

FINAL DRAFT RESTORATION PLAN FRANKLIN COUNTY SMP UPDATE



Prepared for
Franklin County

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LIST OF ACRONYMS AND ABBREVIATIONS

ALEA	Aquatic Lands Enhancement Account
BLM	Bureau of Land Management
CBP	Columbia Basin Project
CIA	Cumulative Impacts Analysis
County	Franklin County
CTUIR	Confederated Tribes of the Umatilla Indian Reservation
DNR	Washington State Department of Natural Resources
Ecology	Washington State Department of Ecology
FCD	Franklin Conservation District
Franklin PUD	Franklin County Public Utility District
IAC	Inventory, Analysis, and Characterization
Plan	Restoration Plan
NOAA	National Oceanic and Atmospheric Administration
OHWM	ordinary high water mark
RCW	Revised Code of Washington
Reclamation	U.S. Bureau of Reclamation
SMA	Shoreline Management Act
SMP	Shoreline Master Program
TMDL	total maximum daily load
TNC	The Nature Conservancy
USACE	U.S. Army Corps of Engineers
USDOE	U.S. Department of Energy
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WRIA	Water Resource Inventory Area

1 INTRODUCTION

This Restoration Plan (Plan) has been prepared in support of Franklin County (County) in the development of an updated Shoreline Master Program (SMP). The SMP is being prepared to comply with the Washington State Shoreline Management Act (SMA) requirements (Revised Code of Washington [RCW] 90.58) and the state's SMP guidelines (Washington Administrative Code [WAC] 173-26, Part III-201 2(f)), which were adopted in 2003. The Franklin County SMP comprises policies and regulations that regulate the use and development of the river, streams, and lakes shorelines in the County.

Restoration and enhancement elements discussed in this Plan, in addition to the environmental protection and mitigation measures set forth in the SMP, are intended to work together to achieve the SMA goal of "no net loss" of shoreline ecological function. The Plan was formulated based on a detailed inventory and characterization of the shoreline ecosystem and impaired functions in the Inventory, Analysis, and Characterization Report (IAC) for the County (Anchor QEA 2014). A Cumulative Impacts Analysis (CIA) Report will also be developed to demonstrate how future development under the proposed SMP will result in no net loss of shoreline ecological function.

The scope of this document, the definition of restoration and enhancement, and the key elements in restoration planning in the SMP process are discussed next.

1.1 Purpose and Scope of Plan

The purpose of this Plan is to describe how and where shoreline ecological functions can be protected, restored, or enhanced within the County's SMP jurisdiction. This Plan identifies protection, restoration, and enhancement actions within SMP restoration context.

The SMP guidelines (WAC 173-26-201(2)(f)) articulate the Plan is to include specific elements, which are identified below, along with the section in which the element occurs in this Plan:

- Section 3 – Identification of existing and ongoing projects and programs that are currently being implemented that are designed to contribute to local restoration goals (such as capital improvement programs and watershed planning efforts).

- Section 4 – Identification of degraded areas, impaired ecological functions, and sites with potential for ecological restoration.
- Section 4 – Establishment of overall goals and priorities for restoration of degraded areas and impaired ecological functions.
- Sections 4 and 5 – Identification of additional projects and programs needed to achieve local restoration goals, and implementation strategies, including identifying prospective funding sources for those projects and programs.
- Section 5 – Identification of timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals.
- Section 5 – Provisions for mechanisms or strategies to ensure restoration projects and programs will be implemented, according to plans, to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals.

Although the Plan incorporates elements of other shoreline restoration planning documents that involve the shorelines under the County’s SMP jurisdiction, the scope of this Plan, under the SMA guidance, does not extend to that of a master document combining and aligning priorities of other shoreline restoration documents, plans, or efforts. It is expected alignment or conflict between this Plan and the goals of other plans (such as Comprehensive Plans) that occurs during implementation will be addressed within the context of the applicable regulations. This Plan does not provide or constitute any regulatory approval of the projects identified within the document. All applicable federal, state, and local regulatory requirements will need to be met, and all associated approvals will need to be obtained prior to implementation of any project.

It is important to clarify that restoration, as it is discussed here, is distinct from the concept of protection or no net loss. The WAC defines *restoration* or *ecological restoration* as follows:

“...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 state's SMP policies include a standard of no net loss of ecological functions that is necessary to sustain shoreline natural resources that must be adhered to by new SMPs. The Washington State Department of Ecology (Ecology) has clarified that no net loss means that, "...establishing uses or conducting development are identified and mitigated with a final result that is no worse than maintaining the current level of environmental resource productivity" and "...no uses or development supersede the requirement for environmental protection" (Ecology 2004). The current level of environmental productivity is the baseline level of function of the system. For the purposes of this Plan and the SMP, the environmental baseline is established as part of the IAC Report, or other reports prepared by the County referenced therein, as well as the other maps and data developed by the County as part of the SMP update process. Thus, mitigation activities are the method by which no net loss is compensated. The distinction between no net loss and SMP restoration is restoration goes beyond no net loss by establishing an increase in the amount, size, and/or functions of an ecosystem or components of an ecosystem compared to a baseline condition (Thom et al. 2005). Therefore, mitigation activities, including re-development and new development that includes mitigation activities, could not be considered as part of restoration under this Plan unless there was a *beyond no net loss* component to the work.

1.2 Key Elements of Restoration Planning in SMP Process

The state's SMP guidelines indicate preference for certain shoreline uses, in the order as follows:

1. Reserve appropriate areas for protecting and restoring ecological functions to control pollution and prevent damage to the natural environment and public health.
2. Reserve shoreline areas for water-dependent and associated water-related uses.
3. Reserve shoreline areas for other water-related and water-enjoyment uses that are compatible with ecological protection and restoration objectives.
4. Locate single-family residential uses where they are appropriate and can be developed without significant impact to ecological functions or displacement of water-dependent uses.
5. Limit non-water-oriented uses to those locations where the above described uses are inappropriate or where non-water-oriented uses demonstrably contribute to the objectives of the SMA (WAC 173-26-201(2)(d)).

The WAC guidelines also state that SMPs are to, “...include goals, policies and actions for restoration of impaired shoreline ecological functions” (WAC 173-26-186). The impaired functions are to be identified based on a detailed inventory and characterization of the shoreline ecosystem, and a Restoration Plan is to be formulated based on that information (WAC 137-26-201). The results of the inventory assessment were presented in the IAC Report (Anchor QEA 2014). This Plan uses the information from the IAC Report to address the Restoration Plan requirements discussed in the SMP guidelines. This Plan is not a regulatory document or a set of regulatory requirements. However, the SMP points to this Plan as a guide outlining opportunities for improving shoreline ecological function within the jurisdiction of the County.

2 BACKGROUND

Franklin County is located in the eastern portion of Washington State and encompasses a total area of 1,265 square miles (3,276 square kilometers), of which 1,220 square miles (3,161 square kilometers) are land and 44 square miles (115 square kilometers; 3.5%) are water. The County is bordered by Adams County to the north, Whitman County to the east, Walla Walla County to the southeast, Benton County to the west and southwest, and Grant County to the northwest.

The County is bounded by rivers on the west, south, and east sides. The Columbia River forms the western boundary of the County, the Snake River forms the southern boundary, and Palouse River forms the eastern boundary. The County shoreline also includes several lakes and reservoirs. A major portion of the Columbia River shoreline on the north side of the County is under the federal ownership as part of the Hanford Reach National Monument's Wahluke Unit, which extends from the Columbia River shoreline to the Saddle Mountains. The County shorelines contain a mix of agricultural and residential uses on private lands, and open space, parks, and recreational opportunities on publicly owned lands.

2.1 Planning Area Characteristics

Agriculture is a predominant land use in the County, comprising more than 88% of the County's land use, which includes both Croplands (56%) and Rangelands (32%). The west side of the County is within the Columbia Basin Project (CBP) boundary and has irrigated cropping. Non-irrigated cropping also occurs in the County's agriculture land. Other uses include Federal Reserve land and Rural Lands serving residential, industrial, and other activities. Detailed discussion and maps of land use and land ownership within the County are provided in the IAC Report (Anchor QEA 2014).

2.1.1 Geology

The surficial geology, soils, and topography of the County are primarily dictated by glacial outburst flooding that occurred near the end of the last major glacial period, approximately 18,000 to 20,000 years ago (referred to as the Missoula Floods). The geologic makeup of the County is the result of erosion of pre-floods geologic units, deposition of sediments carried

by the floodwaters, and the formation of the unique topographic features that influence present-day hydrology.

The Missoula Floods deposited thick layers of sands and gravels in wide, flat areas, including the Pasco Basin, which is currently heavily developed for agriculture on the west side of the County (Lyerla 1991). Wind-driven fine material from these outburst flood deposits has more recently formed active sand dunes that are used for off-road vehicle recreation in some locations, but are not well suited to agriculture or other uses. The sediment rests atop high-relief areas that were not eroded in the floods. Recent fluvial deposits (alluvium) deposited by post-glacial and modern-day streams are present in most of the major stream valleys; these deposits typically comprise sands and gravels.

The unique topography of Franklin County lends itself well to the development of modern drainage channels and reservoirs but may limit the available area suitable for restoration, with the exception of narrow vegetated bands along rivers, lake shores, and streams.

2.1.2 Climate

The County falls within the Central Basin region of Washington (NOAA 2013a and 2013b). This region is the driest region in eastern Washington. The annual precipitation ranges from 7 inches in the drier southern slopes of the Saddle Mountain (northwestern part of the County) to 15 inches in the vicinity of the Blue Mountains, to the east of Franklin County. Snowfall varies from 10 to 35 inches and typically occurs after the first of December through the last of February. The Central Basin is subject to Chinook winds, which produce a rapid rise in temperature. A few damaging hailstorms are reported in the agricultural areas each summer. Monthly average high temperature in January is near 40°F in the lower Yakima valley, and low temperatures between 15 to 25°F. In the summer, monthly average high temperatures are in the low 90s with low temperatures occurring in the upper 50s (WRCC 2013).

2.1.3 Water Resources

Approximately 3.5% (44 square miles) of the County surface area is water. Three Water Resource Inventory Areas (WRIAs) are within the County. The most significant WRIA by

area is WRIA 36 (Esquatzel Coulee). WRIAs 33 (Lower Snake) and 34 (Palouse) are also located in the County, and adjacent to WRIA 31-Rock Glide, WRIA 35 – Middle snake, WRIA 37 – Lower Yakima, and WRIA 40 – Alkali-Squilchuck.

Water resources in the County are significantly affected by the CBP. The CBP is a large, multi-purpose development that utilizes Columbia River water for irrigation, power, recreation, and flood control. Grand Coulee Dam is the key structure that provides water and energy for the CBP. The management and operation of the CBP is described more extensively in the IAC Report (Anchor QEA 2014). Development of the CBP has caused an increase of water available for recreation. Before the CBP was developed, there were 35 lakes throughout portions of Grant, Lincoln, Adams, and Franklin counties. There are now more than 140 lakes, ponds, and reservoirs (Reclamation 2013).

Within the County, the Columbia River receives water flows dependent on the coordination of dam operations of all seven dams in the mid-Columbia River, which range from Grand Coulee Dam to Priest Rapids Dam. A portion of the Hanford Reach occurs in the County, which is the only free-flowing section of the Columbia River in the United States. The portion of the Snake River under County jurisdiction consists of a series of reservoirs formed by the construction of run-of-the-river dams, specifically McNary Dam on the Columbia River downstream of its confluence with the Snake River (Lake Wallula), Ice Harbor Dam (Lake Sacajawea), and Lower Monumental Dam (Lake West).

3 EXISTING RESTORATION PLANNING, PROGRAMS, AND PARTNERS

This section describes the range of restoration planning, programs, and partners at work in the region.

There is a sizable body of literature on recent habitat and environmental planning that pertains to shoreline ecosystems, flora, and fauna in the County and Columbia River/Columbia Plateau region. These documents collectively describe a number of plans, projects, and status of the science. The following primary resource documents were reviewed for the purposes of establishing existing restoration planning and partners:

- 2014 Columbia River Basin Fish and Wildlife Program (NWC 2014)
- Columbia Plateau Ecoregional Assessment (TNC 1999)
- Updated Interior Columbia Basin Strategy (ICBEMP 2014)
- Washington Connected Landscapes Project: Analysis of the Columbia Plateau Ecoregion (WHCWG 2012)
- WRIA 43 Upper Crab/Wilson Creek Detailed Implementation Plan (WRIA 2008)
- Draft Crab Creek Subbasin Summary (WDFW 2001)
- Restoring the Pacific Northwest (Link et al 2006)
- Crab Creek Subbasin Plan (WDFW 2004)
- Swanson Lakes Wildlife Area Management Plan (Anderson 2006).
- Coordinated Implementation Plan for Bird Conservation in Eastern Washington (IWJV 2005)

Many groups are involved in shoreline restoration and protection in and around the County, including the federal and state government, public utilities, the Franklin Conservation District (FCD), the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), the Lower Columbia Basin Audubon Society, Ducks Unlimited, The Nature Conservancy (TNC) and other conservation organizations, as well as the local cities and towns. The following sections list the key groups and their contributions. This is intended to be a list of key parties and may not name all groups that have contributed to shoreline restoration or protection in the past or that may contribute in the future.

3.1 U.S. Bureau of Land Management

The Bureau of Land Management (BLM) administers many acres of federal lands in the County. In its land acquisitions, the bureau targets shrub-steppe and associated riparian zones. BLM policy gives priority to habitat for sensitive species and riparian areas. The BLM implements the Interior Columbia Basin Strategy, which is aimed at managing eastside forests in a scientifically-sound and ecosystem-based manner. It also implements integrated weed management, including management of shoreline areas.

3.2 U.S. Bureau of Reclamation

The U.S. Bureau of Reclamation (Reclamation) owns land managed as part of the CBP, Columbia Basin Wildlife Areas (managed by Washington Department of Fish and Wildlife [WDFW]) or as part of the Columbia National Wildlife Refuge (managed by the U.S. Fish and Wildlife Service [USFWS]). The U.S. Department of Energy (USDOE), U.S. Army Corps of Engineers (USACE), and Reclamation own nearly 60% of the publically-owned land located within the County SMP jurisdiction (Anchor QEA 2014).

3.3 U.S. Army Corps of Engineers

USACE Walla Walla District owns and operates the hydroelectric features on the Snake River and the downstream McNary dam on the Columbia River, and has been actively engaged in management of shoreline habitat and restoration actions along Snake and Columbia river shorelines.

3.4 U.S. Department of Agriculture

The U.S. Department of Agriculture administers several programs through its Natural Resource Conservation Service that protect and restore shorelines, including the Wetlands Protection Program, the Resource Conservation and Development Program, the Wildlife Habitat Incentives Program, and the Conservation Reserve Program, among several others.

3.5 U.S. Department of Energy

The USDOE has a comprehensive conservation plan for its natural resources, including shorelines of the Columbia River. USDOE owns and USFWS manages the Hanford Nuclear Reservation in and the Hanford Reach National Monument, which extends into portions of the Columbia River in the County.

3.6 National Oceanographic and Atmospheric Administration Fisheries

The National Oceanographic and Atmospheric Administration (NOAA) Fisheries lead recovery efforts for populations of salmon and steelhead in Washington and other states, which often include consideration of protection and restoration of shoreline habitat that supports various life stages of these fish. NOAA Fisheries also administers the Watershed Program, which evaluates the effectiveness of habitat and watershed restoration strategies or techniques.

3.7 U.S. Fish and Wildlife Service

USFWS manages the Columbia National Wildlife Refuge, a protected wetland and shrub-steppe area intended for species use, as well as the Hanford Reach National Monument, which includes Columbia River shorelines within the County. It also administers a number of programs that restore and protect other shoreline and aquatic habitats. The Partners for Fish and Wildlife Program helps private landowners restore wetlands and other habitats on their properties through voluntary cooperative agreements. The Water Management and Evaluation Program coordinates and manages issues that affect instream flows and shorelines.

3.8 U.S. Forest Service

In the 1990s, the U.S. Forest Service (USFS) and BLM developed the *Interior Columbia Basin Ecosystem Management Plan*, which was a large-scale ecosystem assessment and plan for ecological integrity in the County and region. The plan was set into action by the Interior Columbia Basin Strategy (ICBEMP 2014), which provides guidance to manage the large-scale effort by developing practical resource management plans and projects. The

strategy is implemented by a group of federal participants, including the USFS, BLM, USFWS, NOAA Fisheries, and the U.S. Environmental Protection Agency.

3.9 Washington State Department of Fish and Wildlife

WDFW administrates the Columbia Basin Wildlife Areas, which protect, restore, and enhance shorelines for fish and wildlife, including federal- and state-listed and candidate species. Its strategies include supporting species research and documentation as time allows, and enhancing native shrub-steppe habitats, wetlands, uplands, streambanks, and other species-specific habitats. WDFW also ensures all activities, programs, facilities, and lands are consistent with federal and local protection and recovery efforts for species and habitats.

WDFW has close involvement in the technical and policy aspects of fisheries and wildlife research and conservation, as well as habitat restoration in the region. WDFW administers several federally funded pass-through grant programs that provide funding opportunities for projects within Washington State, which are conducted by outside organizations or members of the public. Projects are designed to benefit the conservation and management of fish and wildlife and their habitat. In some cases, other sources provide grant funds, which are then also administered by WDFW.

3.10 Washington State Parks and Recreation Commission

The Washington State Parks and Recreation Commission acquires, operates, enhances, and conserves natural sites, including shorelines, and fosters protection and preservation of important habitat within its properties.

3.11 Washington State Conservation Commission

The Washington State Conservation Commission provides incentives to restore and improve salmon and steelhead habitat on private land under its Conservation Reserve Enhancement Program.

3.12 Washington State Department of Ecology

Ecology works with local jurisdictions, agricultural interests, and others to develop cleanup plans, or total maximum daily loads (TMDLs) for waterbodies that contain pollutants that exceed state water quality criteria. Currently, there are TMDLs under development for dioxin for the lower Snake River, and for total dissolved gas for the lower Snake River from the Palouse River to the Snake River confluence with the Columbia River. Ecology also administers water quality monitoring grants to various jurisdictions.

3.13 Washington State Department of Natural Resources

The Washington State Department of Natural Resources (DNR) manages state trust lands in the County as Natural Area Preserves, which are areas earmarked for protection, research, and education. DNR restores freshwater and marine habitat under its Aquatic Lands Enhancement Account (ALEA) Grant Program. ALEA grants may be used for the acquisition, improvement, or protection of aquatic lands for public purposes. They also may be used to provide or improve public access to the waterfront.

3.14 Franklin County Public Utility District

The Franklin County Public Utility District (Franklin PUD) service coverage area comprises approximately 35% of the County. Hydroelectric power is primarily supplied from the federal hydropower system located on the Columbia and Snake rivers and managed by the Bonneville Power Administration.

3.15 Franklin Conservation District

The FCD is a legal sub-division of state government mandated by RCW 89.08 to develop and administer voluntary, non-regulatory programs for the wise use and conservation of natural resources in the County. The FCD is governed by a board of elected and appointed supervisors who establish priorities and set policies. Conservation Districts are Washington's only locally driven, conservation delivery system that identifies natural resource problems and guides voluntary solutions.

3.16 The Confederated Tribes of the Umatilla Indian Reservation

The CTUIR is a fish and wildlife co-manager of the mid-Columbia Basin. The CTUIR works for the protection and enhancement of treaty fish, wildlife, and habitats within the County and region for present and future generations.

3.17 Nonprofit Groups

Several nonprofit groups focused on restoration work in and around the County. The National Fish and Wildlife Foundation is developing sagebrush and shrub-steppe habitat restoration sites in Franklin and Benton counties as part of DOE's mitigation requirements (NFWF 2015). Washington Trout is a nonprofit conservation and ecology organization that seeks to preserve, protect, and restore Washington's wild fish and their habitats.

Ducks Unlimited and its partners complete wetland restoration and enhancement projects in eastern Washington, including areas in Franklin County (e.g., Scooteney Reservoir). The restored wetland areas are intended to provide breeding and migration habitat for ducks, geese, and swans, as well as other wetland-dependent birds such as great blue herons, shorebirds, and grebes, as well as for other water fowl during migration.

TNC restores and protects land in the County and region for the benefit of shrub-steppe habitat and wildlife. Many shrub-steppe habitats are within the shoreline jurisdiction of the SMP. The *Columbia Plateau Ecoregional Assessment* (TNC 1999) identified a group of sites that could maintain biota and community viability, and provided an assessment of risks and strategies to conserve biodiversity in the area.

4 RESTORATION CONTEXT, GOALS, AND PRIORITIES

Shoreline restoration is a response to habitat impairment that has occurred as a result of alterations to the hydrology and physical structure of the shoreline. To plan restoration, there must be an understanding of the major existing impairments, an overarching set of goals to guide the work, a prioritization context to organize the efforts, and a list of the available opportunities.

4.1 Shoreline Impairments

The ecosystem-wide processes and structure of the County shorelines are described in detail in the IAC Report (Section 5; Anchor QEA 2014). The IAC Report categorizes each shoreline reach in terms of ecosystem function. The categories include functioning, partially functioning, or impaired. Table 1 provides a summary of the County shoreline reaches, level of existing function, key stressors, and restoration and protection opportunities as included in Appendix A of the IAC Report.

Table 1
Key Stressors and General Restoration and Protection Opportunities

Reach	Reach Description	Shoreline Jurisdiction	Subreach	Level of Existing Function	Key Stressors						Restoration/Protection Opportunities									
					Agriculture	Hydrologic Management Regimes	In-water or Overwater Development	Recreation	Upland Development	Vegetation (i.e., invasive or non-native species)	Consolidate Water Access Trails	Protect Existing/Replant Degraded Riparian and Wetland Habitat	Protect Existing/Replant Degraded Shrub-steppe Habitat	Incorporate Aquatic Habitat Complexity	Incorporate Soft Bank Stabilization Techniques	Incentivize Creating Vegetated Filters Adjacent to Agricultural Fields	Incentivize Replacing Residential Lawns with Native Vegetation	Invasive Species Management	Implement Stormwater Controls for New Development	Manage Livestock and Recreational Access Areas
Columbia River Reach 1	Columbia River from Grant County boundary to downstream of Savage Island	1,735 acres	SR 1a	Partially Functioning				•	•		HR-CCP, IAC	HR-CCP, IAC	HR-CCP, IAC	IAC	IAC				IAC	
			SR 1b	Functioning				•												
			SR 1c	Functioning				•			HR-CCP, IAC	HR-CCP, IAC	HR-CCP, IAC						IAC	
			SR 1d	Partially Functioning				•			HR-CCP, IAC	HR-CCP, IAC	HR-CCP, IAC	IAC	IAC				IAC	
			SR 1e	Functioning (Island), Partially Functioning (Mainland)				•	•		HR-CCP, IAC	HR-CCP, IAC	IAC						IAC	
Columbia River Reach 2	Columbia River from the downstream end of Savage Island to Baxter Canyon	897 acres	SR 2a	Partially Functioning					•		IAC	IAC	HR-CCP, IAC						IAC	
			SR 2b	Partially Functioning			•	•		•	HR-CCP, IAC	HR-CCP, IAC	IAC	IAC	IAC				IAC	
			SR 2c	Impaired	•			•	•		IAC	HR-CCP, IAC	IAC						IAC	
			SR 2d	Partially Functioning				•			IAC	HR-CCP, IAC	HR-CCP, IAC	IAC	IAC				IAC	
			SR 2e	Partially Functioning				•	•		HR-CCP, IAC	IAC	HR-CCP, IAC						IAC	
Columbia River Reach 3	Columbia River from Baxter Canyon to Sagemoor Road	603 acres	SR 3a	Partially Functioning				•	•		HR-CCP	HR-CCP	HR-CCP	IAC	IAC				IAC	
			SR 3b	Partially Functioning	•				•							IAC	IAC		IAC	
			SR 3c	Partially Functioning				•	•		HR-CCP, IAC	HR-CCP, IAC	HR-CCP, IAC	IAC	IAC				IAC	
			SR 3d	Partially Functioning	•				•							IAC			IAC	

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Reach	Reach Description	Shoreline Jurisdiction	Subreach	Level of Existing Function	Key Stressors						Restoration/Protection Opportunities									
					Agriculture	Hydrologic Management Regimes	In-water or Overwater Development	Recreation	Upland Development	Vegetation (i.e., invasive or non-native species)	Consolidate Water Access Trails	Protect Existing/Replant Degraded Riparian and Wetland Habitat	Protect Existing/Replant Degraded Shrub-steppe Habitat	Incorporate Aquatic Habitat Complexity	Incorporate Soft Bank Stabilization Techniques	Incentivize Creating Vegetated Filters Adjacent to Agricultural Fields	Incentivize Replacing Residential Lawns with Native Vegetation	Invasive Species Management	Implement Stormwater Controls for New Development	Manage Livestock and Recreational Access Areas
Columbia River Reach 4	Columbia River from Sagemoor Road to Interstate 182 Bridge	866 acres	SR 4a	Impaired				•	•		HR-CCP	HR-CCP, IAC	HR-CCP, IAC			IAC	IAC		IAC	
			SR 4b	Partially Functioning	•				•							IAC				
			SR 4c	Partially Functioning					•			HR-CCP, IAC	HR-CCP, IAC				IAC		IAC	
			SR 4d	Partially Functioning					•			HR-CCP, IAC	IAC				IAC		IAC	
			SR 4e	Partially Functioning					•		HR-CCP, IAC	HR-CCP, IAC	IAC				IAC		IAC	
Palouse River Reach 1	Palouse River from Adams/ Whitman County Boundary to the confluence with Snake River	1,136 acres	SR 1a	Partially Functioning	•											IAC			IAC	
			SR 1b	Functioning				•	•	•		HR-CCP		IAC	IAC				IAC	
			SR 1c	Partially Functioning				•	•		IAC	IAC	HR-CCP, IAC			IAC			IAC	
			SR 1d	Partially Functioning		•		•	•			HR-CCP, IAC	HR-CCP, IAC			IAC			IAC	
Snake River Reach 1	Snake River from the confluence with the Palouse River to Lower Monumental Dam	2,660 acres	SR 1a	Impaired (eastern half); Functioning (western half)					•			IAC	HR-CCP, IAC			IAC			IAC	
			SR 1b	Partially Functioning	•		•		•	•		IAC	HR-CCP, IAC			IAC			IAC	
			SR 1c	Functioning					•			IAC	HR-CCP, IAC						IAC	
			SR 1d	Partially functioning	•						HR-CCP	IAC	HR-CCP, IAC							
			SR 1e	Partially functioning	•	•					HR-CCP	IAC	HR-CCP, IAC							
			SR 1f	Partially functioning	•	•			•	•		IAC	HR-CCP, IAC			IAC			IAC	

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Key Stressors and General Restoration and Protection Opportunities

Reach	Reach Description	Shoreline Jurisdiction	Subreach	Level of Existing Function	Key Stressors						Restoration/Protection Opportunities									
					Agriculture	Hydrologic Management Regimes	In-water or Overwater Development	Recreation	Upland Development	Vegetation (i.e., invasive or non-native species)	Consolidate Water Access Trails	Protect Existing/Replant Degraded Riparian and Wetland Habitat	Protect Existing/Replant Degraded Shrub-steppe Habitat	Incorporate Aquatic Habitat Complexity	Incorporate Soft Bank Stabilization Techniques	Incentivize Creating Vegetated Filters Adjacent to Agricultural Fields	Incentivize Replacing Residential Lawns with Native Vegetation	Invasive Species Management	Implement Stormwater Controls for New Development	Manage Livestock and Recreational Access Areas
			SR 1g	Partially functioning	•	•	•		•		HR-CCP	HR-CCP, IAC	HR-CCP, IAC	IAC	IAC				IAC	
			SR 1h	Partially functioning		•		•	•		IAC	HR-CCP, IAC	HR-CCP, IAC	IAC	IAC				IAC	
Snake River Reach 2	Snake River from Lower Monumental Dam to McCoy Canyon	2,591 acres	SR 2a	Impaired		•		•	•		IAC	HR-CCP, IAC	IAC	IAC	IAC				IAC	
			SR 2b	Partially Functioning					•			IAC	HR-CCP, IAC						IAC	
			SR 2c	Partially Functioning			•					HR-CCP, IAC	IAC	IAC	IAC				IAC	
			SR 2d	Impaired					•				HR-CCP, IAC						IAC	
			SR 2e	Partially Functioning				•	•		HR-CCP	HR-CCP, IAC	HR-CCP, IAC						IAC	
			SR 2f	Partially Functioning				•	•		HR-CCP	HR-CCP, IAC	HR-CCP, IAC							
			SR 2g	Partially Functioning				•			HR-CCP	IAC	HR-CCP, IAC						IAC	
Snake River Reach 3	Snake River from McCoy Canyon to Ice Harbor Dam	3,048 acres	SR 3a	Functioning		•		•	•		IAC	HR-CCP, IAC	IAC	IAC	IAC				IAC	
			SR 3b	Functioning		•		•	•		IAC	HR-CCP, IAC	IAC	IAC	IAC				IAC	
			SR 3c	Functioning		•		•	•		IAC	HR-CCP, IAC	IAC	IAC	IAC				IAC	
			SR 3d	Partially Functioning		•		•	•		IAC	HR-CCP, IAC	IAC	IAC	IAC				IAC	
			SR 3e	Functioning		•		•	•		IAC	IAC	IAC	IAC	IAC			IAC		
			SR 3f	Functioning		•		•	•		IAC	HR-CCP, IAC	IAC	IAC	IAC				IAC	

Table 1
Key Stressors and General Restoration and Protection Opportunities

Reach	Reach Description	Shoreline Jurisdiction	Subreach	Level of Existing Function	Key Stressors						Restoration/Protection Opportunities									
					Agriculture	Hydrologic Management Regimes	In-water or Overwater Development	Recreation	Upland Development	Vegetation (i.e., invasive or non-native species)	Consolidate Water Access Trails	Protect Existing/Replant Degraded Riparian and Wetland Habitat	Protect Existing/Replant Degraded Shrub-steppe Habitat	Incorporate Aquatic Habitat Complexity	Incorporate Soft Bank Stabilization Techniques	Incentivize Creating Vegetated Filters Adjacent to Agricultural Fields	Incentivize Replacing Residential Lawns with Native Vegetation	Invasive Species Management	Implement Stormwater Controls for New Development	Manage Livestock and Recreational Access Areas
			SR 3g	Functioning		•		•	•		IAC	HR-CCP, IAC	IAC	IAC	IAC				IAC	
			SR 3h	Partially Functioning		•		•	•		IAC	HR-CCP, IAC	IAC	IAC	IAC				IAC	
			SR 3i	Partially Functioning		•		•	•		IAC	HR-CCP, IAC	IAC	IAC	IAC				IAC	
Snake River Reach 4	Snake River from Ice Harbor Dam to US 12 Bridge	1,196 acres	SR 4a	Partially Functioning		•		•	•		IAC	HR-CCP, IAC	IAC	IAC	IAC				IAC	
			SR 4b	Low Functioning		•	•	•	•		IAC	HR-CCP, IAC		IAC	IAC				IAC	
Mesa Area Lakes Group	Along Interstate 395 between Connell and Mesa	Mesa Lake, 100 acres; Clark Pond, 68 acres; T-Lake, 309 acres; and Unnamed Lake, 170 acres	N/A	Functioning	•			•										IAC		IAC
Scootenev Reservoir Lakes Group	Consists of five lakes to the south of the Adams County boundary and to the east of US 17	Scootenev Reservoir, 1,186 acres; Chance Lake, 46 acres; Camp Lake, 107 acres; Unnamed Lake 1, 112 acres; and Unnamed Lake 2, 75 acres	N/A	Functioning	•			•										IAC		IAC

Table 1
Key Stressors and General Restoration and Protection Opportunities

Reach	Reach Description	Shoreline Jurisdiction	Subreach	Level of Existing Function	Key Stressors						Restoration/Protection Opportunities									
					Agriculture	Hydrologic Management Regimes	In-water or Overwater Development	Recreation	Upland Development	Vegetation (i.e., invasive or non-native species)	Consolidate Water Access Trails	Protect Existing/Replant Degraded Riparian and Wetland Habitat	Protect Existing/Replant Degraded Shrub-steppe Habitat	Incorporate Aquatic Habitat Complexity	Incorporate Soft Bank Stabilization Techniques	Incentivize Creating Vegetated Filters Adjacent to Agricultural Fields	Incentivize Replacing Residential Lawns with Native Vegetation	Invasive Species Management	Implement Stormwater Controls for New Development	Manage Livestock and Recreational Access Areas
Eagle Lakes Group	Consists of six lakes located to the south of the Adams County boundary and the east of Sagehill Road	Eagle Lake 1, 150 acres; Eagle Lake 2, 59 acres; Scootene Lake, 340 acres; Eagle Lake 3, 155 acres; Eagle Lake 4, 284 acres; and Bailie Lake, 141 acres	N/A	Functioning	•			•										IAC		IAC
Wahluke Lakes Group	Northwest corner of the County between the Columbia River and Sagehill Road	Wahluke Slope HMA_W (118 acres) and Wahluke Slope HMA_N (130 acres)	N/A	Functioning	•			•										IAC		IAC

Notes:
HR-CCP – Hanford Reach National Monument: Final Comprehensive Conservation Plan and Environmental Impact Statement (USFWS 2014)
IAC – Inventory, Analysis, and Characterization Report (Anchor QEA 2014)
SR = subreach

4.2 Restoration Goals and Objectives

As described in Section 3, much work has been done with regard to setting the direction for habitat management in the County and region. The general management goals identified in the plans for these areas and jurisdictions were used to formulate a list of goals and example objectives for this Plan. The following goals and objectives will guide the restoration actions described herein and can be used to formulate metrics to monitor progress in implementing the Plan:

1. Protect, maintain, and where feasible, enhance and restore riparian, aquatic, shrub-steppe, and wetland habitats. Example objectives could include removing invasive vegetation, replanting native species, and consolidating livestock or recreation access to sensitive habitats.
2. Promote and enhance habitat diversity, especially for sensitive or rare areas (e.g., seasonal alkali wetlands, shrub-steppe, emergent marsh, and seep streams and channels). Example objectives could include incorporating habitat complexity and vegetative components into bank-stabilization techniques, or involving channel sinuosity into stream projects.
3. Protect and maintain lakes and stream channels, especially those that contribute to the recovery of sensitive species and impaired waters. Example objectives could include implementing stormwater controls consistent with state standards, and protecting steep slope areas from runoff and sedimentation.

4.3 Restoration Opportunities

Several opportunities now exist for restoration of the County shorelines, presented below in terms of general areas (county, cities, and towns) and also in terms of specific identified projects or sites.

4.3.1 General Restoration Opportunities

Various ecological benefits can be realized if shoreline impairments are addressed by restoration in the County. The habitat plans and programs described in Section 3 of this document describe direction and/or recommendations for actions to address many of the impairments that occur within their jurisdiction or area of interest. Table 1 shows the

restoration or protection opportunities these plans and programs have identified, including the reasons for the habitat impairment, and a summary of the ecological benefits to be realized from the project.

Major opportunities identified include establishing or protecting sensitive habitats such as riparian, wetland, or shrub-steppe habitats. This could be accomplished by consolidating or restricting access to these areas by livestock and recreationists. In addition, plans and programs suggest incorporating habitat diversity and complexity into new or enhanced habitats, especially aquatic areas that have been simplified by channelization or shoreline hardening. Former wetland and floodplain areas could be reconnected to their source waters, and removal of shoreline armoring could be conducted where soft shore stabilization techniques may be appropriate. For shrub-steppe in particular, WDFW has recommended specific measures for shrub-steppe habitat restoration (WDFW 2011a) and has given direction for managing these habitats in developed areas (WDFW 2011b). Protecting or improving water quality was also a key element of habitat management under these plans, including using the most recent stormwater controls and managing temperature and nutrient loading from local sources.

The following benefits to ecological functions can be derived as a result of implementing the restoration and protection opportunities identified in Table 1:

- Improved vegetation recruitment for riparian, shrub steppe, and wetland habitats
- Improved temperature, dissolved oxygen, toxin, and pathogen management capabilities
- Increased habitat for aquatic and terrestrial species foraging, breeding, nesting, and migration
- Increased hyporheic exchange, groundwater recharge, and water storage
- Increased subsurface infiltration and flow and surface water quality protection
- Reduced soil erosion
- Reduced excess nutrient sources to improve water quality

4.3.2 *Site-specific Restoration and Protection Opportunities*

Although most plans and programs from the SMP jurisdictional area address large-scale direction and management, there is a small set of actions that are named or planned for specific areas. Table 2 lists these locations and opportunities, and includes the source document or project proponent, as well as the impairment to be addressed and the key benefits to ecological function expected as a result of the project implementation.

Table 2
Site-specific Restoration and Protection Opportunities in Franklin County and Surrounding Cities and Towns

No.	Area	Location	Restoration/Protection Opportunities	Priority ¹	Source	Key Impairments	Key Benefits to Ecological Functions
1	Snake River	Reaches 1 to 4	Explore opportunities to protect intact riparian areas	High	ESA Snake River Sockeye Recovery Plan 2014 (page 297) ²	Riparian vegetation	Riparian vegetation recruitment
2	Snake River	Reaches 1 to 4	Explore opportunities to protect remaining high-quality, off-channel habitat, and restore areas with potential habitat	Moderate	ESA Snake River Sockeye Recovery Plan 2014 (page 297) ²	Habitat quality	Aquatic species rearing habitat improvements
3	Snake River	Reaches 1 to 4	Identify water quality sources and implement best management practices	Moderate	ESA Snake River Sockeye Recovery Plan 2014 (page 298) ²	Water quality	Reduced excess nutrient sources to improve water quality
4	Snake River	Reaches 1 to 4	Implement Water Quality Plan for total dissolved gas and temperature	Moderate	ESA Snake River Sockeye Recovery Plan 2014 (page 298) ²	Water quality	Temperature/dissolved oxygen improvements
5	Snake River	Subreach 4a, (Ice Harbor and Lower Monumental dams)	Implement and improve deterrent devices to keep avian predators away from juvenile salmonid concentration areas	Moderate	ESA Snake River Sockeye Recovery Plan 2014 (page 299) ²	Predators	Aquatic species rearing habitat improvements
6	Snake River	At dams (Ice Harbor and Lower Monumental)	Encourage educational and monitoring projects and enforce laws to stop spread of invasive species	Moderate	ESA Snake River Sockeye Recovery Plan 2014 (page 300) ²	Non-native species	Increased habitat for aquatic and terrestrial species foraging/breeding/nesting/migration
7	Snake River	Mainstem	Retain shade along stream channels and augment summer flows	Moderate	ESA Snake River Sockeye Recovery Plan 2014 (page. 300) ²	Water quality	Temperature/dissolved oxygen improvements
8	Snake River	Subreach 1a	Plant riparian vegetation in the bare areas along the Lyons Ferry Fish Hatchery shoreline	High	IAC Report ³	Riparian vegetation	Riparian vegetation recruitment
9	Snake River	Subreach 2d	Soft shoreline stabilization and riparian vegetation enactment in the area west of Windust Park along Burr Canyon Road	High	IAC Report ³	Riparian vegetation, shoreline stabilization	Riparian vegetation recruitment/ reduce erosion
10	Columbia River	Subreach 2c	Plant riparian vegetation in degraded areas	High	IAC Report ³	Riparian vegetation	Riparian vegetation recruitment
11	Columbia River	Subreach 4a	Replant riparian vegetation in degraded areas	High	IAC Report ³	Riparian vegetation, shoreline stabilization	Riparian vegetation recruitment/ reduce erosion
12	Columbia River		Remove non-native vegetation in the upland and replant with native shrub-steppe species	Moderate	IAC Report ³	Non-native species, shrub-steppe rehabilitation	Riparian vegetation recruitment/ native grasslands and shrub-steppe improvements
13	Columbia River		Install soft shoreline stabilization and replant riparian vegetation around the irrigation outfall	High	IAC Report ³	Riparian vegetation, shoreline stabilization	Riparian vegetation recruitment/ reduce erosion ecological processes
14	Columbia River	Subreach 4c	Replant degraded riparian vegetation	High	IAC Report ³	Riparian vegetation	Riparian vegetation recruitment

Notes:

1 = Very High – Habitat protection projects or actions that have a high likelihood of successfully addressing restoration of ecosystem functions and a high certainty of funding; or address critically important species and habitat concerns’ High – Restoration of ecosystem functions (funded actions take higher priority within this category); Moderate – Restoration of habitat structure (funded actions take higher priority within this category)

2 = NOAA (National Oceanic and Atmospheric Administration), 2014. *Proposed ESA Recovery Plan for Snake River Sockeye Salmon (Oncorhynchus nerka)*. June 2014.

3 = Anchor QEA, 2014. *Final Shoreline Inventory, Analysis, and Characterization Report*. Franklin County Shoreline Master Program Update. Prepared for Franklin County by Anchor QEA with assistance from Oneza and Associates. December 2014.

ESA = Endangered Species Act IAC = Inventory, Analysis, and Characterization

4.4 Project Evaluation and Prioritization Criteria

Projects and opportunities in this Plan can be evaluated against various criteria to prioritize implementation. The following list includes a description of criteria that indicate a project is viewed as implementable under this Plan. Potential projects should have the following purposes:

- Meet goals and objectives for shoreline restoration (see Section 4.2)
- Maintain consistency with existing plans and programs as described in Section 3
- Have public support
- Be located on public property or property owned by a willing partner for restoration projects
- Restore ecosystem processes or provide habitat protection (those that restore function by providing habitat structure only would take a lesser priority)
- Improve a rapidly deteriorating habitat condition
- Have high benefit to ecosystem function relative to cost
- Provide riparian, shoreline, or instream habitat for spawning and rearing ESA-listed salmonids, or improve conditions in sensitive shrub-steppe systems for state- and federally listed native wildlife (a list of wildlife are given in WDFW 2011b; e.g., Greater Sage grouse, burrowing owl, Townsend's ground squirrel)

All specific projects or actions comprising a project listed in Table 2 exhibit some, if not all, of the above criteria. To prioritize these actions, they were assigned to a category of Very High, High, and Moderate relative to their value in achieving the SMP goal of no net loss for shorelines within the County SMP jurisdiction (Table 2). Projects were categorized as follows:

1. Very High – Habitat protection projects or actions that have a high likelihood of successfully addressing restoration of ecosystem functions and a high certainty of funding; or address critically important species and habitat concerns
2. High – Restoration of ecosystem functions (funded actions take higher priority within this category)
3. Moderate – Restoration of habitat structure only (funded actions take higher priority within this category)

5 IMPLEMENTATION, MONITORING, AND REVIEW

Implementation of the Restoration Plan may require close coordination with the County, Ecology, and potentially other agencies and organizational partners noted in Section 3 of this Plan.

5.1 Potential Restoration Funding Partners

There is currently no single dedicated funding source for the restoration actions presented here. Restoration described in this Plan is dependent on federal, state, and local budgets; grant funding; and the variety of outside funding sources available for restoration work. Funds are distributed through grant-making agencies at the local, state, and federal level. The opportunities described below are primarily administered by state and federal agencies. It is expected funding will be derived from various sources. Sources listed here do not represent an exhaustive list of potential funding opportunities, but are meant to provide an overview of the types of opportunities available. The following agencies could provide funding:

- Recreation and Conservation Office of Washington/Salmon Recovery Funding Board
- Franklin PUD
- Reclamation CBP
- Ecology
 - Aquatic Weeds Financial Assistance Program
 - Water quality grants, including federal Clean Water Act Section 319 Program
- Washington Department of Fish & Wildlife
 - ALEA Volunteer Cooperative Projects Program
 - Landowner Incentive Program
- National Fish and Wildlife Foundation
 - Bring Back the Natives: A Public-Private Partnership for Restoring Populations of Native Aquatic Species
 - Five-Star Restoration Matching Grants Program
 - Marine Debris Prevention and Removal Program

- Native Plant Conservation Initiative
 - The Migratory Bird Conservancy
- FCD
- NOAA Restoration Center
 - Community-based Restoration Program
 - NOAA CRP 3-Year Partnership Grants
 - NOAA CRP Project Grants
- American Sportfishing Association’s Fish America Foundation Grants
- Environmental Protection Agency Region 10: Pacific Northwest
 - The Clean Water State Revolving Fund Program
 - Nonpoint Source Implementation Grant (319) Program
 - Wetland Protection, Restoration, and Stewardship Discretionary Funding
- USFWS:
 - Partners for Fish and Wildlife Program
 - National Fish Passage Program
 - Cooperative Endangered Species Conservation Fund
 - North American Wetlands Conservation Act Grants Program
- DNR Small Forest Landowner Office
- Private foundations, businesses, and other groups administer grant programs that include funding for shoreline habitat and ecosystems, including:
 - The Russell Family Foundation
 - William C. Kenney Watershed Protection Foundation
 - Northwest Fund for the Environment
 - Kongsgaard-Goldman Foundation
 - The Bullitt Foundation
 - The Compton Foundation
 - Doris Duke Charitable Foundation
 - The Hugh and Jane Ferguson Foundation
 - Washington Trout

5.2 Timelines, Benchmarks, and Monitoring

The County restoration work as it relates to this Plan should be monitored and evaluated on a set timeline against a suite of benchmarks to determine consistency with the State's SMP policy standard of no net loss of ecological functions. This Plan will be implemented when the SMP is adopted by Ecology, and would be implemented with the suggested timeline provided below, within funding availability constraints.

Within 10 years of Plan adoption, the following objectives could be achieved:

- Prioritize, fund, and complete a set number of restoration projects (two to five).
- Explore and solidify regular funding opportunities for future projects.
- Identify and implement public workshops, webpages, or other forums for periodically updating residents on shoreline restoration in the County.

Quantifiable benchmarks should also be noted over time to track changes in shoreline conditions and to create documentation for no net loss of shoreline function. A mechanism to track this county-wide should be established within funding constraints.

Information identified for tracking and monitoring includes permit information, project applications, and completion reports filed with various jurisdictions. Possible data could include but is not limited to the following:

- Shoreline variances and reasons/nature of variance
- Linear distance of new hard armoring or hard armoring removed, above the ordinary high water mark (OHWM)
- Linear distance of new soft shoreline stabilization
- Linear distance of new or enhanced riparian vegetation or vegetation removals
- Number of new docks and coverage area
- Number of new piles or piles removed
- Cubic yardage and coverage area of fill removed or replaced, below the OHWM
- Number of new boat ramps or boat ramps removed
- Number of new outfalls or outfalls removed/consolidated
- Wetland acreage existing, restored, and lost
- Increase or decreases in impervious surface area

5.3 SMP Review

The County will be required to conduct periodic SMP updates, which will include an evaluation of the efficacy of the SMP and this Plan. This review will involve comparing past conditions with existing conditions, and assessing whether the actions, policies, and regulations set since the last SMP update have been valuable in ensuring no net loss. The evaluation will be an opportunity to adjust these measures as applicable for the benefit of future shoreline conditions.

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