

**WHITMAN COUNTY
GRANT No. G1400494**

CUMULATIVE IMPACTS ANALYSIS

FOR THE TOWN OF ALBION SHORELINE MASTER PROGRAM

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CUMULATIVE IMPACTS ANALYSIS

TOWN OF ALBION SHORELINE MASTER PROGRAM

1 INTRODUCTION

1.1 Background and Purpose

This Cumulative Impacts Analysis (CIA) is a required element of the Town of Albion's (Town or Albion) 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 Town 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 4 below and *Shoreline Analysis Report*]; and
- iii. Beneficial effects of any established regulatory programs under other local, state, and federal laws." [Chapter 3 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.

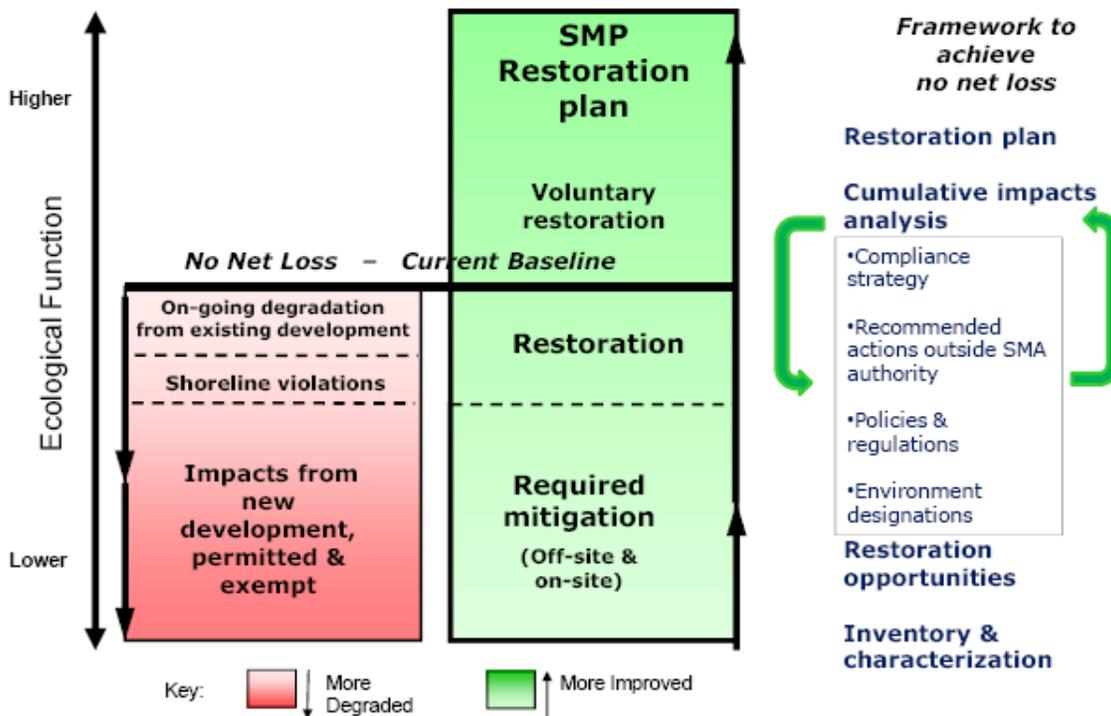


Figure 1-1. Framework for achieving no net loss of shoreline ecological functions (Source: Department of Ecology)

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, Albion’s SMP applies only to activities in shoreline jurisdiction (Figure 1-2), yet activities upland of shoreline jurisdiction or upstream in the watershed may have offsite impacts on shoreline functions.

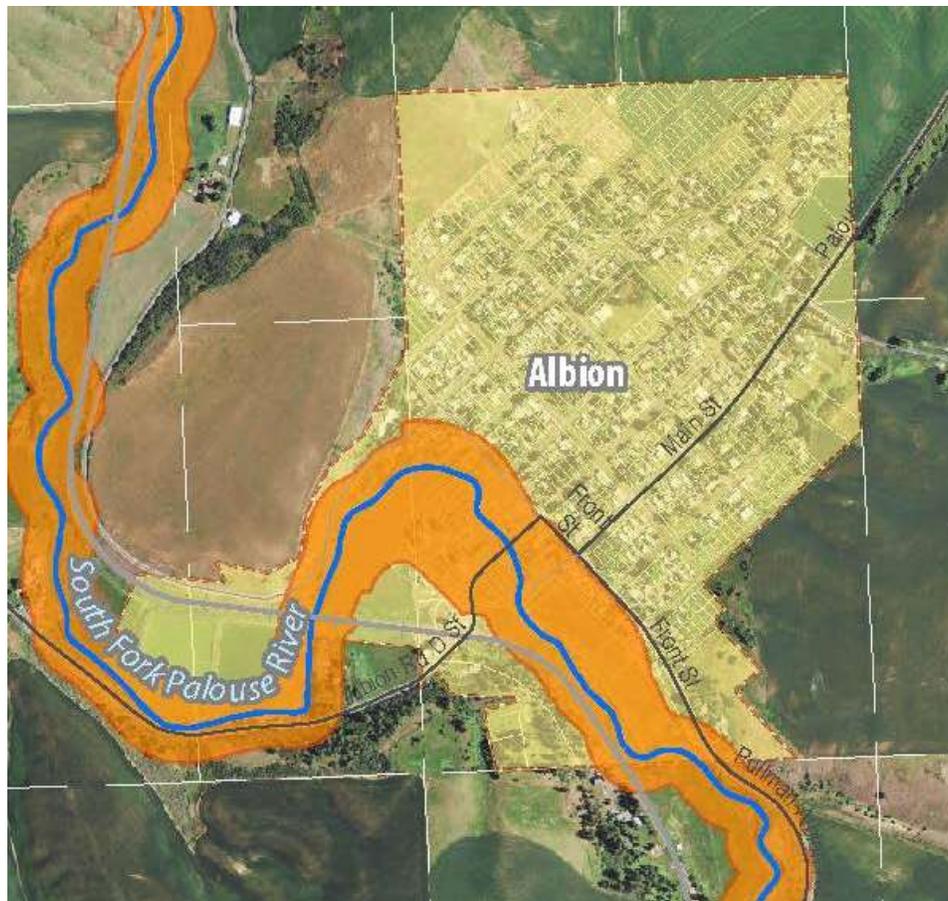


Figure 1-2. Albion's shoreline jurisdiction (orange shading within the Town limits).

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

Albion is located in the Palouse watershed (WRIA 34), along the south fork of the Palouse River. WRIA 34 covers the majority of Whitman County. The Palouse River originates in the Bitterroot Mountains in northern Idaho, and flows westerly into Whitman County before joining the Snake River at the Whitman/Franklin County line. 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, 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 percent 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. All reaches of the South Fork Palouse River through Albion have a water quality Category 4a listing for bacteria.

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.

Through Albion shorelands are primarily undeveloped with some smaller areas of residential development. Agricultural uses are dominant. A portion of the Town's wastewater treatment lagoons are also within shoreline jurisdiction. Loss of riparian vegetation, primarily from agricultural uses and roads, is the primary modification to the shorelines.



For the purposes of the *Shoreline Analysis Report*, three reaches were delineated, descriptively titled agriculture, residential and industrial. The residential and agricultural reaches have the highest function for attenuating flow energy due to extensive floodplain and floodway present.

No armoring and moderate slopes provide good connectivity to the floodplain. However, low to moderate vegetation function is present in these reaches and very little wetland. Developed open space and cultivated crops dominate both reaches. Most of the shoreline vegetation consists of a narrow but dense band of herbaceous vegetation separating the channel from surrounding agriculture and residential development.

Despite the presence of the wastewater treatment lagoons, the industrial reach has the highest vegetation score due to a greater presence of shrubs and trees. A moderately wide and dense band of vegetation generally separates the channel from surrounding uses. This reach also has the most wetland area mapped of the three reaches.

More reach details and a qualitative ranking of reach ecological function is available in the *Shoreline Analysis Report*.

2.2 Land Use

Existing Land Use and Zoning

Albion's shoreline jurisdiction includes 54 acres along just under a mile of the South Fork Palouse River. The shoreline area extends from the south through mostly agricultural areas (72%). Shoreline jurisdiction includes some residential development (27%) in the center of town, governmental services (1%, U.S. Post Office), and some industrial development in the form of grain silos on the west side of the river (<1%).

Ownership data shows no state or federal ownership in shoreline jurisdiction.

Zoning

Zoning in Albion's shorelines is a mix of residential, commercial and industrial.

Water-Oriented Uses

Water-oriented uses within Albion are limited. The South Fork is not commercially navigable. Waters are typically too shallow to allow water transportation.

Transportation and Utilities

There is 0.33 mile of active rail within shoreline jurisdiction. There is 0.66 mile of roads as well. The roads are classified as rural local access road; there are no major roads.

There are two bridges within shoreline jurisdiction. One is an active rail bridge and one is a road bridge that crosses the South Fork Palouse River at South D Street, which becomes Albion Road as it leaves town.

Public Access

A park between West Front Street and the river on the north side of the Post Office provides public access, and includes seating areas, a community garden, and open space.

3 REASONABLY FORESEEABLE FUTURE DEVELOPMENT

This section considers potential future development within and along the shorelines of the Town of Albion. 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.

Albion's shoreline jurisdiction is zoned for residential, commercial and industrial uses. There are currently no known plans for new use or development. In the decade between 2000 and 2010, there was a decline in both population and housing in Albion and there has not been any significant recent development.

4 EFFECTS OF ESTABLISHED PROGRAMS

4.1 Current County Regulations and Programs

All development activity within the Town is required to comply with the Albion Municipal Code (AMC). Provisions in the AMC 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

The Town critical area regulations require wetland buffers of between 50 and 250 feet based solely on wetland category. 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. The Town's critical areas regulations also apply to geologically hazardous areas, critical aquifer recharge areas, and frequently flooded areas.

Zoning Code

Town 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 Residential – Low Density, Residential – General, Residential – Mobile Homes and Multiple Dwellings, Commercial and Industrial. Each zone has different permitted uses which help to concentrate development in areas appropriate and suitable for similar uses.

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 Town'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 Town 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, shoreline stabilization measures, culverts, outfalls, 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 Town’s shoreline jurisdiction, however, it generally means that the Corps must review and approve many activities in streams, lakes 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 10 or Section 404 permit also require such consultation if these activities occur in waterbodies with listed species.

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 higher 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 government 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 Town'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 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 4-1, and the distribution of each environment designation is shown in Figure 4-1.

Table 4-1. 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 Residential	Areas that are predominantly single-family or multi-family residential development or are planned and platted for residential development.
Urban Conservancy	Those areas: <ul style="list-style-type: none"> • 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.

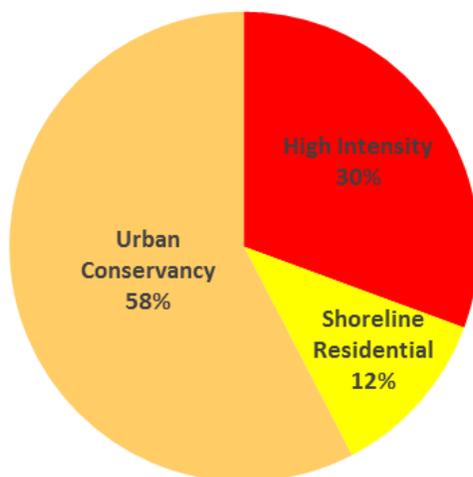


Figure 4-1. Distribution of Upland Environment Designations in Albion by Area

Albion’s proposed environment designations reflect the generally rural-agricultural nature of the Town and the extensive floodplain and floodway. The environment designations protect those areas with the highest existing shoreline function and the presence of critical areas under the Urban Conservancy designation. The High Intensity designation focuses potential commercial and industrial development activity in existing disturbed areas zoned for commercial or industrial use, with higher levels of alteration and lower ecological functions

compared to other reaches of the Town. Those existing disturbed shorelines are not likely to experience significant function degradation with incremental increases in new development.

5.2 Effects of 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 shoreline critical areas including wetlands; fish and wildlife habitat conservation areas, including streams and riparian areas; critical aquifer recharge areas; frequently flooded areas; and geologically hazardous areas. SMP regulations proposed for wetlands and streams include standard buffer areas, which are discussed in greater detail below.

Wetlands

The SMP requires vegetated buffers for all shoreline wetlands. Mitigation sequencing analysis (see Section 4.3) and compensatory mitigation are 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, Section 3.C). The SMP Administrator may increase buffer widths on a case-by-case basis if larger widths are determined to be necessary to protect certain functions (Appendix B, Section 3.D). Buffer averaging is not permitted. These proposed SMP standards should ensure that wetland functions are maintained over time.

Streams

The South Fork Palouse River, as well as non-shoreline streams occurring in shoreline jurisdiction, are designated as Fish and Wildlife Habitat Conservation Areas. As such, buffers are required to protect stream function. Stream and stream buffer regulations are contained in the Fish and Wildlife Habitat Conservation Areas section of the critical areas regulations (Appendix B, Section 5). The buffer on the South Fork Palouse River is developed to be consistent with existing conditions, as generally described as part of the *Shoreline Analysis Report*, and varies based on environment designation as follows:

- Urban Conservancy: lesser of 100 feet or the waterward edge of an improved public road or railroad
- Shoreline Residential: 50 feet

- High Intensity: lesser of 75 feet or the waterward edge of an improved public road or railroad edge.

For all environment designations, 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 (See Section 4.3).

For non-shoreline tributaries of the South Fork Palouse River within shoreline jurisdiction, a buffer of 50 feet is proposed. Buffers on non-shoreline streams within shoreline jurisdiction help ensure that riparian functions are maintained at ecologically significant confluence areas.

Under certain circumstances, the buffer width may be increased if the standard buffer is insufficient to protect the functions of the habitat area. Buffer width averaging may also be permitted under certain circumstances provided that the overall stream and habitat functions are not decreased (Appendix B, Subsections 5.D(3)(d and e)).

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 (Subsections 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 Town'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 Effects of SMP Standards on Commonly Occurring Foreseeable Uses

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.

Anticipated new development in Albion is expected to be limited in terms of location and extent. New development would likely consist of residential or commercial uses. However, based on growth trends, which have seen a decline in population and housing unit numbers in recent years, significant new private development is unlikely in the near future. No significant new uses or developments have been identified.

In addition to these changes in shoreline development, 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 discussion further addresses the extent to which future changes to shoreline land uses and modification are anticipated, and describes how the SMP would apply to each of these changes to help maintain no net loss of functions.

All of the potential new uses and modifications would be required to comply with the mitigation sequencing requirements described in Section 4.3 above as well as shoreline buffer provisions in Appendix B, Subsection 5.D(3).

Agriculture

Likelihood of development: Most of the Albion shoreline jurisdiction contains agricultural uses. Given the land use trends in the surrounding area, these uses are expected to continue. It is

unlikely that additional lands will be converted to agriculture. However, it is possible, although not commonly anticipated, that existing agricultural lands could be converted to a non-agricultural use.

Application of the SMP: The SMP provisions do not limit or require modification to ongoing agricultural activities. 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 Town 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: Only non-commercial aquaculture may be permitted. 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)). Aquaculture structures and activities that do not require a waterside location must be located landward of the shoreline buffers (Subsection 5.2(B)(3)). Mitigation sequencing, as described above, would apply.

Boating Facilities

Likelihood of development: No boating facilities currently exist in Albion and no new boating facilities are anticipated.

Application of the SMP: The SMP prohibits all new boating facilities (Section 4.10, Shoreline Use and Modification Table).

Commercial Development

Likelihood of development: Zoning in Albion's shoreline is a mix of residential, commercial and industrial. Existing commercial development includes the U.S. Post Office. It is possible new commercial development could be proposed in the commercially zoned areas; however, extensive floodway and floodplain limit development potential.

Application of the SMP: Common effects of commercial development include increased impervious surfaces, increased traffic, and vegetation clearing. Under the proposed SMP, nonwater-oriented commercial development is prohibited in the Urban Conservancy environment except where the site is physically separated from the shoreline by another property or a public right-of-way, or it's part of a mixed-use project that includes a water-dependent use (Section 4.10, Shoreline Use and Modification Table). Water-oriented commercial development is allowed with a Shoreline Substantial Development Permit in all environments except the Aquatic environment (Section 4.10, Shoreline Use and Modification Table).

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 (Subsection 5.3(B)(6)).

Forest Practices

Likelihood of development: Forestry practices are not a common shoreline use in Whitman County and do not currently occur in Albion. Future forest practices in shoreline jurisdiction are not anticipated.

Application of the SMP: The SMP prohibits all new forest practices (Section 4.10, Shoreline Use and Modification Table).

In-Stream Structural Uses

Likelihood of development: In-stream structures are not common in the Town. Some existing in-stream uses may be present 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: In-stream 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 5.4(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 5.4(B)(5)). In-stream structures shall comply with the Environmental Protection regulations in Section 4.3(B) and shall ensure no net loss of ecological function. Consistent with requirements for mitigation sequencing (4.3(B)(4)), all structures must be the minimum size necessary and designed to avoid and then minimize potential adverse impacts. All unavoidable adverse impacts must be mitigated, and a mitigation plan submitted.

Mining

Likelihood of development: Mining does not currently occur in Albion. Future mining is not anticipated.

Application of the SMP: The SMP prohibits all new mining (Section 4.10, Shoreline Use and Modification Table).

Industrial Uses

Likelihood of development: Zoning in Albion's shorelines is a mix of residential, commercial and industrial. Existing industrial development in shoreline jurisdiction is limited to some grain silos and a portion of the Town's wastewater treatment lagoons. It is possible that new industrial development could be proposed in the industrial zoned areas, which includes a currently undeveloped area along the railroad south of Albion Road.

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 draft SMP includes provisions to minimize the effects of new or redeveloped industrial uses.

Industrial development is prohibited in the Urban Conservancy and Shoreline Residential environments. Water-oriented industrial development and nonwater oriented industrial development on sites separated from the shoreline is allowed with a Shoreline Substantial Development Permit in the High Intensity environment designation. Water-oriented industrial development is conditionally allowed in the Aquatic environment designation, while nonwater-oriented development is conditionally allowed in High Intensity designation as part of a mixed use development that includes a water-dependent use.

Subsection 5.5(B)(2)(a) would require that industrial development be located, designed, constructed, and operated in a manner that minimizes impacts to the shoreline, 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 (Subsection 5.5(B)(2)(f)).

Construction of a levee in support of new industrial development within the floodplain would be required to meet the regulations of Subsection 4.6(B) (Flood Hazard Reduction) as well as Section 6 (Frequently Flooded Areas) of Appendix B. Flood hazard reduction measures shall not result in channelization of normal stream flows, interfere with natural hydraulic processes such as channel migration, or undermine existing structures or downstream banks (Subsection 4.6(B)(4)).

Recreational Development

Likelihood of development: The Town has a passive park fronting the Palouse River between the post office and some residential use. Based on information provided by the Town, it has no plans to implement any new recreational developments in the park.

Application of the SMP: Recreational development can result in increased impervious surfaces, increased use of pesticides and fertilizers, and increased potential for riparian degradation. Per SMP Subsection 5.6(B)(1), recreational development shall demonstrate achievement of no net loss of ecological functions.

Water-oriented recreational development and nonwater-oriented recreational development that is physically separated from the shoreline by another property or a public right-of-way may be permitted by a Shoreline Substantial Development Permit in all environment designations. However, nonwater-oriented recreational development is allowed only by Shoreline Conditional Use Permit.

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) (Appendix B, Subsection 5(D)(3)(h)(ii)).

Residential Development

Likelihood of development: Residential development is currently present in just over a quarter of shoreline jurisdiction. Much of the undeveloped areas are zoned Residential and it is possible new residential development could occur in the future. However, based on population trends in the area, significant residential growth is not anticipated in the Town. Extensive floodway and floodplain also limit development potential.

Application of the SMP: Rural residential development typically is associated with an increased potential for use of landscape chemical treatments and disturbance of riparian corridors. Residential development is allowed in all upland environment designations. However, to protect those areas with the highest existing shoreline function, multi-family dwellings are prohibited in the Urban Conservancy designation. Multi-family dwellings are allowed with a Shoreline Substantial Development Permit in the Shoreline Parks and High Intensity environments. Single- and two-family dwellings are allowed with a Shoreline Substantial Development Permit in all three upland environments.

New residential development shall be located to avoid the need for shoreline stabilization and located, designed, and constructed in a manner that assures no net loss of shoreline ecological functions (Subsection 5.7(B)(2)(b-c)). Residential development will also need to comply with buffer and critical area requirements, vegetation and water quality standards of the SMP which provide additional protection for natural resources (Subsection 5.7(B)(2)(a)). Subsection 5.7(B)(1) requires that new residential lots created through land division comply with all applicable subdivision and zoning regulations, assure that no net loss of ecological functions result from the plat or subdivision at full build-out of lots, and prevent the need for new shoreline stabilization or flood hazard reduction measures.

Transportation and Parking

Likelihood of development: Existing transportation infrastructure in shoreline jurisdiction includes local roads, parking areas, and in-active rail line, and two bridges. New transportation facilities are not anticipated, but are possible. Replacement, repair, and maintenance of existing facilities, including the existing bridge at South D Street, are likely to occur.

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 roads, road expansions or railroads in shoreline jurisdiction if other options outside of shoreline jurisdiction are available and feasible. When unavoidable, proposed transportation facilities shall be planned, located, and designed to minimize possible adverse effects on unique or fragile shoreline and maintain no net loss of shoreline ecological functions and implement mitigation standards of this SMP (Subsection 5.8(B)(1)). Parking facilities shall be allowed only as necessary to support an authorized use and must meet all regulations regarding critical areas and shoreline buffers, as well as additional requirements designed to minimize impacts including incorporating low impact development practices (Subsection 5.8(B)(2)).

Because shoreline crossings have potential direct effects on instream and riparian habitats and functions, shoreline crossings and culverts shall be designed to mitigate impact to riparian and

aquatic habitat and shall allow for fish passage (Subsection 5.8(B)(4)). Additionally, in order to minimize the proliferation of individual crossings to access private property, crossings that are to be used solely for access to private property shall be designed, located, and constructed to provide access to more than one lot or parcel of property, where feasible (Subsection 5.8(B)(5)).

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

Utilities

Likelihood of development: Albion’s wastewater treatment facilities, including portions of the two lagoons, are located at the west end of the Town. Although no active plans are under development for improvements, it is likely that some improvements will be necessary in the future to increase compliance with water quality standards. It is likely that any short-term construction activities that increase the potential for water quality impacts on the river and temporarily result in loss of any riparian vegetation would be outweighed by the long-term benefits.

Other primary utility facilities may be developed to supply existing undeveloped areas with utilities or to upgrade utilities to existing developed areas; however, these are not expected to commonly occur. Regular maintenance and repair of existing utilities is anticipated throughout shoreline jurisdiction.

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 spatial extent of any impacts from new utilities, under Subsection 5.9(B)(1) 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. Additionally, utility production and processing facilities or parts of those facilities that are nonwater-oriented shall be located outside of shoreline jurisdiction, where feasible (Subsection 5.9(B)(4)). 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 (Subsection 5.9(B)(3)).

Repair and maintenance of utilities facilities are addressed below under “Redevelopment, Repair, and Maintenance.”

Redevelopment, Repair, and Maintenance

Likelihood of development: The majority of activities within shoreline jurisdiction will likely fall under 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 5.10(B)(3)).

Breakwaters, Jetties, Weirs, and Groins

Likelihood of development: These structures were not observed in the Town. Few, if any, new breakwaters, jetties, weirs or groins are anticipated.

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 occur over relatively small areas of shoreline jurisdiction.

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. 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.

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 limited, and generally only noted at stream crossings; repair and maintenance is expected on an infrequent 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)).

5.5 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:

- Restore instream habitat complexity
- Address impacts to existing riparian conditions by re-establishing native vegetation.
- Implement best management practices and TMDL actions to improve water quality conditions

6 NET EFFECT ON ECOLOGICAL FUNCTION

This CIA indicates that future growth is likely to be limited. In instances where new development is proposed, this analysis can help inform the Town of potential future shoreline impacts and the importance of specific proposed SMP provisions.

The primary types of anticipated development are residential and commercial. Some industrial development, most likely agriculture related, is also possible. Improvements to existing agricultural uses and regular maintenance and repair of existing facilities is likely.

The proposed SMP is expected to maintain existing shoreline functions within Albion 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 shoreline of the Town of Albion**. Voluntary actions identified and prioritized in the *Shoreline Restoration Plan* will provide the opportunity to enhance and restore shoreline functions over time.

7 REFERENCES

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