ATTACHMENT 3

Shoreline Master Program

Restoration Plan

9/11/2014 Planning Commission Packet

city of West Richland

RESTORATION PLAN

SHORELINE MASTER PROGRAM UPDATE – WEST RICHLAND, WASHINGTON

Prepared for the
City of West Richland
Community Development Department

Prepared by
Herrera Environmental Consultants, Inc.

and

AHBL, Inc.

RESTORATION PLAN

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Prepared for the
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Introduction

In 2012, the City of West Richland (City) obtained a grant (G1200048) from the Washington State Department of Ecology (Ecology) to update its Shoreline Master Program (SMP). The 2003 Washington State Legislature established a schedule in the Revised Code of Washington (RCW) 90.58.080 for all Washington State cities and counties to update their local SMPs consistent with the Shoreline Management Act (SMA), RCW 90.58, and its implementing guidelines, Washington Administrative Code (WAC) 173-26. The State guidelines establish general procedures, goals, and standards that are adjusted to reflect local conditions by each jurisdiction as they amend their individual SMPs.

The goal of the SMA is "...to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." The SMA protects shoreline resources by regulating development, but is also intended to provide for appropriate shoreline use. The SMA encourages public access and use of the shoreline and provision of water-dependent uses, as well as land uses that enhance and conserve shoreline functions and values. The State guidelines establish goals and policies that provide a framework for development standards and use regulations in the shoreline. The SMP is based on state guidelines but tailored to the specific conditions and needs of individual communities. The SMP is also meant to be a comprehensive vision of how the City's shoreline area will be managed over time.

The first phase of the City's SMP update was to identify the shoreline jurisdiction and reaches (Figure 1) and prepare a plan for public participation in SMP update process. The second phase of the City's SMP update was to prepare a shoreline inventory and characterization (Herrera and AHBL 2013) to be used as a foundation for the SMP update process (WAC 173-26-201(3)(c) and (d)), which includes development of shoreline management policies and regulations (Phase 3) and shoreline restoration plan (Phase 4). As part of the inventory and characterization, impaired functions were identified in the shoreline jurisdiction and specific reaches. Overall opportunities for restoration were also identified.

Section 173-26-201(2)(f) WAC of the SMP Guidelines states:

> ***Shoreline restoration planning.*** *Consistent with principle WAC 173-26-186 (8)(c), 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. The approach to restoration planning may vary significantly among local jurisdictions, depending on:*
>
> - *The size of the jurisdiction;*
> - *The extent and condition of shorelines in the jurisdiction;*
> - *The availability of grants, volunteer programs or other tools for restoration; and*
> - *The nature of the ecological functions to be addressed by restoration planning.*
>
> *Master program restoration plans shall consider and address the following subjects:*
>
> *(i) Identify degraded areas, impaired ecological functions, and sites with potential for ecological restoration;*

(ii) *Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions;*

(iii) *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;*

(iv) *Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies including identifying prospective funding sources for those projects and programs;*

(v) *Identify timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals;*

(vi) *Provide for 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.*

This document was prepared to fulfill the requirements of the fourth phase and serves to accomplish the following goals:

- Identify the City of West Richland's overall shoreline restoration goals and priorities.
- Identify existing and ongoing projects and programs, as well as potential projects and programs to meet restoration goals.
- Identify timelines and benchmarks for implementing restoration projects and programs.
- Identify potential partners, funding sources, and strategies to achieve the greatest overall benefit.

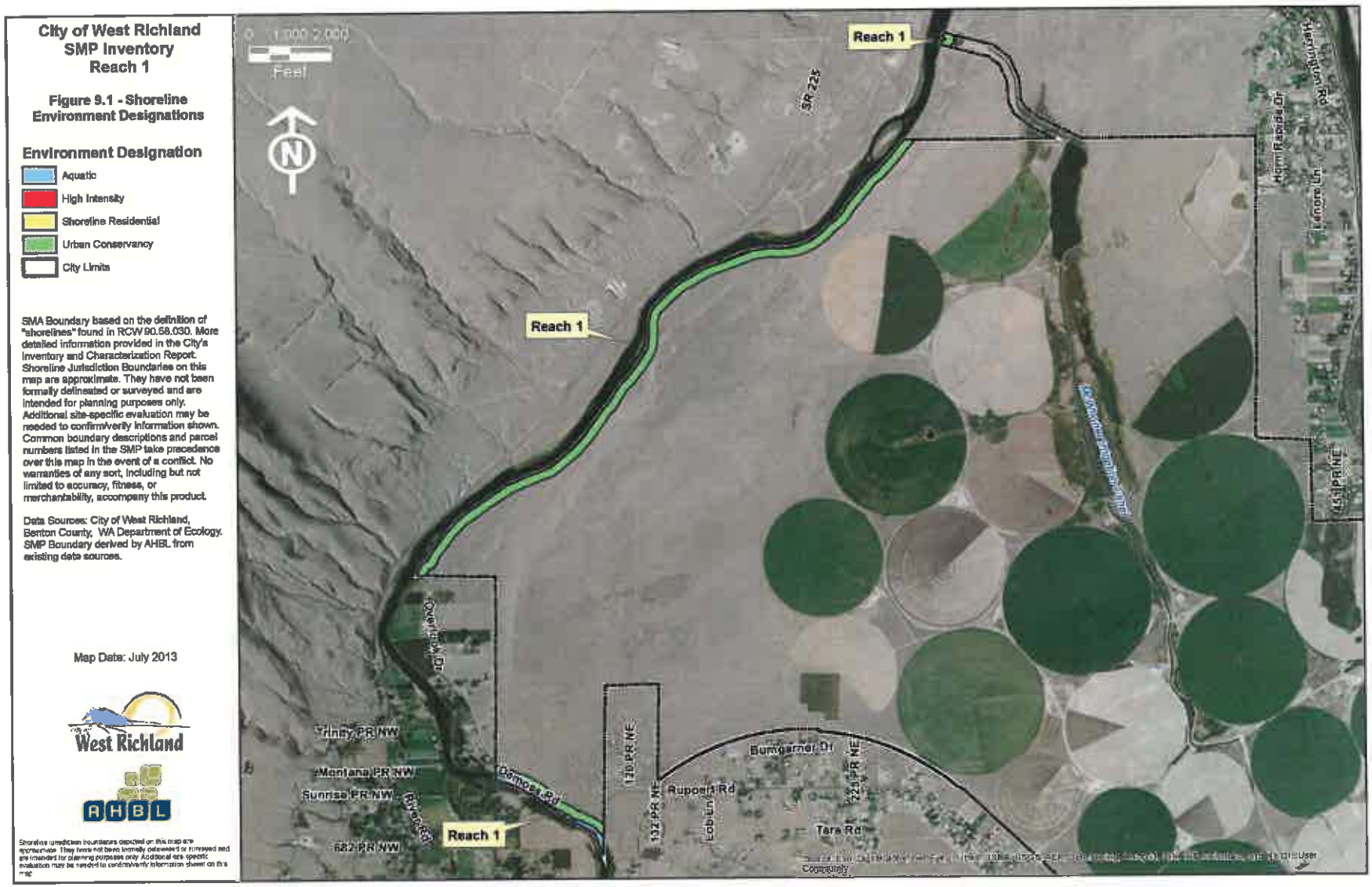

Figure 1 - Shoreline Jurisdiction - Yakima River West

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Data Sources: City of West Richland, Benton County, WA Department of Ecology. SMP Boundary derived by AHBL from

Figure 2 - Shoreline Jurisdiction - Yakima River East

Shoreline Jurisdiction

As defined by the SMA of 1971, shorelines include certain Waters of the State plus their associated "shorelands." At a minimum, the water bodies designated as shorelines of the state are streams with mean annual flows of 20 cubic feet per second (c.f.s.) or greater and lakes with areas greater than 20 acres. Shorelands are defined in RCW 90.58.030(d) as:

> *"...those lands extending landward for two hundred feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of this chapter; the same to be designated as to location by the department of ecology. Any county or city may determine that portion of a one-hundred-year-flood plain to be included in its master program as long as such portion includes, as a minimum, the floodway and the adjacent land extending landward two hundred feet therefrom. Any city or county may also include in its master program land necessary for buffers for critical areas, as defined in chapter 36.70A RCW, that occur within shorelines of the state..."*

Shoreline jurisdiction within the City includes the Yakima River, all lands that are located within 200 feet of the river's floodway edge or ordinary high water mark (OHWM), whichever is further landward, and any associated wetlands. The total area that is subject to the City's SMP is approximately 386 acres and encompasses approximately 5.91 miles of river shoreline.

Restoration Goal and Objectives

The West Richland SMP has been developed in accordance with statewide policies established in the SMA. Protecting the shoreline environment is an essential statewide policy goal, consistent with other policy goals. The SMP protects shoreline ecology by developing an inventory that ensures a meaningful understanding of current and potential ecological functions provided by shorelines, and by regulating development in a manner that ensures no net loss of ecological functions from direct or cumulative impacts of development. The SMP also recognizes that the shoreline ecology on a landscape and basin-wide scale is already degraded and that long term sustainability of ecological functions is only achievable if restoration of those ecological functions is accomplished over time. The following objectives of this restoration plan support the overall goal to restore impaired ecological functions in the shoreline jurisdiction on a local and basin-wide scale.

- Encourage and facilitate cooperative restoration programs between local, state, and federal public agencies, tribes, non-profit organizations, and landowners to address shorelines with impaired ecological functions 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 required to support the life cycles of priority or locally important fish and wildlife species.

- Ensure restoration and enhancement is consistent with and, where practicable, prioritized based on the biological recovery goals for several salmonid species (i.e., Chinook, steelhead, coho, etc.), and other species or populations for which a recovery plan is available.
- Seek funding for restoration, enhancements, easements or acquisitions using federal, state, county, grant, private donation, or other funding sources.

Overview of Restoration Opportunities from the Shoreline Inventory and Characterization

Shorelines in the City are within the Middle Columbia River Steelhead Recovery Unit. This unit is managed under the 2009 Yakima Subbasin Salmon Recovery Plan (Conley et al. 2009) developed by the Yakima Basin Fish and Wildlife Recovery Board. The plan calls for basin-wide actions and lower mainstem actions related to reservoir operations, screening water diversions, increasing on-farm irrigation and water delivery efficiency, improving recruitment of cottonwoods, and improving the river's hydrograph through artificial storage and Columbia River water transfers, among others.

The US Bureau of Reclamation and Washington Department of Ecology (Ecology) convened the Yakima River Basin Water Enhancement Project (YRBWEP) Workgroup in 2009 to develop a recommendation for advancing a Yakima Basin preliminary Integrated Water Resource Management Plan (IWRMP) to restore fisheries and improve water supply in the Yakima River basin (YRBWEP 2009). The workgroup continued to develop the plan through 2011 and in 2012 the integrated plan was selected as the preferred alternative in the Final Programmatic Environmental Impact Statement (USDI 2012).

A 26-mile reach of the lower Yakima River from Prosser to its mouth, including the City's shoreline jurisdiction, was identified as a Tier III restoration reach, the lowest of a three-tier rating (YRBWEP 2009 and 2011). The reach was classified as Tier III based on the timing and schedule of restoration efforts which, for Tier III, includes "...program flexibility because some projects could be scheduled later depending on priorities, readiness to proceed, and new information developed over time". The Yakima River Basin study (YRBWEP 2011) recommends improvements for the 26-mile reach, including the following:

- Connect wetlands with the river.
- Restore 1 mile of riparian habitat.
- Improve in-stream habitat complexity (e.g., logjams).
- Protect 400 acres through conservation easements and acquisitions.

Recommended restoration actions more specifically included installation of engineered log jams and protection of floodplain and riparian lands through property easements and acquisitions. Similar restoration actions were identified by the Benton Conservation District (BCD) for the lower Yakima River and West Richland area in an assessment of the lower Yakima River in Benton County (BCD 2011). These plans and assessment provide the basic

framework for focusing and developing restoration activities for the City in this restoration plan.

Opportunities for restoration in the Yakima River basin in general include restoring side channel and off-channel habitats that provide thermal refugia, as these habitats have been reduced from historical conditions. However, potential sites for side channel and off-channel habitat restoration are limited due to the natural topography and channel form, primarily in Reach 1 where specific sites were not identified. Restoration of priority fish habitat might include monitoring and control efforts for nuisance-level water stargrass on a watershed or site-specific scale. Shoreline functions related to hydrologic processes, hyporheic connectivity, and vegetation conditions that affect habitat might also be improved through acquisition of agricultural land for developing wetlands, or by restoring floodplain wetlands where they can be connected to the Yakima River (Reach 2). However, as described previously for Reach 1, site-specific opportunities for restoration are likely limited due to existing undeveloped conditions, the City's jurisdictional boundary, and property ownership and current uses.

Opportunities are also constrained by regional water management and dam operations (BCD 2011) such as those outlined and described in the Interim Comprehensive Basin Operating Plan (USBR 2002). Therefore, programmatic and regulatory actions that improve or protect water quality and water quantity may be most suitable restoration strategies for the City and its shorelines. In fact, in some locations, increased water quantity through programmatic and regulatory actions is likely to help achieve some of the recommended improvements identified by YRBWEP (2009 and 2011), particularly reconnecting wetlands with the river. Programmatic actions to monitor and control the spread of non-native, invasive plants or nuisance aquatic vegetation are also appropriate.

In the last decade, the quality of return flows in the lower Yakima River has improved dramatically, with an approximate 90 percent decrease in turbidity due to improved irrigation management and implementation of the sediment total maximum daily load (TMDL) for the lower Yakima River (Ecology 1998, Conley et al. 2009). There are several ongoing plans to control pollutants and improve water quality in the Yakima River, including the TMDLs for suspended sediment and the organochlorine compound dichlorodiphenyltrichloroethane (DDT) (Johnson et al. 2010). Ecology is developing a new water quality improvement plan that includes a new evaluation of current levels of DDT in the lower Yakima River Valley, sets human health clean-up targets for DDT, and lays a path to achieve these targets (Ecology 2012). Ecology's Environmental Assessment Program has completed two studies that evaluate pollutant levels for the current water quality improvement project (Johnson et al. 2007, 2010).

Water quality monitoring and continued programmatic or site specific actions could continue to improve water quality which is currently impaired in the City's shoreline jurisdiction. Monitoring and ecological studies may also help to understand and respond to ecological changes that are occurring as a result of water management practices (Wise et al. 2009). For example, the recent explosive growth of water stargrass in the lower Yakima River has led to concerns about its effect on water quality including dissolved oxygen and nutrients, as well as habitat and migration conditions for salmonids (Conley et al. 2009). Growth of this native

plant may have been augmented by advances in controlling suspended sediments (described above) that increased light penetration into the water column, as well as by long periods without bed-scouring high flows.

Priority Restoration Actions

Priority restoration actions were selected based on discussions and literature described in the shoreline inventory and characterization (Herrera and AHBL 2013) and summarized in the previous section. Restoration opportunities should be periodically re-evaluated to assess priorities and respond to changes in land use designations, project status (i.e., completion and success level), community support, funding availability, and overall feasibility. The City should continue to work with local programs, agencies, citizens, and scientists to identify activities that would produce the most benefit for the restoration of ecological functions. The following general guidance may be used to prioritize restoration actions:

- Areas of high importance for ecological processes and functions are higher priorities for restoration than areas of low importance.
- Areas of low alteration (i.e., low level of development) are higher priorities for preservation than highly altered areas (i.e., urbanized or developed).
- Projects with high overall feasibility (e.g., projects that have available funding, political and community support, and site access) are generally higher priorities for restoration than less feasible projects.

The Benton Conservation District identified high priority restoration actions that would be applicable to the City's shoreline jurisdiction or may require, at minimum, further assessment (BCD 2011). The direct applicability of those that are most relevant to the City is described in the following sections.

Fish Screening and Irrigation Water Conservation

The Benton Conservation District identified over sixty privately owned irrigation intakes in their assessment of the Yakima River between Prosser and the Columbia River. Many of the intakes were not compliant with current fish screening standards and they would require updating. The City should coordinate with Benton Conservation District and/or survey the shorelines in their jurisdiction to identify any outdated irrigation systems that may be present. If present, the City should encourage conversion of outdated systems for irrigation efficiency and water savings, as well as for protecting salmon from uptake and impingement. Regulations to ensure adequate fish screening and compliance with other agency standards should be required for all irrigation facilities that may be developed in the future.

Restore Riparian Buffers

Shoreline residential development, grazing, and nonnative riparian vegetation are common on the lower Yakima River. The City should encourage private landowners to restore native riparian buffers and to manage streamside grazing. This may be completed through

regulations or incentives that limit livestock grazing and vegetation disturbance in the City's shoreline jurisdiction.

Restore Side-channel and Off-channel Habitat Connectivity

The Benton Conservation District identified side channel degradation around many of the islands in the lower Yakima River, particularly between Benton City and Richland. Degradation was attributed to extensive water stargrass colonization, sedimentation, low flows, and non-native vegetation. Managing higher summertime flow is outside of the scope of the Benton Conservation District's assessment and the City's restoration plan. Therefore, projects aimed at restoring side channels either through water stargrass removal or through promoting fish habitat formation using large woody debris (LWD) are the recommended focus. Specifically, projects that enhance habitat under current flow scenarios (especially springtime flows), reconnect off-channel habitat, and promote scour for pool and off-channel fish habitat formation should be priorities.

Although Fox Island is outside the city limit, the formation and side channel habitat are important ecological features in Reach 2 of the City's shoreline jurisdiction. The City should investigate possible approaches to improve hydrologic connectivity and habitat complexity using LWD or other measures. The Benton Conservation District recommends exploring opportunities to lease or purchase floodplain habitats and islands such as Fox Island from willing participants. The City should pursue partnerships with other entities such as Benton County or private landowners to manage riparian areas for protection and recreation and implement restoration actions.

Protection, Enhancement, and Further Analysis of Thermal Refugia Potential

Although the lower Yakima River between Prosser and the mouth is predominantly a losing (groundwater recharging) reach, the Benton Conservation District determined that thermal heterogeneity is present along the lower Yakima River and may provide critical temperature differentials for migratory species at the tail end of out-migration, and front end of in-migration. The Benton Conservation District recommends conducting additional studies to determine dissolved oxygen levels and temperature differentials between the identified "cooler" areas and the average river temperature at the end of spring run-off and beginning of fall migration to determine suitability of cool pockets for migration thermal refugia. Water quality monitoring conducted by the City or implemented in partnership with other organizations could contribute to the knowledge base regarding thermal refugia. Once this knowledge base is obtained, and if cool water refugia pockets are present in the City's shoreline jurisdiction, the City should prioritize locations to implement restoration strategies aimed to protect or enhance those important features.

Additional Restoration Actions

To build upon the priority restoration actions identified in existing plans and studies, additional restoration actions were identified and recommended for the City. As described previously, there are limited opportunities for restoration in the City's shoreline jurisdiction.

However, programmatic actions for restoration can be applied throughout the shoreline jurisdiction and in many cases the City overall.

In addition, reach specific restoration actions were identified for Reach 2 such as reconnecting off-channel habitat described earlier.

The following programmatic actions are applicable to most jurisdictions with shoreline area. Many of these actions are appropriate to apply at a watershed scale rather than just in the designated shoreline area.

- Establish a collaborative City and community based shoreline "commission", task force, or interest group to support shoreline stewardship, to promote environmentally friendly use of shorelines, and to provide a pathway for public participation in implementing the SMP restoration plan.
- Support implementation of stormwater and agricultural runoff treatment and control strategies throughout the watershed. Encourage, through incentives or local regulations, low impact development (LID) and water conservation practices.
- Provide educational workshops and an incentives program for City residents, property owners, and developers on proper shoreline stewardship practices, landscape care, and integrated pest management (IPM) techniques.
- Establish a water quality monitoring program to identify potential pollutants, evaluate likely sources, and determine corrective actions.
- Establish and support a routine survey program for invasive species (including aquatic and terrestrial noxious weeds) for all shorelines, parks and other natural areas. Develop and implement a Citywide IPM plan to identify appropriate control measures for each weed type for different levels of infestation.
- Encourage through regulations or incentives, the development of native vegetation communities in areas without structures. Encourage native vegetation landscaping through educational outreach.

This restoration plan also recommends preservation of habitat and ecological functions where possible to offset ecological losses from ongoing and future shoreline development. While protecting shorelines from future development does not directly restore habitats, preservation does help maintain no net loss. For example, where riparian areas with intact native vegetative can be preserved, it will help maintain shoreline habitat for salmon, provide a native plant seed source, provide organic inputs into the aquatic system, and support insect production that is important to salmon as a food source —all important functions of shorelines. Preservation can include land conservation strategies (described later in this plan), policies that protect native vegetation on public lands, or regulations such as building and utility setbacks that protect vegetated buffers on private properties.

Strategies for Implementation of Restoration Actions

To ensure that restoration goals are being achieved, it is important for the City to evaluate the performance effectiveness of this plan and to adapt to changing conditions. At minimum, this restoration plan will be evaluated by Ecology for its ability to improve the overall ecological functions of shorelines and the actual improvements to ecological function will be re-evaluated again in seven years, when the SMP update is required.

Timelines and Benchmarks

During the seven-year interim period between SMP updates, it is valuable to develop implementation and monitoring programs for the individual restoration actions. Due to the nature of restoration actions (i.e., diverse project or site-specific factors that influence their implementation), performance standards and monitoring plans should be developed for individual projects or actions. Annual assessments should occur to determine how well performance criteria are met and how effectively the goals of this restoration plan are achieved.

Programmatic activities such as educational and volunteer programs to improve riparian conditions and public information campaigns are best implemented through the SMP process and through other local ordinances, regulations, and programs. Although implementation of these activities takes time and should be ongoing efforts, over the long term, their overall effectiveness can be significant due to the length of shoreline that can be affected. The ecological function improvements are very high compared to the direct cost of these activities, contributing to the overall feasibility of their implementation.

Invasive weed control and vegetation monitoring or enhancement projects can begin quickly with adequate funding. Frequently, these projects can be initiated with existing staff or volunteer assistance. For invasive weed control and native vegetation enhancement projects in particular, it is important to implement a monitoring program to ensure success. It can take several years for natural vegetation to establish in an area where invasive plants were present. Likewise, non-natives can quickly colonize an area once only one or two plants have been introduced. Restoration of the shorelines relies on specific monitoring and benchmarks unique to each specific project. Monitoring sites on an annual basis will allow re-assessment of priorities based on project success, available funding, and other factors. Comprehensive vegetation monitoring will help identify sites where invasive plants are threatening areas of high ecological value and that should be prioritized for action.

Land Conservation Strategies

Conservation of existing shoreline functions via property or easement acquisition is a process-based strategy to conserve and protect broader, self-sustaining, ecosystem processes that support valued shoreline habitat. For example, acquiring a property or easement that permanently protects a wetland area could prevent future degradation of shoreline functions downstream. Likewise, protection of a key strategic parcel may provide an important habitat connection that effectively increases the functions of adjacent restored or enhanced parcels, thereby adding more restoration value. In addition, the existing Open Space Tax Deferral

Program can provide a reduced property tax incentive for property owners willing to keep their land in a natural state.

- **Property acquisition** – There are significant properties in the shoreline jurisdiction that are either undeveloped or exhibit low intensity land use characteristics. Acquiring such properties can provide habitat connectivity, and ensure that they continue to provide key ecological functions. Property acquisition can also serve as the first step toward completing restoration projects.

- **Easement acquisition** – Placement of conservation easements can be an effective tool to protect key ecological areas, such as salmonid spawning habitat. Placing conservation easements on strategically located properties can provide habitat continuity and ensure that those areas continue to provide key ecological functions.

- **Open Space Tax Deferral Program** - The Open Space Taxation Act, enacted in 1970, allows property owners to have land valued at its current use rather than its highest and best use. The Act states that it is in the best interest of the state to maintain, preserve, conserve, and otherwise continue in existence adequate open space lands to assure the use and enjoyment of natural resources and scenic beauty for the economic and social well-being of the state and its citizens. Lands suitable for this program are those where the current use conserves and enhances natural or scenic resources, protects streams or water supplies, promotes conservation of soils or wetlands, or preserves archaeological and historic sites.

Potential Partners and Funding Sources

Identification of partners and funding sources is a crucial step in implementing restoration activities. Organizations potentially providing support and funding opportunities for restoration activities in the City are described below. To implement this restoration plan effectively, the City should review and identify potential new partnerships and restoration funding sources on a routine basis. In addition to the organizations described below, private landowners and individual volunteers are usually key partners in shoreline restoration.

Similarly to the need for local participation, local funding sources may be necessary to supplement the outside sources described in this section, particularly where matching funds are needed for grants. The City could identify some projects as part of its capital facilities planning or develop a specific restoration fund to ensure that shoreline restoration is considered during the budget process.

It is expected that restoration funding will be derived from a variety of sources selected for their appropriateness to the project or program goals. For example, applicants for shoreline permits may be allowed to implement one or more of the restoration projects to fulfill project mitigation requirements. Applicants could also be allowed to fund a restoration project partially through an in-lieu-fee, which is created as an agreement between a regulatory agency (state, federal, or local) and a single sponsor, generally a public agency or non-profit organization. Under an in-lieu-fee agreement, a sponsor collects funds from an individual or a number of individuals who are required to conduct compensatory mitigation. The sponsor may use the funds pooled from multiple permittees to create one or a number of

restoration projects under the authority of the agreement to satisfy the permittees' required mitigation. In-lieu-fee mitigation is generally categorized as mitigation conducted after permitted impacts have occurred.

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) has an active role in watershed planning groups. The agency also provides direct financial and technical assistance for private landowners to conduct projects that improve fish and wildlife habitat through the Partners for Fish and Wildlife Program and National Fish Passage Program which fund the projects. USFWS also oversees the Fisheries Restoration Irrigation Mitigation Program, which funds fish screening and fish passage improvements related to water diversions, as well as the North American Wetlands Conservation Act grants program.

National Marine Fisheries Service

The community-based Restoration Program administered by the National Marine Fisheries Service (NMFS) is designed to engage communities actively in on-the-ground restoration of local habitats. The program invests funding and technical expertise in high-priority habitat restoration projects that instill strong conservation values and engage citizens in hands-on activities. The Restoration Center staff helps to identify potential projects, strengthen the development and implementation of habitat restoration activities within communities, and generate long-term national and regional partnerships to support community-based restoration efforts across a wide geographic area.

Northwest Power and Conservation Council / Bonneville Power Administration

The Northwest Power and Conservation Council works to protect, mitigate, and enhance fish and wildlife of the Columbia River basin and guides Bonneville Power Administration's (BPA) funding of projects to implement the fish and wildlife program. The Council supported the development of the Yakima Subbasin Plan (YSFWPB 2004), which provided necessary background information to develop the Yakima Steelhead Recovery Plan (Conley et al. 2009). The Pacific Northwest Electric Power Planning and Conservation Act requires that impacts on fish and wildlife resources from the construction and operation of the Federal Columbia River Power System (FCRPS) be mitigated. The fish and wildlife program including subbasin plans and amendments assist the Council in guiding effective ways to meet those obligations, which includes funding appropriated through BPA.

Yakima Basin Fish and Wildlife Recovery Board

The Yakima Basin Fish and Wildlife Recovery Board's (YBFWRB) mission is to restore sustainable and harvestable populations of salmon, steelhead, bull trout and other at-risk fish and wildlife species through collaborative, economically sensitive efforts, combined resources, and wise resource management of the Yakima Basin. The YBFWRB develops strategic plans to guide fish and wildlife recovery efforts, supports efforts to implement priorities identified in its strategic plans, and fosters public awareness and engagement in fish and wildlife recovery issues.

The YBFWRB also coordinates funding for fish and wildlife restoration projects in the Yakima Basin. Salmon recovery grants are awarded by the Washington State Salmon Recovery Funding Board (SRFB) to protect or restore salmon habitat. The YBFWRB solicits projects from their geographic area, organizes technical and community reviews of the proposals, and presents the best of them to the SRFB for approval.

Yakama Nation

The Yakama Nation leads and participates in numerous salmon recovery and watershed planning efforts, and conducts research and monitoring to support and protect fishery resources in the watershed. The Yakama Nation collaborates with organizations on projects throughout the watershed.

Washington State Conservation Commission / Benton Conservation District

The Benton Conservation District is a non-regulatory, grant-funded organization dedicated to the wise stewardship of soil, water, air, fish, and wildlife. The Benton Conservation District provides landowners with educational and financial opportunities to support restoration activities related to fish screening, irrigation efficiency conversions and water conservation, streamside planting and buffers, streamside fencing and off-channel watering for livestock, and ecological landscaping techniques. The Benton Conservation District also provides technical support to assist landowners with protecting highly erodible soils along the Yakima River. The Conservation Reserves Enhancement Program (CREP) provides reimbursement for riparian planting and maintenance costs delivered through the Farm Service Agency.

Washington Department of Ecology

Ecology provides various sources of funding including low-interest loans and grants for projects that improve the state's water quality, or prevent and control the spread of non-native invasive aquatic plants. For example, Ecology administers funds for water quality infrastructure and projects to control non-point source pollutants through the Centennial Grant Program and the Clean Water Act Section 319 Grant Program.

Washington Department of Fish and Wildlife

Washington Department of Fish and Wildlife's (WDFW) mission is to ensure effective use of current and future financial resources in order to meet the needs of the state's fish and wildlife resource for the benefit of the public. WDFW administers several pass-through grant programs to provide funding for restoration projects which benefit fish and wildlife. The federal government is often the funding source. In some cases, other sources provide grant funds, which are then administered by WDFW. Programs such as the Aquatic Lands Enhancement Account (ALEA) Volunteer Cooperative Projects Grant Program provide financial assistance for private landowners taking measures to restore habitat to benefit at-risk species, and local agencies taking actions that benefit fish and wildlife. WDFW may provide grant funding, collaborate on wetland enhancement projects, or provide technical assistance or staffing for restoration projects.

Washington Recreation and Conservation Office

The Washington Recreation and Conservation Office administers the Washington Wildlife and Recreation Program (WWRP), a state grant program that provides a variety of different funding programs to protect habitat, restore habitat and species, and acquire properties with valuable natural resources. The program is funded by the legislature in the state's capital construction budget.

Mid-Columbia Fisheries Enhancement Group

The Mid-Columbia Fisheries Enhancement Group (MCFEG) collaborates with numerous partners on fish habitat restoration projects and educational outreach. For example, MCFEG sponsors and manages the Bull Trout Task Force (the Task Force), dedicated to protecting and restoring native bull trout populations in the Yakima Basin. The Task Force work included outreach and education to anglers and other river recreationists, attending conservation-related events, removing recreation dams and assisting with population monitoring through redd counts and fish snorkel surveys. MCFEG also regularly hosts volunteer work parties for weed management, trash clean up and dog waste clean up. They have also collaborated with Washington Conservation Corps, Yakama Nation, U.S. Forest Service, and other state and local agencies to increase large wood loading in upper Yakima watershed streams.

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