CUMULATIVE IMPACTS ANALYSIS

TOWN OF LATAH
SPOKANE COUNTY, WASHINGTON

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1 INTRODUCTION

The Shoreline Management Act (SMA) Guidelines under Washington Administrative Code (WAC) 173-26-186(8)(d) states 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 among development opportunities." Cumulative impacts are not specifically defined within either the SMA or the Shoreline Master Plan (SMP) guidelines. However, the National Environmental Policy Act provides a useful definition of cumulative impacts as:

> *The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR § 1508.7).*

This Cumulative Impacts Analysis is intended to develop a model of cumulative impacts on shoreline ecological functions within the Town of Latah (Town). The intent of this analysis is to ensure that shoreline environmental designations and proposed SMP regulations will be protective of shoreline functions even when considering incremental actions that cumulatively have the potential to negatively impact those functions. Per the SMA Guidelines, the evaluation of such cumulative impacts should consider:

i. Current circumstances affecting the shorelines and relevant natural processes;
ii. Reasonably foreseeable future development and use of the shoreline; and
iii. Beneficial effects of any established regulatory programs under other local, state, and federal laws.

Findings of this analysis may result in modifications to the draft SMP regulations if it is determined that cumulative impacts could result in a net loss of shoreline ecological functions over time. If such changes are made to the SMP regulations as a result of this report, a brief addendum will be prepared for this report that documents those changes and updates the model results accordingly.

The results of this analysis are based on a variety of inputs filtered through the draft environmental designations and their applicable level of land use restrictions. The inputs include anticipated growth, development estimates, and existing shoreline functions with particular emphasis on those that are most at risk. These are then analyzed based on the proposed protections in the updated SMP, other regulatory protections, and estimates of non-regulatory shoreline restoration. Further, it discusses how other local, state and federal regulations would address these potential impacts, and describes the net effect on the ecological functions and processes.

2 EXISTING CONDITIONS

The following summary of existing conditions in the Town of Latah's shoreline area of Hangman Creek and the relevant natural processes is based on the *Shoreline Inventory and Characterization Summary Report* prepared by URS and J-U-B ENGINEERS Inc. in October 2012, and the June 2005 *Spokane County Proper Function Condition Stream Inventory and Assessment*.

2.1 Shoreline Environments

The Town of Latah is within Hangman Creek reach numbers 6, which consists mostly of Mixed Use and Urban Conservancy designation.

2.2 Land Use

The Town of Latah is located primarily along the eastern banks of Hangman Creek. SMP jurisdiction includes approximately 18.12 acres of lands along the creek. Land use within the shoreline jurisdiction is a mixture of vacant natural area, commercial, agricultural and residential. Most of the shoreline is privately owned with the exception for a small area of road right of way east of the Spring Valley road bridge. Shorelines at the south end of the town and west of Hangman Creek are primarily for agriculture. Shorelines at the north end of town east of the Creek are mostly vacant and commercial/industrial uses.

2.3 Open Space/Public Access

The existing pasture and farmed grass field to the west and south of the shoreline provide open space. However, public access to the shoreline does not appear to be present.

2.4 Shoreline Modifications

Impervious surfaces within the shoreline jurisdiction include roads and building footprints and West Spring Valley Road provides a bridge crossing over Hangman creek.

2.5 Biological Resources and Critical Areas

1 **Geologically Hazardous Areas**

The Critical Areas Map as shown in the Spokane County Critical Areas Maps identifies the shorelines along Hangman Creek as geologically hazardous areas due to the Alluvium soil type.

2 **Flood Hazard Areas**

The Town lies at a relatively low elevation; therefore, much of it is located within the creek's floodplain. Described in the *Shoreline Inventory and Characterization Summary Report*, conversations with local residents revealed that along the Town's commercial/industrial areas, the streambank is armored and a berm has been constructed to provide protection from flooding. Other areas along the creek bank experience flooding.

3 **Wetlands**

Under Field Observations in the Summary Report, two wetland areas are described in the south end of town, located along the right/east bank of the creek north of Cove Creek. Both of these wetlands are mapped as Priority Habitats by the Washington Department of Fish & Wildlife (WDFW) and mapped as a wetland by the National Wetland Inventory (NWI). Additionally, any currently undocumented wetlands located within or adjacent to the Town, and which are associated with the shoreline, would also be subject to the Town's SMP regulations and CAO.

4 Streams

Hangman Creek watershed drains more than 431,000 acres and spans two states and four counties. The Town of Latah spans a 3,100-foot-long portion of Hangman Creek between at stream mile 47. Within the town, Hangman Creek receives one fish-bearing tributary stream (Cove Creek) according to the Washington Department of Natural Resources (DNR) Water Type Base Map.

5 Habitat Classification/Plant Communities

The section of Hangman Creek that runs through Latah is rated as non-functioning due to the limited amount of vegetation, landform, or large woody debris. A narrow strip of mixed grasses and weeds lie between the stream and agricultural fields. The only woody riparian plant community is a stand of cottonwoods along the right bank in the Town of Latah. Reed canary grass is well established for the entire length along both banks and extends for the water's edge upward to the edge of the fields.

6 Other Fish and Wildlife Habitat Conservation Areas

Wildlife along Rock Creek, as observed during the Spokane County Proper Function Condition Stream Inventory and Assessment included Canada goose, mallards, owl, great blue heron, common merganser, coyote and ringneck pheasant.

3 EXISTING SHORELINE FUNCTIONS

The intent of the Town of Latah SMP is to assure, at a minimum, no net loss of ecological functions necessary to sustain shoreline natural resources. As described in the Shoreline Inventory and Characterization Report (URS 2013), the shoreline zone within the Town provides several ecological functions that the SMA seeks to protect. Influenced by watershed processes, such as erosion and deposition, the hydrologic cycle, and nutrient transport and uptake, these functions provide ecological services that are less available outside of the shoreline zone.

Shoreline functions are often separated into three general functional categories for ease of assessment and description. These functional categories include habitat functions, water quantity (hydraulic) functions, and water quality functions. Table 1 outlines ecologic functions of the Town of Latah shoreline jurisdiction and related processes that are at risk and must be protected by the SMP. The Functional Rating and Ecological Condition were taken from the *Spokane County Proper Functioning Condition Stream Inventory and Assessment* reported dated June 2005.

Table 1: Ecologic Functions of the Town of Latah's Shoreline Jurisdiction

Reach	Shoreline Function				Ecological Condition
	Water quantity	**Water Quality**	**Habitat**	**Functional Rating**	
RC6	Bank erosion due to limited shoreline vegetation	Town is a potential source for significant storm water runoff	Natural areas located at NW and S end of towns (Urban Conservancy) best potential areas for fish and wildlife habitat	This reach is functional-at-risk with a downward trend.	Poor
	Risk of flooding during infrequent flood stages	Warmer water temperatures due to loss of riparian cover.	Shoreline conditions along the town are degraded and heavily dominated by a mixture of reed canary grass.		
		Sediment load is moderate	Vegetation is limited to a pocket of mature cottonwood trees,		
			Erosion and Livestock grazing is influencing riparian vegetation growth, and riparian vegetation within reach is limited in many areas		

There are several processes affecting shoreline ecological functions within the Town that are beyond the City's ability to control. Habitat functions are affected by the spread of invasive species along the shoreline zone by wind, water flow, animal droppings, and other means. Water quality is affected by agricultural runoff, urban runoff, limited erosion, and temperature.

Within the Town, several land use activities and natural processes affect shoreline ecological functions. Unlike the external processes listed in above, many of these land use activities and processes *can* be controlled by the Town, through a combination of regulations and land management activities.

Within the Town, habitat, water quality, and hydrologic functions are primarily affected by development, industry, and vegetation management. Riparian habitats are affected by land clearing and development, after which they become especially susceptible to invasive species establishment, which lowers the riparian habitat value for most species.

Water quality within the Town is largely affected by external processes but degradation can be exacerbated by erosion from concentrated surface runoff, and contamination from localized discharge of untreated stormwater. Erosion from runoff into the creek also affects water quality and aquatic habitat. Too much runoff can result in turbid water, which is harmful for fish.

Water quantity within the creek is primarily affected by external factors but impervious development has the potential to increase "flashy" flows and decrease summer base flows through rapid discharge of stormwater that would otherwise infiltrate and recharge the aquifer over a longer period.

4 REASONABLY FORESEEABLE FUTURE DEVELOPMENT

This section discusses the estimated developments and other uses that are reasonably expected within the shoreline zone over a 20-year period.

4.1 Patterns of Shoreline Activity

In an effort to understand past shoreline impacts for the purpose of determining the cumulative impacts of past, present, and reasonably foreseeable future impacts, the preceding 20 years of shoreline permits issued in the Latah SMP jurisdiction was researched, reviewed, and summarized. When combined with estimates of growth, as described below, this provides a reasonable tool for estimating future growth as well.

As a result, existing development along the shoreline jurisdiction is limited to commercial/industrial uses. They are also the type of development most likely to require a Substantial Shoreline Development Permit under the existing SMP. Based on the historical population estimates provided by the Washington State Office of Financial Management, the Town of Latah has remained constant for the last 20 years. Since the 1990, the Town has held a population of around 200. As a result it is anticipated that future development will be limited.

4.2 Reasonably Foreseeable Future Development and Anticipated Impact to Shoreline Function

In general, areas with development potential are limited to small amount of vacant commercial/ industrial land and agriculture/pasture land. Many of these sites lack adequate access, utilities, or are otherwise constrained in a manner that limits development potential. The majority of areas under SMA jurisdiction within the Town is either not developable or has already been developed. Some minor redevelopment and infill is expected within mixed use shoreland areas.

The following table provides a summary of reasonably foreseeable future development within the Town. The information provided in this table was provided by the Shoreline Inventory & Characterization Summary Report (October 2012).

Table 2: Foreseeable Future Development

Shoreline Environmental Designation	Possible Future Developments	Anticipated Impact to Shoreline Function
Mixed Use & Shoreline Residential	Latah has not grown in any significant way for decades. Discussion with a town councilman indicates that no development is currently planned in the shoreline management area.	The shoreline area is privately owned for the most part, but it appears unlikely that there will be a marked increase in development in the near future. Impacts to shoreline function should be minimal.

	There is no wastewater treatment plant as all the town is on septics. Should a wastewater treatment plant be proposed in future it is likely to be located in or near the shoreline area.	Should a wastewater treatment plant be proposed within the shoreline area loss of wetland or riparian vegetation could be expected. However, with the exception of an area of willows and cottonwoods most of the shoreline reach lacks plant diversity or structure.
Aquatic & Urban Conservancy	The willow/cottonwood stand is the most appropriate area for preservation. Preservation of this area should be a priority. Establishment of woody vegetation including native shrubs along the left bank adjacent to an existing goat pasture.	Preservation of the willow/cottonwood stand will maintain wildlife habitat. Erosion would be reduced; additional fish and wildlife habitat could be established; and shade over the nearshore would help to address water temperatures – the creek is a TMDL listed waterbody for temperature.

In addition to private and commercial developments, there are public developments that are likely to occur. The Town is anticipating development of a wastewater treatment plant near the shorelines to replace the existing septic system. Currently the Town does not have a wastewater treatment plant.

5 PROTECTIVE SMP PROVISIONS

Based upon the past, present, and reasonably foreseeable actions described in Section 4 above, certain shoreline uses appear to have the greatest potential to result in losses of ecological shoreline functions due to incremental actions over time. These uses are analyzed by shoreline environmental designation (SED) to determine whether they would be allowed outright through an exemption, allowed with a shoreline substantial use application, potentially allowed as a conditional use, or outright prohibited. In addition to the general allowances and prohibitions associated with each SED, there are several additional shoreline regulations that further protect shoreline environmental functions. These are described in Sections 5.1.2 through 5.1.6. Following this, Section 5.2 describes other state and federal regulatory programs that function to protect shoreline ecological functions. Lastly, Section 5.3 describes other activities that are expected to enhance shoreline ecological functions and should be considered together with potentially detrimental anticipated development and recreation effects to assess the potential for a net loss or gain of shoreline ecological functions.

5.1 Environment Designations

The first level of protection provided by the SMP is the recognition of four different shoreline environment types in the Town of Latah: Urban Conservancy, Shoreline Residential, Shoreline Mixed Use, and Aquatic. Shoreline environment designations are used to classify the shoreline areas. Pursuant to the SMP update guidance, shoreline environment designations should correspond to local shoreline conditions, including ecological functions and shoreline development and provide “the framework for implementing shoreline policies and regulatory measures specific to the environment designation” (WAC 173-26-191 (1)(d). The Shoreline Environmental Designations for Latah are based on existing and proposed land use patterns, the biological and physical character of the shoreline as described in the Shoreline Inventory and Characterization Summary Report, URS, November 2012, and the goals and aspirations of the community expressed through the local comprehensive plan.

Shoreline Coalition Shoreline Master Program Environment Designations, URS, June 2013 outlines the three different environmental types in the following manner:

> **Aquatic Environment:** The purpose of the “aquatic” environment is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high water mark.
>
> **Urban Conservancy Environment:** The purpose of the "urban conservancy" environment is to protect and restore ecological functions of open space, floodplain and other sensitive lands where they exist in urban and developed settings, while allowing a variety of compatible uses.
>
> **Shoreline Residential Environment:** The purpose of the "shoreline residential" environment is to accommodate residential development and appurtenant structures that are consistent with this chapter. An additional purpose is to provide appropriate public access and recreational uses.

Shoreline Mixed Use Environment: The purpose of the "shoreline mixed use" environment is to accommodate mixed use development including residential, commercial, institutional, utility and industrial development that is consistent with the shoreline management act, creates a unique urban waterfront environment, enhances aesthetic appeal, provides public access, and allows compatible uses. This proposed environment is intended to provide an environment similar to the Residential Environment but allowing for non-residential uses.

1 General Policies and Regulations

Table 3: Summary of the Shoreline Master Program Policies and Regulations

SMP Section with SMP Goal, Policy or Regulation	Purpose of SMP Provision	Key General Ecological Functions Protected
Section 2: Environmental Designations	Defines and maps the shoreline jurisdiction in the Town and defines and maps the environment designations of all the shorelines of the state in the Town. Policies and regulations specific to the three designated shoreline environments (Shoreline Residential, Urban Conservancy, and Aquatic) are detailed in this section. Specifically, the environments are the key to providing appropriate and specific regulations to ensure no net loss in both developed and undeveloped areas with high functions.	All, with focus on preserving and enhancing shoreline ecological functions.
Section 3: Goals and Policies	The policies are designed to protect against adverse effects to the public health, the land, its vegetation and aquatic life and wildlife, and the waters of Hangman Creek and its aquatic life. The goals and policies address specific shoreline use and conservation and restoration.	Focuses on no net loss, including the protection of water quality, erosion control, storm water systems, and fish and wildlife habitat
Section 4: General Shoreline Regulations	Sets forth policies and regulations governing specific categories of uses and activities typically found in shoreline areas. The policies and regulations cover the following uses and activities: Agriculture, Aquaculture, Boating Facilities, Commercial Development, Forest Practices, Industry, In-Stream Structures, Mining,	All, with specific focus on the unique aspects of specific uses that require specific and unique requirements to assure no net loss.

	Recreational Development, Residential Development, Transportation and Parking, and Utilities (Primary and Accessory). Specifically, it contains the requirement that all specific shoreline uses meet no net loss.	
Section 4.8 Specific Shoreline Uses Shoreline Modifications	Provides policies and regulations for those activities that modify the physical configuration or qualities of the shoreline area, such as shoreline stabilization, clearing and grading, dredging and fill, and overwater structures. Specifically, it contains the important shoreline modification matrix that describes what modifications are allowed in each environmental designation.	All, with focus on protecting habitat, water quality and water quantity.

5.2 Buffers and Setbacks

Shoreline buffers and building setbacks protect the shoreline environment by limiting development and use within a reasonable distance from the shoreline, ensuring no further degradation of the existing shoreline environment. Shoreline buffers vary between 25 and 100 feet and generally follow the vegetation conservation boundary identified in the shoreline inventory. Buffer reductions in all SEDs may be granted by Shoreline Variance Permit; however, sites which have had buffer widths reduced or modified by any prior action are not eligible for buffer reduction.

Proposed building setbacks vary depending on the SED. A 15-foot setback is required within the Urban Conservancy SED. The Shoreline Residential and Mixed Use SED each require a 10-foot setback. The SMP allows the following developments within the building setback area when accessory to a primary structure:

- Landscaping
- Uncovered decks or patios
- Paths, walkways, or stairs
- Building overhangs, if not extending more than 18 inches into the setback area

5.3 Shoreline Vegetation Conservation Measures

Shoreline vegetation plays a number of functional roles by providing bank stability, habitat and wildlife corridors, shade and cover, and wood and organic debris recruitment. Vegetation conservation measures ensure that vegetation within the shoreline jurisdiction is protected and/or restored when damaged or removed by development activities. Vegetation conservation also improves the aesthetic qualities of the shoreline.

The proposed SMP requires vegetation conservation measures for most projects proposing vegetation removal. For new development, expansion, or redevelopment, all clearing and grading activities must comply with the SMP and receive a substantial development or conditional use permit for work done in the Shoreline Residential, Mixed Use or Aquatic SED. A vegetation management plan, describing the vegetative conditions of the site and summarizing functions provided by existing vegetation, is required for projects that propose removal of mature trees or shrubs. Removal of vegetation from within the shoreline buffer also requires submittal of a vegetation management plan. Mitigation, in the form of native vegetation replacement, may be required. The Town may also require a performance surety as a condition of shoreline permit approval to ensure compliance with the SMP.

Exceptions to proposed shoreline conservation measures include activities related to maintenance of existing yards or gardens; noxious weed removal; and dead or hazardous tree removal. Pruning and thinning of trees for maintenance, safety, forest health, and view protection are also exempt from the requirement to obtain a Shoreline Permit, if a letter of exemption is issued, and if conducted on/or within the following areas:

- Public land
- Utility corridors
- Private residential land buffer areas

Pruning and thinning for view maintenance on public and private lands are subject to conditions to ensure that pruning activities are conducted in a way that ensures the continued health and vigor of shoreline vegetation.

Adherence with the shoreline Critical Areas Ordinance (CAO) regarding the application of pesticides, herbicides, fertilizers, or other chemicals is required for all vegetation removal activities.

5.4 Shoreline Hardening Restrictions

Bulkheads and other hard shoreline stabilization structures can disrupt natural shoreline processes and destroy shoreline habitats. The proposed SMP encourages the use of nonstructural methods (e.g., building setbacks, relocation of the threatened structure, soil bioengineering with vegetation, groundwater management, and planning and regulatory measures to avoid the need for structural stabilization) instead of shoreline hardening measures. New structural stabilization methods require a Shoreline Conditional Permit and will be permitted only under the following conditions:

- Evidence shows that an existing primary structure is in danger from shoreline erosion caused by wave action and river currents.
- Nonstructural measures are not feasible or not sufficient.
- An engineering or scientific analysis shows that damage is caused by natural processes.
- Structural stabilization will incorporate native vegetation and comply with the mitigation sequencing in Section 6.5.

The SMP also includes provisions allowing for repair, maintenance, and replacement of existing shoreline stabilization structures, so long as the location and footprint of the replacement structure remain similar.

New or replaced shoreline stabilization structures must comply with SMP Regulations and require the submittal of design plans, a design narrative, and engineering or scientific reports prepared by a qualified professional.

5.5 Avoidance and Minimization Standards

To achieve no net loss of shoreline ecological functions, applications for proposed shoreline modifications or developments must demonstrate that the proposed project meets the Town Avoidance and Minimization standards. These standards require the applicant to first seek opportunities to avoid impacts to sensitive shoreline areas, including the Riparian Habitat Area and shoreline CAOs. Where impacts cannot be avoided, they must be minimized to the extent practicable and remaining impacts must be mitigated. Mitigation for unavoidable impacts to sensitive shoreline areas typically includes shoreline restoration. Mitigation measures will be applied in the following order of priority:

i. Avoiding the impact altogether by not taking a certain action or parts of an action;
ii. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;
iii. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
iv. Reducing or eliminating the impact over time by preservation and maintenance operations;
v. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and
vi. Monitoring the impact and the compensation projects and taking appropriate corrective measures.

Mitigation sequencing is required for all proposed shoreline uses and development, including uses that are exempt from a Shoreline Substantial Development Permit.

5.6 Shoreline Critical Areas Regulations

The Town's shoreline CAO provides regulations for development within critical areas located within SMP jurisdiction. Designated critical areas within the shoreline jurisdiction include wetlands, fish and wildlife habitat conservation areas, and geologically hazardous areas. Development is generally restricted from occurring within a critical area without a site specific analysis of potential impacts to the critical area and proposed mitigation. Regulation of critical areas within the shoreline jurisdiction will be administered as part of the CAO guidelines that are being developed specifically for the SMP update. All use, modification, or development proposed within the shoreline jurisdiction must comply with the Town's Critical Areas Regulations.

5.7 Beneficial Effects of Other Established Regulatory Programs

Federal and state regulations also provide mechanisms that aim to avoid adverse impacts to shoreline ecological functions. In addition to local regulations, several state and federal agencies have regulatory authority over resources within the Town's shoreline jurisdiction. These regulations help manage potential cumulative impacts to shorelines. The following state and federal regulations may apply to activities and uses within the Town's shoreline jurisdiction to avoid impacts.

1 Washington Department of Fish and Wildlife

The Washington Department of Fish and Wildlife has jurisdiction of in- and over-water activities up to and including the ordinary high water mark, as well as any other activities that could "use, divert, obstruct, or change the bed or flow of state waters." These activities in the Town of Latah include, but are not limited to, installation or modification of shoreline stabilization measures and accessory structures such as culverts, and bridges and footbridges. These types of projects must obtain a Hydraulic Project Approval from WDFW, which will contain conditions intended to prevent damage to fish and other aquatic life, and their habitats. In some cases, the project may be denied if significant impacts would occur that could not be adequately mitigated.

2 Washington Department of Ecology

The Washington Department of Ecology may review and condition a variety of project types in the Town of Latah, including 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 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. Their authority comes from the State Shoreline Management Act, Section 401 of the Federal Clean Water Act, the Federal Water Pollution Control Act, the Federal Coastal Zone Management Act of 1972, the State Environmental Policy Act, the Growth Management Act, and various RCWs and WACs of the State of Washington.

3 U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (Corps) has jurisdiction of in- and over-water activities up to and including the ordinary high water mark, as well as any associated wetlands. These activities in the Town of Latah include, but are not limited to, installation or modification of shoreline stabilization measures and accessory structures such as culverts, and bridges, footbridges and restoration activities.

These types of projects must obtain a Section 404 Clean Water Act permit, which will contain conditions intended to prevent damage to Waters of the United States, including Rock Creek. In some cases, the project may be denied if significant impacts would occur that could not be adequately mitigated.

4 TMDL's

Ecology and the SCCD are developing TMDLs because several parts of Hangman Creek were identified on the 1998 303(d) list of impaired waters for not meeting state water quality standards for fecal coliform, dissolved oxygen, pH, and temperature. In conversations with Elaine Snouwaert of Ecology's Water Quality Program, it appears that out of all the TMDL factors, temperature is probably the most relevant to the SMP update. This is because the SMP regulates the removal of riparian vegetation, and encourages the restoration of riparian vegetation along creeks, which shades the water and assists with temperature issues.

5.8 Other Activities that May Protect or Restore Shoreline Functions

As noted in Table 4, opportunities for the restoration of shoreline ecological functions have been identified throughout the Town's SMP jurisdiction. These restoration opportunities are described in the Latah Shoreline Restoration Plan prepared for the SMP (URS 2013). Implementation of these restoration projects is dependent upon volunteer interest or mitigation obligations associated with a Shoreline Substantial Development Permit. Local environmental advocacy groups periodically work on tree planting and weed removal activities.

Future developments requiring a Substantial Shoreline Development Permit are likely to require mitigation if they involve habitat impacts that cannot be avoided. Where located near an identified shoreline restoration opportunity the Town is expected to work with applicants to include an identified restoration opportunity as part of the permit approval.

6 FINDINGS

Upon completion and review of Table 4, it appears that the SMP will maintain existing shoreline ecological functions in general. Based upon current draft shoreline regulations, certain portions of the mixed use SED may experience a minor decrease in shoreline ecological functions over the forthcoming planning period (estimated at 20 years). However, these losses are relatively small in area and large portions of the SMA SED appear likely to achieve a net increase in shoreline functions over the planning period. The increases are based on availability of shoreline restoration opportunities, public interest in volunteering for shoreline restoration projects, and anticipated shoreline mitigation activities associated with likely shoreline developments.

As it currently stands, the overall, or net, status of shoreline ecological functions is expected to remain at its current state. As noted in Table 4, where minor decreases are possible within an SED, recommendations for minimizing functional losses are provided that may help achieve no change over the planning period.

It should be noted that some of the factors that may degrade shoreline ecological factors are largely beyond the scope of the SMP, including managed flows on the river.

Shoreline Segment	Existing Conditions	Likely Future Developments	Potential Impacts	Effect of SMP Provisions	Effect of Other Development and Restoration Activities/Programs	Net Effect
Hangman Creek Reach 6	Land use within shoreline jurisdiction is a mixture of vacant natural areas, commercial, and agricultural. Both banks of the creek include a relatively narrow band of wetland and riparian habitat that provide habitat for wildlife.	Future development is likely to include new commercial and/or industrial construction on currently vacant properties. Future development is likely to include a new wastewater treatment plant.	New construction will result in additional impervious surfaces which could increase stormwater runoff to the creek. This would potentially add pollutant and nutrient delivery, adversely affecting water quality. This could also impact infiltration recharge and groundwater discharge to the creek. Wetland and riparian habitat could be lost due to future development into the floodplain. Fills into floodplains would reduce flood storage. New development improvements/ modifications could potentially reduce shoreline and wetland habitat.	*** Minimize effects of impervious surfaces by limiting to what is unavoidable; require surface water filtration where opportunity allows; prohibit encroachment into floodplain and wetlands without adequate mitigation to offset impact. Prohibit encroachment into the floodplain. Where encroachment is unavoidable require mitigation that replaces lost floodplain habitat and flood storage. Where opportunity arises remove old fills in the floodplain to restore storage.	The U.S. Army Corps of Engineers (USACE) regulates any discharge of dredged or fill material into Hangman Creek and adjacent wetlands. USACE would review any such activity and require design modifications as necessary to assure no net loss of wetland habitat. The U.S. Fish and Wildlife Service is tasked with review of projects for possible impacts to federally listed Endangered Species. The Washington Department of Ecology (WDC) also is charged with protecting waters and wetlands within Washington State.	Implementation of the SMP will be essential in minimizing impacts to Hangman Creek and adjacent wetland habitats. Stormwater management requirements, minimization of impervious surfaces and mitigation for impacts to native vegetation will address impacts to the ecological functions of the shoreline environment. Flood storage will be retained or increased over time.

Table 4: Cumulative Impacts Summary Table

Appendix A: No Net Loss Statement

NET EFFECT ON ECOLOGICAL FUNCTIONS AND PROCESSES

The Shoreline Management Act Guidelines provided by the Washington State Department of Ecology requires jurisdictions to regulate new development within and adjacent to the shoreline is such a way as "to ensure no net loss of ecological function." The guidelines, as defined within WAC 173-26, require that shoreline master programs contain policies, programs, and regulations that address adverse cumulative impacts and fairly allocate the burden of addressing cumulative impacts to ensure no net loss of ecological functions and protection of other shoreline functions and/or uses.

The SMP update process has provided the opportunity for the Town of Latah to establish baseline conditions within the shoreline, anticipate future impacts to shoreline habitat and functions, and identify restoration opportunities within the shoreline jurisdiction. Consistent with requirements of the SMA and the associated guidelines, the Town of Latah's SMP provides new shoreline environment designations, updated policies and goals, and updated development standards. The revised SMP provides better protection for shoreline processes and functions and is consistent with best available science in protecting shoreline resources.

Based upon the Cumulative Impacts Analysis and the Restoration Plan, it is anticipated that cumulative development and redevelopment actions taken over time, conducted in accordance with the Shoreline Master Program and associated regulations and requirements will result in either no net loss or a net improvement of shoreline function within the Town of Latah.