

FINAL
September 2011

Shoreline Restoration Plan

Shoreline Master Program Update for Tenino



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About This Report

Consistent with Governor Gregoire's Plain Talk Executive Order 05-03 (2005), this report is written in a manner that is brief and to-the-point, uses non-bureaucratic language and features a clean design that promotes fast scanning and reading.

Scientific and legal references are kept to a minimum, replaced by a full list of sources in the report appendix.

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I. Introduction

A. Background

This report is the proposed restoration plan for the City of Tenino and its urban growth area. The document has been prepared to comply with the state's Shoreline Master Program guidelines for restoration planning (WAC 173-26-201(2)) and is meant to provide a planning-level framework for understanding how and where shoreline ecological functions can be restored¹ in the City and its urban growth area. The plan is not a regulatory document or a set of regulatory requirements, and is only meant to be used as a resource for future shoreline restoration efforts.

Guidelines for the creation of Shoreline Master Programs state that, in the creation of master programs, it is not enough to simply prevent further loss of ecological functions; master programs provisions must "...achieve overall improvements in shoreline ecological functions over time when compared to the status upon adoption of the master program."² A visual depiction of this overall improvement or restoration of shoreline ecological functions is displayed within Figure 1.

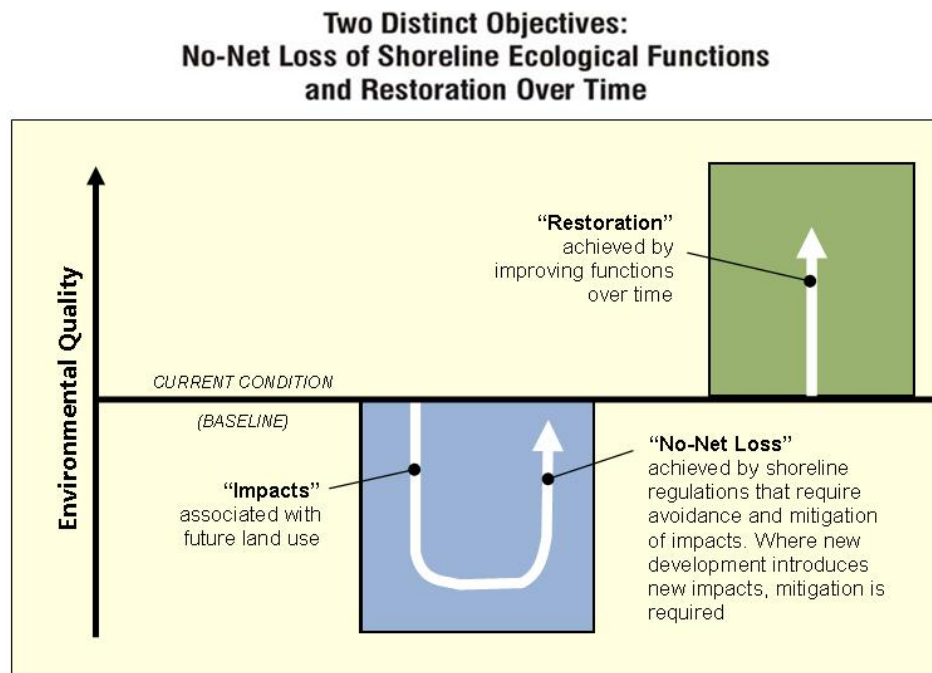


Figure 1: Conceptual view of the Objectives of the Shoreline Management Act
(Source, WA Department of Ecology)

¹ Restoration is defined under the shoreline guidelines as "reestablishment or upgrading of impaired ecological shoreline processes or functions." It is important to note that, for the purposes of shoreline management, the term does not imply returning shoreline areas to aboriginal or pre-European settlement conditions.

² The mandate to improve ecological functions over time provides the basis for restoration planning and creates a distinction between project-related mitigation and environmental restoration in the context of the SMP. Under the Shoreline Management Act, applicants for shoreline permits must fully mitigate new impacts caused by their proposed development, but are not required to restore past ecosystem damages as a condition of permit approval. Project applicants are also not required to implement the restoration measures identified in this plan as mitigation for project-related impacts, except in those instances where restoration is deemed appropriate. The two white arrows within Figure 1 display this distinction; the upward portion of the left white arrow represents project-related mitigation, while the right white arrow displays restoration.

To achieve this overall improvement, the guidelines recommend that restoration plans:

- 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 (based on an evaluation of funding likely in the foreseeable future), 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 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.

B. Context

This restoration plan has been created as part of the Shoreline Master Program update for the City of Tenino and is included in Phase 4 of the overall update. A timeline for the update is shown below:

TABLE 1: TIMELINE FOR THE SHORELINE MASTER PROGRAM UPDATE FOR THE CITY OF TENINO

PHASE	UPDATE SCHEDULE	TIMELINE
1	• Meet with Planning Commissions • Determine what shorelines are regulated under the act • Conduct an inventory of all existing and available data for shorelines	Fall 2009
2	• Analyze and characterize shoreline conditions	Winter 2010
3	• Characterize each shoreline segment into shoreline environment designations, each with a different set of rules • Develop draft rules and policies	Spring 2010
4	• Analyze the cumulative impacts of expected shoreline development and redevelopment • Develop a restoration (and preservation) plan, including public access	Fall - Winter 2010
5	• Conduct public hearings • Planning Commission Recommendation • City Council Action	Spring - Fall 2011
6	• Ecology Review • Ecology Action • Final Adoption by Ecology and the City Council	Winter- Spring 2012

II. Restoration Goals, Policies and Development Standards

This restoration plan builds upon the identification of degraded areas, impaired ecological functions, and sites with the potential for ecological restoration as identified in the *Shoreline Inventory and Characterization for Tenino* (2011) conducted in Phase 1 of the update and is based on the following restoration goals found within section 5.6 of the *Proposed Shoreline Master Program*:

1. Improve impaired shoreline ecological functions and/or processes through voluntary and incentive-based public and private programs and actions that are consistent with the Shoreline Master Program and other approved restoration plans.
2. Provide fundamental support to restoration work by various organizations by identifying shoreline restoration priorities, and by organizing information on available funding sources for restoration opportunities.
3. Target restoration and enhancement towards improving habitat requirements of priority and/or locally important wildlife species.

The plan also builds on the priorities for restoration projects identified in Policy 8.4(5) of the *Proposed Shoreline Master Program*. This policy states that restoration actions and stand alone projects are prioritized in the following order:

1. Create dynamic and sustainable ecosystems.
2. Restore connectivity between stream/river channels, floodplains and hyporheic zones.
3. Restore natural channel-forming geomorphologic processes.
4. Mitigate peak flows and associated impacts caused by high stormwater runoff volume.
5. Reduce sediment input to streams and rivers and associated impacts.
6. Improve water quality.
7. Restore native vegetation and natural hydrologic functions of degraded and former wetlands.
8. Replant native vegetation in riparian areas to restore functions.
9. Remove obsolete and no longer needed shoreline modifications.

Each of the projects identified within the shoreline inventory process have the ability to address some of these goals and restoration priorities.

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III. Restoration Opportunities

Sites with the potential for restoration, along with a short description of potential restoration projects on the site, and the restoration priority that the projects would address are presented within Table 2. The location of these projects is shown in Map 1 (found at the back of this document).³

TABLE 2: POTENTIAL RESTORATION PROJECTS IN TENINO AND UGA.

Shoreline	Opportunity Site	Potential Project Description	Restoration Priority
Scatter Creek	Site A	Arrange for legal access across creek from an adjacent property owner; remove dual culverts and fill; and replant riparian vegetation	-Remove obsolete and no longer needed shoreline modifications (Priority 4) -Replant native vegetation in riparian areas to restore functions (Priority 8)
	Site B	Obtain a conservation easement or trade existing unused City right-of-way for property near the creek, fence riparian buffer, and replant riparian vegetation and trees along the creek	-Reduce sediment input into the creek (Priority 5) -Restore native vegetation and natural hydrologic functions of degraded and former wetlands and riparian areas (Priorities 7 and 8)
	Site C1 (County)	Obtain a conservation easement, remove/ manage reed canary grass and replant riparian vegetation and trees along the creek	-Restore native vegetation and natural hydrologic functions of degraded and former wetlands and riparian areas (Priorities 7 and 8)
	Site C2 (County)		
	Site D	Obtain a conservation easement; remove/ manage reed canary grass near creek; and create a potential outdoor classroom with interpretative trail for the elementary, middle and high school students	-Create dynamic and sustainable ecosystems (Priority 1) -Restore natural channel forming processes (Priority 3) -Restore native vegetation and natural hydrologic functions of degraded and former wetlands and riparian areas (Priorities 7 and 8)

Of these potential restoration projects, the three with the highest potential priority rankings (listed in order of priority) are: Opportunity Site D, Opportunity Site B and Opportunity Site A.

Opportunity Sites C1 and C2 are located in unincorporated Thurston County. C1 would provide an opportunity to extend Site B north of Morningside Road, whereas C2 would allow an extension of Site D to McDuff Road. The priority projects are explained below.

³ In addition to these opportunity sites, additional private riparian restoration efforts have a similar potential to enhance the shoreline habitat along Scatter Creek. Private restoration opportunities would be consistent with Goal 1 of the Shoreline Master Program, which seeks to improve impaired shoreline ecological functions and/or processes through voluntary and incentive-based public and private programs, but these types of projects were not specifically analyzed in Table 9 due to the large number and variety of potential restoration efforts that could occur. If the city was interested in facilitating private restoration efforts among landowners, the City could coordinate with a non-profit organization to conduct a project such as the planting of riparian vegetation (trees and shrubs) along the shore.

Priority 1: Opportunity Site D (see Figure 2)

Opportunity Site D provides the potential to enhance habitat along the creek, create an environment for outdoor education in collaboration with the Tenino School District, and potentially create a trail that could be usable by the general public. The site has high quality riparian habitat in its upland portions, including a large stand of oak and ash trees with a diverse understory; however, the overall ecological functions of the site are minimized due to the predominance of reed canary grass, which has infested the creek to such a degree that the channel is no longer evident. Restoration of the area would enhance these ecological functions, especially in the water and near the shore, and would contribute to more natural channel forming processes in the area. Restoration would also provide educational opportunities for the adjacent schools elementary, middle and high school.

To achieve the project, acquisition of the property or an easement would be required, and a habitat restoration effort would have to be undertaken along the creek. This restoration effort could focus solely on the area along the creek, or could include some additional upland habitat enhancement. At minimum, the project would involve planting trees along the stream, mowing between the trees (to manage the reed canary grass) and eventually having the trees shade the grass. Larger projects that included restoration efforts in the upland areas could include removing coniferous trees or saplings to retain the upland oak and ash habitat, removing invasive species, and/or enhancing the habitat function of the storm ditch that handles the stormwater from the adjacent schools.



Figure 2: Opportunity Site D - Aerial
North is to the left



Figure 3: Opportunity Site D - Photo
Scatter Creek North of Tenino Elementary & Middle Schools

Priority 2: Opportunity Site B

Opportunity Site B provides an additional opportunity to plant riparian vegetation along Scatter Creek and potentially create a trail along the creek. The project would plant new trees along the creek, add a fence to limit the generation of sediment and impacts to the riparian vegetation associated with the grazing of livestock (if the site is still currently grazed), and manage any reed canary grass or other invasive species on the site through mowing and the eventual shading of the grass.

The project would require negotiations with the land owner to receive an easement or acquire the site, but this acquisition could potentially occur as part of a land swap between Tenino and the landowner. The City of Tenino currently appears to own unutilized right-of-way near the stream and this property could potentially be traded for a stretch of property that bordered Scatter Creek to complete the project (see Figure 4).⁴ A search of Tenino's records to ensure that these right-of-ways have not been vacated is necessary to determine the viability of this potential swap.



Figure 4: Opportunity Site B
- Photo

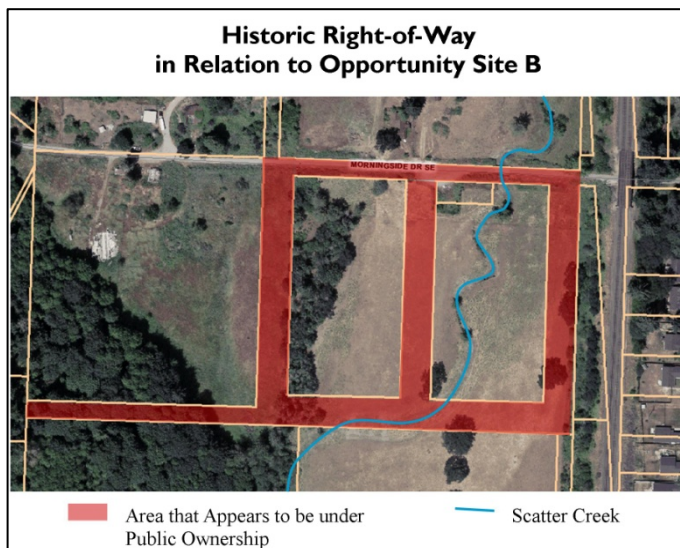


Figure 5: Historic Right-of-Way in
Relation to Opportunity Site B

⁴ This right-of-way was recorded as part of the Snyder and Steven's plat and was originally envisioned to have streets. However, because of the wetland and stream in the area, these streets have never been created.

Priority 3: Opportunity Site A

This site provides an opportunity to remove culverts placed across the stream located downstream of the bridge that provides access to the Hercules quarry. The project would include revegetation of that area with additional shoreline vegetation. To undertake this project, the property owner or another interested party would have to negotiate an access easement with a neighboring property that was located west of the stream and create an access easement into the site. Once access is provided, then the culverts could be removed, and planting of new riparian vegetation in the area impacted by the bridge could occur.

IV. Implementation Strategies

These restoration projects could be implemented in a number of ways, but the most likely method will be a close collaboration between the City of Tenino, a non-profit organization, and a willing land owner (if the City of Tenino does not currently own the land). Recognizing this likely collaboration, the identification of potential partners and the nature of their work is essential.

A. Primary Restoration Partners

Of all the potential restoration partners that could assist the City of Tenino with these projects, the two primary partners are: the Heernet Environmental Foundation and the Thurston Conservation District.

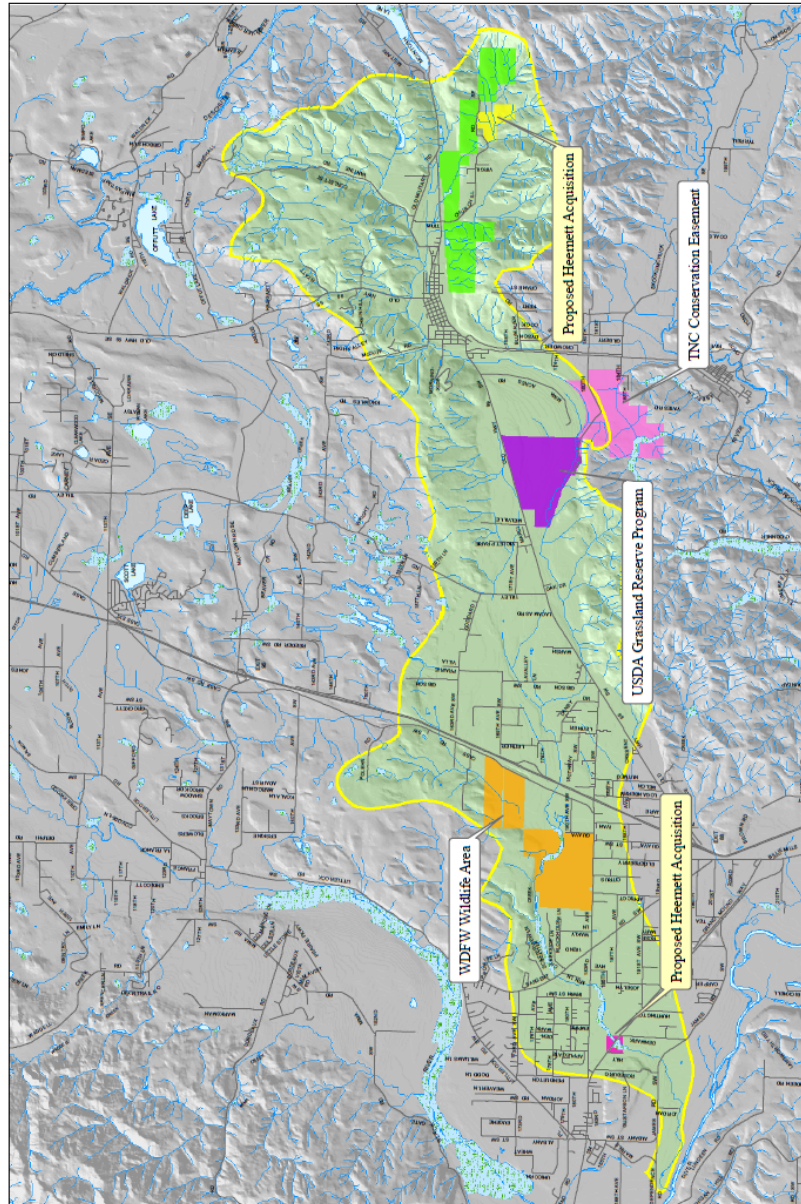
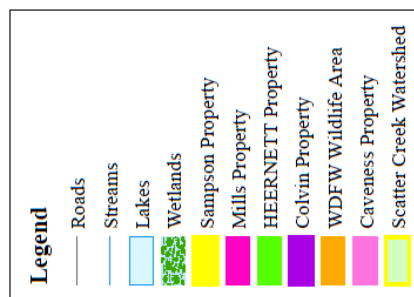
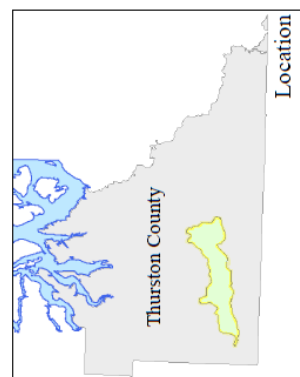
Heernet Environmental Foundation seeks to protect and preserve native wildlife, plants, and stream systems through out the Chehalis River basin, but is particularly interested, invested and active in the Scatter Creek watershed. The foundation has worked on projects throughout the watershed, including a number of habitat restoration, protection and education efforts. Several of these projects have been focused on Cozy Valley in the uplands to the east of Tenino, where the Foundation owns and is actively restoring 780 acres of property; however, recent protection efforts have shifted further downstream where the foundation hopes to acquire forty acres of relatively undisturbed oak forest (the Mills property), which would provide additional land for habitat protection and opportunities for educational visits for area students (see Figure 4).

Thurston Conservation District works to administer programs to conserve natural resources and promote voluntary stewardship among private landowners in Thurston County. The Conservation District restores riparian habitats; provides technical assistance to landowners in conservation planning; and conducts, oversees and participates in various restoration projects throughout the county. Recent restoration projects along Scatter Creek include the removal of two culverts and the restoration of habitat on a parcel directly to the northeast of Tenino.

TABLE 3: PRIMARY RESTORATION PARTNERS

Group	Description	Restoration Activities
Heernet Foundation	The Heernett Environmental Foundation is located in South Thurston County and frequently works in the Scatter Creek watershed. The foundation's mission is to protect and preserve native wildlife, plants, and streams systems through out the Chehalis basin, including the Scatter Creek basin.	The foundation owns approximately 780 acres in the upper Scatter Creek watershed and performs a number of restoration efforts including education, outreach, land acquisition, and habitat enhancement.
Thurston Conservation District	The Thurston Conservation District (TCD) promotes voluntary stewardship among private landowners in Thurston County. Conservation Districts are governmental entities that administer programs to conserve or restore natural resources.	The TCD oversees and participates in various restoration projects throughout Thurston County. The conservation district works to restore riparian habitats; and is involved with agricultural assessments, education and outreach.

SCATTER CREEK WATERSHED PROTECTED PROPERTIES



Base data from Thurston Geodata Center
 Projection: Lambert Conformal Conic
 (WA State Plane South Zone)
 Datum: NAD 83; Units: Feet
 Cartography by: Mike Kuitel, Jr.
 (Thurston Conservation District) June 27 2007
 File name: heernett_scatter_protected_properties.mxd

DISCLAIMER: THIS MAP IS INTENDED FOR
 GENERAL PLANNING PURPOSES ONLY.
 THURSTON CONSERVATION DISTRICT MAKES
 NO EXPRESSED OR IMPLIED WARRANTIES,
 AND NO WARRANTY OF FITNESS FOR A
 PARTICULAR PURPOSE.



Figure 6: Scatter Creek Watershed Protected Properties

B. Additional Potential Restoration Partners

Additional restoration partners beyond these two primary partners, include a number of government and non-profit groups that work in the Chehalis River Basin and/or provide funding for restoration projects. Several of these groups are listed in Table 4.

TABLE 4: ADDITIONAL POTENTIAL RESTORATION PARTNERS

Group	Description	Restoration Activities
Capitol Land Trust	The Capitol Land Trust conserves wildlife habitat and natural areas by accepting donations of conservation easements and gifts of land, and working with partners to purchase land. Since 1989, Capitol Land Trust has helped to permanently conserve 2,957 acres in Mason, Grays Harbor and Thurston Counties.	The Capitol Land Trust has acquired two properties within the Scatter Creek watershed. In 1996, the Capitol Land Trust acquired a 160 acre conservation easement on the western flank of Crawford Mountain. This easement is referred to as the Heertje Easement. In 2009, the Capitol Land Trust purchased the Tilley Road wetlands. These wetlands are partially located within the Scatter Creek watershed
Chehalis Basin Land Trust	The Chehalis Basin Land Trust conserves wildlife habitat and natural areas by accepting donations of conservation easements and gifts of land, and by working with partners to purchase lands.	The Chehalis Basin Land Trust has no known projects within the Scatter Creek watershed.
Chehalis Basin Education Consortium	The Chehalis Basin Education Consortium (CBEC) is an education and outreach partnership comprised of Educational Service District 113, school districts, natural resource agencies, Grays Harbor College, the Chehalis River Council and other nonprofit agencies within the Chehalis watershed.	The Chehalis Basin Education Consortium supports the stewardship of the Chehalis basin through environmental education geared to students located within the watershed. The consortium however has also done some riparian restoration projects. The Rochester School District is a participant in the consortium.
Chehalis Basin Fisheries Task Force	The Chehalis Basin Fisheries Task Force was established to bring diverse interest groups together with the common goal of enhancing fisheries resources. The Task Force works to produce salmon for sport and commercial fisheries; enhance Steelhead and Cutthroat trout resources; and restore, enhance and protect stream habitat critical to these species.	The Chehalis Basin Fisheries Task Force functions as a funding agency, a coordinator of technical resources and a provider of public education. The Task Force also supports some habitat restoration activities.
Chehalis Basin Partnership	The Chehalis Basin Partnership was formed in 1998, as part of the Watershed Management Act, to provide a framework for local citizens, interest groups, and government organizations to work collaboratively to identify and solve water-related issues in the Chehalis Basin. Interested towns and cities are able to participate in the organization, but at this point Tenino is not involved.	The Chehalis Basin Partnership conducts watershed planning for the Chehalis basin and conducts information and advocacy outreach efforts focused on: • Improvement of water quality • Management of water resources • Reduction of the effects of flooding • Increase in recreational opportunities and • Increase in watershed awareness through education. The group also has work groups that pursue restoration projects within the basin.

Group	Description	Restoration Activities
Chehalis River Council	Education and Advocacy Non-Profit	The Chehalis Basin Partnership publishes Drops of Water, which reports on water-related issues throughout the Chehalis River Basin. The publication has been in print (available for free within local newspapers), but is shifting to a primarily online presence with some printed material still available.

These partners have their own distinct capacities (whether fundraising, land acquisition or habitat enhancement) and could be asked to provide technical assistance or support to any of the projects identified. Additionally, individuals that live within the City or the surrounding area that possess these or similar capacities could also be identified and solicited to support restoration efforts.

C. Funding Opportunities

Opportunities for funding these or other restoration projects within the Scatter Creek watershed are limited. The most relevant funding sources have been listed below, with county sources listed first and followed by state grants.

TABLE 5: POTENTIAL FUNDING OPPORTUNITIES

Funding Source	Description	Restoration Activities
Thurston County Conservation Futures	Started in 1990, Conservation Futures fund the acquisition of parks and open space lands. This acquisition can include fee-simple acquisition or acquisition of habitat lands by a conservation easement. The funds are allocated via a ranking system from Thurston County. Projects which include both restoration and acquisition components may require a combination of funding sources.	Conservation Futures funds can be spent on a wide range of projects. The 2009 acquisition of the Tilley Wetlands Preserve, which is located near Millersylvania State Park and lies partially within the Scatter Creek watershed, was supported in part with Conservation Futures funding.
Salmon Recovery Funding Board (SRFB)	Created in 1999 by the Washington State Legislature, the Salmon Recovery Funding Board (SRFB) provides grant funds to protect or restore salmon habitat and assist in related activities. These funds are administered through the Recreation and Conservation Office (RCO) formerly Interagency Committee for Outdoor Recreation (IAC). The RCO works closely with local watershed groups known as lead entities. The SRFB board is composed of five citizens appointed by the Governor and five state agency directors.	The SRFB Board supports salmon recovery by funding habitat protection and restoration projects. It also supports programs and activities that produce sustainable and measurable benefits for fish and their habitat. The SRFB has helped finance over 900 projects, but there are no known projects along Scatter Creek.
Aquatic Lands Enhancement Account (ALEA)	The Aquatic Lands Enhancement Account funds are handled through the WA Department of Natural Resources (WDNR).	There are no known ALEA funded projects within the Scatter Creek watershed

Funding Source	Description	Restoration Activities
Washington Wildlife and Recreation Program (WWRP)	The Washington Wildlife and Recreation Program is a state grant program that provides funding to protect habitat, preserve working farms and create new local and state parks. It is administered by the Recreation and Conservation Office (RCO). WWRP is funded by the legislature in the state's capital construction budget.	WWRP grants were used for the the acquisition of 10.6 acres above Tenino's City Park and the acquisition of the Tilley Wetlands Preserve, which is located south of Millersylvania State Park.

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V. Other Restoration Measures

Beyond the restoration opportunities listed above, the restoration of shoreline ecological functions will also occur as a result of the mitigation of projects, and the creation of standards that are based on the environmental characteristics of the shoreline environment. The Shoreline Master Program update process acknowledges that these factors will contribute to the enhancement of shoreline functions within Policy 6 of the Shoreline Enhancement and Restoration section, which states that the City should “recognize that restoration and enhancement may result from: mitigation of impacts from new development, and adoption of shoreline setbacks which are based upon shoreline ecological functions and processes.”

Mitigation and mitigation sequencing requirements can be found throughout the *Proposed Shoreline Master Program*, especially where an impact to the shoreline environment is anticipated as a result of development. In most instances this mitigation is meant to alleviate the impacts of development, however in some instances mitigation and the consideration of mitigation sequencing will improve the overall functioning of the environment. For instance, if an individual sought to enlarge a home that was a nonconforming use under the *Proposed Shoreline Master Program*, their addition would have to expand landward and would “require the restoration of degraded shoreline ecological functions as mitigation for adding square footage to a residential structure” (see Policy 7.9). If this occurred, most of the impact from the expansion would be away from the shore (where less impact to shoreline functions is likely) and most of the mitigation would occur near the shoreline (where a higher level of shoreline ecological function restoration is possible). If the project was completed in this manner, the mitigation would mitigate the potential impacts of the additional building square footage, and potentially provide some additional restoration value, as depicted above within Figure 1.

Required setback standards and vegetation retention standards within the *Proposed Shoreline Master Program* further ensure that shoreline functions will be enhanced over time. As plants grow, age and die, they naturally improve shoreline ecological functions by adding vegetation of several different ages, shading the river, and eventually create large woody debris that provides shoreline habitat. Vegetation retention standards also may, over time, allow plants to naturally restore the understory vegetation, and contribute to a more diverse vertical habitat structure in the shoreline environment.

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VI. Conclusion

When considering current conditions, the standards articulated within the *Proposed Shoreline Master Program*, and the potential restoration partners and projects that are available along the Scatter Creek, it is clear that the enhancement of shoreline functions compared with the current ecological conditions is likely. The City of Tenino has several areas that could see some small scale habitat restoration, as well as some larger projects that could contribute to the overall quality and functions of the Scatter Creek shoreline environment. This plan has sought to articulate the key pieces of property on which these various types of restoration could occur, and has articulated some of the partners that could be utilized to assist in the process. The completion of the projects will not be easy but, with the strength of the potential partners and the benefits of the potential projects, the successful implementation of the efforts is promising.

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VIII. Map Folio

