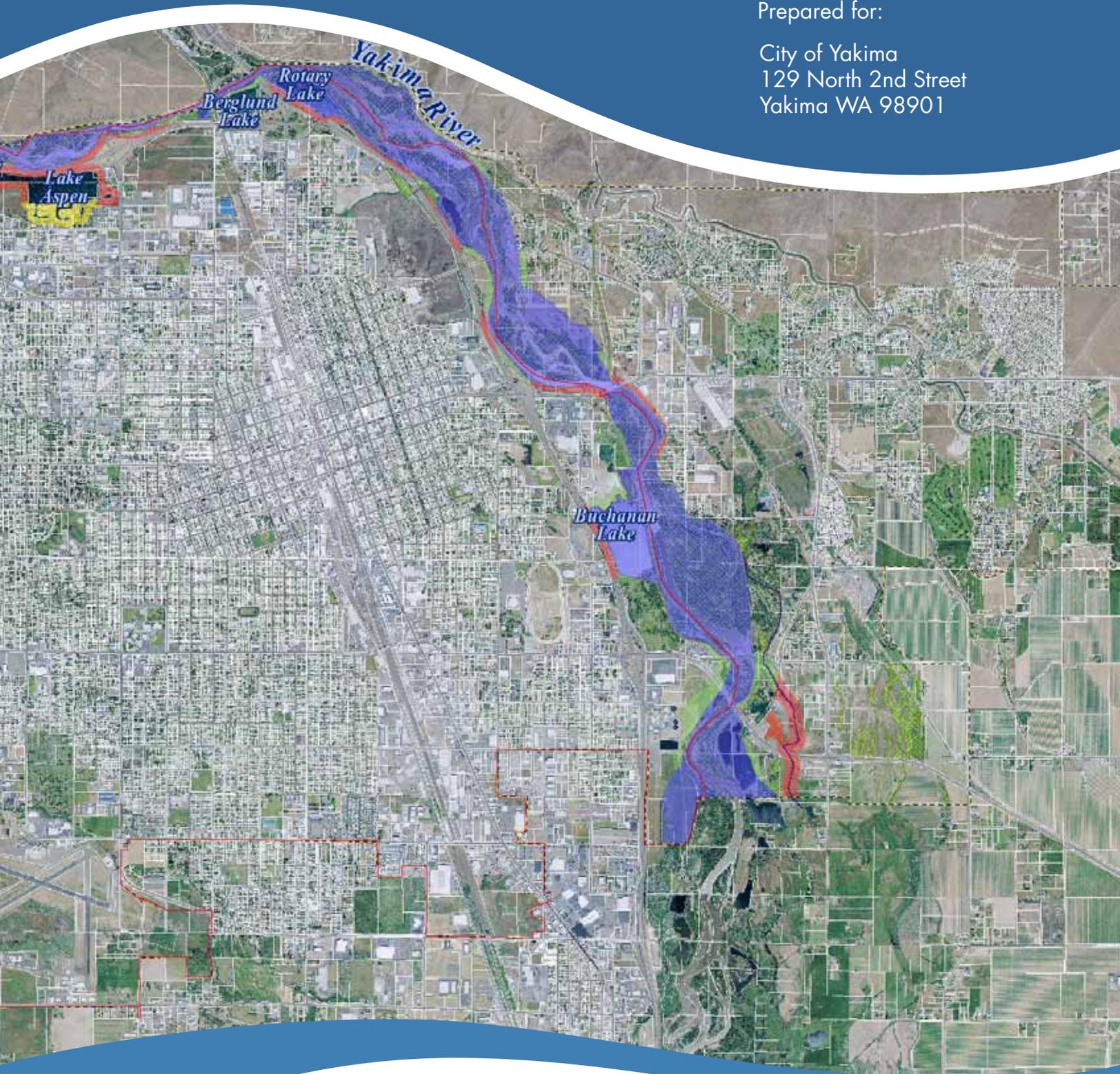


Addendum to the Yakima County Cumulative Impacts Analysis For the City of Yakima's Shoreline Master Program

Prepared for:

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**CITY OF YAKIMA
GRANT NO. G1200051**

**ADDENDUM TO THE YAKIMA COUNTY
CUMULATIVE IMPACTS ANALYSIS**

For the City of Yakima's Shoreline Master Program



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ADDENDUM TO THE YAKIMA COUNTY CUMULATIVE IMPACTS ANALYSIS

For the City of Yakima's Shoreline Master Program

1 INTRODUCTION

The City of Yakima participated in a regional Shoreline Master Program (SMP) update process with Yakima County. The Yakima County Regional SMP was completed in 2007 and approved by Washington Department of Ecology (Ecology) in 2010, along with supporting documents, including a regional analysis report, restoration plan, and cumulative impacts analysis (CIA), which demonstrated no net loss on a County basis. The City's shorelines were addressed in the supporting documents, including the CIA. Near the end of the County's local adoption process, the City chose to complete the update independently. The City subsequently adopted the County's supporting documents and adapted the County's SMP to prepare a locally based SMP that meets State Guidelines and the Shoreline Management Act requirements.

This CIA addendum identifies the major areas where the proposed City SMP diverges from the County's SMP, and it updates and amends the Regional CIA accordingly and determines whether no net loss of shoreline functions will be maintained under the City's proposed SMP.

The State Master Program Approval/Amendment Procedures and Master Program Guidelines (SMP Guidelines; WAC 173-26) require local shoreline master programs to regulate new development to "achieve no net loss of ecological function."

As directed in the Guidelines, this CIA Addendum will consider:

- “(i) current circumstances affecting the shorelines and relevant natural processes;
- (ii) reasonably foreseeable future development and use of the shoreline; and
- (iii) beneficial effects of any established regulatory programs under other local, state, and federal laws.”

An accompanying component of the SMP process that can bring environment conditions to an improved level is the *Shoreline Restoration Plan*, which identifies and prioritizes potential actions and programs that may be implemented on a voluntary basis. This CIA will include and consider additional City-specific

restoration elements that may not have been addressed in the County's restoration plan.

2 METHODOLOGY

This CIA Addendum was prepared consistent with direction provided in the Shoreline Master Program Guidelines as described above. However, information already referenced or provided in the Regional CIA will not be repeated here. The effects of likely development were evaluated in the context of the City's SMP provisions. This Addendum focuses on areas of the proposed City of Yakima SMP that substantively differ from what was included in the County's Regional SMP and Regional CIA. These main areas of divergence include the following:

- Shoreline Jurisdiction (corrected)
- Environment Designations and Allowed Uses (customized)
- Regulations for Shoreline Uses and Modifications (updated)
- Critical Areas Regulations (customized)
- Shoreline Restoration Plan (updated)

Cumulative impacts were analyzed quantitatively where possible. Where specific details regarding redevelopment likelihood or potential were not available at a level that could be assessed quantitatively or the analysis would be unnecessarily complex to reach a conclusion that could be derived more simply, a qualitative approach was used.

3 AREAS OF DIVERGENCE IN THE PROPOSED CITY OF YAKIMA SMP

3.1 Shoreline Jurisdiction

3.1.1 Shoreline Waterbodies

Cowiche Creek

The City's SMP excludes Cowiche Creek from shoreline jurisdiction based on the combined weight of stream gauge data which does not include 10 consecutive years, United States Geologic Survey (USGS) modeling, and the opinions of

various local agency experts. Ecology concurred with this assessment on May 22, 2013 and again on June 17, 2013.

Consistent with the Yakima County Regional SMP, Washington Department of Ecology's GIS data set shows that the Yakima and Naches Rivers are Shorelines (20 cfs or greater), and further are Shorelines of Statewide Significance (200 cfs or greater). Cowiche Creek is also noted in Yakima County's current SMP as a Shoreline. However, Cowiche Creek is not identified in Ecology's suggested shoreline data set as a Shoreline.

USGS published a report in 2003 that updated its earlier 1971 work identifying the upstream limit of 20 cfs mean annual flow. The 2003 report predicted the boundary point for streams in southeastern Washington by applying a multiple-linear-regression equation that relates mean annual discharge to drainage area and mean annual precipitation (Higgins 2003). An equation was developed for the lower Yakima hydrologic region (Higgins 2003). Cowiche Creek is not identified in the USGS report as a waterbody with a minimum mean annual flow of 20 cfs.

In addition to consulting the Ecology and USGS sources mentioned above, one or more representatives of the United States Bureau of Reclamation (Joel Hubble), Washington Department of Ecology (Stan Isley, Chuck Springer, Gary Graff, Cathy Reed), Yakima County Surface Water Management Division (Joel Freudenthal), and the Yakima Tieton Irrigation District (Richard Dieker) were also consulted. Available gauge data was reviewed and found to be generally inconclusive. According to a full year of data from a USBR gage (2/1/91 – 2/1/92), the mean annual flow was 16.75 cfs; this was not a drought year according to USBR. According to Chuck Springer at Ecology, the agency only has a complete water year of data for 2006, which showed a mean annual flow of 47 cfs, but that was a "very atypical year." By comparison, water year 2005, which is missing data for October and half of November, showed a mean annual flow of 11 cfs.

Because of the mixed professional opinions of the agency staff contacted, USGS (Johnna Higgins) was re-contacted to ascertain if a modeled mean annual flow was available (it was not reported in the 2003 report). The result was a mean annual flow of 18.76 cfs, below the 20 cfs minimum for shoreline jurisdiction. Ecology noted in an e-mail communication with the City of Yakima on June 17, 2013, that "[i]n order to determine the mean annual flow within any additional certainty, more data will be required; collecting that data will take many years."

Buchanan Lake

Buchanan Lake meets the minimum shoreline jurisdiction criteria based on its size (larger than 20 acres), and thus would be a shoreline waterbody. However, because the lake was constructed as part of a gravel mining operation and

continues to have an active Surface Mining Permit from the Washington Department of Natural Resources, it is not regulated as a shoreline lake until such time as the Surface Mining Permit lapses. In anticipation of that future event, the City has pre-designated the lake and the associated shorelands.

3.1.2 Shorelands

The upland extent of potential shoreline jurisdiction was also revisited by re-examining mapping of FEMA floodplain and floodway, associated wetlands, levees, and the determination of shoreline waterbodies as described above under Section 3.1.1.

3.2 Environment Designations and Allowed Uses

3.2.1 Environment Designations

The first line of protection of the County's shorelines is the environment designation (ED) assignments. According to the Guidelines (WAC 173-26-211), the assignment of EDs must be based on the existing use pattern, the biological and physical character of the shoreline, and the goals and aspirations of the community as expressed through a comprehensive plan.

The Urban ED under the County's SMP grouped several distinct land uses within the City. In place of the Urban designation, the City has proposed three new EDs that better reflect the site-specific conditions, including: Shoreline Residential, High Intensity, and Essential Public Facilities. The City SMP also proposes an Aquatic designation, which was not included in the County's Regional SMP. The Urban Conservancy ED from the County's SMP is retained, except that one area designated as Urban on the Naches River in the City's UGA is reclassified as Urban Conservancy to be more consistent with existing conditions. The Floodway/CMZ ED from the County's SMP is generally retained in the proposed City SMP (with corrections to address existing levees that limit channel migration). Because the Urban Conservancy and Floodway/CMZ EDs were generally retained from the County's SMP, these designations will not be discussed further.

The final distribution of environment designations by area in the City limits is illustrated below (Figure 1). The two most protective environment designations (Floodway/CMZ and Urban Conservancy) comprise 69 percent of the total shoreline area in the current City limits. If the UGAs are annexed, 82 percent of the combined jurisdictional area will be in the most protective environment designations (Figure 2).

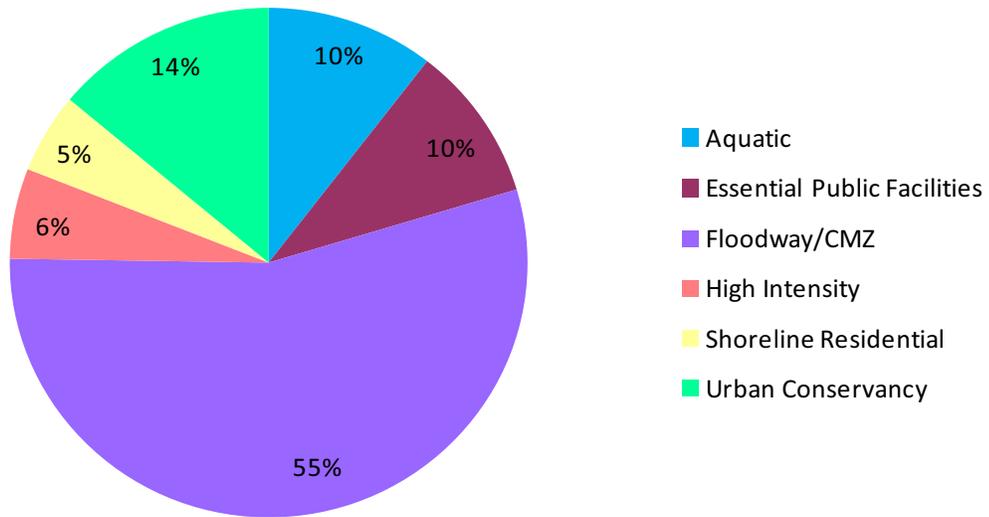


Figure 1. Distribution of environment designations by area in City limits.

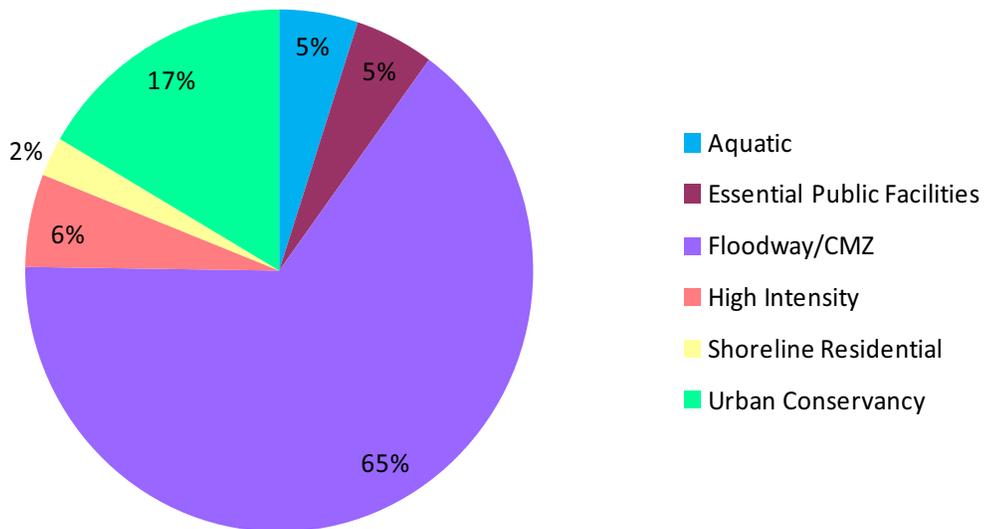


Figure 2. Distribution of environment designations by area in City limits and the Urban Growth Areas.

A discussion of existing conditions in each of the newly proposed EDs and anticipated development is provided below.

Shoreline Residential

The Shoreline Residential ED is assigned to lands that are predominantly single-family or multifamily residential development or are planned and platted for residential development.

The two shoreline areas that include Shoreline Residential designations occur along Willow Lake and Lake Aspen. The Shoreline Residential ED areas on these lakes are largely developed. In addition to the City's M-1 and R-3 zoning standards for light industrial and multi-family development, development in Lake Aspen's "Aspen Village" residential community is subject to Covenants, Codes & Restrictions that more tightly govern the land uses and character of development. Within shoreline jurisdiction, land zoned M-1, but designated as Shoreline Residential, consists of a trail. Land zoned R-3 in shoreline jurisdiction is fronted by small lot single family dwellings. No significant changes in development are anticipated. It is likely that activities would include maintenance, repair, and expansions of existing uses.

High Intensity

Shorelands that presently support or are planned to accommodate commercial, industrial, urban recreational, transportation, or high-intensity water-oriented uses are assigned to the High Intensity ED.

- Willow Lake: Several vacant industrially zoned parcels that range in size from 5 to 14 acres are located on the south and western portions of Willow Lake, and are designated as High Intensity in the SMP. Future use inside and adjacent to shoreline jurisdiction will include industrial activities. One large lot has approved industrial development extending within 37 feet of Willow Lake (Grette 2012).
- Lake Aspen: Properties along the eastern side of the lake are zoned and used for B-1 Professional Business activities (e.g. office) and accordingly designated as High Intensity. As much of the land is currently developed for offices along the shoreline, including a cantilevered overwater platform, no additional development is anticipated. It is likely that activities would include maintenance, repair, and expansions of existing uses.
- Buchanan Lake: The north side of Buchanan Lake is highly altered as a result of its present use as an active Surface Mine. The area has Suburban Residential zoning, and following reclamation, the property could be redeveloped. Present zoning would assume possible residential, agricultural, and some limited service uses. However, the property owner indicated during the SMP process that future interest

is in redevelopment for commercial purposes, including water oriented recreation and retail (e.g. floating restaurant). Following reclamation, the property owner could request a rezone.

- Yakima River – Terrace Heights Drive: General Commercial (GC) zoning applies on the south bank near Terrace Heights Drive, and current uses include restaurants and hotels. The Yakima River Greenway Trail is located waterward of the commercial uses, separating these uses from the River. These lands are already developed and unlikely to substantively change apart from maintenance, repair, and expansions of existing uses.
- Yakima River – Keyes Road: Land zoned for M-1 Light Industrial uses lies along the Yakima River and is designated as High Intensity in the SMP. Much of the land is in use for industrial purposes, but other parcels are in single-family residential uses and could convert to industrial uses over time.
- Yakima River – West Birchfield Road: Land is in use for auto sales and service uses (humane society). A levee separates development from the River. The property is zoned Suburban Residential (SR). Present zoning would assume possible residential, agricultural, and some limited service uses. Given the current investment and alteration, current development is likely to continue. It is likely that activities would include maintenance, repair, and expansions of existing uses if allowed by underlying zoning.
- Blue Slough: The lands along the Blue Slough are designated as M-1 Light Industrial, and there are lands developed for low intensity industrial uses, retail, mining, and residential uses, as well as vacant lands that could add some light industrial uses. Parcels range in size from 2 to 15 acres. The largest undeveloped lands are two parcels around 15 acres in size each that could add light industrial uses along SR 24.

Essential Public Facilities

The Essential Public Facilities ED includes shorelands containing state or regional transportation facilities and waste water handling facilities.

Within roadways, the most likely activities include repair, maintenance, and expansion. Most repair and maintenance activities would be considered exempt and subject to a proposed programmatic exemption for Transportation facilities under the responsibility of the Washington State Department of Transportation to allow for routine maintenance and repair of existing highways and associated

facilities. This programmatic exemption is similar to one applied by Yakima County and would be included in the SMP Appendix.

The wastewater treatment plant could also be the subject of maintenance, repair, and expansion. A planned levee setback will require a change to how wastewater is treated and released to the Yakima River. In order to address this need, a new side channel is proposed with habitat improvements, and an extended mixing zone project is planned south of the treatment plant (See Section 3.5 for additional details).

Aquatic

The Aquatic ED applies to areas waterward of the ordinary high water mark of shoreline lakes.

Currently, Lake Aspen and Willow Lake waters are used for boating. Docks extend from residential areas. Ongoing maintenance needs would include repairing existing shoreline stabilization (only in front of the residential areas) and piers, and managing water quality and aquatic vegetation (milfoil and algae). Aquatic vegetation control for milfoil has included a variety of mechanical mechanisms, but success was finally achieved with introduction of grass carp. However, the increased clarity resulting from control of milfoil has resulted in algae blooms. Possible solutions could include planting native water lily and “floating islands” [currently in place at Buchanan Lake].

3.2.2 Allowed Uses

The SMP identifies specific uses and modifications permitted, prohibited, or allowed as conditional uses within each ED. The proposed SMP allows a few specific uses not identified in the County’s SMP. These allowed uses and the rationale for changes from the County SMP are as follows:

- Non-commercial aquaculture: This allows for conservation hatchery facilities, and other facilities that benefit shoreline functions.
- Public, community, and commercial boat launches, as well as private boat launches in the High Intensity ED: Boat launches are needed to improve access for river rescue safety and public access. Few boat launches would be anticipated, and they would need to follow mitigation sequencing to avoid impacts.
- Piers and docks in the High Intensity, Shoreline Residential, and Aquatic EDs: Piers and docks are only allowed on lake shorelines, and this allowance is consistent with existing conditions.

- Expansion of roads, highways, bridges, and railroads: Any expansion of transportation infrastructure would need to follow mitigation sequencing to avoid, minimize, and mitigate for effects on shoreline functions.

3.3 Regulations for Shoreline Uses and Modifications

The proposed SMP contains numerous shoreline modification and use policies and supporting regulations intended to protect the ecological functions of the shoreline and prevent adverse cumulative impacts. The following table provides a brief summary of the differences in the County’s adopted Regional SMP and the City’s proposed SMP, as well as the likely effects of those differences on ecological functions. As noted in Table 1, the majority of the proposed changes to the SMP either help to improve or maintain shoreline functions, and some changes are not directly applicable to shoreline functions (e.g., formatting changes and public access). None of the proposed changes to regulations for shoreline uses or modifications identified in Table 1 reduce protections of shoreline functions.

Table 1. Summary of changes in the proposed City of Yakima SMP compared to the Yakima County Regional SMP and the anticipated effect on ecological functions.

	Changes in City SMP compared to County’s Regional SMP	Effect on Ecological Functions
General Regulations		
Environmental Protection-17.05.020	<p>New section that applies to all areas in shoreline jurisdiction, not just critical areas and their buffers.</p> <ul style="list-style-type: none"> • Requires no net loss of functions (A). • Requires mitigation sequencing and preparation of a mitigation plan for any shoreline use or modification that is not entirely addressed by specific, objective standards in the proposed SMP (C-E). 	Maintains- provisions protect ecological functions
Shoreline Vegetation Conservation-17.05.030	<p>New section that applies in and outside of critical areas within shoreline jurisdiction.</p> <ul style="list-style-type: none"> • Requires mitigation for adverse impacts resulting from vegetation removal. 	Maintains- provisions require mitigation sequencing for vegetation removal
Water Quality, Stormwater, and Non-Point Pollution-17.05.040	<ul style="list-style-type: none"> • Added a general standard that development shall maintain surface and groundwater quantity and quality, and maintain no net loss of ecological functions (A). • Added standards that new development and redevelopment must comply with the latest edition of the Stormwater Management Manual for Eastern Washington, and best management practices must be employed, even if the Manual’s thresholds (e.g., area of disturbance) are not met (C)(1). 	Maintains- implementation of BMPs will help maintain water quality functions

	Changes in City SMP compared to County's Regional SMP	Effect on Ecological Functions
Public Access- 17.05.050	Section consolidated from many areas of the Regional SMP and added provisions consistent with the SMP Guidelines.	NA
Flood Hazard Reduction- 17.05.060	New section that establishes uses and standards for modifications within the channel migration zone (CMZ) and floodway. <ul style="list-style-type: none"> • Only development and subdivision in the floodway or CMZ that will not require structural shoreline stabilization measures is allowed (F). • Prohibits flood hazard reduction measures that will channelize stream flows, interfere with hydraulic processes, or undermine existing structures or downstream banks (E). 	Maintains- limits potential new restrictions/obstructions on the CMZ and floodway
Shoreline Uses and Modifications		
Agriculture- 17.07.010	Added provision prohibiting concentrated animal feeding operations (D).	Maintains- concentrated feedlots are prohibited under City's zoning
Aquaculture- 17.07.020	<ul style="list-style-type: none"> • Added standard that specifically references mitigation sequencing and no net loss (C). • Added standard that encourages aquaculture that promotes recovery of listed species or public recreation (E). 	Maintains/Improves- potential to bolster listed species recovery
Boating Facilities and Private Moorage Facilities- 17.07.030	Adds standards for boat ramps to ensure that they minimize the effect on channel form and hydraulics (G)(1).	Maintains- Boat ramps will be required to minimize (and mitigate) for impacts per Environmental Protection standards (17.05.020)
Commercial- 17.07.040	Added provision that mixed-use commercial development in shoreline jurisdiction must provide public benefit such as ecological restoration and public access (C).	Improves- provides incentive for restoration
Dredge and Dredge Disposal- 17.07.050	<ul style="list-style-type: none"> • Added standards that new development shall be sited and designed to avoid or, if that is not possible, to minimize the need for new and maintenance dredging (A). • Added standard that where dredging is permitted, mitigation sequencing must be followed (B). 	Maintains- Development will not exacerbate the need for dredging, and dredging will require mitigation sequencing
Fill- 17.07.060	<ul style="list-style-type: none"> • Fills shall meet no net loss of ecological function (A) • Establishes allowed applications of fill in sensitive areas and upland areas (B-C) • Erosion control measures and BMPs must be implemented (G) 	Maintains- provides standards to ensure that fill does not affect ecological functions
Industrial- 17.07.070	No substantive change	NA
In-Water Structures- 17.07.080	New Section <ul style="list-style-type: none"> • New standard that in-water structures do not degrade water quality (C). 	Maintains- Standards maintain functions and processes

	Changes in City SMP compared to County's Regional SMP	Effect on Ecological Functions
	<ul style="list-style-type: none"> • New standard requiring in-water structures to provide for the protection and preservation of ecosystem-wide processes, ecological functions, and cultural resources (F). 	
Mining-17.07.090	No substantive change	NA
Recreation-17.07.100	Added provision that recreational uses shall not result in a net loss of ecosystem functions.	Maintains- ensures no net loss
Residential-17.07.110	Added provision to ensure that shoreline stabilization and flood control structures are not necessary to protect proposed residences (C).	Maintains- minimizes occurrence of new stabilization features and encourages adequate shoreline setbacks
Shoreline Habitat and Natural System Enhancement-17.07.120	New section to provide standards to ensure that shoreline enhancement is based on the best available science and that they are maintained and monitored for long-term sustainability.	Improves- maximizes benefits of shoreline enhancement
Shoreline Stabilization-17.07.130	No substantive changes	NA
Transportation-17.07.150	Added provision requiring that new or expanded transportation and parking facilities be designed and located to have the least possible adverse effect on unique or fragile shoreline features, and that they will not result in a net loss of shoreline ecological functions (B).	Maintains- limits potential effect of new pollutant generating impervious surfaces on water quality and quantity, as well as habitat connectivity
Utilities-17.07.160	Added provision prohibiting new or expanded non-water-oriented utilities within shoreline jurisdiction unless no feasible alternative exists (B).	Maintains- minimizes habitat fragmentation resulting from new utility corridors.
Redevelopment, Repair, and Maintenance-17.07.170	<p>Section added to provide a process for multi-year management plans for maintenance and repair for:</p> <ol style="list-style-type: none"> 1. Dredging 2. Private development and facilities on private lakes 3. Public Parks and Recreation 4. Transportation facilities 5. Utility facilities, including, but not limited to wastewater and water systems 	<p>Maintains- provides administrative clarity on exempt development. Exempt development must still meet SMP provisions. Application criteria include providing information regarding:</p> <ul style="list-style-type: none"> • aquatic habitat protection measures • riparian and wetland protection measures • stormwater management practices • erosion and sediment control practices • re-vegetation or restoration activities • chemical and nutrient use and containment practices

	Changes in City SMP compared to County's Regional SMP	Effect on Ecological Functions
Existing Uses, Structures and Lots- 17.11	Amends standards to be consistent with WAC requirements for existing residential development.	NA

3.4 Critical Areas Regulations

The City’s critical area regulations that apply outside of shoreline jurisdiction are amended and integrated into the City’s proposed SMP critical areas regulations in order to meet Shoreline Management Act requirements and maximize regulatory consistency and clarity. Some critical area buffers are reduced in the proposed SMP compared to the County’s Regional SMP; however, the proposed shoreline buffers are consistent with existing conditions, and wetland buffers are consistent with Ecology’s guidance. Additionally, because the proposed SMP applies environmental protection and conservation standards to the entire area of shoreline jurisdiction, and not just critical areas and their buffers (as in the County’s SMP), the City’s proposed SMP is expected to maintain shoreline functions.

3.4.1 Wetlands

Proposed wetland buffers are consistent with Ecology’s *Guidance for Small Cities Eastern Washington Version*, revised October 2012. Required buffers are reduced compared to the County’s SMP; however, because they comply with Ecology’s guidance, they are expected to maintain wetland functions.

3.4.2 Fish and Wildlife Habitat and the Stream Corridor System

The proposed regulations establish allowed and prohibited uses within hydrologically related critical areas, as well as vegetative buffer standards for streams and lakes. Unlike the County SMP, which established a 100-foot buffer for all shoreline streams and lakes, the City’s SMP proposes regulations based on existing conditions, environment designations, and stream typing. The 100-foot buffer is maintained in the Essential Public Facilities, Urban Conservancy, and Floodway/CMZ EDs. Proposed buffers are reduced in the Shoreline Residential and High Intensity EDs, as indicated in Table 2. Proposed buffers in the High Intensity and Shoreline Residential EDs are consistent with, and are expected to maintain, existing functions.

Table 2. Proposed shoreline buffer widths in the High Intensity and Shoreline Residential environment designations.

	High Intensity		Shoreline Residential	
	Proposed Buffer	Existing Conditions	Proposed Buffer	Existing Conditions
Streams	75 feet	<ul style="list-style-type: none"> • City and UGA on Yakima River: High intensity development is separated from the shoreline by the Yakima Greenway Trail and a levee. Shoreline vegetation is limited • UGA on Blue Slough: 30-100 feet of intact vegetation separates Blue Slough from low intensity industrial uses. 	NA	City: NA
Lakes	50 feet	<ul style="list-style-type: none"> • City: 0-50 foot setback for high intensity industrial areas • Three large vacant lots. One large lot has approved industrial development extending within 37 feet of Willow Lake (Grette 2012). 	20 feet	Fully developed residential development with structural setbacks ranging from 0-50 feet, most commonly in the range of 15-25 feet. Vegetation commonly consists of maintained lawn extending to the water's edge.

For streams and ponds within shoreline jurisdiction that do not meet the standards for Shorelines of the State, buffers apply depending on the classification of the waterbody. Buffers on these waterbodies range from 75 feet for Type 2 streams and lakes, to no required buffer for Type 5 ephemeral streams. The County's SMP does not explicitly set a buffer for non-shoreline streams and lakes. These buffers are lower than the 100-foot standard buffer applied to hydrologically related critical areas in the County SMP, but the proposed City buffers appropriately reflect the varying width of vegetated buffers needed for aquatic habitat functions.

Buffer averaging is allowed if averaging will improve stream protection, or if averaging is necessary to allow reasonable use of a parcel (17.09.030(P)(4)). Buffers may be reduced if a road or railway crosses the buffer if the reduction would not result in a loss of vegetative functions (17.09.030(P)(3)).

3.4.3 Flood Hazard Areas

The proposed Flood Hazard Area regulations permits projects that avoid altering the flow of water in the floodway, causing erosion, filling the floodway, or increasing the base flood discharge.

3.4.4 Geologically Hazardous Areas

The City's Geologically Hazardous Areas regulations are similar to those found in the County's SMP, except that Channel Migration Zones are explicitly included in the City's Geologically Hazardous Areas regulations.

3.5 Shoreline Restoration Plan

The SMP guidelines state that "master programs shall include goals, policies and actions for restoration of impaired shoreline ecological functions." Although the SMP is intended to achieve no net loss of ecological functions through regulatory standards, practically, despite required practices to follow mitigation sequencing to avoid, minimize, and compensate for impacts on a site-specific scale, an incremental loss of shoreline functions may still occur at a cumulative level. These losses may occur through minor, exempt development; illegal development; failed mitigation efforts; or a temporal lag between the loss of existing functions and the realization of mitigated functions. The Restoration Plan, and the voluntary actions described therein, can be an important component in making up that difference in ecological function that would otherwise result.

The County's restoration plan included several projects underway or planned within the City, and since the County Restoration Plan was completed, several additional projects have been proposed or are underway within the City. City projects identified in the County's Shoreline Restoration Plan include the following.

- Yakima Habitat Improvement Project (YHIP)

The City of Yakima and Union Gap started a project to improve aquatic and riparian habitats in and around the Yakima Urban Growth Area. This project works in concert with past and ongoing efforts in the basin.

- Protect Normative Structure and Function of Critical Aquatic and Terrestrial Habitat

This program includes direct purchase of lands within 25 feet of either side of existing streams, creeks, and rivers, and purchase of "development rights" for lands between 25 feet and 50 feet of either side of existing streams, creeks and rivers within the Yakima Urban Area Boundary. As resources become available, the protected riparian corridors will be enhanced and/or restored.

In addition to these projects, other restoration projects planned or underway within the City and its UGA include:

- Instream Flow Enhancement

The U.S. Bureau of Reclamation (USBR), with funding from the Yakima River Basin Water Enhancement Project (YRBWEP), purchased a former campground and its water right. As a result of the purchase and a water right transfer, an additional 2.8 cubic feet per second of stream flow will be provided to Blue Slough and the Yakima River.

- Gap to Gap Levee Setback

The project will setback and upgrade the existing Drainage and Irrigation District (DID) 1 levee on the east side of the Yakima River. The project will restore 400 acres of floodplain and reduce flood hazards for urban infrastructure and development. This project, led by the City of Yakima, involves cooperation with multiple agencies, and is part of an integrated approach to watershed restoration. For example, the acquisition of the campground (above), and the relocation of the wastewater outfall location (discussed below) were necessary to eliminate constraints that would otherwise render the levee setback infeasible.

- City of Yakima Floodplain Ecosystem Restoration

The proposed levee setback, described above, has the potential to jeopardize the functionality of the outfall structure for the City of Yakima Regional Wastewater Treatment Facility (YRWWTF) on the west side of the river by allowing the thalweg of the channel (and the optimal mixing zone for sewage effluent) to migrate away from the current outfall location. In order to alleviate this constraint, the City proposes to construct an outfall system that is integrated into restored floodplain surrounding the site. The first phase of the project was funded in 2012 by the Salmon Recovery Funding Board. This phase will reshape a shallow gravel-pit pond in the floodplain, restore the pond's outlet to the Yakima River, and enhance the value of intergravel flow on the site and downstream. This project will ultimately set back the west-bank levee, adding an additional 200 to 300 acres of floodplain restoration within the Gap to Gap reach.

The City, in coordination with Yakima County, the City of Union Gap, and the Yakama Nation, developed a flood hazard management plan to identify and prioritize flood hazard reduction opportunities (YFCZD 2012). In addition to proposed structural actions, recommended actions fell into several programmatic categories, including inventory and study, planning and regulatory, maintenance and management, public outreach, and flood response. Recommendations were prioritized based on anticipated flood benefits. The majority of the proposed

actions would have secondary benefits of restoring floodplain processes and associated ecological functions.

On an individual project basis, implementation of each of the above-described projects and programs will result in a net improvement in shoreline functions within the City of Yakima.

4 NET EFFECT ON ECOLOGICAL FUNCTION

This Addendum to the Yakima County Regional CIA indicates that the proposed City of Yakima SMP is expected to maintain existing shoreline functions within the City of Yakima while accommodating the reasonably foreseeable future shoreline development. As discussed above, major elements of the SMP that diverge from the County’s Regional SMP fall into five general categories: 1) shoreline jurisdiction, 2) environment designations and allowed uses, 3) regulations for shoreline uses and modifications, 4) critical area regulations, and 5) voluntary components of the shoreline restoration plan. A summary of the areas of divergence and the effect on shoreline ecological functions are identified in Table 3.

Table 3. Summary of key features of the proposed SMP that differ from the Regional SMP and effects on ecological functions.

City SMP Features that Differ from the Regional SMP	Effects on Ecological Functions
Cowiche Creek is excluded from shoreline jurisdiction because it does not meet minimum flow criteria.	No effect on shoreline ecological functions. Land use outside of City limits along Cowiche Creek will still be regulated by the County’s SMP until annexed by the City, at which point it and the portion of Cowiche Creek outside of shoreline jurisdiction in City limits would be regulated by the City’s Critical Areas Regulations.
County’s Urban ED is split into High Intensity, Shoreline Residential, and Essential Public Facility EDs. An Aquatic ED applies waterward of the ordinary high water mark in lakes.	No adverse effect on shoreline ecological functions. Environment designations, allowed uses, and buffers are more closely correlated with land use and ecological conditions.
Several uses are permitted to improve public access, economic growth, and ecological enhancement.	Allowed uses are strictly regulated, such that no net loss of functions is anticipated.
Several new provisions pertain to shoreline uses and modifications, including: <ul style="list-style-type: none"> • Application of mitigation sequencing and vegetation conservation throughout shoreline jurisdiction, not just in critical areas • Reduced threshold for mandatory 	Improved protection of ecological functions throughout shoreline jurisdiction.

City SMP Features that Differ from the Regional SMP	Effects on Ecological Functions
<p>implementation of stormwater best management practices</p> <ul style="list-style-type: none"> Standards to ensure that flood hazard management measures do not impair ecological processes 	
<p>Critical area buffers are reduced in areas where existing conditions or state guidelines support the use of smaller buffers than those proposed in the Regional SMP.</p>	<ul style="list-style-type: none"> Shoreline buffers are consistent with existing vegetation widths in High Intensity and Shoreline Residential EDs. Standard buffer widths for non-shoreline waterbodies are scaled to the size and functions of the waterbody. Wetland buffers are consistent with Ecology's guidance for Eastern Washington.
<p>Several restoration actions are planned or underway, including and in addition to those identified in the County's Restoration Plan.</p>	<p>Implementation of voluntary restoration actions will improve shoreline functions.</p>

Given the above provisions and areas of divergence, implementation of the City's proposed SMP is anticipated to achieve **no net loss of ecological functions in the shorelines of the City of Yakima**. Voluntary actions identified and prioritized in the *Shoreline Restoration Plan* will provide the opportunity to enhance and restore shoreline functions over time.

5 REFERENCES

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