

PURPOSE AND INTENT

The purpose of this restoration plan is to improve degraded areas of the shoreline environment of Bainbridge Island over time by restoring shoreline ecological functions and processes. This plan will be accomplished through voluntary and incentive-based public and private programs to restore and enhance shoreline areas identified and prioritized in this plan for improvement.

This plan serves as a science-based guide for the City of Bainbridge Island to achieve island-wide improvements in ecological functions of degraded shoreline areas as required by WAC 173-26-201(2)(f). This plan identifies and prioritizes where improvements can be most effective; identifies existing and ongoing restoration projects; and includes education and outreach activities to encourage shoreline restoration by individual shoreline homeowners. The plan is intended to describe opportunities for restoration for all of Bainbridge Island, not just the city. The following information is provided in this document for use as a basis for shoreline restoration planning:

- Identification of degraded areas and opportunities for restoration that will improve shoreline functions for the future
- Identification of development that is harming shorelines
- Opportunities for protection and conservation
- Identification of programmatic restoration strategies, as well as general restoration activities, that could be applied to any candidate shoreline within the city

A summary of ongoing and proposed restoration projects in the city is provided in Appendix A. A summary of completed restoration projects in the city is provided in Appendix B.

Scope and Context

This plan describes restoration opportunities and programmatic strategies to improve ecosystem functions along the marine shorelines of Bainbridge Island. The island has approximately 53 miles of marine shoreline, which includes bays, spits, estuaries, bluffs, and stream and tidal deltas (Williams et al. 2004). Marine shoreline areas included in this restoration plan are defined as all uplands within 200 feet of the shoreline edge and associated tidelands and wetlands, as defined landward by the ordinary high water mark (OHWM) and nearshore waters to the local government's in-water jurisdictional boundary.

This plan's success depends on the involvement of a number of government, tribal, and non-profit organizations, in addition to the City of Bainbridge Island, that are stewarding and restoring land on the island. They include, for example, Bainbridge Island Metropolitan Park and Recreation District (BIMPRD), Bainbridge Island Land Trust, the Suquamish Tribe, and the Puget Sound Restoration Fund.

This plan also relies on preservation of ecological functions on remaining undeveloped parcels to offset ecological losses from ongoing shoreline development. While protecting shorelines from future development does not directly restore habitats, preservation does help maintain no net loss. For example, where feeder bluffs with intact native vegetative canopy can be preserved, they will help maintain the supply of sediment along the shore, provide a native plant seed source, and supply large woody debris—all functions that can support adjacent shorelines and restoration projects.

Educational opportunities represent an unusual aspect of this restoration plan. Because most of Bainbridge Island shorelines are privately owned and are developed with single family residences, homeowner education is viewed as an essential strategy for maintaining and improving ecological conditions along the shoreline. As detailed in the Addendum to the Summary of Science (Herrera 2011), the largest stressors on the ecological health of the island are cumulative impacts from private development that was/is completed without adequate protection for shoreline ecological functions. Reduction and removal of such impacts will be more common and effective with an educated shoreline populace.

The following sections describe the relationships between this restoration plan, and City regulations, plans, ongoing programs, and broader regional goals that have been identified for the restoration of Puget Sound.

State Shoreline Master Program

The 2010 Washington Department of Ecology Shoreline Management Plan Guidelines (Ecology 2010a) require the development of a shoreline restoration plan as part of the shoreline management plan (SMP) update process. This plan reflects the findings of the shoreline inventory and characterization work completed for the City of Bainbridge Island and supports the goals, policies, and regulations of the City's SMP. Although the protective and mitigation provisions of the SMP are intended to achieve no net loss of ecological functions from new adverse impacts, this restoration plan will help ensure that the shoreline ecosystem functions within the city achieve no net loss with potential for improvement over time. As such, this plan serves as a technical companion to the SMP to improve degraded and impaired shoreline resources.

This plan, in conjunction with the SMP policies and regulations, is designed to satisfy Ecology's SMP requirements for shoreline restoration planning. It provides a planning-level framework for understanding how and where shoreline ecological functions can be restored in the city. This plan also describes how future restoration activities can be integrated with existing and ongoing restoration efforts including: the region-wide effort to restore Puget Sound spearheaded by the Puget Sound Partnership and the West Sound Watersheds Council, and the work of several non-profit organizations (including Bainbridge Island Land Trust, Puget Sound Restoration Fund, and People for Puget Sound), as well as private citizens. In addition, community partnerships, collaborations, and willing landowners are key to implementing the many recommended restoration actions.

City Comprehensive Plan

The City of Bainbridge Island completed an update to its comprehensive plan in 2004 (City of Bainbridge Island 2004). The comprehensive plan update motivated several studies that have provided information used for this restoration plan (for example, EDAW|AECOM 2008). The comprehensive plan goals are broadly consistent with planned activities mentioned herein, particularly the first two guiding principles of the comprehensive plan, which are: 1) preserve the special character of the land and 2) protect fragile water resources.

Bainbridge Island Metropolitan Park and Recreation District Comprehensive Plan

The BIMPRD comprehensive plan identifies restoration as an important component of conserving the public shoreline areas of Bainbridge Island parks. The BIMPRD comprehensive plan has many policies that support resource conservation and coordination with public agencies and non-profit groups to conserve, preserve, and protect wildlife habitat, natural areas, and open spaces, including shorelines and waterfronts (BIMPRD 2009). Some of the suggested restoration actions developed herein are intended to assist BIMPRD with conceptual planning for projects that support its comprehensive plan and can be used as a tool for developing park plans under the SMP.

City Water Quality and Flow Monitoring Program

The City's Water Quality and Flow Monitoring Program conducts status and trends monitoring in both freshwater and marine nearshore environments island wide in order to assess current water quality conditions and discern apparent trends. The results of this monitoring help guide the prioritization and optimization of water resources protection and restoration efforts in the City. Typical monitoring activities include:

- Monthly status and trends monitoring
- Targeted storm event sampling (every 5 years)
- Sediment sampling (every 5 years)
- Automated continuous flow and precipitation monitoring

The Water Quality and Flow Monitoring Program also engages in special water quality monitoring projects such as targeted basin-wide illicit discharge detection and elimination, and joint-agency shoreline survey pollution identification and correction.

City Stormwater Management Program

The City's Stormwater Management Program (SWMP) is a comprehensive program plan designed to reduce or eliminate pollutant discharge from the City of Bainbridge Island's municipal storm sewer system in order to restore and protect beneficial uses of the waters of the state. This program addresses the conditions of the City's municipal stormwater permit (aka. NPDES Phase II). Typical activities of the program include:

- Implementing the Road Maintenance Manual and the Stormwater Pollution Prevention Plan, which outlines goals and objectives for protecting water quality and also establishes best management practices (BMPs) for conducting municipal operations. Examples of water quality operations include cleaning of catch basins, and maintaining water quality vaults and stormwater control facilities.
- Training and educating City staff in recognizing and reporting illicit discharges, construction inspection, and municipal housekeeping practices
- Conducting surveys and outreach activities designed to engage and inform the public and the business community regarding water quality protection issues and to effectively focus education efforts
- Contracting with the Kitsap Conservation District to provide expertise to farmers, animal hobbyists, and other agricultural entities on water quality protection measures, including BMPs for soil management, animal waste handling and storage, pasture management, and irrigation
- Providing the Mutt Mitt program that allows individuals, neighborhood groups and businesses to obtain and maintain dispensers for dog waste pick up bags to preserve their neighborhood water quality
- Offering Business Technical Assistance Visits to local businesses and commercial properties to identify sources of pollutants transported by stormwater and provide information on good housekeeping practices that prevent pollutant discharges
- Providing Household Hazardous Waste Collections to citizens as an avenue to dispose of unwanted waste and eliminate dumping
- Conducting outfall reconnaissance during dry weather to evaluate the water quality of outfalls discharging to the shorelines and to pursue pollutant elimination
- Conducting investigations of illicit discharges and pollutant sources to allow the city to eliminate such sources of pollutants
- Regulating water quality and quantity impacts of development, redevelopment and construction through Municipal Code compliance, including inspecting sites under construction and requiring erosion control and reduction of sediment deposition to waterways
- Encouraging Low Impact Development (LID) through a guidance manual adopted with the latest Municipal Code update
- Requiring stormwater facilities to be operated and maintained appropriately in perpetuity
- Cooperating with Kitsap Public Health District to conduct surveys of the City's shorelines to evaluate water quality

Broader Puget Sound Restoration Goals

This plan seeks to establish a basic framework for improving the quality and sustainability of the city's shoreline resources over time in a collaborative and cohesive manner. This overarching goal is consistent with the Shoreline Management Act and with the Puget Sound Partnership's regional strategy for restoring Puget Sound.

The Washington legislature directed the Puget Sound Partnership to coordinate and lead the regional restoration effort. In 2008, the Partnership developed an "Action Agenda" that describes the steps needed to restore the Sound by 2020. In identifying specific restoration goals and objectives that the Action Agenda must achieve, the legislature described the characteristics of a healthy and restored Puget Sound as follows:

- A healthy human population supported by a healthy Puget Sound that is not threatened by changes in the ecosystem
- A quality of human life that is sustained by a functioning Puget Sound ecosystem
- Healthy and sustaining populations of native species in Puget Sound, including a robust food web
- A healthy Puget Sound where freshwater, estuary, nearshore, marine, and upland habitats are protected, restored, and sustained
- An ecosystem that is supported by ground water levels, as well as river and stream flow levels, sufficient to sustain people, fish, and wildlife, and the natural functions of the environment
- Fresh and marine waters and sediments of a sufficient quality so that the waters in the region are safe for drinking, swimming, shellfish harvest and consumption, and other human uses and enjoyment, and are not harmful to the native marine mammals, fish, birds, and shellfish of the region.

This restoration plan seeks to achieve those same goals by contributing to the Puget Sound restoration effort and to the specific strategies being developed by the Partnership as part of the 2020 Action Agenda. This plan is also intended to be compatible with the restoration goals already developed by other restoration planning entities working within the city.

In addition to being compatible with the Puget Sound Partnership goals, this plan used Puget Sound Nearshore Ecosystem Restoration Project (PSNERP) guidance and methodologies for identifying, assessing, and prioritizing restoration actions described herein. PSNERP's restoration strategies are process-based and aimed at restoring damaged or degraded ecosystems. Process-based restoration involves making intentional changes to an ecosystem to allow erosion, accretion, tidal exchange, accumulation of wood debris, and other natural process to occur. Process-based restoration is expected to deliver benefits to the diverse array of species that rely upon nearshore ecosystems in a manner that is sustainable and reduces the need for future interventions at the restored site.

Although, PSNERP did not identify specific projects on Bainbridge Island, the approach advocated by PSNERP of identifying those areas where human activities have altered geomorphic processes was used throughout this document. In addition, the restoration priorities identified by PSNERP will be used by the City to identify future additional strategic opportunities for restoring nearshore ecosystem processes.

Restoration Plan Objectives

- Encourage and facilitate cooperative restoration and enhancement programs between local, state, and federal public agencies, tribes, non-profit organizations, and landowners to address shorelines with impaired ecological functions and/or processes.
- Restore and enhance shoreline ecological functions and processes, as well as shoreline features, through voluntary and incentive-based public and private programs.
- Target restoration and enhancement toward improving habitat requirements of priority and/or locally important wildlife species.
- Ensure restoration and enhancement is consistent with and, where practicable, prioritized based on the biological recovery goals for Chinook, bull trout, and other species and/or populations for which a recovery plan is available.
- Seek funding for various restoration actions and programs from local sources and by working with the BIMPRD and other jurisdictions in Water Resource Inventory Area (WRIA) 15 and stakeholders to seek federal, state, grant and other funding opportunities.
- Continue to develop and implement the City's Shoreline Stewardship Program as a public education program to inform private property owners in the shoreline jurisdiction and in the remainder of the city about the effects of land management practices and other unregulated activities (such as vegetation removal, pesticide/herbicide use, car washing) on fish and wildlife habitats.

Restoration Policies

The following policies will guide the City's restoration activities:

- **Policy 1.** Restoration and enhancement actions will improve shoreline ecological functions and processes and should be designed using principles of landscape and conservation ecology. The primary goal is to restore and/or enhance physical and biological ecosystem-wide processes that create and sustain shoreline habitat structures and functions.
- **Policy 2.** Encourage and facilitate cooperative shoreline restoration and enhancement programs between local, state, and federal agencies, tribes, non-profit organizations, and landowners to address shorelines with impaired ecological functions and/or processes.

- **Policy 3.** Target restoration and enhancement actions to improve habitat requirements of priority species, such as Chinook salmon and other species; locally important plant, fish and wildlife species; and other populations or habitats for which a prioritized restoration or recovery plan is available.
- **Policy 4.** Integrate restoration and enhancement with other natural resource management efforts such as Puget Sound Salmon recovery planning, West Sound Watershed planning, and WRIA 15 watershed management planning.
- **Policy 5.** As feasible, include provisions for shoreline vegetation restoration, fish and wildlife habitat enhancement, and low impact development techniques in projects located within the shoreline through project mitigation and incentive-based restoration.
- **Policy 6.** Seek funding from state, federal, private, and other sources to implement restoration and enhancement, and to provide support to restoration work, by identifying shoreline restoration priorities and organizing information on available funding sources for restoration implementation.
- **Policy 7.** Encourage restoration and enhancement projects by developing project permitting and processing guidelines that will streamline the review of restoration-only projects.
- **Policy 8.** Identify and encourage the use of tax incentive programs, mitigation banking, grants, land swaps, or other programs, as they are developed, to encourage restoration and enhancement of shoreline ecological functions and to protect habitat for fish, wildlife, and plants, provided that mitigation sequencing is maintained.
- **Policy 9.** All shoreline restoration and enhancement projects should avoid adverse impacts on existing saltwater critical areas, fish and wildlife habitat conservation areas, water quality, and flood holding capacities.
- **Policy 10.** Shoreline restoration and enhancement projects are intended to restore or enhance a shoreline in conjunction with shoreline stabilization, recreational enhancement, and aquatic habitat creation or restoration, and shall not be utilized to create new land area along the shoreline below the OHWM or to raise the elevation to create dry upland areas.
- **Policy 11.** Supplementary beach nourishment should be encouraged where existing shoreline stabilization is likely to increase impoverishment of existing beach materials at or downdrift from the project site, and should be coordinated with an island-wide shoreline restoration plan.
- **Policy 12.** Shoreline stabilization should incorporate beach restoration or enhancement in accordance with the restoration provisions of this plan.