PRELIMINARY DRAFT

CITY OF ELLENSBURG SHORELINE MASTER PROGRAM UPDATE – CUMULATIVE IMPACTS ANALYSIS

Ecology Grant No. G1200054

Prepared for: October 2013

City of Ellensburg Community Development Department

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CHAPTER 1. INTRODUCTION

1.1 Purpose of the Report

The City of Ellensburg is updating its Shoreline Master Program (SMP) in accordance with the Shoreline Management Act (SMA) and implementing regulations[1]. As part of this SMP Update effort, the City is required to evaluate the cumulative impacts of "reasonably foreseeable future development" to verify that proposed policies and regulations for shoreline management are adequate to ensure "no net loss" of shoreline ecological functions. The Washington Administrative Code (WAC) 173-26-186(8) directs that master programs "include policies and regulations designed to achieve no net loss of those ecological functions." The proposed City of Ellensburg Draft SMP (dated XXXX 2013) provides standards and procedures to review, through established permitting processes, subsequent use or development proposals for their potential to impact shoreline resources. The purpose of this report is to assess the cumulative impacts that would result from development and activities in the shoreline over time under the provisions contained in the City's draft SMP. This report is prepared as a requirement of the Kittitas County Regional Comprehensive Shoreline Master Program Update grant agreement with the state funding agency, Washington Department of Ecology (SMA Grant No. G1200054). This report is based upon guidance provided in Ecology's SMP Handbook (accessed at: http://www.ecy.wa.gov/programs/sea/shorelines/smp/handbook/index.html), specifically Chapter 4 – No Net Loss of Shoreline Ecological Functions and Chapter 17 – Cumulative Impacts Analysis (CIA).

The cumulative impacts to be addressed in this report are those expected to result from future development and uses within the SMA shoreline jurisdiction and regulated by the Draft SMP (XXXX 2013). Cumulative impacts that may result from development outside the shoreline jurisdiction are not considered in this report.

This draft analysis will need to be revised if substantial revisions are made to the policies and regulations proposed in the City of Ellensburg Draft SMP.

1.2 State Requirements

According to the state shoreline guidelines outlined in WAC 173-26, Part III, the City of Ellensburg is required to evaluate and consider cumulative impacts of "reasonably foreseeable future development" on the shorelines of the state as follows[2]:

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

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[1] RCW 90.58 and WAC 173-26

[2] WAC 173-26-186(8)(d))

address adverse cumulative impacts and fairly allocate the burden of addressing cumulative impacts among development opportunities. Evaluation of such cumulative impacts should consider:

- Assessment of current shoreline conditions;
- Reasonably foreseeable future development and use of the shoreline; and
- Beneficial effects of any established regulatory programs under other local, state, and federal laws.

This CIA uses these three considerations as a framework for evaluating the potential long-term impacts on shoreline ecological functions and processes that may result from development or activities under the proposed Draft SMP over a 20-year time frame for consistency with local government Growth Management Act comprehensive plans.

1.3 Report Contents and Methodology

This draft report provides a planning-level assessment of the potential cumulative impacts that can be expected to occur if the proposed Draft SMP is adopted and implemented. The assessment is limited to cumulative impacts of reasonably foreseeable future development in areas subject to SMA jurisdiction. There is approximately two miles of regulated shorelines within the City limits of Ellensburg, encompassing portions of the Yakima River and Lake Matoon.

The shoreline guidelines state that the impacts of "commonly occurring and planned development" should be assessed programmatically "without reliance on an individualized cumulative impacts analysis." In contrast, developments that have unforeseen or uncommon impacts, which cannot be reasonably identified at the time of SMP development should be evaluated via the shoreline substantial development and/or conditional use permit processes to ensure that all impacts are addressed and that there is no net loss of ecological function after mitigation[3]. In addition, the guidelines require evaluation of the cumulative effects caused by:

- Unregulated activities (i.e., timber harvest and certain agricultural uses);
- Developments that are exempt from a shoreline substantial development permit (e.g., single-family residential development); and
- Residential bulkheads, residential piers, and runoff from newly developed properties.

[3] WAC 173-26-201(3)(d)(iii)

Accordingly, this analysis is focused on those uses or developments that have the greatest potential for adverse impacts when considered collectively over a 20-year planning horizon. Within City shoreline jurisdiction, this primarily involves recreational and commercial development. Some types of development that are addressed in the SMP, such as signs, dredging, and/or utilities, are not analyzed in detail because of their limited size and effect on shoreline ecological functions or because they will be assessed through the conditional use permit process.

The objective of this analysis is to evaluate whether commonly occurring shoreline uses and developments within the City will result in cumulative impacts to shoreline ecological functions. The analysis assists in determining whether the Draft SMP will result in a *net* loss of shoreline ecological functions compared to 'baseline' conditions. No net loss means that impacts may occur, but adequate measures are in place within the overall shoreline program to mitigate them such that the post development conditions are no worse *overall* than pre-development conditions. For this analysis, the baseline conditions are the conditions that are generally identified and described in the Kittitas County Regional Shoreline Master Program Update-Shoreline Inventory and Characterization Report (ESA, 2013).

Standards and procedures are at the core of any SMP. These are essential for evaluating the effects of specific development actions on a case-by-case basis at the time individual shoreline development proposals are reviewed. These project-level analyses will allow site-scale factors to be considered in the assessment of baseline conditions to supplement the inventory information available for the City. To achieve no net loss, the SMP requires each project to mitigate impacts by avoiding, then minimizing adverse effects, then replacing impacted resources through compensatory mitigation efforts. The SMP requires that avoidance, minimization and compensatory mitigation be employed at the project scale to ensure no net loss of ecological functions on a site-by-site basis.

1.3.1 Methodology

Assessing whether the City of Ellensburg Draft SMP would result in cumulative impacts over time requires a multi-step process:

Step 1: Identify existing shoreline ecological functions.

The concept of ecological functions recognizes that any ecological system is composed of a wide variety of interacting physical, chemical and biological components, that are interdependent in varying degrees and scales, and that produce the landscape and habitats as they exists at any time. Ecological functions are the work performed or role played individually or collectively within ecosystems by these components (WAC 173-26-201).

Existing ecological functions within City limits are documented by waterbody and by shoreline segment/reach per the Inventory and Characterization report (ESA, 2013).

Step 2: Determine reasonably foreseeable future development. A qualitative assessment of potential development within shoreline jurisdiction was conducted, based

on underlying zoning districts and planned projects or improvements. Future foreseeable development is described in Chapter 3 below.

Step 3: Determine potential impacts associated with foreseeable development. Step 2 establishes the type of development likely to occur along City shorelines. Step 3 examines the typical impacts that could result from such development, as described in Chapter 3.

Step 4: Determine ecological functions at risk. Step 4 compares current conditions and reasonably foreseeable future development to determine ecological functions at risk. Ecological functions at risk are grouped into categories of water quality, habitat, and hydrology. The categories are consistent with WAC 173-26-201(3)(d)(i)(C). The description of ecological functions at risk is included in Chapter 3.

Step 5: Determine how impacts will be adequately avoided or mitigated. This step describes the regulations in the Draft SMP that would serve to mitigate potential impacts associated with foreseeable development, with a particular focus on ecological functions at risk. Four questions guided this analysis:

- Are the proposed Shoreline Environment Designations (SEDs) protective of existing ecological functions?
- Are the allowed and conditionally allowed uses appropriate for each SED?
- Are the shoreline buffers, setbacks and critical area buffers protective of existing ecological functions?
- What other regulations in the SMP serve to protect ecological functions at risk and are they adequate to address all potential impacts?

Step 6: Evaluate incremental impacts. This analysis addresses incremental impacts anticipated from development and other activities in the shoreline after mitigation is applied. Even with mitigation, development can cause impacts to shoreline functions which cumulatively could have adverse impacts. According to Ecology's SMP Handbook (Ecology, 2010), restoration activities included in the Shoreline Restoration Plan should be considered in determining whether the SMP will prevent cumulative impacts and achieve no net loss.

Step 6: Describe beneficial effects. Various existing local, regional, state and federal plans and programs were reviewed to determine if ecological functions and processes would be restored or improved when new development occurs.

Step 7: Explain how the SMP will deal with unanticipated impacts. The final step describes uses and developments that may have unanticipated or uncommon impacts (e.g., illegal activities) within the shoreline and how the SMP will address such impacts, such as through site-specific analysis or the conditional use permit process. These impacts were considered throughout the development of the updated Draft SMP and will continue to be considered with implementation of the SMP during the shoreline permit review process.

CHAPTER 2. SUMMARY OF EXISTING SHORELINE CONDITIONS

The following sections describe the current ecological conditions and land uses along the shorelines within Ellensburg City limits (portions of the Yakima River and Matoon Lake).

2.1 Yakima River

An approximately 1.5 mile segment of the left bank of the Yakima River is located within City shoreline jurisdiction, which includes a portion of the river channel itself and adjacent shorelands (Figure 2.1). This portion of the river is identified by WDFW (2012) as providing spawning and juvenile rearing habitat for spring Chinook and summer steelhead, and the presence of several other salmonid species is documented. Fish habitat quality within City shoreline jurisdiction has been impacted by upstream conditions and land uses, including an altered flow regime due to irrigation reservoir operations, lack of large woody debris, and the presence of floodplain/channel confining structures. Within City shoreline jurisdiction, water quality is listed by Ecology (2009) as impaired for pH, elevated water temperatures, and fecal coliform.

Within City shoreline jurisdiction, the shoreland area of the Yakima River is contained within Irene Rinehart Riverfront Park, a popular area that provides public access to the Yakima River. In the southern portion of the park, the riparian area consists almost entirely of relatively undisturbed forest habitat, with the exception of a trail, boat launch, and small parking area. The north end of the park is generally more developed with park amenities, including two ponds (Carey Ponds, also referred to as 'People's Pond), which are former gravel pits. This area also contains a sand volleyball court, picnic tables and barbecues, grassy play area, and restroom facilities. Access to the river for swimming, fishing and rafting is provided. Non-motorized boating on Carey Lakes is also available. The river shoreline along the northern portion of the park contains an uncertified levee.

The Yakima River shoreland area within City shoreline jurisdiction is within a mapped channel migration zone and the FEMA 100-year floodplain.

2.2 Matoon Lake

Matoon Lake is a shallow, 26-acre formal gravel pit that is annually stocked with trout by WDFW. The lake is eutrophic, and has a maximum depth of approximately 12 feet. The lakeshore is highly modified by adjacent roads (including I-90 to the south), and the presence of invasive aquatic vegetation (i.e., Eurasian watermilfoil) has been reported by Ecology (2009). Because of the lake's highly altered shoreline, it provides limited habitat functions. An approximately 0.25-mile segment of the eastern shoreline lies within Ellensburg City limits, although the City limits do not extend into the waters of the lake (Figure 2-2). Within the City, the shoreland area is contains a gravel road and sparse vegetation. A channelized portion of Wilson Creek parallels the Matoon Lake in this area. This portion of the creek is not a shoreline of the state, but does lie within shoreline

jurisdiction of the lake. Almost the entire shoreland area within City shoreline jurisdiction lies within the FEMA 100-year floodplain.

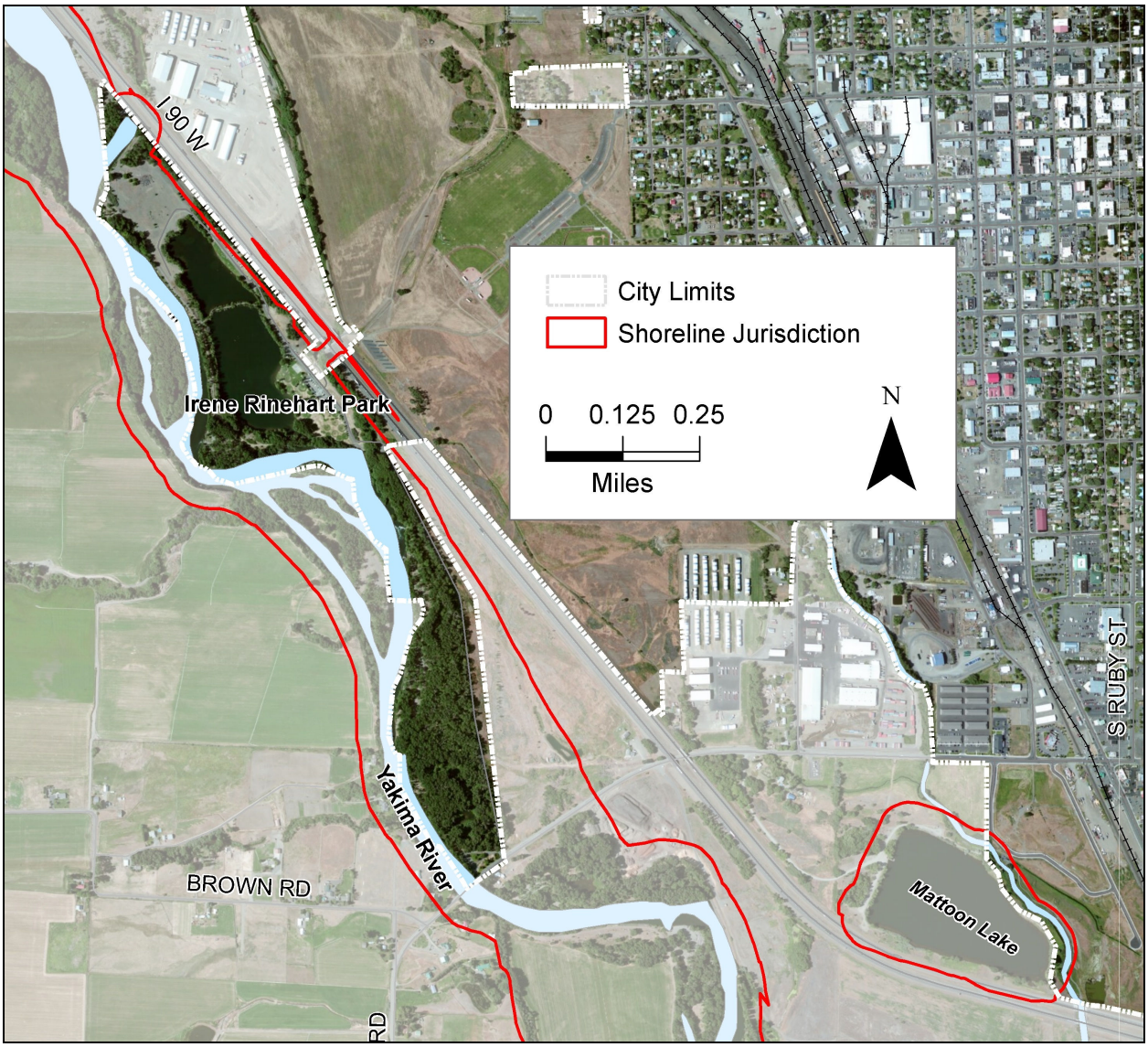

Figure 2-1. Shorelines within City of Ellensburg jurisdiction.

CHAPTER 3. REASONABLY FORESEEABLE FUTURE DEVELOPMENT, ECOLOGICAL FUNCTIONS AT RISK AND PROTECTIVE SMP STANDARDS

The purpose of this chapter is to identify reasonably foreseeable development for City of Ellensburg SMA shorelines based on underlying zoning districts and planned development. This chapter also describes the shoreline ecological functions most at risk from foreseeable development, based on the findings of the Shoreline Inventory and Characterization report (ESA, 2013), and how foreseeable development would affect ecological functions. The protective provisions in the City of Ellensburg Draft SMP that would serve to mitigate potential impacts associated with foreseeable development are also described.

3.1 Reasonably Foreseeable Future Development

The following section provides an assessment of reasonably foreseeable development along Yakima River and Matoon Lake within Ellensburg city limits. This qualitative analysis was conducted using several sources of information, which include:

- City of Ellensburg zoning map (2013);
- Kittitas County parcel data (2013); and
- An internet search for current land development proposals

The potential for future development on publically owned lands was based on the Concept Plan for City-to-Canyon Trails (City-to-Canyon Trails Committee, 2009) and the Park, Recreation, & Open Space Plan (City of Ellensburg Parks and Recreation Commission, 2002).

3.1.1 Yakima River

The portion of the Yakima River within City jurisdiction is entirely within Irene Rinehart Riverfront Park. The Park is zoned for Public Reserve. Only public uses are allowed in this district, and include government buildings and facilities, educational institutions, libraries, community centers, recreational uses, utilities, airports and hospitals, and accessory facilities associated with primary uses such as retail services, student housing and medical offices. However, the primary purpose is for recreation; it is very unlikely that non-park building and facilities would be constructed within the Park.

According to the City of Ellensburg Parks and Open Space Recreation Plan (2002) no improvements are proposed to Irene Rinehart Riverfront Park (city to confirm). Anticipated activities could include routine maintenance to existing facilities, such as trail and road maintenance. According to the Concept Plan for City-to-Canyon Trails (2009),

trail improvements are planned to the south of the park, outside shoreline jurisdiction and City limits that would eventually connect the Irene Rinehart Park Trail to the City to Canyon Trails. The portion of the proposed trail that would traverse alongside Yakima River is called Bureau of Reclamation Restoration Trial and is located south of City limits.

No planned improvements to transportation, utilities or parks are proposed near Yakima River according to the Capital Facility & Improvements Program (City of Ellensburg, Undated).

3.1.2 Matoon Lake

Properties within City shoreline jurisdiction along Matoon Lake are vacant and zoned Commercial Highway. This zone allows commercial uses including auto and truck sales, mortuaries, drive-ins, repair and construction services, commercial recreation, government services, gas stations, hotels, motels, supermarkets, restaurants, offices, small-scale retail, regional retail and outlet centers.

Since the properties are currently vacant and a variety of commercial uses would be allowed based on the underlying zoning, the potential for development and increased land use intensity is considered high along Matoon Lake. Currently, a 39-acre shopping, entertainment and hospitality center is proposed for the vacant properties near Matoon Lake. The development, to be called The Lakeside Landing, would include an indoor water park, convention center, two hotels on either end of the development, an outlet mall that connects the hotels, and surface parking. Solar and wind energy facilities would provide electricity and rain water would be collected for use as irrigation and entertainment. Although the development was originally proposed in 2008, permit applications have yet to be submitted to the City. According to preliminary site plans, a wide landscape buffer and trail is shown along Matoon Lake, potentially buffering the entire development from the water. In addition, the The Lakeside Landing development does not include any proposed in-water development. (An and Kim LLC, 2011; *Daily Record*, 2013). No planned improvements to transportation or utilities are proposed near Matoon Lake according to the Capital Facility & Improvements Program (City of Ellensburg, Undated), although some utility facilities would likely be constructed to serve the proposed Lakeside Landing development.

3.2 Ecological Functions at Risk

This section summarizes how foreseeable future development would affect shoreline functions within City jurisdiction.

3.2.1 Water Quality

3.2.1.1 Yakima River

Upstream of the City of Ellensburg, the temperature of the Yakima River is elevated (particularly in reaches downstream of storage reservoirs) and fecal coliform contamination from livestock operations and faulty septic systems has been detected. Also

present are elevated concentrations of legacy pollutants (e.g., chlorinated pesticides) and nutrients (e.g., nitrogen), which are largely caused by the intensive agricultural and irrigation practices common along the Yakima River. Within City shoreline jurisdiction, water quality is listed by Ecology (2009) as impaired for pH, elevated water temperatures, and fecal coliform.

There is potential for limited vegetation removal in the future as park facilities are maintained or constructed. But significant vegetation removal along the river is unlikely, so there is a low likelihood of small-scale vegetation removal resulting in decreased river shading and subsequently higher water temperatures. Construction of new impervious surfaces or playfields could increase runoff of pollutants to the river. However, given that much the park is a publically-valued natural area, widespread development within the park is unlikely.

3.2.1.1 Mattoon Lake

Potential for significant water quality impacts to Mattoon Lake resulting from new development are minimal. The lake is a former gravel pit with no permanent surface water connection to the Yakima River. In addition, the proposed Lakeside Landing development would be required to meet the State's latest requirements for stormwater detention and treatment.

3.2.2 Habitat

3.2.2.1 Yakima River

Much of Irene Rinehart Park contains relatively unaltered riparian shrub and tree habitat. Vegetation removal and development within riparian areas could affect aquatic habitat by decreasing large woody debris recruitment and organic inputs, degrading water quality, and increasing runoff and erosion rates. Remove of vegetation would also directly reduce wildlife habitat.

3.2.2.1 Mattoon Lake

Potential for significant habitat impacts to Mattoon Lake resulting from new development are minimal. The lake shoreline within City jurisdiction contains a gravel road and is largely denuded of native vegetation. In addition, the lake does not provide habitat for native fish species (with the exception of stocked rainbow trout), and no priority wildlife species or habitats are identified in the vicinity.

3.2.3 Hydrology

3.2.3.1 Yakima River

It is unlikely the wide-spread hydrologic alteration would occur within Irene Rinehart Park, as much of the park is a natural area that is highly valued by the community. There is potential for new park structures within the floodplain, but it is unlikely that wide-spread development would occur within the park.

3.2.3.2 *Mattoon Lake*

Mattoon Lake is a shallow former gravel pond with no permanent surface water connection to the Yakima River. It is unlikely that adjacent development would significantly alter the hydrology of the lake.

3.3 Protective SMP Standards

This section describes regulations in the Draft SMP that would serve to protect shoreline ecological functions.

3.3.1 Shoreline Environment Designations

The assignment of Shoreline Environmental Designations (SEDs) is one of the key tools for regulating shoreline uses to achieve the policy goals of the SMA and those developed for the City's Draft SMP. Generally, environment designations are based on biological and physical capabilities and limitations of the shoreline, existing and planned development patterns, and a community's vision or objectives for its future development.

The proposed designation for the portions of the Yakima River and Matoon Lake within Ellensburg city limits is **Urban Conservancy** (100 percent of shoreline jurisdiction). Given that these shoreline areas are used primarily for recreational purposes, the primarily purpose of the Urban Conservancy SED is to allow for water-related or water-enjoyment uses while maintaining or restoring the ecological functions of the areas. Areas waterward of the OHWM are proposed to be designated **Aquatic**. VERIFY THAT URBAN CONSERVANCY IS THE ONLY SHORELAND SED

For both proposed SEDs, the City's Draft SMP (Sections 3.10 and 5.21) identifies:

- Permitted uses – These are uses and developments that are consistent with the SMA. Such uses/developments require a shoreline substantial development permit or a letter of exemption (A letter of exemption is required for projects that are considered exempt from shoreline substantial development permits. The letter of exemption process is an added check to ensure that the proposed location and design meets all of the requirements of the SMP). Deviations from bulk, dimensional or performance standards may necessitate a variance permit, which requires Ecology approval.

- Conditionally-allowed uses – Uses that may be authorized provided they meet certain criteria. Conditional use permits also require Ecology approval.

- Prohibited uses – These are uses and developments that are inconsistent with the SMA in the specified SED, and cannot be allowed through any permit or variance.

- Required shoreline buffers and setbacks –Shoreline buffers, side yard setbacks, height, lot frontage and residential density limits are established for the Urban

Conservancy SED. Buffers and setbacks are intended to protect shoreline ecological functions and water views while supporting other priority uses of the shoreline.

3.3.2 Mitigation Sequencing

Mitigation sequencing is a common hierarchical protocol for avoiding and minimizing environmental impacts. Mitigation sequencing is a requirement per WAC 173-26-201(2)(e) that directs all proposed uses and developments to avoid environmental impacts of a proposal and where unavoidable, include measures to minimize and mitigate those impacts in compliance with the SMP and other applicable regulations. Mitigation sequencing is a requirement in the City of Ellensburg Draft SMP and can be found in Section 4.2 Environmental Protection and Critical Areas, Regulation B.2.

In instances where impacts to ecological functions have the potential to occur, mitigation sequencing requires that all reasonable efforts must be taken to avoid, and where unavoidable, minimize and mitigate impacts such that no net loss of shoreline ecological functions is achieved.

In mitigation sequencing, possible adverse impacts should be avoided altogether by not taking a certain action or parts of an action, or by moving the action. For example, a development project that may impact a wetland might be required to avoid construction activities that will directly impact (e.g. vegetation removal or draining) or indirectly impact (e.g. increased sedimentation or runoff) the wetland habitat. By simply avoiding impacts to critical areas no future compensatory mitigation will be required.

When adverse impacts to ecological functions are unavoidable, the magnitude or severity of the impact resulting from an activity should be minimized. This may include reducing or eliminating the adverse impact by preservation and maintenance operations that occur during the life of the action. Minimizing impacts would include, but not be limited to, installing sediment and erosion control measures and other Best Management Practices to reduce soil erosion and retain water quality in or adjacent to a critical area and retaining natural vegetation, to ultimately reduce or abate the severity of the development action.

When avoiding or minimizing impacts is unfeasible, compensatory mitigation is required to replace the affected resources. This includes monitoring both the impact and mitigation project and taking appropriate corrective measures to ensure that impacts are abated to ensure no net loss. Compensatory mitigation can involve reseeding or replanting impacted areas, restoring water quality and quantity, or otherwise restoring the ecological functions. Other typical mitigation activities include wetland restoration, installation of large woody debris, and floodplain reconnection.

3.3.3 Vegetation Conservation and Shoreline Buffers

According to Ecology Guidelines, master programs must include "planning provisions that address vegetation conservation and restoration, and regulatory provisions that address conservation of vegetation; as necessary to assure no net loss of shoreline ecological

functions and ecosystem-wide processes, to avoid adverse impacts to soil hydrology, and to reduce the hazard of slope failures or accelerated erosion" (WAC 173-26-221(5)(b)).

Ellensburg's Draft SMP includes provisions for vegetation conservation in Chapter 4 General Policies and Regulations (see Section 4.5). The Draft SMP requires new uses and developments to be located 100 feet landward of the ordinary high water mark of the shoreline. The SMP also requires shoreline buffers to be maintained in a well-vegetated condition that supports native plant species at densities that would occur in similar undisturbed settings. Clearing or removing vegetation is allowed only when associated with an allowed use or development. These provisions must be met by any use, development, or activity regardless if a shoreline permit is required or not. The focus of these provisions is to establish shoreline buffers and limit development and activities in the buffers.

Protection and restoration of riparian zones is important for improvement of water quality and maintenance of adequate water temperatures. Protection of existing native vegetation and enhancement of degraded riparian areas is a key component in protecting water quality and improving in-stream habitat for aquatic species, including salmonids. Riparian zones also buffer streams and lakes from noise and human activities associated with property use.

3.3.4 Critical Areas Standards

Critical area protections must be included in the SMP per Ecology Guidelines. SMPs are required to incorporate protections for critical areas that assure no net loss of shoreline ecological functions necessary to sustain shoreline natural resources. Critical area regulations for wetlands, aquatic habitat conservation areas, fish and wildlife habitat conservation areas, wildlife habitat conservation areas, geologically hazardous areas, frequently flooded areas, and critical aquifer recharge areas are established in Section 4.2. As an overview, critical area buffers for wetlands and aquatic habitat conservation areas are shown in Table 3-1.

Subdivisions must have lots that contain at least one site, including access and utility locations that is suitable for use or development and is not located entirely within a wetland, aquatic habitat conservation area, floodway, channel migration zone, or landslide hazard area. The new lots must adhere to the standard buffer widths without buffer averaging or reduction.

Table 3-1. Summary of Buffer Requirements for Wetlands and Aquatic Habitat Conservation Areas

Critical Area		Standard Buffer
Wetlands	Category I	150 feet
	Category II	100 feet
	Category III	50 feet
	Category IV	25 feet
Aquatic Habitat Conservation Areas	Type 1 Waterbodies (Shorelines of the State)	100 feet
	Type 2 Streams	85 feet
	Type 3 and 4 Streams and Ponds	50 feet

The City also designates wildlife habitat conservation areas, geologically hazardous areas, aquifer recharge areas and floodplains as critical areas and establishes standards and use limitations. Standards and limits on certain uses for these critical areas are described in Table 3-2 below.

Table 3-2. Summary of Requirements for Wildlife Habitat Conservation Areas, Frequently Flooded Areas, Geologically Hazardous Areas and Aquifers

Critical Area	Standards and Use Limitations
Wildlife Habitat Conservation Areas	A habitat management plan (HMP) must be prepared if a proposed use or development is located within 200 feet of a known or suspected wildlife habitat conservation area and there are potential direct or indirect impacts on wildlife species or habitat. The HMP must identify methods and measures to avoid, minimize, or compensate for adverse impacts associated with the proposed development. For unavoidable impacts to wildlife habitat conservation areas, a wildlife habitat management and mitigation plan must be prepared and must demonstrate that when implemented there will be no net loss of ecological function of habitat.

Critical Area	Standards and Use Limitations
Geologically Hazardous Areas	New shoreline uses and developments must be located, designed, constructed and maintained to avoid geologically hazardous areas. If a severe erosion hazard, mine hazard, or landslide hazard is present, a geologic hazard risk assessment is required. If further analysis is required, a geotechnical report is required that provides recommendations concerning drainage practices, vegetation retention and other mitigation and monitoring measures which may be needed to ensure slope stability.
Frequently Flooded Areas	New uses must not reduce the effective base flood storage volume of a floodplain. Compensatory storage must be provided if grading or other activity would reduce the effective storage volume. Compensatory storage must provide equivalent volume at equivalent elevations to that being displaced; be hydraulically connected to the source of flooding; and be provided in the same construction season. All structures must be located on the buildable portion of the site out of the floodplain unless there is no buildable site area. For sites with no buildable area out of the floodplain, structures must be placed on the highest land on the site, oriented parallel to the anticipated flow of water rather than perpendicular, and sited as far from the watercourse and other critical areas as possible. If there is any evidence of active hyporheic exchange on a site, the development must be located to minimize disruption of such exchange. Fill or grading within the floodplain must not block side channels, inhibit channel migration, increase flood hazards to others, or be placed within a channel migration zone. Encroachments, including new construction, substantial improvements, fill, and other development, are prohibited within designated floodways unless certified by a registered professional engineer. Such certification must demonstrate that the proposed encroachment will not result in any increase in flood levels during the occurrence of the base flood discharge.
Critical Aquifer Recharge Areas(CARAs)	Activities in critical aquifer recharge areas must not cause contaminants to enter the aquifer or adversely affect the recharging of the aquifer. The use or development must comply with water source protection requirements and must be designed and constructed in accordance with surface water management or water quality regulations.

3.3.5 Allowed Shoreline and Critical Area Buffer Alterations

Shoreline and critical buffers are generally required to be left undisturbed but there are some exceptions that allow for buffer reduction, buffer averaging and activities and developments within buffers. These allowances provide for minimal infill development while still maintaining or improving existing levels of protection for riparian zones, shoreline vegetation, and associated habitats.

3.3.5.1 Shoreline Buffer Alterations

Shoreline Buffer Averaging

Shoreline buffer widths may be averaged to accommodate a single-family residential development or a water-dependent or water-related development. Buffer averaging is only allowed in those limited instances when adherence to the standard buffer is infeasible or presents a substantial hardship because of site conditions, lot configuration or other circumstances. Residential subdivisions of more than four lots and non-water-dependent and non-water-related developments are not eligible for buffer averaging except through a shoreline variance. The minimum width of the buffer at any given point must be at least 75 percent of the standard buffer or 25 feet, whichever is greater. The net buffer area after averaging (total acreage) must not be less than the standard buffer area. The area that is added to the buffer to offset the reductions must be well-vegetated and may require vegetation enhancement.

Shoreline Buffer Common-Line Setback

PLACEHOLDER—describe common line setback provision in draft SMP

Activities Allowed in Shoreline Buffers

Alterations to the shoreline buffers are allowed to accommodate one of the following uses or developments. It must be limited to the minimum necessary and vegetation enhancement may be required as compensation:

1. Shoreline view corridors limited to 25 feet in width or 25 percent of the width of the lot frontage, whichever is less
2. Private pathways made of pervious materials and no greater than 6 feet in width
3. Hazard tree removal
4. Invasive species management
5. Public trails and other public access improvements
6. Water-dependent or water-related utilities and essential public facilities CONFIRM THIS IN DRAFT SMP

3.3.5.2 Allowed Critical Buffer Alterations

Similar to shoreline buffers, there are some exceptions that allow for critical area buffer averaging and activities within the buffer.

Wetland Buffer Averaging

Wetland buffer widths may be averaged on a case-by-case basis in accordance with an approved critical area report and the best available science. The minimum width of the

buffer at any given point must be at least 75 percent of the standard buffer or 35 feet, whichever is greater. The total area in the buffer after averaging must not be less than what would be contained within the standard buffer area. The wetlands must contain variations in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils or vegetation, and the wetland would benefit from a wider buffer in places and would not be adversely impacted by a narrower buffer in other places. Wetland functions or functional performance must not be reduced.

Aquatic Habitat Conservation Area Buffer Averaging

Aquatic habitat conservation area buffer widths may be averaged in accordance with a critical area report only if:

1. The averaging will not reduce stream or habitat functions;
2. The averaging will not degrade the habitat;
3. The proposal will provide additional habitat protection;
4. The total area contained in the riparian habitat area of each stream on the development proposal site is not decreased;
5. The recommended stream buffer width is not reduced by more than 25 percent in any one location;
6. The width reduction will not be located within another critical area or associated buffer; and
7. The averaging is supported by the best available science.

Activities Allowed in Wetland Buffers

The following uses are allowed in a wetland buffer without a variance provided they are conducted in a manner that minimizes impacts to the buffer and adjacent wetland, including wetland functions and values:

1. Conservation or restoration activities;
2. Passive recreation facilities (pervious walkways and trails in the outer 25 percent of the buffer, wildlife viewing structures or fishing access areas no wider than 6 feet); and
3. Stormwater management facilities in the outer 25 percent of the buffer of Category III or IV wetlands.

Building Setbacks

Building setbacks for critical area buffers may be reduced to alleviate a hardship resulting from unique conditions such as irregular lot shape or size or natural conditions or features. The applicant must demonstrate that the public interest would not suffer substantial detrimental impact and that the strict application of setback standards precludes or significantly interferes with use of the property. The maximum setback reduction must not exceed 25 percent, and in no case may be reduced to less than the setback requirement of the underlying zoning district.

3.3.6 Unregulated and Exempt Activities

Ecology Guidelines identify specific developments and activities as exempt from obtaining a shoreline substantial development permit under the SMP. The developments and activities that are considered exempt and are anticipated to occur along City of Ellensburg shorelines include: vegetation clearing and maintenance and restoration projects.

Exempt developments and activities (per WAC 173-27-040) may have to obtain a conditional use permit when required by a local government's SMP or a variance if the development is not consistent with bulk and dimensional standards (see Section 3.3.9 for information on conditional use permits and variances). For exempt uses not required to obtain a conditional use permit, a letter of exemption must be obtained from the City. A letter of exemption from the City that verifies the project would conform to all SMP goals, policies and regulations is required for all activities considered exempt. For projects that require City permits, including clearing, grading, and most construction, the City reviews the projects for compliance with the SMP before the permit is issued. Other exempt activities are enforced only on complaint basis. By establishing a formal shoreline permit review process for exemptions, the City has reduced the possibility of confusion during building permit review and increased scrutiny for shoreline compliance. Need City review of the paragraph above

3.3.7 Uses Requiring Conditional Use Permits and Variances

Developments that have impacts that cannot be anticipated or are considered uncommon, which cannot be reasonably identified during the SMP planning process, are typically allowed only with approval of a conditional use permit. For example, impacts and effects from riverine gravel mining include sedimentation, loss of riparian habitat, and degradation of fish habitat. Requiring these uses to obtain a conditional use permit would help identify and address such impacts during the permit process. In some cases, activities exempt from shoreline substantial development permits are required to obtain a conditional use permit (per WAC 173-27-040). UPDATE THIS PARAGRAPH, BASED UPON DRAFT SMP. SPECIFY WHAT USES REQUIRE A CUP

Evaluation under the conditional use permit process ensures that all impacts are addressed and that there is no net loss of ecological function after mitigation. Local governments make decisions on shoreline conditional uses, but these decisions need review and

approval by Ecology and provide opportunities for citizens to provide input into Ecology's decision and provides for the opportunity to appeal final decisions to the State Shorelines Hearing Board.

Developments that do not comply with bulk and dimensional standards in the SMP, or cannot adhere to the standards in the SMP including the provisions to protect critical areas could only be allowed if a shoreline variance permit is approved. Shoreline variances for new development are very rare [CITY TO CONFIRM]. Variances are typically granted for unusually constrained sites to allow a reasonable level of development as compared with similarly-sized lots in the same SED.

Evaluation under the variance process must ensure that all impacts are addressed through mitigation. The shoreline variance process also elevates final decision-making to Ecology.

3.3.8 Illegal Activities

Illegal actions or violations that may or may not be known or remedied via enforcement often cause significant impacts on ecological functions and processes. A dock built illegally, vegetation removed from a buffer, or unreported spills of pollutants could adversely affect shoreline ecological functions. Illegal grading or construction of bulkheads, or construction of structures without permits or mitigation, can cause harm to shoreline resources. Without enforcement, impacts from such activities would not likely be mitigated. Once identified by the local government, illegal actions are expected to be corrected through enforcement and, it is assumed, after-the-fact mitigation would be required as part of that enforcement.

3.4 Summary of Potential Impacts and SMP Protective Standards by Use Type

The following table summarizes the potential impacts on shoreline ecological functions of uses or developments that are allowed or conditionally allowed in the Draft SMP and outlines the protective regulations proposed in the Draft SMP.

CREATE TABLE BASED UPON USES/DEVELOPMENTS COVERED IN DRAFT SMP

Table 3-3. Summary of Potential Impacts and SMP Protective Standards by Use Type

Use / Development Type	Existing Development	Expected Type and Location of Future Development	Potential Impacts of Future Development on Shoreline Ecological Functions (water quality, habitat, hydrology)	SMP Protective Standards

CHAPTER 4. BENEFICIAL EFFECTS OF ESTABLISHED PROGRAMS

A variety of other regulatory programs, plans, and policies work in concert with the City of Ellensburg SMP to manage shoreline resources and regulate development near the shoreline.

4.1 Local Plans and Regulations

4.1.1 City of Ellensburg Comprehensive Plan

The *City of Ellensburg Comprehensive Plan* was last updated in 2012 (City of Ellensburg, 2012). It contains goals, policies, and programs that guide land use decisions. Several "land use categories" are described in the plan. These categories serve as the basis for more detailed zoning code designations. Land use categories for the City are as follows:

- Business Office Park
- Commercial (includes Central Commercial, Corridor/Neighborhood Commercial, Tourist Commercial, General Commercial)
- Industrial (includes Heavy Industrial, Industrial Residential, Light Industrial)
- Residential (Mixed Residential, High Density Residential)
- Public/Institutional
- Open Space

During the development of SEDs as part of this SMP update process, Comprehensive Plan designations were examined to determine planned future uses and whether they would be in general alignment with existing shoreline ecological functions. Generally speaking, the Comprehensive Plan designations generally aligned with the findings of the Shoreline Inventory and Characterization report (ESA, 2013) findings. Regulating the type and location of land uses in the City ensures that development occurs in areas that would result in minimal impacts to existing shoreline ecological functions.

4.1.2 Flood Hazard Management

The Kittitas County area, including Ellensburg, has significant exposure to numerous natural hazards that have caused millions of dollars in past damage. Limited local resources make it difficult to be pre-emptive in risk reduction initiatives, and being able to leverage federal financial assistance is paramount to successful hazard mitigation in the area. In an effort to be proactive in preparedness for the impacts of natural hazards, Kittitas County, the City of Ellensburg and partners developed the *Kittitas County Multi-*

Jurisdictional Hazard Mitigation Plan (Tetra Tech 2012), which was approved by the Washington Military Emergency Management Division and the Federal Emergency Management Agency on July 27, 2012. The plan identifies resources, information, and strategies for reducing risk from natural hazards.

The plan addresses the following hazards of concern: avalanche, dam failure, drought, earthquake, flood, landslide, severe weather, volcano, and wildfire. The hazard mitigation plan is intended to be incorporated by reference in the City's comprehensive plan. This will assure that all future trends in development can be established with the benefits of the information on risk and vulnerability to natural hazards.

Recently, the County formed the Flood Control Zone District (FCZD), which is funded through property taxes. The collected funds will be used to fund flood-related projects and programs within the County and its cities.

4.1.3 EMC Chapter 1.42- State Environmental Policy Act

Most projects requiring a shoreline permit must also demonstrate compliance with the State Environmental Policy Act (SEPA). The SEPA process assures that environmental impacts, including compliance with SMP regulations, are identified, minimized and mitigated, where possible. The City adopts the state's SEPA rules by reference (Chapter 197-11 WAC). Chapter 1.42 outlines general SEPA requirements, threshold determinations, public notice and comment, categorical exemptions, and agency compliance.

4.1.4 EMC Title 13-Zoning

The purpose of Title 13 is to provide zoning standards that direct uses, building bulk, scale, and location, and other design considerations throughout the City. A chapter within the Title, Chapter 13.39 Critical Areas, includes provisions for designating and protecting critical areas. Critical areas include (1) wetlands; (2) areas with a critical recharging effect on aquifers used for potable water; (3) fish and wildlife habitat conservation areas; (4) frequently flooded areas; and (5) geologically hazardous areas.

4.1.5 Stormwater Standards

The City of Ellensburg regulates stormwater through their Public Works Development Standards, Section 4 Storm Water Standards. All subdivisions, commercial property improvements, and parking lots are required to meet the stormwater treatment and flow control requirements established in the most current Department of Ecology Stormwater Management Manual for Eastern Washington. Stormwater management regulations include requirements for pollution prevention during construction, control of migrant dust leaving the site during construction, treatment of runoff and control of stormwater flow volumes. Residential, commercial, industrial and municipal developments are encouraged to implement site design and low impact development techniques. These techniques include site designs that minimize impervious surfaces, conservation and restoration of

vegetation and soils, managing stormwater close to where the rain falls and providing maintenance and education.

4.1.6 Benefits of Local Regulations

Various sections of the EMC regulate development in ways that benefits the City's diverse shoreline environments. Regulations are focused on protecting public health through the proper treatment and disposal of sewage, flood damage prevention, clearing and grading activities as described in zoning code and land use and development standards including management of environmentally critical areas.

4.2 State and Federal Regulations

A number of state and federal agencies may have jurisdiction over land or natural elements in shoreline jurisdiction. Local development proposals most commonly trigger requirements for state or federal permits when they propose work in or over waters of the state; impact wetlands or streams; potentially affect fish and wildlife listed under the federal Endangered Species Act (ESA); result in over one acre of clearing and grading; or affect the floodplain or floodway. As with local requirements, state and federal regulations may apply throughout the jurisdiction, but regulated resources are common within the City's shoreline jurisdiction. The most commonly applied state and federal regulations protecting shoreline-related resources are described briefly below.

4.2.1 Endangered Species Act

The federal Endangered Species Act addresses the protection and recovery of federally listed species. The Act is jointly administered by the National Oceanic and Atmospheric Administration (NOAA) Fisheries (formerly referred to as the National Marine Fisheries Service), and the United States Fish and Wildlife Service (USFWS).

4.2.2 Clean Water Act

The federal CWA requires states to set standards for the protection of water quality for various parameters, and it regulates fill, excavation, and dredging in waters of the U.S., including wetlands. Certain activities affecting wetlands in shoreline jurisdiction or work in the adjacent rivers may require a permit from the U.S. Army Corps of Engineers and/or Washington State Department of Ecology under Section 404 and Section 401 of the CWA, respectively.

4.2.3 National Flood Insurance Program

Communities that participate in the National Flood Insurance Program receive federally backed flood insurance. In order to participate, a community must adopt and enforce floodplain management regulations to reduce future flood damage. The Federal Emergency Management Agency is responsible for mapping the country's flood hazard areas.

4.2.4 Hydraulic Project Approval

The Washington Department of Fish and Wildlife (WDFW) regulates activities that use, divert, obstruct, or change the natural flow of the beds or banks of waters of the state and which may affect fish habitat. Projects in the shoreline jurisdiction requiring construction below the ordinary high water mark could require an HPA from WDFW. Projects creating new impervious surface that could substantially increase stormwater runoff to waters of the state may also require approval.

4.2.5 Rivers and Harbors Act

Any work or project that may affect or obstruct navigable waters requires a Section 10 permit under the Rivers and Harbors Appropriation Act of 1899. The U.S. Army Corps of Engineers reviews and authorizes projects with either a standard individual permit, letter-of-permission, nationwide permit, or regional permit.

4.2.6 National Pollutant Discharge Elimination System (NPDES)

Ecology regulates activities that result in wastewater discharges to surface water from industrial facilities or municipal wastewater treatment plants. NPDES permits are also required for stormwater discharges from industrial facilities, construction sites of one or more acres, and municipal stormwater systems that serve census-defined Urbanized Areas (more than 10,000 people within an incorporated boundary).

4.2.7 Benefits of State and Federal Regulations

Regulations focused on preserving in-stream water quality, quantity, and habitat integrity include the Clean Water Act, the Hydraulic Project Approval, the Rivers and Harbors Act, and the National Pollutant Discharge Elimination System. These regulations require that any development or redevelopment must comply with protocol for avoiding or mitigating impacts to streams, creeks, rivers, lakes, wetlands, or other water bodies. For example, projects that will require in-channel work must comply with the protocol of the Hydraulic Project Approval process in addition to the Clean Water Act. In addition, the Endangered Species Act provides a framework for the preservation of endangered or threatened flora, fauna, or fish species and their associated habitat areas. This overarching regulation must be considered for federal projects or projects with a federal nexus (projects funded with federal money or take place on federal lands) that may adversely impact priority species habitat.

The Federal Emergency Management Agency National Flood Insurance Program and the Rivers and Harbors Act address the removal of materials that may exacerbate flood conditions, and/or provide assistance in development or redevelopment in areas subjected to flooding. In addition to protecting public health and property, these measures also assist in promoting preservation and restoration of floodplain habitat.

CHAPTER 5. RESTORATION EFFORTS

Steps are being taken to restore habitats for the benefit of fish and wildlife. Several entities are currently supporting preservation and restoration of shorelines within Ellensburg:

INSERT BULLETED LIST OF ENTITIES- PLACEHOLDER

Question for City—are there any ongoing restoration efforts occurring within the City?

Many of the habitat restoration projects currently underway target listed salmonid species and are designed specifically to benefit fish habitat.

5.1 Shoreline Restoration Opportunities

INSERT SUMMARY DESCRIBING OPPORTUNITIES HERE - PLACEHOLDER

Question for City—are you aware of any existing shoreline restoration opportunities? The opportunities that we've identified in the restoration plan are generally limited to projects in the unincorporated County

CHAPTER 6. DRAFT CONCLUSIONS

Placeholder—need to wait for Draft SMP to be completed

CHAPTER 7. REFERENCES

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