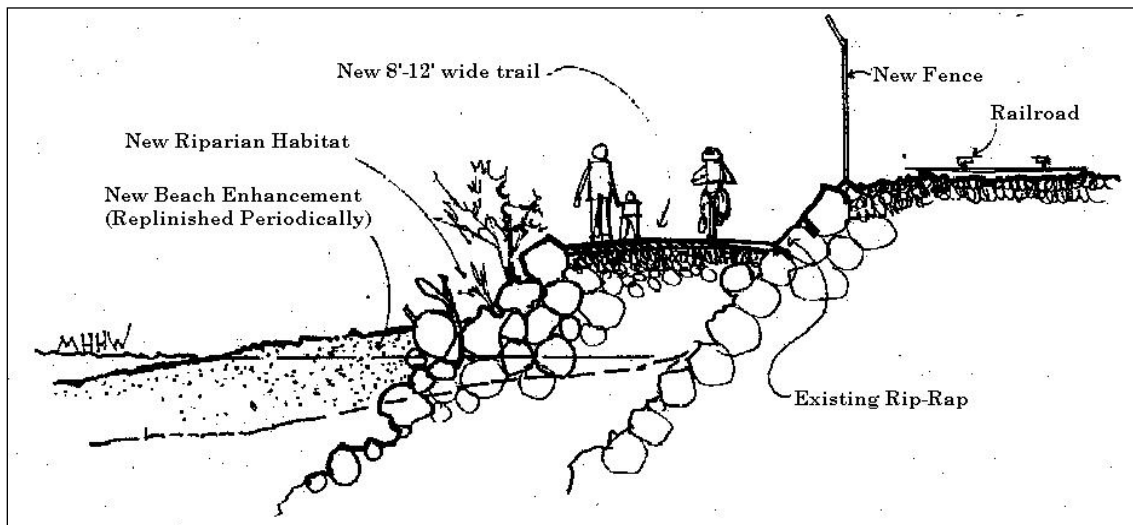
Another waterfront initiative is to provide beach and tideland access along the western side of the City adjacent to Possession Sound. This ambitious effort will take years to fulfill. First, tidelands have to be purchased from private homeowners and BNSF to allow “legal access.” A trail under or over the railroad tracks is necessary to provide safe, legal pedestrian access to the shoreline. Such a structure (i.e. over or underpass) is proposed at Possession View Park. Adequate structures exist at Picnic Point Park and Meadowdale Park. Over and underpass structures will help facilitate the long-range concept of “beach-walks,” first proposed in the 2003 City of Everett Shoreline Public Access Plan. Figure 21 exemplifies the types of over or underpass structures that could provide shoreline access where feasible and legal, such as at Possession View Park.

**Figure 21: Examples of Pedestrian Access Structures to the Shoreline**



Figure 22 (below) shows a cross-section of a proposed beach walk terrace between Mukilteo and Pigeon Creek in Everett (City of Everett, 2003 Shoreline Public Access Plan). This diagram represents a typical trail. A similar design could be employed for new shoreline trails in Mukilteo.

**Figure 22: Cross-section of Proposed Beach Walk Terrace**



## **Priority 2: Trails**

In conjunction with waterfront re-development, one of the most important elements of the re-development is building a pedestrian waterfront promenade. This is one of the major objectives yet to be achieved while re-developing the Federal Tank Farm. Washington State Ferries, Sound Transit, and the Port of Everett have laid the groundwork for this process with Sound Transit opening the Sounder Platform in June 2008. This walkway will link Edgewater Beach with Lighthouse Park. Both ends of the promenade will supply convenient parking and access. Washington State Ferries is encouraged provide elevators and second level walkways over the ferry loading area. This will make crossing the congested area easy and



safe for pedestrians. A conceptual drawing of the promenade taken from the Multi-modal Plan is shown below in Figure 23.

**Figure 23: Conceptual Drawing of the Waterfront Promenade Looking Northeast**



A proposed schedule for accomplishing future trail projects has been included below in Table 4.

**Table 4: Timeline for Trail Development**

Trails, Open Space and Habitat Projects	Year																			
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Develop shoreline promenade																				
Develop a Trail Master Plan																				
Develop ravine trails (shoreline access & bike/pedestrian system)																				
Enhance shorelines, streams, & forest management areas																				
Create urban separators using vegetated buffers																				
Acquire tidelands, & shorelines (on-going)																				

The need to provide connections for pedestrian trails and bicycle paths may include land acquisition. This is important because developing trail and walkway connections requires an overall vision and strategy to accomplish it. Actions the City can take, to see this vision through include coordinating with street and infrastructure projects and conditioning development projects to provide connections. Because it is difficult to predict opportunities, potential land acquisitions cannot be shown on a map. When acquisition opportunities occur, their relative importance will be evaluated against the overall park system. Decisions

will be based on the following criteria: expanding existing holdings or facilities, providing high quality facilities with adequate funding for operation and maintenance, and protecting critical areas and providing parks and open space in under-represented areas of the city.

Proposed trail development will provide public access through the city's steep gulches to the shoreline. However, trail construction within these ravines poses some challenges. The largest challenge is developing a public resource in a geologically sensitive area without creating environmental problems. Other associated challenges include performing maintenance and repairs to these areas, as needed since 2002, when the City became responsible for the gulches. As mentioned above, providing safe, legal access to the water is an overriding factor in creating trail connections. The first trail development opportunity has been Mukilteo Water District's sewer line replacement in Big Gulch, which began in 2009.

Because build-out in the City is assumed to occur by 2020, opportunities for land acquisition are becoming scarce. Tidelands and steep slopes might be the few opportunities available for acquisition for trail development and connections.

### **Priority 3: Active Facilities and Parks**

It is expected that the Tank Farm will be transferred to the Port of Everett, which will open public access to approximately 3,000 lineal feet of waterfront after re-development occurs. The transfer of land continues to put a greater burden on city governments to provide services, to both residents and non-residents. Developed parks that remain open will experience a higher level of use and even greater maintenance and renovation requirements than other parks. The City of Mukilteo had the foresight to set aside revenues coming from the Hotel-Motel tax to provide for park maintenance; however, this revenue source will not be enough to maintain the whole system. General funds will continue to be needed to subsidize costs, as well as taxes collected by the Port of Everett. Just as there are pressures to maintain and staff Lighthouse Park adequately, there will be similar pressures placed on local park and recreation services to maintain and staff specific park and recreation services, at the expense of other City services unless funding is approved by a voted levy-lid lift. Determining what the cost is to operate, staff and maintain parks and recreation facilities, as well as setting aside funding for renovation—let alone new development—will continue to be an ongoing challenge. In the near future, local governments have to face this issue. The City must estimate maintenance and operation costs before building new parks and recreation facilities and consider these costs and funding sources when determining the phasing of development in individual park master plans.

## Chapter 9: Public Input Process

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Since this proposed *Shoreline Master Program* represents a change from the 1974 *SMP*, and public use of the shorelines is a principal goal, it is imperative that the public, stakeholders, and lake, shoreline, and bluff landowners have an opportunity to participate in the process. The following details the public participation process for this plan update.

### Goals of the Public Participation Plan

RCW 90.58.130 and WAC 173-26-090 and 100 require that local governments inform the people of the state about the planning process and invite and encourage participation by all who have any interest or responsibility related to shorelines. The goal of the Public Participation Plan is to provide a guide to proactively encourage public participation during the *SMP* update public process. The City of Mukilteo is committed to encouraging coordinated and effective public involvement.

### Overview of the City's Shorelines

The City of Mukilteo is located in Snohomish County, 25 miles north of Seattle and west of Everett with over 20,110 residents occupying a land area of 60 square miles. Mukilteo forms the southern boundary of Port Gardner Bay and the western portion of the city and the annexation area along Possession Sound encompassing 25,874 lineal feet or 4.9 miles of Puget Sound's shoreline (including the annexation area).

The majority of the shoreline was altered with the construction of the railroad line along the Puget Sound from Everett to Seattle in the late 1800s. The northern, or older, portion of Mukilteo's waterfront, known as Mukilteo Landing, lies within the 100-year floodplain and was formed by sand deposits from the Japanese Gulch Creek and lateral drift that comes north from Edmonds around Elliot Point. The northern portion of Mukilteo was created by a sand spit that was filled back to the railroad early in the 20<sup>th</sup> century.

Those shorelines that have been used for industrial, commercial or state park purposes will continue to be used by new urban re-development and essential public transportation facilities. The western portion of the shoreline south of Lighthouse Park that contains only railroad tracks and steep slopes is more "natural," and will be retained that way.

The *SMP* update will also cover the city's annexation area south of Mukilteo. This area is approximately 2,600 acres and home to nearly 11,000 people.

Lake Serene is over 20 acres and is also included in the Shoreline Plan. The Puget Sound shoreline from Everett to Seattle, which includes Mukilteo's western shoreline, was impacted by the construction of the railroad in the late 1800's.

### Roles and Responsibilities

The City of Mukilteo is responsible for all aspects of the *SMP* update. The City will be the primary regulator, with Washington State Department of Ecology (DOE) acting in a support and review capacity. DOE is also required to approve some permits and must approve new or amended shoreline master programs.

The primary contact for Mukilteo's *SMP* update is:

Department of Planning & Community Development  
City of Mukilteo  
11930 Cyrus Way  
Mukilteo, WA 98275  
(425) 263-8000

[planning@ci.mukilteo.wa.us](mailto:planning@ci.mukilteo.wa.us) (Subject Line: Shoreline Question or Comments)  
City website: <http://www.ci.mukilteo.wa.us/Page.asp?NavID=171>

## Public Agencies or Interest Groups/Residents/Tribes/Parties of Interest

Local governments must consult with interested parties throughout the process of developing the *SMP*. Mukilteo will involve representatives from the following:

- Mukilteo City Council
- Mukilteo Planning Commission
- Residents of Mukilteo
- Lake Serene Associations
- Property/Business owners in the shoreline environment
- Tulalip Tribe
- Squamish Tribe
- Swinomish Indian Tribal Community
- Lummi Nation
- Other Point Elliot Treaty Tribes
- Port of Everett
- WA State Department of Transportation
- Sound Transit
- Community Transit
- City of Edmonds
- City of Lynnwood
- City of Everett
- Snohomish County- WRIA 7
- Snohomish County Marine Resources Committee and the two members living with the City of Mukilteo
- King County-WRIA 8
- Department of Ecology (DOE)
- Department of Fish and Wildlife (WDFW)
- Department of Natural Resources (DNR)
- Department of Commerce (Commerce)
- State Office of Archaeology and Historic Preservation (DAHP)
- NOAA Fisheries
- US Fish and Wildlife Service
- US Air Force
- Burlington Northern Santa Fe (BNSF)
- Shore land/Mukilteo Landing parties of interests
- Pilchuck Audubon
- Master Builders
- Parties of record

These parties will be informed and invited to participate throughout the review process.

Other stakeholders not included in the list above may also be notified during the public involvement process. Others may include homeowner associations, environmental groups or others. Notification to these stakeholders may be accomplished via email or other means as the shoreline management planning process proceeds.



# Public Participation Strategy

The City of Mukilteo developed a strategy to ensure there is effective public participation throughout the review process. The primary methods to be employed were:

- Development of a public outreach program to inform community members, tribes and agencies.
- Updating the City website, City Council and Planning Commission periodically and have them host open houses, work sessions and public hearings.

By utilizing all of these methods, the City exceeded the mandates of Washington State to involve all interested parties in the update of the *SMP*.

Further details regarding these primary methods are as follows:

## **Public Agencies or Interest Groups/Residents/Tribes/Parties of Interest**

The affected Tribes and Department of Fish and Wildlife, and other agencies such as Department of Natural Resources, Department of Ecology, King and Snohomish County WRIA and Marine Resources Committees, neighboring jurisdictions, residents and affected property owner/parties of interest etc. were be asked to provide comments the draft plan and code.

## **Planning Commission (PC)**

The PC consists of seven community members that apply, are selected by the Mayor, and confirmed by the City Council. The PC open houses, work sessions and public hearings provided a forum to review the technical work, discuss issues and suggest solutions. They receive testimony at their public hearing(s) and make a recommendation to City Council on the draft documents.

## **City Council (CC)**

The CC consists of seven local residents elected by the residents to represent them.

The CC represents a cross-section of interest groups and public values. Meetings will provide a forum to review the technical work, discuss issues and suggest solutions. The PC process allows for those that want to participate in the discussion or feel it is important that they are heard beyond their written comments to participate in person. The City is encouraging direct input in the process. Staff will report on the public process and comments made and will identify whether specific entities or interests have not responded with input, so that it will be clear whether the City Council should move with adoption of the documents or whether additional time is needed to solicit input (for example, from the Tribes).

The City Council solicited throughout the review process and relied on the following public outreach program to encourage citizen participation.

## **Public Outreach Program**

Community members and stakeholders were involved, through the following required and supplemental outreach methods:

- SEPA process and notification of agencies, including Tribes, and parties of interests
- Website: A Shoreline page was added to the City's website where community members were able to access draft documents and maps, view the schedule, check for meeting notices, obtain contact information and submit comments. This created one central location where the latest information could be obtained. The City calendar also contained key dates in the development of the *SMP*. The City of Mukilteo's website [www.ci.mukilteo.wa.us](http://www.ci.mukilteo.wa.us) provided an excellent opportunity to post information and draft reports. Under *News*, a link can take users from the homepage to a

Shoreline homepage specifically for the *Shoreline Master Program* update with all related reports and maps. The open houses, work sessions and public hearings for the PC and CC were listed and links to the agendas, minutes and materials and can took the user to the pages that are maintained by the City Clerk and the Planning Department.

- Newsletter: The City of Mukilteo publishes three newsletters per year to cover the most important activities and information that interest residents. The Planning Department is given 1-2 pages to provide articles about plan updates and where to obtain more information on the city website.
- Newspaper(s): The City of Mukilteo is fortunate to have a local weekly newspaper that covers, planning commission, city council, and other city activities. Residents depend on the paper to find out what is going on within the community and at the City. They will also feature articles related to plan updates, especially the *Shoreline Master Program*, that is of interest to so many residents due to the Federal Tank Farm property redevelopment and Ferry Terminal relocation project.
- Open house: Hosting an open house at a convenient location allowed for the broad dissemination of information (i.e. maps, proposals, etc.) and opportunity for comment. In addition, project staff and City personnel will be on-hand to answer questions from community members and address any concerns. Several steep slope workshops were held for bluff property owners.
- Public hearings: The public hearings on the draft and final plan and code provided the community with the forum to include their comments into the public record.
- Public notices: Notice of the open house and public hearings were placed on the City's website, posted at City Hall, Rosehill and other posting sites, the local library branches, and published in the newspaper of record, *The Everett Herald*.
- Mailing list: The City maintains a list of interested parties that provides the City with another avenue to keep the public informed throughout the update process. Notices of comment periods, open houses and public hearings were sent to parties on the mailing list.
- Comments: Establishing multiple means for submitting comments allowed for interested people to choose their preferred way to provide input. Methods included submitting comments via email on the City website, or submitting written comment forms at the open house and public hearing testimony. The City also considered all comments received and responded in aggregate or individually as needed throughout the process. These are recorded on a comment matrix as part of the documentation.

### **City Council Planning Commission and Adoption Process**

In order to meet the overall objective of adopting an updated *SMP* by the end of 2011, it is important to keep interested parties at all levels adequately informed from the beginning of the process. Through open houses and meetings with the planning commission, concerns can be addressed. These meetings also provide another opportunity for other interested parties to obtain information on the process. The City Council is in charge with adopting the *SMP*. Public hearings will be on schedule to allow for thorough discussion of the *SMP*'s details.

## **Timeline**

The City of Mukilteo is aware that developing and maintaining a schedule will contribute to the successful adoption of the *SMP*. By laying out this tentative schedule at the start of the process, the public is aware of key dates where input is especially critical. The following timeline highlights key public involvement opportunities:

<b>City of Mukilteo - Public Participation Schedule</b>	
	Parties of interests & key parties/agency lists prepared
Aug. 30, 2009	Public participation plan to DOE
August 2009	Characterization/Inventory Submitted for Early DOE review & comment
Sept. 2009 – April 2010	Staff finalizes Characterization/Inventory Document
Sept. 17, 2009	Planning Commission reviews Goal & Policies including new Aquatic Use Policies with 2009 Comprehensive Plan Update
Sept. – Oct. 2009	Agency & Tribal Review of SMP Characterization and Shoreline Policies
April – May 2010	Planning Commission work session on SMP Characterization/Inventory
April 2010	SMP Characterization/Inventory released for public review & comment
April 2010	Shoreline homepage activated with available information, open house & PC activities
June 14, 2010	Joint CC, PC, and PAC work session on different documents that make up the SMP
July 2010	City Newsletter and Local Newspaper articles identifying plan update process and opportunities to participate and comment
July – Sept. 2010	Agencies and Tribes review and comment period
Oct. – Nov. 2010	PC hosts Public Open House
Oct. – Nov. 2010	Staff prepares summary of comments and makes any edits
Nov. 2010 – Jan. 2011	Planning Commission Public Hearings
Jan. – March 2011	City Council Public Hearings & Acceptance
April – Nov. 2011	SMP to DOE for Review & Amendments
Sept. – Nov. 2011	Revisions and Responses to comments as needed
Dec 12, 2011	City Council Recognizes DOE's Conditional Approval
December 2011	DOE Approval Letter + 14 days = Adoption

City of Mukilteo - Future SMP Process	
2012 – 2017	Monitoring, Adaptive Management, Amendments
2018	7-yrs Update Cycle (if Fed/State Funding is available)

If there are modifications to the timeline, the schedule on the City's website will be updated. This plan will meet the requirements for public involvement opportunities in the *SMP* update process. Modifications may be made if needed.

## Chapter 10: Capital Improvements

Chapter 6 of this *Shoreline Master Program (SMP)* covers the projects that are likely to be considered over the next ten years, recognizing that not all of these projects or ideas can be carried out due to technical, coordination and available funding limitations. What is more important is that potential projects are identified, and five projects will have been accomplished by the end of 2011.

**Table 5: Restoration or Enhancement Projects Accomplished by 12-2011**

Project Name & Location	Restoration Accomplishment	Cost of Restoration
<b>1. Lighthouse Park</b> <b>Phase 1:</b> Backshore Berm and Riparian Vegetation Re-planting	Removed park restroom and picnic tables, redesigning the backshore of the beach creating a 1,000 l.ft. berm, adding large woody debris (drift logs) and replanting with native riparian species.  Water quality improvements were added using a stormwater swale cleaning water from park parking lot before released into Puget Sound. Used LID to reduce parking impact.  Expanded pedestrian waterfront walkway.	\$1,000,000.  ALEA Grant \$500K  City \$500K

Phase 1 Area Before 2008 Redevelopment



Phase 1 After Increasing Backshore



Project Name & Location	Restoration Accomplishment	Cost of Restoration
Backshore After Phase 1 is Completed	Backshore After Phase 1 is Completed	
		
<b>2. Lighthouse Park</b> <b>Phase 2:</b> Riparian Vegetation Replanting & Impervious surface retrofit	<p>One thousand lineal feet (450 l.ft.) was replanted to assist with water quality and to provide additional riparian habitat upland of the Ordinary High Water Mark (OHWM).</p> <p>Improved water quality with use of pavers, rain gardens, and stormwater swales as a retrofit for cul-de-sac and parking before releasing into Puget Sound.</p> <p>Added 500 l.ft. of pedestrian waterfront trail to Elliot Point and added park benches and picnic tables.</p>	<p>\$40,000. RCO Grant \$20K City \$20K</p> <p>\$200,000. Heritage Grant \$100K City SW \$100K</p>

**Project Name &  
Location**

**Restoration Accomplishment**

**Cost of Restoration**

Lighthouse Park Phase 2 Backshore Enhancement & Riparian Replanting



**3. Japanese Gulch Fish  
Passage Phase 1 &  
Design & Permitting of  
Phase 2**

Baffles and rocks installed onto concrete sluice to concentrate water flow and allow fish to pass under Mukilteo Lane.

\$61,000

Airport Mitigation \$

Before:



After:





Project Name & Location	Restoration Accomplishment	Cost of Restoration
<b>4. Japanese Gulch Fish Passage Phase 2</b>	A three level fish ladder installed just south of Mukilteo Lane and ring weirs installed inside the culvert to allow fish to pass into and through a 170 foot culvert under BNSF – Boeing Spur.	\$81,800 Airport Mitigation \$

Before:



After:



<b>5. Japanese Gulch Fish Passage Phase 3 &amp; Estuary and Stream habitat connection</b>	Realigned Japanese Gulch Creek to flow in original natural stream corridor and leaving concrete sluice for high water flow as a by-pass.	\$170,000 Airport Mitigation of \$25,000 Stormwater Funds of \$145,000
	Reconnected a freshwater estuary to Japanese Gulch Creek, by breaking a dike built to protect the railroad bed, by separating the tributary and groundwater flows from reaching the stream south of Mukilteo Lane.	

### ***Summary of Shoreline Projects***

City: \$520K  
City SW: \$265K  
Grants: \$620K  
Mitigation Funds: \$150K

The Restoration Plan serves as a supporting document and Appendix B of that document provides the potential funding sources that are available to assist with funding and grants. Generally, the following funding sources are being used for restoration efforts:

- 1) State and Federal Grants
- 2) Stormwater capital funds



3) Real Estate Excise Tax

4) Project Mitigation Funding

Because capital plans evolve each year, it is not appropriate to include details in the SMP. The reader is referred to the City Budget that includes funded capital projects each year, and the most current City of Mukilteo Comprehensive Plan – Capital Facilities Element.

## Appendix A: Definitions

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To clarify the intent and meaning of certain words or terms contained in this *SMP*, the following list of definitions is provided. These definitions are used for general understanding only when reviewing the *SMP*. Adopted definitions are contained in Title 17B.08.020 of the Mukilteo Municipal Code. All other words used in this document carry their customary meaning. Words in the present tense include the plural, and vice versa.

**“Archaeological/Historical”** means uses, developments, and activities on sites of historical or archeological significance, or sites containing items of historical or archeological significance.

**“Bike / Pedestrian Path/Trail”** means multi-purpose trails that emphasize safe travel for pedestrians and bikes around the community with a joint focus on recreation and transportation that may include separate on-street travel lanes.

**“Boat”** means vessels less than twenty tons, used as a private pleasure craft.

**“Boathouse”** means a structure specifically designed or used for storage of boats.

**“Boat launching facility”** means a facility used for launching of boats by auto or hand including ramps and other devices, along with adequate parking and maneuvering space.

**“Breakwater”** means protective structure usually built off-shore for the purpose of protecting the shoreline or harbor areas from wave action.

**“Buffer”** means an area, typically adjacent or otherwise associated with an environmentally sensitive feature, which is retained in its natural state. No clearing, grading, or filling is permitted within a buffer (unless specifically conditioned otherwise).

**“Buildable area”** is that portion of a lot within the setbacks established by the zoning district in which the lot lies. Open space tracts, native growth protection areas, drainage facilities, easements, or other similarly restricted land are not considered part of the buildable portion of a lot.

**“Bulkhead”** means a wall or embankment used for holding back earth and to protect structures or shoreline from wave action.

**“Capital Facilities”** means those services and/or structures provided by a state, county or city such as roads, sewers, police and fire protection, schools that provide the necessary foundation for the functions of a community of people and commerce.

**“Community Park”** means larger parks that focus on meeting the active and passive recreation needs of several neighborhoods or larger sections of the community, including group activities. They also preserve unique landscapes and open spaces within the community. Community centers may be included in this classification as they also provide broad recreation opportunities for the community. This classification may include school resources such as High School and Middle School athletic fields.

**“Critical Areas”** For the purpose of the critical area regulations contained in Chapters 17B.52 through 17B.52D, “critical areas” means those possessing existing slopes in excess of forty percent, or areas containing unstable soils or other geologic hazards, or natural drainage ways or ravines, areas of special flood hazard, areas of critical

recharging effect on aquifers used for potable water, or areas that have been identified as providing significant wildlife habitat by the Washington Department of Fish and Wildlife, wetland areas, or those areas defined as shorelines of Mukilteo, the state, or of statewide significance.

**“Cultural Resources”** Includes sites, structures, objects, or remains, which convey historical, architectural or archaeological information of local, state, or national significance.

**“Daylighting a stream”** means to bring a previously culverted or piped stream or stormwater drain to the surface. Daylighting projects reestablish a stream in its old channel where feasible, or create a new channel if necessary. Daylighting projects shall include installation of habitat features such as large woody debris, creation/recreation of wetlands, streams, and ponds.

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

**“Dock”** means any facility for the moorage of boats, including but not limited to piers, wharves, and quays.

**“Dredging”** means removal of sand, gravel, or other earth from the bottom of a body of water for the purpose of deepening a navigational channel or obtaining bottom materials. Dredging does not include maintenance sediment removal at pipe inlets or outlets or removal of material from man-made ponds, including backwash solids drying areas, or stormwater ponds. Excavation for the purposes of constructing utilities and other permitted structures (e.g. pilings) shall not be considered dredging.

**“Essential Public Facility”** or “EPF” means a facility that is typically difficult to site, such as an airport, a state education facility, a state or regional transportation facility as defined in RCW 47.06.140, a state or local correctional facility, a solid waste handling facility, or an in-patient facility, including substance abuse facilities, mental health facilities, group homes, and secure community transition facilities as defined in RCW 71.09.020. The term “Essential Public Facility” includes all facilities listed in RCW 36.70A.200, all facilities that appear on the list maintained by the State Office of Financial Management pursuant to RCW 36.70A.200(4), and all facilities listed as essential public facilities in the Mukilteo Comprehensive Plan.

**“Essential Public Facility, Local”** means an EPF that is owned, operated, or sponsored by the City of Mukilteo, a special purpose district, Snohomish County (for facilities that do not provide service to the county-wide population), or another unit of local government. An EPF is “sponsored” by a local government when it is to be owned or operated by a nongovernmental entity pursuant to a contract with the local government to provide the EPF.

**“Essential Public Facility, Regional”** means an EPF that is owned, operated, or sponsored by Snohomish County or a Regional Agency whose boundaries encompass the City and which serves the county-wide population or an area that is greater than the County. An EPF is “sponsored” by the County or a Regional Agency when it is to be

owned or operated by a nongovernmental entity pursuant to a contract with the County or Regional Agency to provide the EPF.

**“Essential Public Facility, State”** means an EPF that is owned, operated, or sponsored by the State of Washington.

**“Floodway”** means those portions of the area of a river valley lying streamward from the outer limits of a watercourse upon which flood waters are carried during periods of flooding that occur with reasonable regularity, although not necessarily annually, said floodway being identified, under normal condition, by changes in surface soil conditions or changes in types or quality of vegetative ground cover condition. The floodway shall not include those lands that can reasonably be expected to be protected from flood waters by flood control devices maintained by or maintained under license from the federal government, the state, or a political subdivision of the state.

**“GMA (Growth Management Act)”** This Act (RCW chapter 36.70A) passed by the Washington State Legislature requires that certain cities and counties develop and coordinate policy and plans to: secure wise and proper use of land and resources, maintain environmental quality, ensure sustainable economic growth, provide adequate public facilities including sufficient open space and recreational opportunities, and to preserve cultural and historical resources in the face of increasing population and its concomitant pressures.

**“Groin”** means a barrier-type structure extending from the back of shore into the water across the beach. The purpose of a groin is to interrupt sediment movement along the shore.

**“Hearing board”** means the Shoreline Hearings Board (not the Growth Management Hearing Board(s)).

**“In-water facilities”** means boat-launching facilities, marinas, visitor docks, mooring buoys, residential docks, floats, seaplane access and moorage, docking facilities for cruise boats, and waterborne transportation facilities.

**“In-Water Fill”** means activities that involve the addition of soil, sand, rock, gravel, earth retaining structure, or other material to an area waterward of the ordinary high water mark or in shorelands in a manner that raises the elevation or creates dry land.

**“Level of Service (LOS)”** means a qualitative expression of minimum standards, typically expressed as acres/1,000 population, required to satisfy the parks, open space, and recreational needs of the community.

**“Jetty”** means an artificial barrier used to change the natural littoral drift to protect inlet entrances from clogging by excessive sediment.

**“Marina”** means a facility providing for the rental or public use of moorage for pleasure craft and which may include accessory facilities such as sales, rentals, and light servicing of these craft.

**“Mini-park”** means the smallest park classification used to address limited, passive, or isolated recreational needs or to act as green urban buffers.

**“Moorage”** means any device or structure used to secure a vessel for temporary anchorage, but which is not attached to the vessel (such as a pier or buoy).

**“Mukilteo’s MUGA or Municipal Urban Growth Area”** is that portion of Snohomish County’s Southwest Urban Growth Area that is being considered by the City of Mukilteo for future annexation and has been mutually agreed to by all surrounding cities through the Snohomish County Tomorrow process.

**“Multi-modal”** means two or more modes or methods of transport.

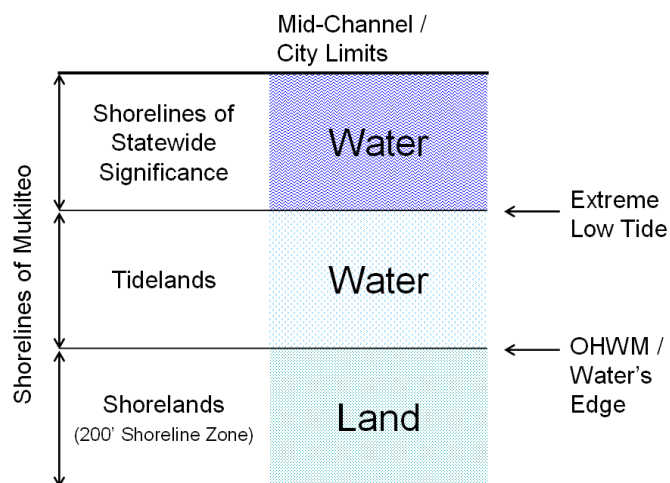
**“Municipal Urban Growth Area”** means the unincorporated portion of Mukilteo within the Southwest Snohomish County urban growth area.

**“Neighborhood Park”** means the basic unit of the park system that provides the active or passive recreational and activities at the neighborhood level for a variety of ages and user groups. This classification may include school resources such as playgrounds and localized centers such as the Boys and Girls Club.

**“Non-water oriented use”** means upland uses that have little or no relationship to the shoreline. All uses which do not meet the definition of water-dependent, water-related or water-enjoyment are classified as non-water-oriented uses. Adding public access features to a non-water-oriented use does not automatically change the inherent use to a water-enjoyment use. Examples may include, but are not limited to, professional offices, automotive sales or repair shops, mini-storage facilities, convenience stores, and gas stations.

**“Ordinary high water mark (OHWM) Shoreline”** means a visible break where the presence of water has created an obvious mark or demarcation on the shoreline. For areas where a seawall or bulkhead creates an obvious break between the tidelands and shorelands, this shall be considered the OHWM. Where there is no obvious break or visible mark, the ordinary high water mark shall be the line of mean higher high water. See Diagram A.

Diagram A: Example of Shoreline Definitions



**“Open Space”** means undeveloped areas set aside for the preservation of significant natural resources, remnant landscapes, and aesthetic buffering, this category may include

critical areas, non-developable land, or tracts of land that set aside during development projects.

**“Ordinary high water mark—streams (OHWM-Streams)”** means the mark that will be found by examining the bed and banks of a stream and ascertaining where the presence and action of waters are so common and usual, and so long maintained in ordinary years, as to mark upon the soil a vegetative character distinct from that of the abutting upland. In any area where the ordinary high water mark cannot be found, the line of mean high water shall substitute. In any area where neither can be found, the top of the channel bank shall be substituted.

**“Overwater structure”** means a structure extending on or over the surface of the water which has one or more walls, with or without a roof.

**“Pedestrian Trail”** means a multi-purpose trail located within parks, greenways, open spaces, or natural resource areas with a focus on recreational value and enjoying the natural environment.

**“Pier”** means a general term including docks and similar structures consisting of a fixed or floating platform extending from the shore over the water secured or supported by pilings. Piers may also be used for fishing.

**“Pile” “Pilings” and “Pile driving”** means a column of wood or steel or concrete that is driven into the ground to provide support for a structure, a number of piles, the process of installing piles into the ground.

**“Priority habitat”** means a habitat type with unique or significant value to one or more species. An area classified and mapped as priority habitat must have one or more of the following attributes:

1. Comparatively high fish or wildlife density;
2. Comparatively high fish or wildlife species diversity;
3. Fish spawning habitat;
4. Important wildlife habitat;
5. Important fish or wildlife seasonal range;
6. Important fish or wildlife movement corridor;
7. Rearing and foraging habitat;
8. Important marine mammal haul-out;
9. Refugia habitat;
10. Limited availability;
11. High vulnerability to habitat alteration;
12. Unique or dependent species; or
13. Shellfish bed.

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

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

1. State-listed or state proposed species. State-listed species are those native fish and wildlife species legally designated as endangered (WAC [232-12-014](#)), threatened (WAC [232-12-011](#)), or sensitive (WAC [232-12-011](#)). State proposed species are those fish and wildlife species that will be reviewed by the department of fish and wildlife (POL-M-6001) for possible listing as endangered, threatened, or sensitive according to the process and criteria defined in WAC [232-12-297](#).
2. Vulnerable aggregations. Vulnerable aggregations include those species or groups of animals susceptible to significant population declines, within a specific area or statewide, by virtue of their inclination to congregate. Examples include heron colonies, seabird concentrations, gravid (egg bearing) female Dungeness crab and marine mammal congregations.
3. Species of recreational, commercial, and/or tribal importance. Native and nonnative fish, shellfish, and wildlife species of recreational or commercial importance and recognized species used for tribal ceremonial and subsistence purposes that are vulnerable to habitat loss or degradation.
4. Species listed under the federal Endangered Species Act as either proposed, threatened, or endangered.

**"Public access"** is a means of physical approach to and along the shoreline available to the general public. Public access may also include visual approach.

**"Shorelands" or "shoreland areas"** means those lands extending landward for two hundred (200) feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred 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 plan and code; the same to be designated as to location by the department of ecology. See Diagram A under "ordinary high water mark."

**"Shoreline"** means the water and submerged lands of Port Gardner Bay, Possession Sound, and including all shorelines of the state and shorelines of statewide significance as defined in RCW 90.58.030. See Diagram A under "ordinary high water mark."

**"Shoreline activity"** means an activity associated with use of the shoreline or the use of energy toward a specific action or pursuit. Examples of shoreline activities include, but are not limited to, fishing, swimming, boating, dredging, fish spawning, wildlife nesting, or discharging of materials. Not all activities necessarily require a shoreline location.

**"Shoreline Appeal – Date of Filing"** the "date of filing" varies according to the type of permit being appealed:

- A. An appeal of the City's approval or denial of a substantial development permit or the City's denial of a variance or conditional use permit, the "date of filing" is the date that DOE actually receives a completed filing from the City on its permit decision.



- B. An appeal of a conditional use permit or variance that has been approved by the City and approved or denied by DOE, the “date of filing” is the date that DOE transmits its final decision or order to the City, not the date the City actually receives the decision or order.
- C. Where a project involves both a substantial development permit and a conditional use permit or variance, the latest applicable date of filing may be used in filing the project appeal.

For shoreline appeal process and timelines, the requirements of RCW 90.58.180 shall be followed.

**“Shoreline designations”** means the seven (7) shoreline overlay zones in the city: Urban Waterfront, Urban Waterfront Park, Urban Conservancy, Aquatic Urban, Aquatic Urban Conservancy, Urban Railroad, and Urban Lakefront.

**“Shoreline modifications”** means those actions that modify the physical configuration of qualities of the shoreline area, usually through the construction of a physical element. Shoreline modification activities are generally construction actions undertaken in preparation for, or in support of, a shoreline use.

**“Shoreline stabilization”** means actions taken to address erosion impacts to property and dwellings, businesses, or essential public facility structures caused by, or associated with, current, flood, tides, wind, or wave actions. These actions include structural methods (i.e., seawalls, bulkheads, retaining walls and bluff walls, concrete groins, gabions, rock revetments, etc.), nonstructural methods (i.e., beach nourishment and vegetation enhancement) and regulatory requirements (i.e., setbacks).

**“Shoreline use”** means the commitment of land or water surface to a given purpose or activity. Examples of shoreline uses include, but are not limited to, residential units, parks, marinas, open space, office buildings, ports, restaurants, wildlife preserves, utilities, essential public facilities or even nonuse. Not all uses, however, are necessarily reasonable or appropriate for a shoreline location.

**“Shorelines of Mukilteo”** means the total of all the “shorelands” (extending landward two hundred (200) feet from the water’s edge or OHWM) and the “shorelines of the state” (areas of Puget Sound lying seaward of the water’s edge or ordinary high water mark) within the city limits, being those areas covered by the city’s shoreline master program. See Diagram A under “ordinary high water mark.” Shoreline designations include both the upland and the water or aquatic environment.

**“Shorelines of state-wide significance”** within the city’s jurisdiction, means all of the water areas of Possession Sound and Port Gardner Bay lying seaward of the line of extreme low tide, out to the city limits or to mid-channel. See Diagram A under “ordinary high water mark.”

**“Shorelines of the state”** means those areas of Puget Sound lying seaward of the water’s edge or ordinary high water mark. See Diagram A under “ordinary high water mark.”

**“Steep slopes” or “Geologically Sensitive Slopes”** means those areas within the city that are:

1. Affected by, contain, or exhibit unstable or potentially unstable soil types, steep slopes, erosion, earth movement, slides, surface water runoff, ground water,

liquefaction, within the one-hundred-year flood plain, or within a tsunami hazard area.

2. Within the designated geologic sensitive area as shown on the city's "geologic sensitive areas" map (see Attachment A at the end of Chapter 17.52A).
3. Areas that may not be suited to development consistent with public health, safety, or environmental standards, because of their susceptibility to erosion, sliding, earthquake, or other geological events as designated by WAC 365-190-080(4).

**“Tidelands”** means those areas lying between the water’s edge or ordinary high water mark (OHWM) and the line of extreme low water. See Diagram A under “ordinary high water mark.”

**“Utility uses”** means all services and facilities that produce, convey, store, or process power, gas, sewage, stormwater, communications, oil, waste, water, and the like. Utilities also include pump/lift stations and associated emergency generators.

**“Water courses/streams”** means the areas to which surface and subsurface waters naturally flow and which form a continuous channel through which water descends to natural outlets.

**“Water-dependent uses”** means activities for which direct accessibility to deep water is required because of the nature of their product and/or process (i.e., shipbuilding, marine repair and construction, tug and barge operations, log rafting, commercial fishing, public and private marina, terminal facilities).

**“Water enjoyment use”** means a recreational use, or other use facilitating public access to the shoreline; or uses that cater to recreational, cultural, educational, tourism, food and drink services, hotel/motel, and water-related retail promoting the recreational use or aesthetic enjoyment of the shoreline for a substantial number of people as a general characteristic of the use.

**“Water-related use”** means the use that has something to do with the water and needs to be near the water but does not require direct access to the water to occur.

**“Waterfront area”** means all areas of tidelands and uplands lying above and within two hundred feet of the line of ordinary high tide. In the POS, DB and WMU zones the waterfront area is further defined as lying north of the Burlington Northern Santa Fe Railroad tracks and the line of extreme low tide, extending south to the southern boundary of Mukilteo State Park and extending east to the east boundary of the city.

**“Water’s edge”** means the line of the ordinary high water mark (OHWM).