WHITMAN COUNTY
GRANT NO. G1400494

CUMULATIVE IMPACTS ANALYSIS

FOR THE CITY OF PALOUSE SHORELINE MASTER PROGRAM

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Page #

CUMULATIVE IMPACTS ANALYSIS

CITY OF PALOUSE SHORELINE MASTER PROGRAM

1 INTRODUCTION

1.1 Background and Purpose

This Cumulative Impacts Analysis (CIA) is a required element of the City of Palouse's (City of Palouse) Shoreline Master Program (SMP) update process. The State Master Program Approval/Amendment Procedures and Master Program Guidelines (SMP Guidelines; WAC 173-26-186(8)(d)) state that, "To ensure no net loss of ecological functions and protection of other shoreline functions and/or uses, master programs shall contain policies, programs, and regulations that address adverse cumulative impacts and fairly allocate the burden of addressing cumulative impacts." The CIA is intended to demonstrate that an SMP will not result in degradation of shoreline ecological functions over a 20-year planning horizon. This CIA can help the City make adjustments where appropriate in its proposed SMP if there are potential gaps between maintaining and degrading ecological functions.

In accordance with the SMP Guidelines, this CIA addresses the following:

i. "Current circumstances affecting the shoreline and relevant natural processes [Chapter 2 below and *Final Shoreline Analysis Report for Shorelines in Whitman County; the Cities of Colfax, Palouse, Pullman, Tekoa, and the Towns of Albion, Malden, and Rosalia* (The Watershed Company and Berk 2014)];

ii. Reasonably foreseeable future development and use of the shoreline [Chapter 3 below and *Shoreline Analysis Report*]; and

iii. Beneficial effects of any established regulatory programs under other local, state, and federal laws." [Chapter 4 below]

The CIA assesses the policies and regulations in the draft SMP to determine whether no net loss of ecological function will be achieved as new development occurs. The baseline against which changes in ecological function are measured is the current shoreline conditions documented in the *Shoreline Analysis Report*. For those projects or activities that result in degradation of ecological functions, the required mitigation must return the resultant ecological function back to the baseline. This is illustrated in Figure 1-1.

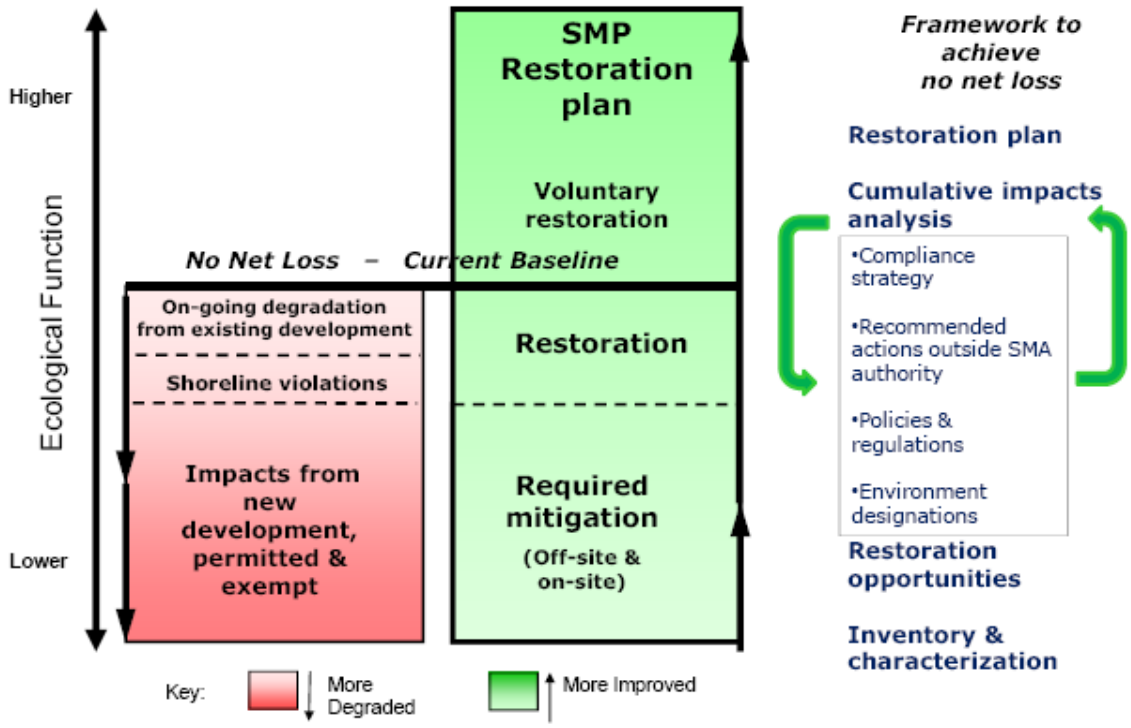

Figure 1-1. Framework for achieving no net loss of shoreline ecological functions (Source: Department of Ecology)

Despite SMP regulations that require avoidance, minimization, and mitigation for any unavoidable losses of function, some uses and developments cannot be fully mitigated. This could occur when mitigation is out-of-kind, meaning that it offsets a loss of function through an approach that is not directly comparable to the proposed impact. A loss of functions may also occur when impacts are sufficiently minor on an individual level, such that mitigation is not required, but are cumulatively significant. Unregulated activities (such as operation and maintenance of existing legal developments) may also degrade baseline conditions. Additionally, the City of Palouse SMP applies only to activities in shoreline jurisdiction (See Figure 1-2), yet activities upland of shoreline jurisdiction or upstream in the watershed may have offsite impacts on shoreline functions.

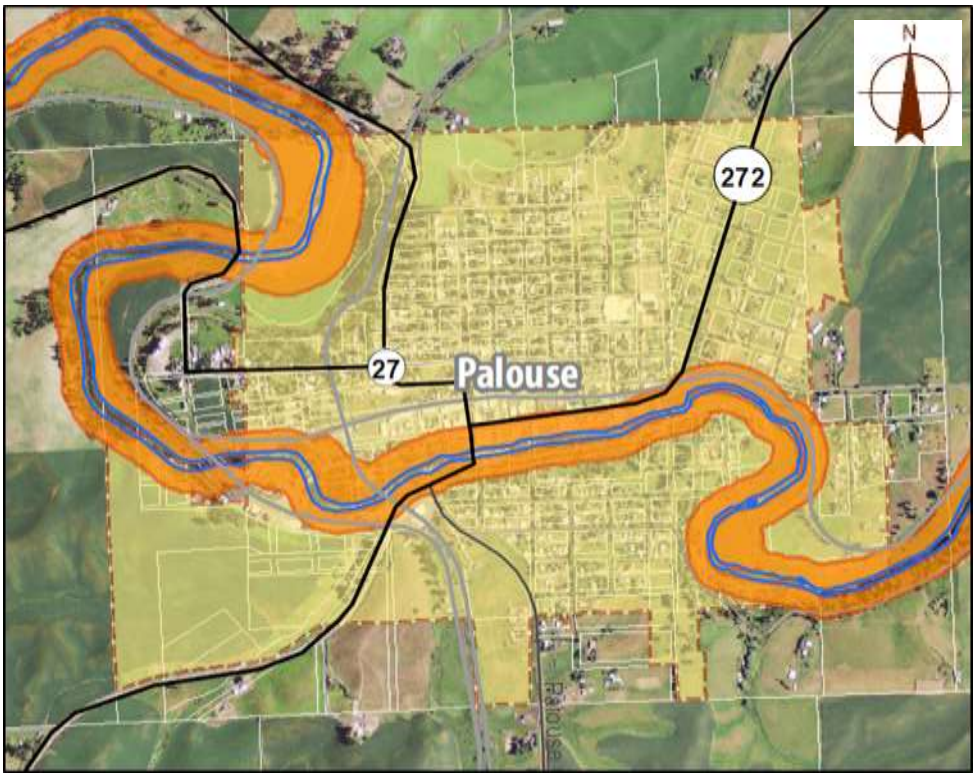

Figure 1-2. Palouse shoreline jurisdiction (orange shading within the yellow city limits)

Together, these different project impacts may result in cumulative, incremental, and unavoidable degradation of the overall baseline condition unless additional restoration of ecological function is undertaken. Accordingly, the *Shoreline Restoration Plan* (The Watershed Company 2015) is intended to be a source of ecological improvements implemented voluntarily that may help to bridge a gap between minor cumulative, incremental, and unavoidable damages and ensure no net loss of shoreline ecological functions.

1.2 Approach

This CIA was prepared consistent with direction provided in the SMP Guidelines as described above. Existing conditions were first evaluated using the information, both textual and graphic, developed and presented in the *Shoreline Analysis Report*. Likely development identified in the *Shoreline Analysis Report* was addressed further to understand the extent, nature, and general location of potential impacts.

The effects of likely development were then evaluated in the context of SMP provisions, as well as other related plans, programs, and regulations. For the purpose of evaluating impacts, areas with a likelihood of high densities of new development or redevelopment were evaluated in greatest detail. Cumulative impacts were analyzed quantitatively where possible. A qualitative approach was used where specific details regarding redevelopment likelihood or potential were

not available at a level that could be assessed quantitatively or the analysis would be unnecessarily complex to reach a conclusion that could be derived more simply.

2 SUMMARY OF EXISTING CONDITIONS

The following summary of existing conditions is based on the *Shoreline Analysis Report*. More detailed information on specific shoreline areas is provided in the *Shoreline Analysis Report*.

2.1 Ecological

Watershed Overview

The City of Palouse is located in the Palouse watershed (WRIA 34), which covers the majority of Whitman County. The topography of the Palouse watershed transitions from mountainous terrain in Idaho to rolling hills composed of basalt covered with loess in the central portion of the watershed. The far western portion of the watershed is in an area called the Channeled Scablands. This area was shaped by massive floods over the past million years, which left behind exposed channels of the underlying basalt amongst islands of loess (HDR and EES 2007).

Precipitation primarily occurs in the winter months, and ranges from 10 inches in the west to 50 inches in the eastern portion of the watershed (HDR and EES 2007). Many of the smaller stream channels are dry in the summer. Major tributaries in the watershed include the North and South Forks of the Palouse River, Rebel Flat Creek, Rock Creek, Pine Creek, Union Flat Creek and Cow Creek.

Historically, the dominant vegetation in the Palouse watershed was a bunchgrass association. Much of that vegetation has been converted to dryland agriculture or altered by rangeland uses. Soil erosion resulting from storm water runoff has been a continuing problem throughout WRIA 34 as a result of land conversions to agriculture. An estimated 40% of the topsoil in the Palouse has been lost to erosion during this time (HDR and EES 2007). Most livestock grazing occurs in the westernmost portion of the basin, within the Channeled Scablands. Urban development makes up a small portion of the watershed; however, several cities and towns are located directly adjacent to the Palouse River and its tributaries. Riparian areas have been significantly altered by land use in the South Fork Palouse subbasin, and many small intermittent streams have been converted to drainage ditches throughout the North and South Fork subbasins.

Water quality concerns are primarily from non-point sources throughout most of the watershed, including erosion, livestock, fertilizers, and septic systems, which contribute sediment, fecal coliforms, and nutrients. Temperature is also a concern in many of the waterbodies in the watershed.

Although there are no man-made dams on the Palouse River, the 185-foot Palouse Falls, approximately 6 miles upstream from the River's confluence with the Snake River, prevents anadromous salmon passage (Golder Associates, Inc 2009). There are no ESA-listed salmonids or other listed aquatic species above the Palouse Falls. Resident fish species above the falls include rainbow trout, brown trout, smallmouth bass, sculpin, largescale sucker, northern squawfish, shiner perch and speckled dace (HDR and EES 2007). Trout are less common in the lower portions of the watershed, presumably as a result of temperature and water quality constraints in the lower watershed.

Throughout much of the Palouse watershed in Whitman County, riparian forest and shrub vegetation is limited. This occurs as a combination of naturally limited water sources, the basalt landscape, and topography. Additionally, riparian vegetation is often limited as a result of ongoing agricultural activity adjacent to the watercourse.

Palouse Shorelines

The North Fork Palouse River flows west from the Idaho border into the southeast corner of the City of Palouse. It meanders north and continues flowing west through the center of the City. Shorelines through the downtown area are the most modified and have the lowest ecological function of the City's shorelines due to the level of commercial development present. Only a narrow band of vegetation separates the channel from the upland development in most areas. A similarly impaired industrial area is present on the south side of the river, west of Highway 27. A Category 5 water quality listing is present for dissolved oxygen, pH and temperature in the North Fork and a TMDL is in place for bacteria.

A small residentially zoned and developed area is present west of the downtown area, located entirely within floodplain. It has a relatively moderate level of ecologic function. Trees and

shrubs area present throughout the residential development providing a source of LWD and organic matter and helping filter inputs from the development.

The highest functioning shorelines are the open spaces areas which dominate the eastern end of shoreline jurisdiction and the area around Hayton Green Park. Agriculture and roads are the primary modifications to these areas. However, the park includes several buildings, lawn areas, a parking area and swimming pool. The majority of the open space reach lies within the floodplain, and some within the floodway. Little or no armoring and moderate slopes provide good connectivity to the floodplain. Some wetland, islands and backwater areas are also present. Some areas of dense riparian forested vegetation are present however cultivated crops dominate the shorelands which have limited capability of providing filtration functions. However, the vast majority of shorelands in this area are vegetated compared to the other, more developed city reaches where impervious surfaces dominate.

2.2 Land Use

The City of Palouse has a population of 1,021 and is located approximately two miles from the Idaho border. The topography of Palouse is dominated by the Palouse River and its associated floodplain. The main street and downtown area are built in the floodplain and are subject to periodic flooding, most recently in 1996. The elevation of the City ranges from 2,400 feet to 2,660 feet.

The shoreline jurisdiction includes 115 acres along just under two miles of the North Fork Palouse River. The river flows from the east through open space, residential areas, the City's business district (East Main Street), and back out into the County. Shoreline jurisdiction includes residential, commercial and recreational uses. Undeveloped land is the most prevalent current land use. The area of undeveloped land extends along both sides of the North Fork from the eastern boundary of the City to North Hall Street. Utilities are also a prominent use. That category includes all of the City's rights-of-way, which comprise a significant land area. Parks and residential uses are the next most common uses.

In contrast to the undeveloped areas, much of the south side of East Main Street in downtown Palouse is also within shoreline jurisdiction. In the downtown area, businesses include a grocery store, several antique stores, an art gallery, a cafe, a museum, a quilt shop, and a tavern. The downtown corridor also contains residential housing, three parks, and the Palouse Community Center. There is some land still available for development, including a lot just west of the Palouse Community Center and the brownfield site (City of Palouse 2014). Most of the existing businesses along East Main Street are oriented away from the river.

Most of the commercial activity lies in the floodplain and faces the street. The backs of the buildings face the river. Toward the west end of the City, there are park uses and industrial uses in the form of grain silos and a rail yard. Zoning in Palouse is a mix of low-density residential, commercial, light industrial, and agriculture. Ownership Data shows no state or federal ownership in shoreline.

Water-oriented uses are limited in Palouse. Those that do occur include agricultural activities and public access sites. There are several access points to the river along the City's streets and walking paths including Hayton-Green Park which offers a variety of recreation activities. The river is used for fishing, swimming and boating (primarily non-motorized).

3 REASONABLY FORESEEABLE FUTURE DEVELOPMENT

This section considers potential future development within and along the shorelines of the City of Palouse. Consistent with the State Guidelines, the analysis will "address the cumulative impacts on shoreline ecological functions that would result from future shoreline development and uses that are reasonably foreseeable" (WAC 173-26-201(3)(d)(iii)). Reasonably foreseeable development is defined as development that is likely to occur during the next 20 years based on the proposed shoreline environment designations, proposed land use density and bulk standards, and current shoreline development patterns. Development potential is discussed qualitatively.

Undeveloped land in Palouse (59%) is the most prevalent current land use in Palouse's 115-acre shoreline jurisdiction. The river flows from the east through open space before it passes through residential areas and the City's business district and back out into open space and the County. Zoning and proposed shoreline environment designations control the capacity of land for development in the shoreline jurisdiction. The majority of zoning in shoreline jurisdiction is Low-Density Residential (L-1), including those areas that are currently undeveloped. The

nature of the environment designations is not expected to change significantly over the next 20 years within Pullman's current boundaries.

The City of Palouse has seen fairly steady growth in population from 1990 to 2010. Housing unit growth has matched the population growth trend, year to year as well. In 2010, there were 998 people living in Palouse and 474 housing units. That upward trend may result in demand for shoreline development, although additional constraints (such as flood-prone areas) reduces development capacity in some of the undeveloped areas.

Commercial

There following developments are likely to occur in Palouse over the next 20 years.

- Reconstruction on the lot of a fire-damaged building at 127 East Main Street. The parcel is located along the Palouse in the business district and within the High Intensity environment designation. It is zoned Commercial.
- There is an ongoing brownfield clean up at a former gas station at 335 East Main Street. The City owns the property and has been working with EPA and Ecology on cleaning the site with the intention to sell the property to a private owner/developer. The parcel is located along the Palouse in the business district and within the High Intensity environment designation. It is zoned Commercial.
- A non-profit in the City is looking for a site to develop a skate park. Two sites on East Main Street are being considered.

Residential

Much of the City's undeveloped land is located outside of downtown in the Urban Conservancy environment. Future residential development along the shoreline is most likely to occur in this area. The current zoning along the Palouse to the northwest is Agricultural. The undeveloped areas along the Palouse to the east of the City are zoned Low-Density Residential. Some residential development can be expected in these areas over the next 20 years, although natural constraints (such as flooding) will reduce development potential in areas currently classified as undeveloped.

Parks

The City's Comprehensive Plan identifies the following future public access opportunities, which are likely to be developed over the next 20 years:

- Install a walking bridge between Hayton-Greene Park and Ancel Jeffers Memorial Lions Club Park. This would occur in the Shoreline Parks environment and the Aquatic

environment. Work would be contained within the Open Space zoning district of the City of Palouse.
- Build and maintain walking trails along the Palouse River with the help of volunteers and civic groups. This could occur in various environment designations and zoning districts.
- Upgrade the War Memorial at Hayton-Greene Park, which is located in the Shoreline Parks designation and the City's Open Space zoning district.
- Develop a skateboard park in cooperation with volunteer organizations. This may or may not locate within shoreline jurisdiction.

No other future uses or developments have been identified. No new water-oriented uses are expected. There are limited water-oriented development opportunities in Palouse given that the Palouse is not commercially navigable as it runs through the City of Palouse. Activities such as boating, fishing and swimming are limited and only occur informally during times when the Palouse is running high. Agricultural uses in the northwest part of town may be considered water-oriented, but no additional agricultural development is expected beyond the current agricultural uses.

4 EFFECTS OF ESTABLISHED PROGRAMS

4.1 Current County Regulations and Programs

All development activity within the City is required to comply with the Palouse Municipal Code (PMC). Provisions in the PMC that potentially affect how future development is implemented and the extent of potential ecological impacts include critical areas and zoning regulations. The following are descriptions of these relevant regulations and how they help to maintain shoreline functions.

Critical Areas Regulations

City regulations applicable to critical areas are contained in Palouse Municipal Code Chapter 17.26, last updated in 2007. These regulations require wetland buffers of between 50 and 250 feet based solely on wetland category (PMC 17.26.050). No stream buffer widths are specified, although the regulations require preparation of a habitat management plan based on best available science and a demonstration that a project would not degrade functions and values of the habitat (PMC 17.26.070). The City's Critical Areas regulations also apply to geologically hazardous areas, critical aquifer recharge areas, and frequently flooded areas.

Zoning Code

City zoning standards direct the location of uses, building bulk, and scale. These standards are important in planning for future growth and focusing development in a sustainable manner. A variety of different zoning designations are present in shoreline jurisdiction including Low-Density Residential, Commercial, Light Industrial, Open Space and High-Density Residential. Each zone has different permitted uses which help to concentrate development in areas appropriate and suitable for similar uses (PMC Title 17).

4.2 State Agencies/Regulations

Aside from the Shoreline Management Act (SMA), state regulations most pertinent to moderation of ecological impacts of development in the City's shoreline include the State Hydraulic Code, the Growth Management Act, State Environmental Policy Act (SEPA), tribal agreements and case law, and Water Resources Act. A variety of agencies (e.g., Washington Department of Ecology, Washington Department of Fish and Wildlife, Washington Department of Natural Resources) are involved in implementing these regulations or managing state-owned lands. The Department of Ecology reviews all shoreline projects that require a shoreline permit, but has specific regulatory authority over Shoreline Conditional Use Permits and Shoreline Variances. Other agency reviews of shoreline developments are typically triggered by in- or over-water work, discharges of fill or pollutants into the water, or substantial land clearing. During the comprehensive SMP update, the City has considered other state regulations to ensure consistency as appropriate and feasible with the goal of streamlining the shoreline permitting process. A summary of some of the key state regulations by agency responsibilities follows.

Washington Department of Natural Resources

Projects on state-owned aquatic lands may be required to obtain an Aquatic Use Authorization from Washington Department of Natural Resources (WDNR) and enter into a lease agreement. WDNR will review lease applications to determine if the proposed use is appropriate, and to ensure that proposed mitigation for impacts to aquatic resources are sufficient.

Washington Department of Ecology

The Washington Department of Ecology may review and condition a variety of project types, including any project that needs a permit from the U.S. Army Corps of Engineers (see below), any project that requires a Shoreline Conditional Use Permit or Shoreline Variance, and any project that disturbs more than 1 acre of land. Project types that may trigger Ecology involvement include pier and shoreline modification proposals and wetland or stream modification proposals, among others. Ecology's three primary goals are to: 1) prevent pollution, 2) clean up pollution, and 3) support sustainable communities and natural resources

(http://www.ecy.wa.gov/about.html). Ecology may comment on local SEPA review if it is an agency of jurisdiction.

Washington Department of Fish and Wildlife

Via the Hydraulic Code (chapter 77.55 RCW), the Washington Department of Fish and Wildlife (WDFW) has the authority to review, condition, and approve or deny "any construction activity that will use, divert, obstruct, or change the bed or flow of state waters." Practically speaking, these activities include, but are not limited to, installation or modification of piers, shoreline stabilization measures, culverts, and bridges. WDFW typically conditions such projects to avoid, minimize, and/or mitigate for damage to fish and other aquatic life, and their habitats.

4.3 Federal Agencies/Regulations

Federal review of shoreline development is in most cases triggered by in- or over-water work, or discharges of fill or pollutants into the water. Depending on the nature of the proposed development, federal regulations can play an important role in the design and implementation of a shoreline project, ensuring that impacts to shoreline functions and values are avoided, minimized, and/or mitigated. A summary of some of the key federal regulations follows.

Clean Water Act

Major components of the Clean Water Act include Section 404, Section 401, and the National Pollutant Discharge Elimination System (NPDES).

Section 404 provides the Corps, under the oversight of the U.S. Environmental Protection Agency, with authority to regulate "discharge of dredged or fill material into waters of the United States, including wetlands" (http://www.epa.gov/owow/wetlands/pdf/reg_authority_pr.pdf). The extent of the Corps' authority and the definition of fill have been the subject of considerable legal activity. As applicable to the City's shoreline jurisdiction, however, it generally means that the Corps must review and approve many activities in streams and wetlands. These activities may include wetland fills, stream and wetland restoration, and culvert installation or replacement, among others. The Corps requires projects to avoid, minimize, and compensate for impacts.

A Section 401 Water Quality Certification is required for any applicant for a federal permit for any activity that may result in any discharge to waters of the United States. States and tribes may deny, certify, or condition permits or licenses based on the proposed project's compliance with water quality standards. In Washington State, the Department of Ecology has been delegated the responsibility by the U.S. Environmental Protection Agency for managing implementation of this program.

The NPDES is similar to Section 401, and it applies to ongoing point-source discharge. Permits include limits on what can be discharged, monitoring and reporting requirements, and other provisions designed to protect water quality. Examples of discharges requiring NPDES permits include municipal stormwater discharge, wastewater treatment effluent, or discharge related to industrial activities or aquaculture facilities.

Endangered Species Act (ESA)

Section 9 of the ESA prohibits "take" of listed species. Take has been defined in Section 3 as: "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The take prohibitions of the ESA apply to everyone, so any action that results in a take of listed fish or wildlife would be a violation of the ESA and is strictly prohibited. Per Section 7 of the ESA, activities with potential to affect federally listed or proposed species and that either require federal approval, receive federal funding, or occur on federal land must be reviewed by the National Marine Fisheries Service (NOAA Fisheries) and/or U.S. Fish and Wildlife Service (USFWS) via a process called "consultation." Activities requiring a Section 404 permit also require such consultation if these activities occur in waterbodies with listed species.

Northwest Power Act

The Northwest Power Act was passed in 1980 as a component of the Federal Power Act. The Act seeks to ensure that the hydropower production is balanced with the maintenance of healthy fish and wildlife populations in the Columbia Basin, including salmon and steelhead. The Act establishes the Northwest Power and Conservation Council and directs the Council to adopt a regional energy conservation and electric power plan and a program to protect, mitigate and enhance fish and wildlife in the Columbia and Snake Rivers and their tributaries.

5 APPLICATION OF THE SMP

This section describes how the proposed SMP protects shoreline functions. The following components of the SMP are integral to ensuring no net loss of shoreline functions. Each of these components is discussed in further detail below.

- Shoreline environment designations are based on existing shoreline conditions. Allowed uses focus high-intensity development in areas with a high level of existing alterations, while limiting future uses in areas where ecological functions and processes are more intact.

- SMP standards require applicants to avoid, minimize, and then compensate for unavoidable impacts to shoreline functions. Where SMP standards do not provide specific, objective measures that clarify avoidance, minimization, and mitigation measures, a mitigation sequencing analysis is required.

- Shoreline critical areas regulations are consistent with recommended state guidance to maintain ecological functions.

- Specific policies and regulations governing shoreline uses and modifications ensure that potential impacts are regulated to avoid a net loss of ecological function, while also meeting the requirements of the Shoreline Management Act pertaining to public access, prioritization of shoreline uses, and private property rights.

5.1 Environment Designations

The assignment of environment designations can help minimize cumulative impacts by concentrating development activity in lower functioning areas or areas with more intensive existing development that are not likely to experience significant function degradation with incremental increases in new development or redevelopment. According to the SMP Guidelines (WAC 173-26-211), the assignment of environment designations must be based on the existing use pattern, the biological and physical character of the shoreline, and the goals and aspirations of the community as expressed through a comprehensive plan.

Consistent with SMP Guidelines, the City's environment designation system is based on the existing use pattern, the biological and physical character of the shoreline, and community interests. The *Shoreline Analysis Report* provided information on shoreline conditions and functions that informed the development of environment designations. The proposed upland environment designations include: High Intensity, Shoreline Parks, Shoreline Residential, and Urban Conservancy generally listed in order by decreasing intensity of allowed use. All areas waterward of the OHWM are designated Aquatic. Criteria for each environment designation are provided in Table 5-1.

Table 5-1. Environment designation criteria

Environment Designation	Classification Criteria
High Intensity	Areas that currently support high-intensity uses related to commerce, transportation or navigation; or are suitable and planned for high-intensity water-oriented uses.
Shoreline Parks	Areas where any of the following apply:

Environment Designation	Classification Criteria
	• They are within existing or planned public parks or public lands intended to accommodate public access and recreational developments; • They are suitable for water-related or water-enjoyment uses; or • They have the potential for development that is compatible with ecological restoration.
Shoreline Residential	Areas that are predominantly single-family or multi-family residential development or are planned and platted for residential development.
Urban Conservancy	Those areas: • Planned for development that is compatible with the principals of maintaining or restoring the ecological functions of the area, • Suitable for water-enjoyment uses, • That are open space or floodplains, or • That retain important ecological functions which should not be more intensively developed.
Aquatic	Lands waterward of the ordinary high-water mark.

The distributions of each environment designation in Palouse are shown in Figure 5-1. Palouse's proposed environment designations reflect the generally rural-agricultural nature of the City's incorporated area. However, along the river is also where many of the City's industrial and commercial uses are found. The environment designations appropriately focus potential high-intensity development activity in existing disturbed areas with higher levels of alterations and lower ecological functions compared to other reaches. Those existing disturbed shorelines are not likely to experience significant function degradation with incremental increases in new development. The Urban Conservancy designation helps protect the less developed, more agricultural and rural shorelines where some shoreline functions are more intact. These occur primarily on the outskirts of the City. The Shoreline Parks designation protects open space and sensitive areas that are not suitable for more intense development, but which can provide public access and recreational enjoyment of the shorelines.

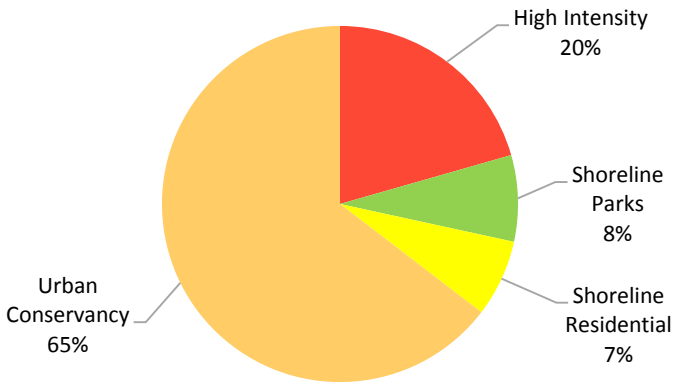

Figure 5-1. Distribution of upland environment designations in Palouse by area

5.2 Critical Areas Regulations

The SMP includes policies and regulations to avoid cumulative effects to critical areas (SMP Appendix B). Mitigation sequencing is required for all proposed impacts to shoreline critical areas, including wetlands, fish and wildlife habitat conservation areas (which includes streams), critical aquifer recharge areas, frequently flooded areas, and geologically hazardous areas (Appendix B, Section 2.E(2)). SMP regulations proposed for wetlands and streams include buffer areas, which are discussed in greater detail below.

Wetlands

The SMP requires vegetated buffers for all shoreline wetlands. Mitigation sequencing is required for impacts to wetland buffers as well as to wetlands. The proposed standard wetland buffer widths are based on the wetland category and habitat scores and are consistent with Ecology's "*Wetlands in Washington State-Volume 2: Guidance for Protecting and Managing Wetlands*," modified to use with the 2014 Washington State Rating System for Eastern Washington (Granger et al. 2005). Use of the standard buffer widths also requires implementation of measures to minimize impacts of adjacent land use. If the prescribed minimization measures are not applied, the buffer width must be increased (Appendix B, 3.C). Buffer averaging is permitted provided that the buffer is increased adjacent to the higher-functioning area of habitat or more sensitive portion of the wetland, and decreased adjacent to the lower-functioning or less sensitive portion, and that minimum buffer widths in Appendix B, 3.E(3-4) are met. The proposed SMP standards should ensure that wetland functions are maintained over time.

Streams

The proposed SMP establishes buffer regulations for the North Fork Palouse River that were developed to be consistent with existing conditions, as generally described as part of the *Shoreline Analysis Report*. Standard buffer widths range from 20 to 100 feet as follows:

- In the Urban Conservancy environment where the least amount of existing development is present, the most protective buffer width is proposed - the lesser of 100 feet or the waterward edge of an improved public road or railroad grade.

- In the Shoreline Residential environment designation, a buffer width of 20 feet applies. In Palouse, there are only two areas of Shoreline Residential designation that are directly on the waterfront, and both could be observed from local bridges (see Figures 5-2 and 5-3).

Figure 5-2. Shoreline Residential environment designation on the south side of the Palouse River, just west of the River Road bridge (photo taken June 4, 2015).

Figure 5-3. Shoreline Residential environment designation on the north side of the Palouse River, west of the Division Street bridge (photo taken June 4, 2015).

- In the Shoreline Parks environment, the buffer widths are determined based on specific location and activity. On the north side of the Palouse River, a 30-foot buffer applies for recreation facilities and a 75-foot buffer applies for new parking (Figure 5-4). These buffers are based on measurements of existing structures and alterations taken at the site, and observations of the maintained lawn that extends close to the water's edge. A substantial portion of the park is located in the mapped floodway, and the entire park is located in the floodplain. The presence of these critical areas also limits the type and extent of allowed alterations. On the south side of the Palouse River in the Shoreline Parks environment, a 20-foot buffer applies for all activities (Figure 5-5). Again, existing conditions and the presence of floodway, floodplain, and likely a wetland fringe support the proposed buffer.

Figure 5-4. Shoreline Parks environment designation on the north side of the Palouse River – Hayton Green Park on the east side of West Main Street (top: photo taken March 25, 2015; bottom: Google Earth image).

Figure 5-5. Shoreline Parks environment designation on the south side of the Palouse River – RV Park/campground on the north side of Almota Road (top: photo taken April 22, 2015; bottom: Google Earth image).

- Finally, in the High Intensity environment west of Main Street, a buffer of the lesser of 60 feet or the waterward edge of the railroad grade applies. Everywhere else in the High Intensity designation, a buffer of 20 feet applies (Figures 5-6 and 5-7). Measurements were taken at several sites in the High Intensity designation where the 20-foot buffer is proposed to establish that the average building setback is currently 20 feet, usually with alterations extending waterward of that.

Figure 5-6. High Intensity environment designation on the south side of the Palouse River, west of the Division Street bridge (photo taken April 22, 2015).

Figure 5-7. High Intensity environment designation on the north side of the Palouse River, east of the Division Street bridge (photo taken April 22, 2015).

Water-dependent developments have no buffer due to the nature of the activity which necessitates that the development be adjacent to the shoreline. However, mitigation sequencing must still be followed which will ensure no net loss of function through compensation of unavoidable impacts.

Tributaries of the North Fork Palouse River within shoreline jurisdiction are required to have a 50-foot standard buffer width. Buffers on non-shoreline streams within shoreline jurisdiction help ensure that riparian functions are maintained at ecologically significant confluence areas.

Buffer width averaging is permitted under certain circumstances provided that the overall stream and habitat functions are not decreased (Appendix B, 5.D(3)(f)).

5.3 Mitigation Sequencing

The proposed SMP includes general regulations requiring projects to be designed, located, sized, constructed and maintained to achieve no net loss of shoreline ecological functions. The mitigation sequence is a series of measures that can be applied to a project to ensure that it achieves no net loss of ecological function (Subsection 4.3(B)(3 and 4)). Mitigation sequencing applies to all projects in shoreline jurisdiction.

For some development activities, provisions in the SMP stipulate specific, objective standards for avoiding impacts (e.g. placement), minimizing impacts (e.g. size), and compensating for unavoidable impacts (e.g. planting requirements). If a proposed shoreline use or development is entirely addressed by such standards, then further mitigation sequencing analysis is not required.

However, in the following situations, applicants must provide an analysis of how the project will follow the mitigation sequence:

- If a proposed shoreline use or modification is addressed in any part by discretionary standards (such as standards requiring a particular action "if feasible" or requiring the minimization of development size) contained in the City's shoreline regulations, then the mitigation sequence analysis is required for the discretionary standard(s).
- When an action requires a shoreline conditional use permit or shoreline variance permit.
- When specifically required by a provision in the City's SMP.

The application of mitigation sequencing standards will help ensure that shoreline uses and modifications achieve no net loss of shoreline ecological functions.

5.4 Unregulated, Illegal and Exempt Development

Unregulated Uses

Unregulated shoreline activities include activities that are not "development" and do not require any sort of shoreline permit, including a shoreline exemption. Typically, these unregulated activities involve everyday maintenance and use of shoreline lands in conjunction with an approved land use (e.g., applying fertilizer in a residential yard, driving a car on a road along the shoreline, using a boat that is moored at a dock or launched at a boat ramp). Because these activities are associated with legally permitted land uses, the potential effects of these unregulated uses are addressed in concert with the analysis of land uses below.

Illegal Uses

Illegal activities are expected to occur infrequently in shoreline jurisdiction. Where illegal actions are identified, they are required to be rectified. Where illegal actions are not recognized, they may result in an incremental loss of shoreline functions. These incremental losses are expected to be offset by mitigation requirements for permitted actions that may result in minor improvements over time, as well as by voluntary restoration actions identified in the Shoreline Restoration Plan.

Exempt Development

Development and activities that are exempt from requirements for a Shoreline Substantial Development Permit are specified in WAC 173-27-040. The SMP explicitly states that development qualifying for a shoreline exemption must still comply with all SMP policies and regulations. Because the SMP provides specific design standards for many exempt developments (such as shoreline stabilization to protect a residence, or a dock) and require that all exempt development types avoid, minimize, and compensate for shoreline impacts, exempt development is not expected to result in a net loss of shoreline functions.

5.5 Effects of SMP Standards on Foreseeable Uses and Modifications

As discussed previously, WAC 173-26-186(8)(d) directs local SMPs to evaluate and consider cumulative impacts of "reasonably foreseeable future development on shoreline ecological functions." Although future development may include other less common types of development, the location, timing, and impacts of less common uses and development projects are less predictable. WAC 173-26-201(3(d)(iii) states:

> *For those projects and uses with unanticipatable or uncommon impacts that cannot be reasonably identified at the time of master program development, the master program policies and regulations should use the permitting or conditional use permitting processes to ensure that all*

impacts are addressed and that there is not net loss of ecological function of the shoreline after mitigation.

Results of the analysis of foreseeable future development in Section 3 indicate that the most commonly anticipated proposals in shoreline jurisdiction involve some low-density residential development to the northwest and the east of downtown, commercial infill on Main Street, and parks improvements. These activities include upland development, and may also include the development of overwater structures, shoreline stabilization, utilities, and/or access roads. In addition to these changes, replacements, repair, and maintenance of existing structures are likely to occur. Additionally, even without a change in use, some level of change to vegetation and shoreline modifications may be anticipated.

The following sections summarize how these potential activities may impact ecological functions, and how SMP provisions address those potential effects to avoid cumulative impacts. Uses and modifications which are less likely to commonly occur, but which are also covered in the SMP, are also briefly discussed.

All of the potential new uses and modifications would be required to comply with the shoreline buffer provisions in Appendix B, Subsection 5.D(3), discussed in Section 5.2 above.

Agriculture

Likelihood of development: Existing agriculture practices are likely to continue. New agriculture activities are less likely, but could possibly be proposed.

Application of the SMP: The SMP provisions do not limit or require modification to ongoing agricultural activities. Ongoing uses may degrade ecological functions relative to existing conditions if management of the agricultural landscape results in continued or new inputs of sediment and agriculture-related chemicals. New agricultural activities could have a number of potential impacts including increased erosion from removal of trees or tilling of soil; alteration of groundwater and base flows from irrigation; potential for livestock waste, pesticides, herbicides, and fertilizers to enter waterbodies through runoff; and reduction in native and riparian cover associated with conversion of lands to agricultural uses.

SMP provisions apply to new agricultural activities or expansion of such activities on land not meeting the definition of agricultural land and conversion of agricultural lands to non-agricultural uses. In such cases, shoreline buffers consistent with SMP Appendix B Subsection 5.D(3), as well as other standards applicable to the proposed use and any proposed modifications, would apply. Development in support of agricultural uses shall be consistent with the environment designation intent and management policies, located and designed to

assure no net loss of ecological functions, and shall not have a significant adverse impact on other shoreline resources and values (Subsection 5.1(B)(8)).

Aquaculture

Likelihood of development: There are no existing aquaculture facilities in the City, and no new aquaculture facilities are anticipated; however, it is possible that a new hatchery or associated rearing or transfer facility could be developed.

Application of the SMP: Aquaculture can result in a reduction in water quality from substrate modification, supplemental feeding practices, pesticides, herbicides, and antibiotic applications. Aquaculture structures can cause alteration in hydrologic and sediment processes. Accidental introduction of non-native species or potential interactions between wild and artificially produced species is also possible. Only non-commercial aquaculture may be permitted (Subsection 4.10, Shoreline Use and Modification Table). Any new aquaculture facility would need to be designed and located to avoid a net loss of ecological functions (Subsection 5.2(B)(1)(d)). Mitigation sequencing, as described above, would apply.

Boating Facilities

Likelihood of development: There are several access points to the river along the City's streets and walking paths, including Hayton-Green Park which offers a variety of recreation activities. The river is used for fishing, swimming and boating (primarily non-motorized). It is possible that new boating facilities could be proposed.

Application of the SMP: Boating facilities can alter currents and sediment transport, cause disturbance to riparian and aquatic vegetation and increase the risk of contaminants (e.g. metals, petroleum hydrocarbons) entering the water.

Under the proposed SMP all over and in-water structures are prohibited, greatly reducing any potential impacts from increased shading in shallow-water habitat areas or leaching of chemicals. Soft boat launch areas for public or non-residential private use may be permitted. The SMP includes provisions to limit the effects of soft launch areas by ensuring that the location, design, and construction will minimize degradation of aquatic habitats (Subsections 5.3(B)(3-5). All proposals must provide impact mitigation at a minimum one-to-one ratio, by area, using one or more of a suite of potential mitigation actions (Subsection 5.3(B)(9)).

Commercial Development

Likelihood of development: Palouse's shoreline environment currently has a number of commercial uses concentrated downtown in the commercial core. The most likely type of commercial development to occur in the future would be infill development on undeveloped lands or replacement of an existing structure or use.

Application of the SMP: Common effects of commercial development include increased impervious surfaces, increased traffic, and vegetation clearing. Under the proposed SMP, water-oriented commercial uses are given more flexibility than nonwater-oriented commercial uses. Recreation concessions and would be permitted in all environments and visitor-serving uses would be permitted in all upland environments and conditional in the aquatic environment (Section 4.10). General commercial activities would be conditional in all environments except High Intensity, where it would be allowed with a Shoreline Substantial Development Permit (Section 4.10). For sites separated from the shoreline and mixed-use projects that include a water-dependent use, commercial development requires varying levels of review depending on the shoreline environment (Section 4.10).

All types of commercial development shall be located, designed, and constructed in a way that ensures no net loss of shoreline ecological functions and without significant adverse impacts to other preferred land uses and public access opportunities.

Forest Practices

Likelihood of development: Forestry practices are not a common shoreline use in Whitman County and do not currently occur in Palouse. There are currently no known forestry practices planned within Palouse's shoreline.

Application of the SMP: The SMP conditionally allows new forest practices in the Urban Conservancy and Shoreline Residential environments (Section 4.10, Shoreline Use and Modification Table). Conditional review would be required on the local level, as well as by the Department of Ecology.

In-Stream Structural Uses

Likelihood of development: Existing in-stream uses in the City appear to be limited to those associated with existing agricultural practices. Maintenance and repair of existing structures is anticipated. New in-stream structures would likely be limited to new irrigation diversion or discharge structures.

Application of the SMP: Instream structures are typically intended to modify flows, which can result in alterations to circulation patterns, water quality, and habitat access and conditions.

The SMP permits in-stream structures that protect public facilities; protect, restore, or monitor ecological functions or processes; or support agriculture. All other structures are a conditional use, except in the High Intensity environment designation. Per Subsection 5.7(B)(1), in-stream structures must provide for the protection and preservation of ecosystem-wide processes, ecological functions, and cultural resources, including, but not limited to, fish and fish passage, priority habitats and species, other wildlife and water resources, shoreline critical areas,

hydrogeological processes, and natural scenic vistas. In addition, natural in-stream features, such as snags, uprooted trees, or stumps, shall be left in place unless it can be demonstrated that they are actually causing bank erosion or higher flood stages or pose a hazard to navigation or human safety (Subsection 5.7(B)(5)).

Mining

Likelihood of development: Recreational gold-panning could occur within Palouse's shoreline.

Application of the SMP: Mining has the potential to significantly impact erosion processes, water quality, and instream habitat. The SMP prohibits all mining except for non-commercial recreational gold-panning waterward of the OHWM (Section 4.10, Shoreline Use and Modification Table and Subsection 5.8(B)). All mining shall strictly follow the requirements of the Washington Department of Fish and Wildlife's Gold and Fish Pamphlet, which was developed to protect fish and wildlife habitat. Any recreational mining activities that do not follow the requirements described therein are required to obtain a Shoreline Conditional Use Permit and would therefore be required to follow mitigation sequencing and provide compensatory mitigation for any adverse impacts.

Industrial Development

Likelihood of development: A portion of Palouse's shoreline is zoned Light Industrial. There are no known plans for new industrial development in this area.

Application of the SMP: Common effects of industrial development include increased impervious surfaces, increased risk of contaminant spills and water quality contamination, and shoreline modifications, which may affect instream habitat. The SMP includes provisions to minimize the effects of new or redeveloped industrial uses. Industrial development is prohibited in the Urban Conservancy, Shoreline Residential, and Shoreline Parks environments (Section 4.10). Depending on whether the industrial use is water-oriented or not, the level of review for industrial development in the High Intensity and Aquatic environments varies (Section 4.10).Subsection 5.6(B)(2)(a) would require that industrial development be located, designed, constructed, and operated in a manner that minimizes impacts to the shoreline, and provides for no net loss of shoreline ecological function. Additionally, industrial development and redevelopment shall be encouraged to locate where environmental cleanup and restoration of the shoreline area can be incorporated (5.6(B)(2)(f)).

Recreational Development

Likelihood of development: There is currently a fair amount of recreational access to Palouse's shoreline at the Lion's park and Hayton Green Park. Additional park improvements are being

considered at public access sites, including a new pedestrian bridge connecting the two parks, a new skate park, and new walking trails along the Palouse River.

Application of the SMP: Recreational development can result in increased impervious surfaces, increased use of pesticides and fertilizers, and increased potential for riparian degradation. Water-oriented recreational development may be permitted by a Shoreline Substantial Development Permit in all environment designations (Section 4.10). General nonwater-oriented recreational development is prohibited in Urban Conservancy and Aquatic environments and conditional in the remaining environments (Section 4.10). Nonwater-oriented recreational developments that are separated from the shoreline would be permitted with a Shoreline Substantial Development Permit in all environments (except in the Aquatic environment, where this type of development is not applicable) (Section 4.10).

New development and redevelopment of water-oriented recreation structures are allowed in buffers provided the applicant can demonstrate that the design applies mitigation sequencing and appropriate mitigation is provided to ensure no net loss of ecological functions. Applicants must submit a management plan that specifically addresses compliance with Sections 4.3 (Environmental Protection), 4.4 (Shoreline Vegetation Conservation), 4.5 (Water Quality, Stormwater and Nonpoint Pollution), and Appendix B (Shoreline Critical Areas Policies and Regulations). Improvements to existing park structures would likely be categorized as routine maintenance and repair activities, which does not require a Shoreline Substantial Development Permit (see Redevelopment, Repair, and Maintenance section below) and has little potential impact on shoreline functions.

Residential Development

Likelihood of development: Existing residential development in shoreline jurisdiction is limited (6%) in Palouse. It is possible that some new residential development could occur in the future in the areas to the northwest and the east of downtown. These areas are zoned Agricultural and Low Density Residential.

Application of the SMP: New residential development is associated with an increase in stormwater runoff and water quality impacts resulting from an increase in impervious surfaces, greater potential for increased erosion, bank instability, and turbidity associated with vegetation clearing, loss or disturbance of riparian habitat during upland development and reduced shoreline habitat complexity and increased water temperatures.

New single- or two-family developments are permitted in Urban Conservancy, Shoreline Residential, and High Intensity environments. Single-family developments would be exempt from a Shoreline Substantial Development Permit as long as they are in accordance with WAC

173-27-040(2)(g). Multi-family structures would require a Shoreline Conditional Use Permit with both local review and Ecology review for the Urban Conservancy, Shoreline Residential, and High Intensity environments (Section 4.10). Residential development is prohibited in the Shoreline Parks and Aquatic environments (Section 4.10).

Subsection 5.10(B)(3) requires that new residential lots created through land division shall assure that no net loss of ecological functions result from the plat or subdivision at full build-out of lots and shall prevent the need for new shoreline stabilization or flood hazard measures. Similarly, new residential development shall meet all applicable critical area, vegetation, and water quality standards of the SMP; be sufficiently set back from steep slopes and shorelines vulnerable to erosion; and be located, designed, and constructed in a manner that assures no net loss of shoreline ecological functions (Subsection 5.10(B)(4)).

Transportation and Parking

Likelihood of development: Existing transportation infrastructure in shoreline jurisdiction includes local roads, parking areas, rail and bridges. New transportation facilities are not generally anticipated, but are possible. Replacement, repair and maintenance of existing facilities are likely to occur. There is potential for the future maintenance and expansion of bridges in Palouse.

Application of the SMP: New transportation and parking facilities are associated with increased stormwater discharge, increased shoreline crossing structures, and riparian disturbance. The SMP limits development of new transportation facilities or parking areas in shoreline jurisdiction if other options outside of shoreline jurisdiction are available and feasible (Subsections 5.11(B)(3) and (4)). When new roads, road expansions, or railroads are unavoidable, proposed transportation facilities shall be planned, located and designed to minimize possible adverse effects on unique or fragile shoreline; to maintain no net loss of shoreline ecological functions; and to be set back from the OHWM to the maximum distance feasible (Subsection 5.11(B)(2)).

Repair and maintenance of transportation facilities are addressed below under "Redevelopment, Repair, and Maintenance."

Utilities

Likelihood of development: The City's wastewater treatment plant is partially in shoreline jurisdiction. The sewage treatment facility was completed in 1995 and was upgraded in 2006. Additional upgrades to the facility are anticipated in the next 20 years.

Application of the SMP: Utilities have the potential to disrupt shoreline functions through an associated need for shoreline armoring; the potential for spills or leakage; and disturbance to riparian areas. In order to limit the special extent of any impacts from new utilities, under Subsections 5.12(B)(3) and (4) of the proposed SMP, preference shall be given to utility systems contained within the footprint of an existing right-of-way or utility easement over new locations for utility systems. Utility projects allowed within shoreline jurisdiction shall be designed to achieve no-net-loss of shoreline ecological function, preserve the natural landscape, and minimize conflicts with present and planned land and shoreline uses while meeting the needs of future population in areas planned to accommodate growth (Subsection 5.12(B)(1)).

Redevelopment, Repair, and Maintenance

Likelihood of development: As significant development already exists within shoreline jurisdiction, many future activities will likely fall under the category of repair and maintenance. For example, roads, utilities, and structures all require regular maintenance and repair.

Application of the SMP: Potential impacts from repair and maintenance activities are generally temporary in nature, including such effects as turbidity and other temporary water quality impacts. Repair and maintenance activities are exempt from a Shoreline Substantial Development Permit, but SMP standards still apply. Therefore, ongoing maintenance and repair activities shall be conducted consistent with the SMP provisions. Where expansion or redevelopment is proposed, the required provisions shall be related to and in proportion to the proposal, as determined by the SMP Administrator (Subsection 5.13(B)(3)).

Breakwaters, Jetties, Weirs, and Groins

Likelihood of development: Few, if any, new breakwaters, jetties, weirs or groins are anticipated. Infrequent repair and replacement of existing structures may be expected.

Application of the SMP: Breakwaters, jetties, weirs and groins are usually intended to alter currents or to deflect or dissipate wave energy. These structures have the potential to cause unintended impacts on natural bank erosion, sediment transport processes, and habitat.

Structures for all purposes other than to protect or restore ecological functions, or maintain existing water-dependent uses are permitted in all environment designations only as a conditional use. Where new structures are permitted, they must be the minimum size necessary, must be designed to protect critical areas, and implement mitigation sequencing to achieve no net loss of ecological functions (Subsection 6.2(B)(2-3)).

Dredging and Dredge Material Disposal

Likelihood of development: There are no known plans for new significant dredging or dredge material disposal. It is possible that smaller dredging projects could be proposed as part of other shoreline uses or developments.

Application of the SMP: Dredging activities have potential short-term and long-term effects on the aquatic environment. Temporary effects include elevated turbidity and direct habitat disturbance. Long-term effects stem from the alteration of currents and sediment transport processes, both to on-site and downstream areas.

Subsection 6.3(B)(3) requires that dredging and dredge material disposal be done in a manner that avoids or minimizes significant ecological impacts. Impacts that cannot be avoided must be mitigated in a manner that assures no net loss of shoreline ecological functions. Additionally, dredge disposal is only permitted if shoreline ecological functions and processes will be preserved, restored, or enhanced, and erosion, sedimentation, floodwaters, or runoff will not increase adverse impacts to shoreline ecological functions and processes or property (Subsection 6.3(B)(6)).

Fill and Excavation

Likelihood of development: Fill and excavation would most likely be proposed over relatively small areas of shoreline jurisdiction as part of other shoreline uses or modifications.

Application of the SMP: Fill and excavation can result in a change in habitat conditions and temporary effects to water quality. In some cases, these actions can be used to restore habitats that have been degraded as a result of altered watershed processes or past practices. Fill and excavation would likely occur over relatively small areas, such as areas associated with repair of existing shoreline stabilization measures.

All fills and excavations shall be located, designed and constructed to protect shoreline ecological functions and ecosystem-wide processes, including channel migration. Any adverse impacts to shoreline ecological functions must be mitigated (Subsection 6.4(B)(1)). Fills and excavations may only be permitted when associated with an approved use, and fills in wetlands, floodways, channel migration zones or waterward of the OHWM are further limited in application under the proposed SMP (Subsection 6.4(B)(2-3)).

Shoreline Restoration and Enhancement

Likelihood of development: Several restoration opportunities were identified in the *Shoreline Restoration Plan*. Many of these opportunities originated in planning documents on a watershed scale and would require voluntary actions on the part of the shoreline land owners.

Application of the SMP: SMP Policy 6.5(A)(1) identifies the intent to promote restoration and enhancement actions that improve shoreline ecological functions and processes and target the needs of sensitive plant, fish and wildlife species. Shoreline restoration and enhancement projects must be designed using the best available scientific and technical information, and implemented using best management practices (Subsection 6.5(B)(2)). Long-term maintenance and monitoring must also be included in restoration or enhancement proposals (Subsection 6.5(B)(5)). In order to eliminate disincentives to restoration resulting from any landward shifts in the OHWM, relief may be granted under RCW 90.58.580 (Subsection 6.5(B)(6)).

Shoreline Stabilization

Likelihood of development: New shoreline stabilization is not anticipated to commonly occur, but it is possible it may be proposed. Existing shoreline stabilization structures are not common, but repair and replacement of those that do exist are expected on a regular basis.

Application of the SMP: Shoreline stabilization measures tend to result in the simplification of shoreline habitat complexity and increased flow velocities along the shoreline. The occurrence of new stabilization measures will be limited because new development must be located and designed to avoid the need for future shoreline stabilization, if feasible (Subsection 6.6(B)(1)), and new stabilization shall only be permitted to protect an existing primary structure or new structure that cannot be placed so as to avoid the need for stabilization (Subsection 6.6(B)(4)). All proposals for shoreline stabilization structures, both individually and cumulatively, must not result in a net loss of ecological functions, and must be the minimum size necessary. Soft approaches shall be used unless demonstrated not to be sufficient to protect primary structures, dwellings, and businesses (Subsection 6.6(B)(3)).

An existing shoreline stabilization structure, hard or soft, may be replaced with a similar structure if there is a demonstrated need to protect principal uses or structures from erosion caused by currents or waves. While replacement of shoreline stabilization structures may meet the criteria for exemption from a Shoreline Substantial Development Permit, such activity is not exempt from the policies and regulations of the SMP (Subsection 6.6(B)(6)).

Repair and maintenance of existing shoreline stabilization measures may be allowed. Repair and maintenance includes modifications to an existing shoreline stabilization measure that are designed to ensure the continued function of the measure. Any additions to, increases in the size of, or waterward encroachment of existing shoreline stabilization measures shall be considered new structures. Areas of temporary disturbance within the shoreline buffer shall be expeditiously restored to their pre-project condition or better. While repair and maintenance of shoreline stabilization structures may meet the criteria for exemption from a Shoreline

Substantial Development Permit, such activity is not exempt from the policies and regulations of the SMP (Subsection 6.6(B)(7)).

5.6 Shoreline Restoration Plan

One of the key objectives that the SMP must address is "no net loss of ecological functions necessary to sustain shoreline natural resources" (Ecology 2011). Although the implementation of restoration actions to restore historic functions is not required by SMP provisions, the SMP Guidelines state that "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" (WAC 173-26-201(2)(f)).

The *Shoreline Restoration Plan* represents a vision for restoration that will be implemented over time, resulting in a gradual improvement over the existing conditions. Although the SMP is intended to achieve no net loss of ecological functions through regulatory standards alone, practically, an incremental loss of shoreline functions at a cumulative level may occur through minor, exempt development; illegal development; failed mitigation efforts; or a temporal lag between the loss of existing functions and the realization of mitigated functions. The *Shoreline Restoration Plan*, and the voluntary actions described therein, can be an important component in making up that difference in ecological function.

Major *Shoreline Restoration Plan* components that are expected to contribute to improvement in ecological functions in the foreseeable future include projects to:

- Increase the width and density of native riparian vegetation
- Implement and enforce the North Fork Palouse River Water Quality Improvement Plan
- Preserve natural areas through conservation easements, land acquisition and land swaps
- Install educational materials such as interpretive nature and/or historical signs at public access or view points, and enhancing the areas mapped as associated wetland

6 NET EFFECT ON ECOLOGICAL FUNCTION

This CIA indicates that future growth is likely to be targeted in specific areas of the City. This analysis can help inform the county of potential future shoreline impacts and the importance of specific proposed SMP provisions.

The primary types of anticipated development include some low-density residential development to the northwest and the east of downtown, commercial infill on Main Street, parks improvements, and regular maintenance and repair of existing facilities.

The proposed SMP is expected to maintain existing shoreline functions within the City of Palouse while accommodating the reasonably foreseeable future shoreline development. Other local, state and federal regulations, acting in concert with this SMP, will provide further assurances of maintaining shoreline ecological functions over time. The *Shoreline Restoration Plan,* and actions described therein, will ensure that incremental losses that could occur despite SMP provisions do not result in a net loss of functions, and these restoration actions may result in a gradual improvement in shoreline functions.

As discussed above, major elements of the SMP that ensure no net loss of ecological functions fall into four general categories: 1) environment designations that focus development on specific areas with existing development and shoreline alterations; 2) shoreline critical areas regulations that protect sensitive areas through appropriate science-based buffers and limitations on new uses; 3) mitigation sequencing, which directs potential development to first avoid, then minimize, and finally mitigate for unavoidable impacts; and 4) shoreline use and modification provisions, which ensure that likely development is guided by regulations that will protect existing functions while allowing priority shoreline activities to occur. The *Shoreline Restoration Plan* identifies ongoing and planned voluntary restoration that will provide an opportunity to improve shoreline conditions over time.

Given the above provisions of the SMP, including the key features listed above, implementation of the proposed SMP is anticipated to achieve **no net loss of ecological functions in the shorelines of the City of Palouse.** Voluntary actions identified and prioritized in the *Shoreline Restoration Plan* will provide the opportunity to enhance and restore shoreline functions over time.

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