CITY OF ELLENSBURG SHORELINE MASTER PROGRAM UPDATE – CUMULATIVE IMPACTS ANALYSIS

Ecology Grant No. G1200054

Prepared for: **January 2014**

City of Ellensburg Community Development Department

Table of Contents

CHAPTER 1. Introduction 1-1
1.1 Purpose of the Report 1-1
1.2 State Requirements 1-1
1.3 Report Contents and Methodology 1-2
1.3.1 Methodology 1-3

CHAPTER 2. Summary of Existing Shoreline Conditions 2-1
2.1 Yakima River 2-1
2.2 Matoon Lake 2-1
CHAPTER 3. Reasonably Foreseeable Future Development, Ecological Functions at Risk and Protective SMP Standards 3-1
3.1 Reasonably Foreseeable Future Development 3-1
3.1.1 Yakima River 3-1
3.1.2 Matoon Lake 3-2
3.2 Ecological Functions at Risk 3-2
3.2.1 Water Quality 3-2
3.2.2 Habitat 3-3
3.2.3 Hydrology 3-3
3.3 Protective SMP Standards 3-3
3.3.1 Shoreline Environment Designations 3-4
3.3.2 Mitigation Sequencing 3-4
3.3.3 Vegetation Conservation and Shoreline Buffers 3-5
3.3.4 Critical Areas Standards 3-6
3.3.5 Allowed Shoreline and Critical Area Buffer Alterations 3-8
3.3.6 Unregulated and Exempt Activities 3-11
3.3.7 Uses Requiring Conditional Use Permits and Variances 3-12
3.3.8 Illegal Activities 3-12
3.4 Summary of SMP Protective Standards by Use Type 3-13
CHAPTER 4. Beneficial Effects of Established Programs 4-1
4.1 Local Plans and Regulations 4-1

4.1.1 City of Ellensburg Comprehensive Plan 4-1
4.1.2 Flood Hazard Management 4-1
4.1.3 ECC Chapter 1.42- State Environmental Policy Act 4-2
4.1.4 ECC Title 13-Zoning 4-2
4.1.5 Stormwater Standards 4-2
4.1.6 Benefits of Local Regulations 4-3
4.2 State and Federal Regulations 4-3
4.2.1 Endangered Species Act 4-3
4.2.2 Clean Water Act 4-3
4.2.3 National Flood Insurance Program 4-3
4.2.4 Hydraulic Project Approval 4-4
4.2.5 Rivers and Harbors Act 4-4
4.2.6 National Pollutant Discharge Elimination System (NPDES) 4-4
4.2.7 Benefits of State and Federal Regulations 4-4
CHAPTER 5. Restoration Opportunities 5-1
CHAPTER 6. Conclusions 6-1
CHAPTER 7. References 7-1

List of Tables

Table 3-1. Summary of Buffer Requirements for Wetlands and Aquatic Habitat Conservation Areas 3-7

Table 3-2. Summary of Requirements for Wildlife Habitat Conservation Areas, Frequently Flooded Areas, Geologically Hazardous Areas and Aquifers 3-7

Table 3-3. Summary of Potential Impacts and SMP Protective Standards by Use Type ... 3-14

List of Figures

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

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 Final Draft SMP (dated January 2014) 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 Final 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 Final Draft SMP (January 2014). 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 Final 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

[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 Final 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 report provides a planning-level assessment of the potential cumulative impacts that can be expected to occur if the proposed Final 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 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 Final 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 (ICR) (ESA, 2013a).

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 Final 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 exist 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 ICR (ESA, 2013a).

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.

Step 3: Determine potential impacts associated with foreseeable development. This step examines the potential impacts that could result from the amount of development likely to occur along City shorelines.

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 Final 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 Final 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 Lake 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.

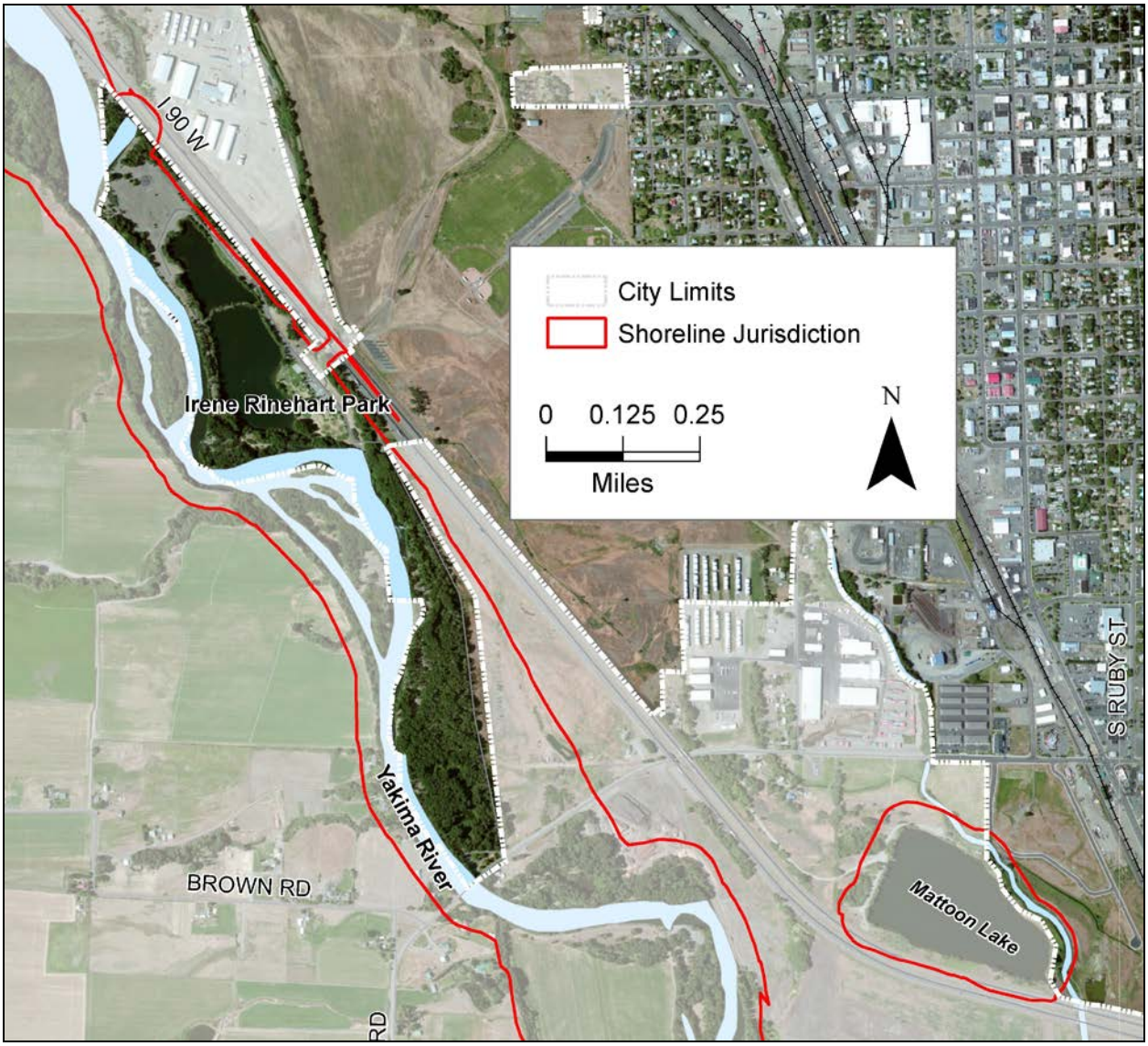

Figure 2-1. Shorelines within City of Ellensburg jurisdiction.

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 ICR (ESA, 2013a), and how foreseeable development would affect ecological functions. The protective provisions in the City of Ellensburg Final 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 of the park is for recreation; it is very unlikely that non-park buildings 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. 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, 2013).

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. No planned improvements to transportation or utilities are proposed near Matoon Lake according to the Capital Facility & Improvements Program (City of Ellensburg, 2013).

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 potential new commercial development along the lake 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 that significant 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 Final 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 Final 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 shoreline jurisdiction 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**.

For both proposed SEDs, the City's Final Draft SMP (Section 3.7 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, building setbacks, building heights, and residential density limits are established for each 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 Final 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 Final Draft SMP includes provisions for vegetation conservation in Chapter 4 General Policies and Regulations (see Section 4.5). The Final 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.

Common Line Shoreline Buffer

To ensure new single-family dwellings have similar, though not necessarily equivalent, shorelines views as existing development, a common line shoreline buffer—determined by averaging the buffers for each of the adjacent residential dwelling units on the shoreline—may be utilized for the development of a single-family dwelling where:

1. The lot was a legal lot of record in place on the date of the adoption of the SMP;

2. The lot is located adjacent to existing residential dwelling units on both adjacent shoreline lots;

3. The lot is located within an urban growth area;

4. There is less than 15 feet of elevation difference between the vacant lot and adjacent lots and less than two hundred fifty 250 cubic yards of grade or fill is required to accommodate use of the common line shoreline buffer; and

5. A management and mitigation plan prepared by a qualified professional shall be submitted and approved which demonstrates no net loss of ecological functions.

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

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)[4]; 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. Exemption from SMP substantial development permitting requirements does not exempt a project from permitting requirements in other City regulations, such as the critical areas ordinance (CAO), or from other shoreline permits such as a shoreline conditional use permit or shoreline variance.

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 3.3.7 below 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

[4] A critical areas permit may still be required for these activities, pursuant to ECC Chapter 13.39.

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.

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 dredging include sedimentation 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).

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. Variances are strictly limited to granting relief where there are extraordinary circumstances relating to the physical character or configuration of property such that the strict implementation of the SMP would impose unnecessary hardships on the applicant or thwart the policies set forth in RCW 90.58.020.

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

Violations of the SMP, such as a dock built illegally, vegetation removed from a buffer, unreported spills of pollutants, or illegal construction of bulkheads, could adversely affect shoreline ecological functions and harm 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 SMP Protective Standards by Use Type

The following table summarizes the protective regulations proposed in the Final Draft SMP for developments that have the potential to occur within shoreline jurisdiction and are allowed or conditionally allowed in the Final Draft SMP.

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

Use / Development Type	Existing Development	Expected Type and Location of Future Development	SMP Protective Standards
Commercial Development	There are no commercial developments within SMA jurisdiction in Ellensburg.	Potential for new commercial development east of Mattoon Lake.	A 100-foot buffer in the Urban Conservancy designation is required for all developments. A 15-foot building setback from the buffer is also required. Buffers must be maintained in a predominately well-vegetated condition. Clearing not associated with an allowed use or development is not allowed. Commercial development must not result in significant adverse impacts to shoreline resources and values, such as navigation, recreation, and public access. New uses and developments must provide stormwater management facilities designed, constructed, and maintained in accordance with the current stormwater management standards. Best management practices for control of erosion and sedimentation must also be implemented for all use and development proposals in shorelines through an approved temporary erosion and sediment control plan.
Recreational Development	Irene Rinehart Riverfront Park.	No major improvements are proposed to the park.	A 100-foot buffer in the Urban Conservancy designation is required for all developments. A 15-foot building setback from the buffer is also required. Buffers must be maintained in a predominately well-vegetated condition. Water-dependent or water-related recreational uses and developments may be allowed in the shoreline buffer, provided that the amount of buffer encroachment is kept to the minimum necessary. Recreational facilities must be designed to take maximum advantage of and enhance the natural character of the shoreline area. The use of native plant species is preferred. Recreational facilities must incorporate means to prevent erosion and control the amount of runoff and prevent harmful concentrations of chemicals and sediment from entering waterbodies.
Transportation	Access roads and parking areas are located within Irene Rinehart Park.	Potential improvements include repaving and other maintenance activities to existing roads and parking areas.	Parking not accessory to a permitted use is prohibited. A 100-foot buffer in the Urban Conservancy designation is required for all developments. A 15-foot building setback from the buffer is also required. Buffers must be maintained in a predominately well-vegetated condition.

Use / Development Type	Existing Development	Expected Type and Location of Future Development	SMP Protective Standards
			Clearing not associated with an allowed use or development is not allowed. Construction of roadways across stream corridors must be by the most direct route possible having the least impact to the stream corridor. Roadways that must run parallel to stream or wetland edges must be along routes having the greatest possible distance from stream or wetland and the least impact to the corridor. Roadways within the stream corridor must not hydrologically obstruct, cut-off, or isolate stream corridor features. Bridges and water-crossing structures shall not constrict the stream channel or impede the flow of the ordinary high water, sediment and woody debris. The use of bridges is the preferred means to preserve natural streams and drainage ways. Where bridges are not feasible, large, natural bottom culverts, multi-plate pipes and bottomless arches must be used.
Shoreline Restoration	There are no known restoration projects within SMA jurisdiction in Ellensburg,	There is potential for shoreline restoration activities within the City, particularly along the Yakima River.	Restoration is permitted in all SEDs. Restoration must be carried out in accordance with a City or resource agency-approved restoration plan and in accordance with the policies and regulations of the Shoreline Master Program. All shoreline restoration and enhancement projects must protect the integrity of adjacent natural resources, including aquatic habitats and water quality, and must not result in significant adverse changes to ecological functions, processes or properties. Restoration projects must be monitored and maintained to ensure they achieve their intended restoration goals. The project proponent must assess and document each restoration project according to the requirements prescribed by the applicable authorizing or funding agency. The project proponent is responsible for implementing corrective actions as needed to ensure the project's ecological benefits are sustainable over time.

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 ICR (ESA, 2013a). 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 ECC 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 of the Ellensburg City Code (ECC) outlines general SEPA requirements, threshold determinations, public notice and comment, categorical exemptions, and agency compliance.

4.1.4 ECC 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 ECC 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 OPPORTUNITIES

The draft Shoreline Restoration Plan (ESA, 2013b) identifies planned and potential shoreline restoration opportunities within Kittitas County, including the City of Ellensburg. Restoration opportunities that have been identified in the vicinity of Ellensburg include:

Wilson Creek:

- Investigate re-establishing a natural stream channel and revegetating the riparian corridor.
- Investigate the feasibility of stormwater treatment retrofits to improve the water quality of stormwater runoff from urban areas.

Yakima River:

- Hanson Pits habitat restoration
- Revegetate disturbed riparian areas, where practical. In particular, the north end of Irene Rinehart Riverfront Park has potential for revegetation
- Investigate opportunities for floodplain reconnection and setting-back of hydromodifications.
- Revegetate the disturbed floodplain area northwest of Irene Rinehart Park.

Mattoon Lake

- Revegetate disturbed lakeshore areas, where practical.

CHAPTER 6. CONCLUSIONS

ESA has reviewed the Ellensburg Final Draft SMP (dated January 2014) according to the requirements in the shoreline guidelines to determine the potential for cumulative impacts. This analysis was guided by the three factors identified in the guidelines for evaluating cumulative impacts and no net loss:

- 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.

The Final Draft SMP provides a comprehensive update to the existing SMP goals, policies, and regulations and establishes appropriate standards for the management of the City's shorelines consistent with the Shoreline Management Act and its implementing regulations. For example, the new shoreline environment designation system is consistent with the Ecology-recommended system (WAC 173-26-211) and was derived from the ICR (ESA, 2013a).

Further, the draft Kittitas County Shoreline Restoration Plan (ESA, 2013b) identifies restoration opportunities within the City that could improve or restore ecological functions that have been impaired as a result of past development activities. Together, the Shoreline Restoration Plan and ICR document the existing conditions within City shoreline jurisdiction at the time of this SMP Update.

Based on review of the Final Draft SMP policies and regulations and our analysis of past shoreline development trends, and potential areas where future foreseeable development is anticipated, we contend that the Final Draft SMP will be effective in preventing cumulative impacts on water quality, habitat, and hydrology functions within the City's shoreline jurisdiction.

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

CHAPTER 7. REFERENCES

City of Ellensburg. 2013. Capital Facility & Improvement Programs. Available at: http://www.ci.ellensburg.wa.us/DocumentCenter/Home/View/89. Accessed: July 9, 2013.

City of Ellensburg. 2012. City of Ellensburg Comprehensive Plan 2006 Update. Amended thru 2012. Available at: http://www.ci.ellensburg.wa.us/index.aspx?nid=107. Accessed: July 1, 2013.

City of Ellensburg Parks and Recreation Commission. 2002. Park, Recreation, & Open Space Plan, Ellensburg, Washington. Prepared August 12, 2002. Available at: http://www.ci.ellensburg.wa.us/index.aspx?nid=149. Accessed: July 1, 2013.

City-to-Canyon Trails Committee. 2009. A Concept Plan for City-to-Canyon Trails. August 2009 Review Draft. Technical Assistance Provided by National Park Service Rivers and Trails Program. Available at: http://www.ci.ellensburg.wa.us/index.aspx?nid=149. Accessed: July 1, 2013.

Daily Record. 2013. Ellensburg water park still in planning stage. Written by Michael Gallagher. June 1, 2013.

Ecology (Washington Department of Ecology). 2009. 2008 Water Quality 303(d)-5 List: Upper Yakima Water Resource Inventory Area (WRIA) 39. W39-303d. Olympia, WA.

ESA. 2013a. Kittitas County Regional Shoreline Master Program Update—Shoreline Inventory and Characterization Report (Revised Draft). Prepared for: Kittitas County Communication Development Services, City of Cle Elum Department of Community Development, Town of South Cle Elum, and City of Ellensburg Department of Community Development. The Central Washington University's Center for Spatial Information and Research provided technical assistance.

ESA. 2013b. Kittitas County Regional Shoreline Master Program Update—Shoreline Restoration Plan (Draft). Prepared for: Kittitas County Communication Development Services, City of Cle Elum Department of Community Development, Town of South Cle Elum, and City of Ellensburg Department of Community Development.

WDFW (Washington Department of Fish and Wildlife). 2012. 2011 Species Distribution by County. Available: http://wdfw.wa.gov/conservation/phs/list/. Accessed: February 3, 2012.

Tetra Tech. 2012. *Hazard Mitigation Plan-Volume 1: Planning-Area-Wide Elements*. Available at: http://www.co.kittitas.wa.us/publicworks/hazard-mitigation-plan/KittitasCoHMP_Vol1_submittal_draft_reduced.pdf. Accessed: June 24, 2012.