Restoration Plan
City of Everson Shoreline Master Program

1.0 INTRODUCTION

The Washington State Department of Ecology shoreline management guidelines direct local governments to review and update their shoreline master programs, including development of a "real and meaningful" strategy to address restoration of shorelines. Restoration planning is required by WAC 173-26-186 and shall include goals, policies, and actions for restoration of impaired shoreline ecological functions. The goal of restoration planning is to implement elements that will serve to improve the overall condition of habitat and resources within the shoreline area. It is understood that restoration plans will vary based on:

- Size of jurisdiction
- Extent and conditions of shorelines
- Availability of grants, volunteer programs, other tools
- The nature of ecological functions to be addressed

This restoration plan describes restoration opportunities identified through a detailed inventory and assessment of ecosystem processes and shoreline ecological functions in the City of Everson. The results of this assessment are detailed and described in the Draft Shoreline Inventory and Analysis Report and the accompanying map folio.

1.1 NO NET LOSS AND RESTORATION

The concept of no net loss is a central idea for shoreline management and is rooted in the goals, policies, and governing principles of the Shoreline Management Act and the Shoreline Management Guidelines. In general, the state's policy goals for shorelines of the state include the "protection and restoration of ecological functions of shoreline natural resources." No net loss of ecological function is accomplished through a combination of regulatory and non-regulatory approaches, including the shoreline regulations and this restoration plan. Restoration planning to achieve no net loss is dependent upon economic incentives, funding availability, volunteer programs, and other programs.

Shoreline restoration planning shall address the elements included in WAC 173-26-201(2)(f). These requirements provide the framework for restoring impacted, degraded, or missing ecological functions resulting from past development of the shoreline. The Department of Ecology master program guidelines state that:

> "Restore," "Restoration," or "ecological restoration," means the reestablishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including but not limited to revegetation, 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.

The City of Everson has a number of areas with the potential for shoreline restoration and improvements to ecological functions. Approximately ¾ of Everson's shorelines adjacent to the water under jurisdiction have been designated Natural. This Natural designation provides opportunity for naturally occurring vegetation and processes to rehabilitate without human influence. Other opportunities for native planting, removal or non-native vegetation, and restoration techniques exist along shoreline areas and tributaries to the Nooksack River.

1.2 RESTORATION PLAN REQUIREMENTS

Ecology's shoreline guidelines suggest that restoration plans consider and address all of the following (WAC 173-26-201(2)(f)):

- Identify degraded areas, impaired ecological functions, and sites with potential for restoration;
- Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions;
- Identify existing and ongoing projects and programs that are currently being implemented, or are reasonably assured of being implemented, which are designed to contribute to local restoration goals;
- Identify additional projects and programs needed to achieve local restoration goals and implementation strategies including identifying prospective funding sources for those projects and programs;
- Identify timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals; and
- Provide mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals.

These restoration requirements are intended to provide a framework to restore impaired, altered, or degraded shoreline functions and to improve overall ecological conditions over time.

2.0 RESTORATION GOALS & POLICIES

Shoreline restoration is rooted in the idea that the widespread loss or alteration of rivers, streams, and wetlands and their associated ecological functions has serious implications for our quality of life and for overall ecosystem sustainability. The overarching goals, priorities and objectives of restoration planning are to improve water quality through natural processes, restore degraded and lost habitat and corridors, and improve connectivity of shoreline environments.

2.1 GOALS

- Protect naturally eroding banks.
- Protect and restore native vegetation.
- Protect and restore wetlands and tributaries to the Nooksack.
- Manage and treat stormwater and wastewater from new and existing development properly.

2.2 POLICIES

Policy A: A cooperative approach to restoration planning between local, state, and federal public agencies, non-profit organizations and landowners should be encouraged to address shorelines with impaired ecological functions;

Policy B: Key natural and ecological functions and processes along shorelines should be protected and restored.

Policy C: Restoration should be encouraged to increase stability in non-naturally eroding stream and riverbanks.

Policy D: Restoration should protect riparian corridors and restore significant habitat and vegetation.

3.0 RESTORATION OPPORTUNITIES

Everson has a number of potential restoration opportunities as mentioned in the introduction to this restoration plan. The amount of restoration will depend on necessary funding and coordination between the City, other agencies and volunteers. The following are areas of degraded ecological conditions or areas for future enhancement: These areas have been described based on their location within the various shoreline reaches identified in the Everson Shoreline Inventory and Analysis Report.

3.1 REACH 2

Reach 2 and Riverside Park provide a good example successful restoration along the Nooksack River. A recent case study for restoration is a groin repair project along the shoreline adjacent to Riverside Park that incorporated engineered logjams and native plantings. The groins were built to increase large woody debris (LWD) and salmon habitat during times of higher water. A bank stabilizing geotextile material was also introduced at the launch site for canoes during the annual Whatcom County Ski to Sea race.

Ecological impairments in Reach 2 largely consist of the lack of large woody debris and overuse of the shoreline by park visitors. Increasing large woody debris and the amount of native vegetation will provide more habitat opportunities and increase biodiversity of species within the reach.

Future restoration projects in Reach 2 should include the replanting for native vegetation, especially types that aid in bank stabilization and increasing LWD along the river edge.

3.2 REACH 3

Reach 3 shares a mix of different land uses and therefore a variety of ecological functions. Along the riverbank, there is eroding shoreline and a lack of riparian habitat and large woody debris. The area farther away from the river is lacking in native vegetation and vegetation that is of substantial size to create a buffer. Future development in areas zoned for residential uses could also impair water quality as a result of increased water runoff and pollution.

Reach 3A

Reach 3A is designated as Natural and as a vegetation conservation area (VCA). This area should be left free of human intrusion, except low impact trails, and allowed to restore through more natural processes. Active restoration actions may include reconnecting trails along the edge of Reach 3A to Reach 2, increasing large woody debris and the number of mixed conifers, restoring abandoned side channels to provide over wintering salmonid habitat, and shoreline stabilization where eroding banks occur.

Reach 3B

With the expansion of Riverside Park, restoration opportunities will exist along the water's edge. These opportunities will include the removal of non-native plant species, planting of native vegetation, and stabilizing shoreline banks.

Reach 3C

As the City of Everson continues to develop, Reach 3C will see an increase of single family residences. Residences located adjacent to Reach 3A should be encouraged to utilize landowner restoration programs that provide more native vegetation and natural buffers from critical ecological areas.

3.3 REACH 4

Reach 4 is a prime area for future residential development. The Reach is divided into two sections and may see impaired ecological functions as a result of development in Reach 4B. Impaired functions include reduced water quality from water runoff and a reduction in vegetation buffer size between Reach 4B and 4A.

Reach 4A

Reach 4A is designated as Natural and as a vegetation conservation area and should be restored to contain as much native vegetation as possible. This vegetation will serve as a filter for water runoff from adjacent development activities and aid in water quality protection. There are remnant swales, used during times of high water, that could possibly be enhanced. Additional recruitment of large woody debris will also help to restore and maintain riparian and fish habitat.

Reach 4B

Restoration in Reach 4B will be closely related with future development plans. Developers should include restoration for the mitigation of increased runoff and impacts to the shoreline environment as a result of increased impervious surfaces and development. Restoration could include vegetation buffers, planting of native vegetation and low impact development techniques to reduce the potential for negative impacts.

3.4 REACH 5

Reach 5 is designated as Natural and is also recommended to remain a vegetation conservation area. Reach 5 is subject to extreme flooding and should remain in its natural state. Reach 5 does not have a significant amount of impaired ecological functions. Increased wetland

connectivity in this area would help with surface water flow and runoff management. Additional large woody debris recruitment will help maintain and increase riparian and fish habitat.

3.5 REACH 6

A large Natural area protects Reach 6 and its ecological processes. Impaired processes in this Reach include a lack of wetland connectivity - including the reduced function of swales - and the invasion of non-native vegetation into the Natural areas.

Reach 6A

Reach 6A will see restoration as new industrial and commercial operations are encouraged to mitigate development plans. Restoration mitigation may include bank stabilization and increased vegetation to the shoreline areas. Restoration activities may be limited to allow future water-dependent uses.

Reach 6B

Reach 6B is designated as Natural and should remain in its natural state as a vegetation conservation area. Some native planting could help with the natural restoration process. Increasing native vegetation here will also develop a buffer from adjacent residential uses.

Reach 6C

Reach 6C could include restoration opportunities with new development plans. The restoration projects could include increasing vegetation, reducing stormwater impacts, and including low impact development techniques in building plans.

3.6 EVERSON SLOUGH

Everson Slough provides a great area for restoration and should be one of the top priorities for the City of Everson. The Slough should be restored back to its original state as a functioning tributary to the Nooksack River. Impaired ecological functions include lack of ground and surface water flow to the Nooksack and impaired habitat and vegetation conditions. Restoration may include connecting the Slough back to the Nooksack River. The Slough should also be restored using native plants and removing the large amount of blackberry, reed canary grass, and other invasive species.

This area provides a unique situation for education. The Slough, with its proximity to the elementary school, could be used for environmental education purposes. It may also be possible to develop work parties to maintain the Slough and return it to properly functioning conditions.

3.7 SCOTT DITCH

Scott Ditch is another site where restoration has occurred and may prove to be a good example for future streamside plantings. Scott Ditch was restored and protected by a buffer on one side of the ditch with native plants. This technique could be used on the remaining areas adjacent to the Ditch. Providing a buffer protects water resources and the quality of water, reduces the effects of stormwater, and provides pleasing aesthetic qualities for public viewing.

3.8 JOHNSON CREEK

Johnson Creek is another site where future restoration may be possible. The banks of Johnson Creek are overgrown with non-native vegetation; this vegetation could be removed and planted with native species. The Conservation Resource Enhancement Program (CREP) should be encouraged to continue planting native and removing non-native plant species along the creek. Improving the drainage features of the creek may help alleviate flooding pressure and carry water to the Sumas River.

4.0 RESTORATION PROGRAMS AND PARTNERS

4.1 RESTORATION PROGRAMS

WRIA 1 Salmon Recovery Plan (SRP)

The SRP outlines actions necessary to recover ESA-listed salmonid populations, with a particular focus on Chinook salmon. The draft SRP includes a Salmonid Habitat Restoration Strategy that identifies and prioritizes specific projects to protect and restore habitats and the ecosystem processes essential to the recovery of threatened Chinook salmon and bull trout, along with other salmonids native to the Nooksack watershed. The restoration measures identified in the SRP have the potential to benefit the full range of shoreline processes and can therefore be expected to have a direct benefit on shoreline ecological functions throughout the County.

WRIA 1 Watershed Management Plan (WMP)

The WRIA 1 planning process provides a framework for government and non-governmental organizations to plan for and address issues relating to water quantity, water quality, instream flow and fish habitat within Whatcom County. The result of this planning effort was the WEIA 1 Watershed Management Plan (WMP). The WMP is intended to be a living document that will be updated over time as projects and programs to address water quantity, quality, instream flows, and fish habitat are implemented. These projects are expected to have direct benefits on shoreline resources and contribute to meeting the no net loss goals of the Shoreline Management Act and the Everson Shoreline Master Program.

Conservation Resource Enhancement Program (CREP)

CREP is a joint partnership between the State of Washington and the USDA, and is administered by the Whatcom Conservation District and the Natural Resource Conservation Service. This conservation program provides incentives to restore and improve salmon and steelhead habitat on private land. This program is voluntary for landowners, and generally involves planting trees and shrubs for 10-15 years to stabilize stream and riverbanks.

Whatcom County Shoreline Restoration Plan

In conjunction with updating its shoreline management program, Whatcom County has developed a draft Restoration Plan. This plan identifies restoration projects within the Nooksack River watershed that have the potential to restore and enhance the shoreline processes within the City.

4.2 RESTORATION PARTNERS

The Everson SMP represents an important vehicle for facilitating and encouraging restoration projects that could be led by private and/or non-profit organizations. The City most likely will not take the lead role in most of the restoration projects or programs described in the previous section. The following agencies and organizations will, therefore, be important partners in achieving the City's restoration goals and objectives.

Lummi Nation

The Lummi Nation is active in most of the ongoing natural resource protection and management efforts in Whatcom County. These efforts encompass a wide range of issues related to salmon recovery, shellfish management, aquaculture, and water quality/quantity.

Nooksack Tribe

The Nooksack Tribe is also very active in natural resource protection and management, with a focus on fisheries and shellfish. The Nooksack Natural Resources Department (NNR) works to protect and recover the treaty resources of the Nooksack Tribe by assessing, preserving and restoring salmon habitat, and by managing fish and shellfish resources for the long term in an ecologically sound, sustainable manner.

Nooksack Salmon Enhancement Association (NSEA)

NSEA is one of the 14 regional salmon enhancement groups in the Washington Department of Fish and Wildlife Regional Fisheries Enhancement Group Program. NSEA works closely with local, state, and federal agencies and local tribes, including the Whatcom Conservation District, the Nooksack Recovery Team, WDFW, DNR, Ecology, USFWS, the Nooksack Tribe, and the Lummi Nation. NSEA works with habitat restoration and salmon enhancement through replanting native vegetation, restoring riparian zones, reducing livestock impacts on water quality, improving instream habitat, and stabilizing eroding banks.

Whatcom Conservation District (WCD)

Whatcom Conservation District works with landowners and farmers to manage natural resources in Whatcom County. WCD is involved in school programs such as 6th Grade Tour (of restoration sites) and Students for Salmon (in coordination with NSEA). These programs could be used to increase ecological awareness and involvement among school-aged children.

Puget Sound Action Team (PSAT)

The Puget Sound Action Team (PSAT) provides a variety of programs and funding opportunities for restoration and rehabilitation of waters of the Puget Sound. The City of Blaine or other agencies or groups may be eligible for the Public Involvement and Education (PIE) grant program administered through PSAT. The PIE grants are used to improve water quality of the Puget Sound through public involvement in restoration and education and by providing opportunities to reduce impacts to and increase enjoyment of Puget Sound.

Washington Department of Ecology (Ecology)

Washington Department of Ecology has regulatory authority over waters of the state. Ecology is actively involved in watershed planning, as well as outreach and education efforts to improve water quality throughout Whatcom County. Ecology also administers the Coastal Zone Management (CZM) grant program that funds shoreline planning projects, such as the Everson Shoreline Master Program Update.

Washington Department of Fish and Wildlife (WDFW)

The Washington Department of Fish and Wildlife is a state leader in providing technical support staff as well as funding for salmon recovery and habitat protection and restoration efforts. One of the mechanisms for this support is through the Priority Habitats and Species (PHS) program, which provides management guidelines pertaining to a wide variety of habitats and species throughout the state.

Interagency Committee for Outdoor Recreation (IAC)

The IAC administers a wide range of grant programs that support development of recreational facilities, acquisition of open space and greenways, protection and enhancement of aquatic lands, and increased access to public resources.

WSU Cooperative Extension

WSU Cooperative Extension, a non-degree program funded through Washington State University, offers a variety of hands-on public educational materials and programs that support environmental and natural resource management in the community. Courses are available to landowners in the following subject areas: forestry, riparian management, water, wildlife, and watershed and beach masters. WSU Cooperative Extension often works closely with other community organizations such as the Conservation District and Whatcom County in providing public educational services. The Cooperative Extension is also active in supporting agriculture and best management practices throughout Whatcom County.

Whatcom County

Whatcom County has jurisdiction over a large area of land that impacts the quality of the shorelines within the City of Everson. County land use regulations have recently been updated to provide increased protection of aquatic resources, and the County has also prepared a draft shoreline restoration plan that addresses the Nooksack watershed. The County is also one of the lead agencies in the implementation of the WRIA 1 Salmon Recovery Plan and Watershed Management Plan.

4.3 RESTORATION STRATEGIES

The City should consider the following strategies to further the restoration goals of the Everson Shoreline Master Program.

Restoration Demonstration Project

A demonstration project that included a variety of restoration techniques could be used as an example for future projects. The City currently has one of these projects in Reach 2, at Riverside Park, where two groins were repaired and enhanced with woody debris for habitat and native plantings along side the river. Seeing completed projects would help to inform the public and provide actual examples that may be replicated throughout restoration planning and implementation.

Coordination

The City could accomplish restoration projects by using community volunteers and/or partnering with restoration organizations. Volunteers could be recruited for project implementation and monitoring and the City would provide equipment and expertise. The City could also consider looking for other opportunities for involvement in regional restoration planning and implementation.

Development Opportunities

The City should look for opportunities to conduct restoration in addition to minimum mitigation requirements where shoreline development occurs. Mitigation and/or restoration plans should be included with new development plans when submitted to the City.

5.0 IMPLEMENTATION AND MONITORING

5.1 TIMELINES AND BENCHMARKS

The City of Everson is in a relatively unique situation because such a large proportion of the area within shoreline jurisdiction and adjacent to the Nooksack River already contains native vegetation. These areas are planned for inclusion in the Natural shoreline environment designation. This designation will preclude virtually all development and will allow these areas to be restored over time through natural processes, supplemented by human restoration projects. The City should be able to observe and document the steady improvement over time in such factors as large woody debris recruitment potential and diversity of riparian vegetation. A reasonable goal would be to see a 5% increase in tree cover by conifers every five years.

Other restoration projects, such as reconnecting remnant side channel wetlands, will require coordinated efforts and substantial funding. The goal of reconnecting one side channel wetland over the course of each seven year period is achievable.

5.2 MONITORING OF RESTORATION AND ADAPTIVE MANAGEMENT

Adaptive management is the process of continually improving management policies and practices in response to results. As data are gathered and compared to the previous years' data, the City will be able to come to a clearer understanding of ecological processes, remaining environmental stresses and the impact of past restoration efforts. As this understanding increases, the City will have the opportunity to adjust shoreline and restoration policies, regulations and priorities to adapt to changes in conditions and information. The City will be required to take action through adaptive management if the mandate of no net loss of shoreline ecological functions is not being met.

The City should monitor development and shoreline processes through a variety of methods, including:

- Tracking information using permitting activities and GIS work to display new shoreline development, shoreline variances, compliance issues, new impervious surfaces, vegetation retention/loss, and bulkheads/armoring.
- Review and provide input to regional ongoing monitoring programs through the coordination with regional agencies to identify any major environmental changes that might occur.
- Re-review the status of environmental processes and functions at the time of periodic SMP updates to validate the effectiveness of the SMP, including what restoration activities actually occurred.

Policies, goals, regulations, and restoration should be monitored and reevaluated every seven years. Through the collection and display of data, the City should be able to monitor and adapt to changing shoreline conditions and ensure no net loss of ecological functions.

5.4 POTENTIAL FUNDING SOURCES

Local, state, and federal agencies, along with other non-profit organizations offer a variety of funding and grant sources for restoration projects. The following table outlines a select few as examples of potential funding sources.

Table 1 – Grant Funding Sources

Grant Name	Allocating Entity	Grant Size	Contact
Coastal Zone Management Administration/ Implementation Awards	Washington State Department of Ecology	$19,000 – 29,000	Bev Huether Phone: (360)407-7254 Email: bhue461@ecy.wa.gov
Nonpoint Source Implementation Grant (319) Program	Environmental Protection Agency, Washington State Department of Ecology	Varies	Aleciea Tilley Email: atill461@ecy.wa.gov
Community-Based Restoration Program	NOAA	$1,000 to 500,000	Chris Doley Phone: (301) 713-0174 Email: chris.doley@noaa.gov
Cooperative Endangered Species Conservation Fund	USFWS	$1,000 to 14,000	Dan Morgan Phone: (703) 358-2061 Email: Dan.Morgan@fws.gov
Habitat Conservation	USFWS	Varies	Sally Valdes Phone: (703) 358-2201 Email: sally.valdes@fws.gov
Aquatic Lands Enhancement (ALEA) Grants	IAC	varies	Lorinda Anderson
PSAT Public Involvement and Education Fund	PSAT	varies	www.psat.wa.gov/Programs/ Education.htm

6.0 RESTORATION MANAGEMENT AND UNCERTAINTY

Volunteer efforts and regional coordination among governmental and non-governmental agencies are two components that are key to the success of restoration projects. Regulatory and non-regulatory incentives could also be utilized to encourage new projects to include some restoration as a condition of development. Management and maintenance are also integral to creating successful restoration projects. The availability of government funding to support restoration and ongoing maintenance efforts is also subject to change. Based on all of these factors, a degree of uncertainty exists related to how quickly and how successfully the City will

be able to achieve its goals related to restoration of the City's shoreline areas. However, with a strong policy base, a clear commitment from City administration and a framework that includes adoptive management, there is strong likelihood of success.

7.0 REFERENCES

Port Townsend. City of, Shoreline Master Program. Port Townsend: 2006.

Puget Sound Action Team. PSAT Public Involvement and Education. Seattle: http://www.psat.wa.gov/Programs/Education.htm

Washington State Department of Ecology. Coastal Zone Management Administration/Implementation Awards.

NOAA. Community-Based Restoration Program

USFWS. Cooperative Endanger

National Research Council 1992