

**DRAFT**

**TOWN OF HUNTS POINT  
GRANT NO. G1000067**

**CUMULATIVE IMPACTS ANALYSIS**  
**for Town of Hunts Point's Lake Washington Shorelines**

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# CUMULATIVE IMPACTS ANALYSIS

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## TOWN OF HUNTS POINT SHORELINE: LAKE WASHINGTON

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### 1 INTRODUCTION

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#### 1.1 Shoreline Management Act Requirements

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

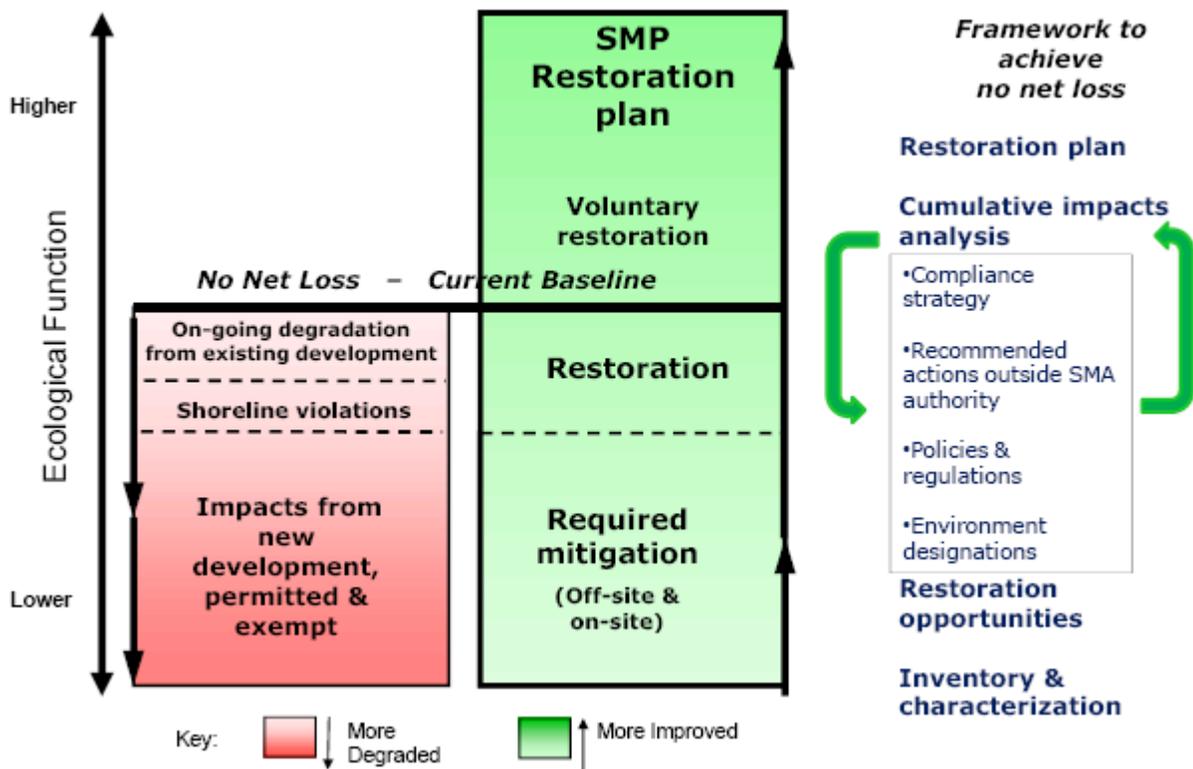
The Guidelines further elaborate on the concept of net loss as follows:

*“When based on the inventory and analysis requirements and completed consistent with the specific provisions of these guidelines, the master program should ensure that development will be protective of ecological functions necessary to sustain existing shoreline natural resources and meet the standard. The concept of “net” as used herein, recognizes that any development has potential or actual, short-term or long-term impacts and that through application of appropriate development standards and employment of mitigation measures in accordance with the mitigation sequence, those impacts will be addressed in a manner necessary to assure that the end result will not diminish the shoreline resources and values as they currently exist. Where uses or development that impact ecological functions are necessary to achieve other objectives of RCW 90.58.020, master program provisions shall, to the greatest extent feasible, protect existing ecological functions and avoid new impacts to habitat and ecological functions before implementing other measures designed to achieve no net loss of ecological functions.” [WAC 173-26-201(2)(c)]*

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

- (i) current circumstances affecting the shorelines and relevant natural processes;
- (ii) reasonably foreseeable future development and use of the shoreline; and

- (iii) beneficial effects of any established regulatory programs under other local, state, and federal laws.



Source: Department of Ecology

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

## 1.2 Methodology

Using the information, both textual and graphic, developed and presented in the *Shoreline Analysis Report*, this cumulative impacts analysis was prepared consistent with direction provided in the Shoreline Master Program Guidelines as described above. To the extent that existing information was sufficiently detailed and assumptions about possible new or re-development could be made with reasonable certainty, the following analysis is quantitative. However, in many cases, information about existing conditions and/or redevelopment potential was not available at a level that could be assessed quantitatively, or the analysis would be unnecessarily complex to reach a conclusion

that could otherwise be derived through a qualitative approach. Further, ecological function does not have an easy metric. For these reasons, much of the following analysis is more qualitative.

## 2 EXISTING CONDITIONS

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The following summary of existing conditions is based on the *Shoreline Analysis Report*. The summary of functions discussed below is framed by waterbody and by proposed shoreline environment designations (see Figure 1 for a map of environment designations). Environment designations include Natural (N), Shoreline Residential (SR), Stormwater Utility (SU), and Aquatic designations. The Shoreline Analysis Report includes an in-depth discussion of the topics below, as well as information about transportation, stormwater and wastewater utilities, impervious surfaces, vegetation coverage, shoreline modifications, and historical/archaeological sites, among others.



Figure 1. Proposed Shoreline Environment Designations in the Town of Hunts Point

## 2.1 Land use

### 2.1.1 Residential Development

The Town of Hunts Point is fully developed as a residential community. With the exception of the Town Hall, the Town Park adjacent to Town Hall, and the Wetherill Nature Preserve, each property is developed with a single-family residence. Occasionally, a residential lot may become vacant, as an older home is removed and a

newer, larger home is planned and eventually constructed. The majority of residential lots have private waterfront, including individual or shared piers.

There are three residential zoning designations in the Town, and each is represented within the shoreline jurisdiction. The R-40 zone, located to the east and west of Hunts Point Road within the peninsula portion of the town, in the Shoreline Residential environment, has a minimum lot size of 40,000 square feet. The R-20 zone has a minimum lot size of 20,000 square feet, and the R-20A zone has a minimum lot size of 12,000 square feet. These zoning areas comprise a much smaller area of shoreline jurisdiction on the southeast and southwest (Fairweather Basin) sides of the Town.

Recent residential development trends in Hunts Point over the past decade indicate that properties are being consolidated to create larger estates. Because the Town limits one residential pier per property, as properties consolidate, there is the potential that the total number and area of waterfront structures will be reduced over time.

### **2.1.2 SR 520**

State Route 520 passes through the southern portion of Hunts Point and currently comes within approximately 200 feet of the Fairweather Basin. Improvements to SR 520 are anticipated, including the creation of a stormwater pond on two former residential lots at the southern terminus of Fairweather Basin. A Shoreline Conditional Use Permit was issued for construction of a state-of-the-art stormwater pond designed to improve water quality in Lake Washington by treating runoff that is currently untreated. The new stormwater facility will provide the benefit of improving water quality in Lake Washington by treating runoff from SR 520.

### **2.1.3 Utilities**

The City of Bellevue operates a sanitary sewer line within Lake Washington. Its location varies between (approximately) twenty feet offshore to twenty feet landward of the ordinary high water mark. The line requires occasional maintenance, including placement of gravel atop the line to protect any exposed pipe areas. A study is currently underway by the City of Bellevue Utilities Department to evaluate the condition of the sewer line, with the goal of 1) identifying any sections requiring immediate repair or replacement, and 2) developing a management plan for the next several decades of sewer capital improvements.

Residential properties located along the Lake Washington shoreline discharge stormwater directly to the lake. Typically, an oil-water separator is installed in paved areas subject to vehicle pollutants, and the runoff is tightlined to an outfall on the property. The tightline also collects runoff from a series of catch basins on patios and lawn areas. As residential lots are redeveloped, new stormwater systems may be installed as necessary, including an increased diameter outfall pipe with energy dissipater. For residential properties without direct access to Lake Washington, the Town maintains a stormwater collection system that discharges to the Lake from Fairweather Creek or Cozy Cove Creek. Fairweather Creek collects runoff from SR 520 as well. Stormwater quality from SR520 will be improved through a state-of-the-art detention and discharge system currently being designed by the Washington State Department of Transportation through the "Medina to SR202: SR 520 Eastside Transit and HOV Project."

### **2.1.4 Wetherill Nature Preserve**

The Wetherill Nature Preserve provides sixteen acres of passive recreational space for the public, including its undeveloped, natural shoreline area.

## **2.2 Ecosystem Functions and Critical Areas**

Shoreline functions vary with the existing land uses and associated environment designations (See Figure 1).

### **2.2.1 Shoreline Residential Environment**

Within the Shoreline Residential environment, which comprises the majority of shoreline jurisdiction, most of the shoreline area close to the OHWM is occupied by lawns with scattered trees at the water's edge. Most shrub and tree vegetation is located perpendicular to the water along property lines. However, there is substantially more native tree cover along the property lines and more substantial tree and shrub vegetation waterward of the primary structure on the Hunts Point peninsula in the R-40 zone, compared to areas zoned R-20 and R-20A (e.g., Fairweather Basin and Cozy Cove Inlet).

The Shoreline Residential environment includes a total of 118 residential lots, three of which are presently undeveloped. The majority of developed properties have associated piers, and a total of 109 piers are present in the Shoreline Residential environment.

In the R-40 zoned area on the Hunt's Point peninsula, residential setbacks vary dramatically. Taking this into consideration, existing building setbacks on the developed lots average 142.8 feet from the shore. Existing building setbacks are significantly lower in the areas zoned as R-20 and R-20A, where developed lots average 52.0 feet from the shore.

In the R-40 zoned area on the peninsula, 86.2% of the shoreline is armored. In the R-20 and R-20A zoned areas, 90.9% of the shoreline is armored. Regular dredging of Fairweather Basin, Haug Channel, and Cozy Cove Inlet is required to maintain boat access.

### **2.2.2 Stormwater Utility**

The Stormwater Utility environment consists of two parcels at the southern terminus of Fairweather Basin. Single-family residences that existed on these parcels were removed in 2011, and these parcels presently consist of bare ground, and are used in construction staging of the SR 520 project. Both properties are armored and include overwater structures running parallel, the entire length of the shoreline in this environment designation. All of the overwater structures will be removed as part of the WSDOT project.

### **2.2.3 Natural**

In the relatively unaltered shorelines of the Natural environment in the Wetherill Reserve and potentially associated wetland areas off of Cozy Cove, shoreline functions are intact with a range of shoreline vegetation types and an absence of overwater structures or shoreline armoring.

### 3 ANTICIPATED DEVELOPMENT

Table 1 below provides a summary of the likely development potential within the proposed environment designations. This information is derived from descriptions provided in the *Shoreline Analysis Report* on likely changes in land use.

**Table 1.** Likely changes in land use along the City’s shoreline

<b>Environment Designation/ Waterbody</b>	<b>Likely Changes in Land Use</b>
Shoreline Residential	<p>The Shoreline Residential environment is nearly fully developed, with only three undeveloped parcels. There is little opportunity for significant additional development. However, remodels and occasional reconstruction of existing homes should be expected in the future. Similarly, the majority of the shoreline is armored, and nearly all developed properties have a pier or other overwater structure. The proposed SMP would limit reconstruction of piers to ensure no net loss of ecosystem functions.</p> <p>Recent residential development trends in Hunts Point over the past decade indicate that properties are being consolidated to create larger estates. Therefore, while there is the potential to subdivide a few lots in Hunts Point, the creation of significant numbers of new lots is not likely to occur.</p>
Stormwater Utility	<p>The SR 520 project will result in construction of a stormwater facility on two parcels formerly occupied by single-family residences at the south end of Fairweather Basin (see Figure 2). This facility will treat SR 520 runoff that previously was discharged via streams or overland into Lake Washington without treatment. The stormwater facility will be separated from Fairweather Basin by a native riparian vegetation buffer and WSDOT maintenance road.</p> <p>Existing overwater structures will be removed within the Stormwater Utility environment, but existing shoreline armoring will remain.</p>
Natural	<p>No significant changes to the Natural environment are anticipated.</p> <p>Future use of the Wetherill Nature Preserve is guided by a deed that states “the property is conveyed to the public in perpetuity, and that it shall never be used for a purpose other than as a nature preserve and a place of retreat for the education and benefit of members of the general public.” Further, the deed directs that “No boat moorage facilities, piers, or pilings should be installed along the waterfront, and access from the water to the property should be discouraged.”</p> <p>Existing wetlands in the Natural environment are governed by federal, state, and local regulations, including the proposed Shoreline Master Program. These wetlands and associated buffers are expected to remain in their present condition.</p>



Figure 2. Planned Improvements by Washington Department of Transportation as part of its SR 520 Corridor project. <http://www.wsdot.wa.gov/NR/rdonlyres/C834093E-B240-4F7C-A5A2-F1D711248863/67820/EastsideCorridorWeb.pdf>

## 4 PROTECTIVE SMP PROVISIONS

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Ecology guidelines include the following suggestions as means to help achieve no net loss through use guidelines:

- **Prohibit uses** that are not water-dependent or preferred shoreline uses. For example, office and multi-family housing buildings are not water-dependent or preferred uses.
- **Require that all future shoreline development**, including water-dependent and preferred uses, is carried out in a manner that limits further degradation of the shoreline environment.
- **Require buffers and setbacks.** Vegetated buffers and building setbacks from those buffers reduce the impacts of development on the shoreline environment.
- **Establish appropriate shoreline environment designations.** The environment designations must reflect the inventory and characterization. A shoreline landscape that is relatively unaltered should be designated Natural and protected from any use that would degrade the natural character of the shoreline.

- **Establish strong policies and regulations.** Policies and regulations will define what type of development can occur in each shoreline environment designation, determine the level of review required through the type of shoreline permit, and set up mitigation measures and restoration requirements.
- **In all cases, require mitigation sequencing.** The SMP must include regulations that require developers to follow mitigation sequencing: avoid impacts, minimize impacts, rectify impacts, reduce impacts over time, compensate for impacts, monitor impacts and take corrective measures.

Measures described below implement the above guidance and help the City achieve the no net loss standard. Specific regulations in the SMP are identified and discussed in greater detail in Chapter 7.

## 4.1 Environment Designations

The first line of protection of the Town’s shorelines is the environment designation assignments (see Chapter 4 of the SMP); these include Natural, Stormwater Utility, Shoreline Residential, and Aquatic.

- The Natural environment is the most restrictive. Only a few uses are allowed outright in this environment (primarily water-oriented uses), and several others are allowed only in special circumstances related to provision of public access or to enable restoration or as conditional uses.
- The Stormwater Utility environment includes two parcels. Stormwater collection and dispersion is allowed in this environment through a Conditional Use Permit.
- Residential and accessory uses are allowed within the Shoreline Residential environment.

Table 2, below, identifies the prohibited and allowed uses and modifications in each of the shoreline environments and shows a hierarchy of higher-impacting uses and modifications being allowed in the already highly altered Shoreline Residential environment, with uses more limited in the less developed areas of the Natural environment. This strategy helps to minimize cumulative impacts by concentrating development activity in lower functioning areas that are not likely to experience function degradation with incremental increases in new development.

**Table 2.** Shoreline Use and Modification Matrix

SHORELINE USE AND MODIFICATION	ENVIRONMENT DESIGNATION			
	Stormwater Utility	Shoreline Residential	Natural	Aquatic
Agriculture	Prohibited	Prohibited	Prohibited	Prohibited
Aquaculture	Prohibited	Prohibited	Prohibited	Prohibited
Boating Facilities	Prohibited	Prohibited	Prohibited	Prohibited
Clearing & Grading (includes fill upland of OHWM)	Conditional Use	Permitted	Permitted	Prohibited
Commercial Development	Prohibited	Prohibited	Prohibited	Prohibited
Dredging	NA	NA	NA	Permitted

SHORELINE USE AND MODIFICATION	ENVIRONMENT DESIGNATION			
	Stormwater Utility	Shoreline Residential	Natural	Aquatic
Dredge Material Disposal	Prohibited, Permitted if restoration			
Fill (waterward of OHWM)	NA	NA	NA	Conditional Use, Permitted if restoration
Forest Practices	Prohibited	Prohibited	Prohibited	Prohibited
Industrial Development	Prohibited	Prohibited	Prohibited	Prohibited
Mining	Prohibited	Prohibited	Prohibited	Prohibited
Parking as a Primary Use as an Accessory Use	Prohibited Prohibited	Prohibited Permitted	Prohibited Prohibited	Prohibited Prohibited
Private Moorage – Boats/Floatplanes Moorage Cover Boathouse Pier, Float, Joint Use Structure, Buoy, Moorage Pile Lift, Lift Canopy Launching Ramp Launching Rails	Prohibited Prohibited Prohibited	Permitted Prohibited Permitted	Prohibited Prohibited Prohibited	Permitted Prohibited Permitted
Recreational Facilities Water-dependent Water-related Water-enjoyment (trail) Non-water-oriented Primary Accessory	Prohibited Prohibited Permitted	Permitted Permitted Permitted	Conditional Use Prohibited Permitted	Permitted Permitted Prohibited
Residential Single-Family Multi-Family	Prohibited Prohibited	Permitted Prohibited	Prohibited Prohibited	Prohibited Prohibited
Shoreline Habitat and Natural Systems Enhancement	Permitted	Permitted	Permitted	Permitted
Shoreline Stabilization Beach Restoration & Enhancement Soil Bioengineering Bulkheads Breakwaters Groins Jetties	Permitted Permitted Prohibited Prohibited Prohibited	Permitted Permitted Prohibited Prohibited Prohibited	Permitted Permitted Prohibited Prohibited Prohibited	Permitted Permitted Prohibited Prohibited Prohibited
Transportation	Conditional Use	Conditional Use	Conditional Use	NA
Utilities, Primary Stormwater Collection & Dispersion All Other Utilities Utilities, Accessory	Conditional Use Prohibited Permitted	Prohibited Prohibited Permitted	Prohibited Prohibited Permitted	Prohibited Prohibited Permitted

## 4.2 General Goals, Policies and Regulations

Goals in the Shoreline Use, Conservation, and Restoration Elements of the SMP emphasize maintaining or improving shoreline functions over time. These goals guided the development of numerous general policies, with supporting regulations (see SMP), intended to protect the ecological functions of the shoreline and prevent adverse cumulative impacts. These policies are summarized below.

- 3.1.B.1 The adverse impacts of shoreline uses and activities on the shoreline environment should be avoided, if feasible, and then minimized during all phases of development (e.g., design, construction, management and use) consistent with the mitigation sequencing standards of 5.3.A and 173-26-201(2)(e)(i). Mitigation for impacts must be provided such that the use or activity overall will result in no net loss of shoreline ecological functions.
- 3.1.B.2 The Town of Hunts Point should protect the ecological integrity of Lake Washington and associated wetlands and creeks. Ecological integrity is a term that refers to a system’s overall health and wholeness, including the presence of all appropriate elements (physical and biological) and the occurrence of all processes (e.g. erosion and deposition) at appropriate rates. Protecting the ecological integrity is the primary directive for water policy in the United States Clean Water Act.
- 3.1.B.3 The Town of Hunts Point shall plan for the restoration of ecological functions where they have been impaired. Master Program provisions, including goals, policies, and regulations, are intended to achieve overall improvements in shoreline ecological functions over time, when compared to the status upon adoption of the Master Program. Restoration goals will be achieved by providing development incentives to private property owners, restoration information and assistance to all interested parties, through Town projects and programs, and other means outlined in the Restoration Plan.
- 3.1.B.4 The Town should consider the adoption of Low Impact Development (LID) standards, such as those contained in the *Low Impact Development Manual: Technical Guidance for Puget Sound*, to further reduce environmental impacts within the Shoreline Environment.
- 3.1.C.2 Unique, rare and fragile natural features and wildlife habitats should be preserved and protected from unnecessary degradation or interference.
- 3.1.C.3 The Town of Hunts Point should protect the ecological integrity of its shoreline areas within its jurisdiction.

Setbacks have been established by environment designation and for specific uses as follows in Table 3.

**Table 3.** Development Standards

Regulation	Stormwater Utility	Shoreline Residential	Natural	Aquatic
Height Limit	Consistent	Not to exceed 30’ above original	NA	16’

Regulation	Stormwater Utility	Shoreline Residential	Natural	Aquatic
	with approved Special Use Permit	grade, 36' above finish grade*		
Minimum lot frontage (waterfront)	50'	50'	50'	NA
Shoreline Setback: R-40 zone**	NA	Unless otherwise established in a plat, subdivision, or any other approval granted by the Town prior to the effective date of the SMP, the primary dwelling shall be set back no closer to the OHWM than the stringline setback.	NA	See Section 6.6 for side setbacks
Shoreline Setback: R-20 zone**	NA	Unless otherwise established in a plat, subdivision, or any other approval granted by the Town prior to the effective date of the SMP, the primary dwelling shall be set back 40 feet from the OHWM, except in the case of a waterfront lot where the setback shall be as defined by a building line where such line has been established by a plat or subdivision approved by the Town.	NA	NA
Shoreline Setback: R-20A zone**	30'	Unless otherwise established in a plat, subdivision, or any other approval granted by the Town prior to the effective date of the SMP, the primary dwelling shall be set back 30 feet from the OHWM.	NA	NA

\* Note that height is defined per Hunts Point zoning regulation and WAC 173-27-030 (9); also see Definition Appendix A.

\*\* See map of shoreline setbacks in Appendix G of the SMP.

## 5 EFFECT OF OTHER DEVELOPMENT AND RESTORATION ACTIVITIES/PROGRAMS

### 5.1 Washington Department of Fish and Wildlife

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

## 5.2 Washington Department of Ecology

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

## 5.3 U.S. Army Corps of Engineers

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

As a federal agency, any activity within Corps jurisdiction that could affect species listed under the Federal Endangered Species Act must be consulted on with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service. These agencies ensure that the project includes impact minimization and compensation measures for protection of listed species and their habitats.

# 6 RESTORATION OPPORTUNITIES

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

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

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

Practically, it is not always feasible for shoreline developments and redevelopments to achieve no net loss at the site scale, particularly for those developments on currently undeveloped properties or a new pier or bulkhead. The Restoration Plan, therefore, can be an important component in making up that difference in ecological function that

would otherwise result just from implementation of the SMP. The Restoration Plan represents a long-term vision for restoration that will be implemented over time, resulting in incremental improvement over the existing conditions.

The Shoreline Restoration Plan identifies project-specific opportunities for restoration inside and outside of shoreline jurisdiction, and also identifies ongoing Town programs and activities, non-governmental organization programs and activities, and other recommended actions consistent with the *Lake Washington/Cedar/Sammamish Chinook Salmon Conservation Plan* and other local recovery planning efforts. One ongoing effort identified is an annual stewardship event in Wetherill Nature Preserve.

## 7 ASSESSMENT OF CUMULATIVE IMPACTS

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The following table (Table 4) summarizes for each environment designation and corresponding waterbody the existing conditions, anticipated development, relevant Shoreline Master Program (SMP) and other regulatory provisions, and the expected net impact on ecological function. Certain special topics are discussed and analyzed in greater detail following the table. The discussion of existing conditions is based on the *Shoreline Analysis Report*, information included in Chapter 2, and additional analysis needed to perform this assessment.

In addition to the environment designations discussed in Table 4, the following designation will apply to those applicable areas of shoreline jurisdiction:

“Aquatic” Environment - The purpose of the “Aquatic” environment is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high water mark. An “Aquatic” environment designation will be assigned to shoreline areas waterward of the ordinary high-water mark.

The critical areas regulations and the prohibition of most uses and modifications in the associated wetlands ensure no net loss of ecological functions in this environment. Aquatic environment impacts are discussed in other sections below.

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