

# DRAFT CUMULATIVE IMPACTS ANALYSIS REPORT GRANT COUNTY SMP UPDATE

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## **Prepared for**

Grant County, Coulee City, City of Electric City, City of Grand Coulee, City of Soap Lake, Town of Krupp, and Town of Wilson Creek

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## LIST OF ACRONYMS AND ABBREVIATIONS

BLM	U.S. Bureau of Land Management
BOR	U.S. Bureau of Reclamation
CBP	Columbia Basin Project
Coalition	Town of Coulee City, City of Electric City, City of Grand Coulee, City of Soap Lake, and the Towns of Krupp and Wilson Creek
County	Grant County
DNR	Washington State Department of Natural Resources
Ecology	Washington State Department of Ecology
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
HPA	<u>Hydraulic Project Approval</u>
km <sup>2</sup>	Square kilometers
MTCA	Model Toxic Control Act
NOAA	National Oceanic and Atmospheric Administration
NPDES	<u>National Pollutant Discharge Elimination System</u>
NPS	National Parks Service
OHWM	ordinary high water mark
PUD	Public Utility District
RCW	Revised Code of Washington
RM	river mile
SDP	substantial development permit
SMA	Shoreline Management Act
SMP	Shoreline Master Program
SR	State Route
TNC	The Nature Conservancy
UDC	Unified Development Code
UGA	Urban Growth Area
USDOE	U.S. Department of Energy

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USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WQC	Water Quality Certification
WSCC	Washington State Conservation Commission
WSPRC	Washington State Parks and Recreation Commission

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# 1 INTRODUCTION

## 1.1 Report Purpose

Grant County (County) received grant funding from the Washington State Department of Ecology (Ecology) for the County, Town of Coulee City, City of Electric City, City of Grand Coulee, City of Soap Lake, and the Towns of Krupp and Wilson Creek (Coalition) to update existing (Grant County and Soap Lake) or develop new (all others) Shoreline Master Programs (SMPs). A primary purpose of this effort is to develop SMPs that comply with Chapter 90.58 of the Revised Code of Washington (RCW), the Shoreline Management Act (SMA), and Ecology’s 2003 Shoreline Master Program Guidelines (Chapter 173-26 Washington Administrative Code [WAC]).

The guidelines require the Coalition members to demonstrate that SMPs will result in “no net loss” to shoreline ecological functions during implementation. Developing this conclusion requires an examination of projected future development, how this development may risk ecological function and the regulatory, and non-regulatory actions including restoration plans, which can influence this risk.

WAC 173-26-201(2)c provides this guidance for protection of ecological functions of shorelines:

*“Master programs shall contain policies and regulations that assure, at minimum, no net loss of ecological functions necessary to sustain shoreline natural resources. To achieve this standard while accommodating appropriate and necessary shoreline uses and development, master programs should establish and apply:*

- *Environment designations with appropriate use and development standards; and*
- *Provisions to address the impacts of specific common shoreline uses, development activities and modification actions; and*
- *Provisions for the protection of critical areas within the shoreline; and*
- *Provisions for mitigation measures and methods to address unanticipated impacts.*

*When based on the inventory and analysis requirements and completed consistent with the specific provisions of these guidelines, the master program should ensure*

*that development will be protective of ecological functions necessary to sustain existing shoreline natural resources and meet the standard. The concept of "net" as used herein, recognizes that any development has potential or actual, short-term or long-term impacts and that through application of appropriate development standards and employment of mitigation measures in accordance with the mitigation sequence, those impacts will be addressed in a manner necessary to assure that the end result will not diminish the shoreline resources and values as they currently exist. Where uses or development that impact ecological functions are necessary to achieve other objectives of RCW 90.58.020, master program provisions shall, to the greatest extent feasible, protect existing ecological functions and avoid new impacts to habitat and ecological functions before implementing other measures designed to achieve no net loss of ecological functions.*

*Master programs shall also include policies that promote restoration of ecological functions, as provided in WAC 173-26-201 (2)(f), where such functions are found to have been impaired based on analysis described in WAC 173-26-201 (3)(d)(i). It is intended that local government, through the master program, along with other regulatory and nonregulatory programs, contribute to restoration by planning for and fostering restoration and that such restoration occur through a combination of public and private programs and actions. Local government should identify restoration opportunities through the shoreline inventory process and authorize, coordinate and facilitate appropriate publicly and privately initiated restoration projects within their master programs. The goal of this effort is master programs which include planning elements that, when implemented, serve to improve the overall condition of habitat and resources within the shoreline area of each city and county."*

Combined with the Restoration Plan, the Cumulative Impacts Analysis Report is the final analysis step for the Coalition's comprehensive SMP updates. This report includes a brief introduction to the County; a more detailed discussion of the setting is available through the Inventory Analysis and Characterization (IAC) report (Anchor QEA 2013). Also included is a discussion of anticipated development within the next twenty years; this is based on the land capacity analysis, presented in the IAC Report, which is further refined based on the foreseeable rate of development within each shoreline reach over the next 20 years.

Potential impacts to ecological functions from this development are identified along with provisions to address these impacts. Finally, based on all of these inputs, the anticipated future performance for each shoreline area is addressed. Overall the report will serve to demonstrate that future development under the proposed SMP will result in no net loss of shoreline ecological function in County and the Coalition.

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## 2 EXISTING CONDITIONS

The County is located in the geographic center of Washington state and encompasses a total area of 2,791 square miles (7,228.7 square kilometers [km<sup>2</sup>]), of which 2,681 square miles (6,943.8 km<sup>2</sup>) is land and 110 square miles (284.9 km<sup>2</sup>) (3.95 percent) is water. The County is bordered by Douglas and Okanogan Counties to the north, Adams and Lincoln Counties to the east, Franklin and Benton Counties to the South, and Yakima and Kittitas Counties to the West. The Columbia River flows in a deep valley along the southwestern boundary of the county. The northern part of the County is characterized by loess mantled hills that have been dissected by the Channeled Scablands. The southern part in general is a smooth, southward sloping plain that is deeply dissected and is interrupted by the Saddle Mountains and Frenchman Hills. Babcock Ridge and Beezly Hills border the northern part of the plain. Elevation ranges from 380 feet along the Columbia River in the southern part of the County to 2,882 feet on top of Monument Hill.

Fourteen incorporated cities and numerous unincorporated small towns and rural communities are located throughout the County, the largest of which are Moses Lake, Ephrata, and Quincy. Six of the seven cities with shoreline jurisdictional lands are participating in the Coalition effort; the City of Moses Lake SMP update is occurring through a separate grant and planning effort.

Coulee City is located at the south end of Banks Lake and Electric City is located at the north end of Banks Lake. Grand Coulee is located between Banks Lake and Lake Roosevelt on the Columbia River. Krupp is located along Crab Creek (river mile [RM] 44) and Wilson Creek is located at the confluence of Wilson and Crab Creeks (RM 37.5). The City of Soap Lake is located on the southern end of Soap Lake, the southern-most of the Sun Lakes in the north-central portion of the County.

This region of Washington has the lowest precipitation rates within the state. The semi-arid climate of the County has average annual temperatures between 40 and 49 degrees Fahrenheit (USACE 2008). Average annual precipitation ranges between 6 and 20 inches and is commonly associated with winter rains and snowfall and periodic summer

thunderstorms. Snowfall depths rarely exceed 8 to 15 inches and occur from December through February.

Water resources in the County are significantly affected by the Columbia Basin Project (CBP). The CBP is a large multi-purpose development that utilizes Columbia River water for irrigation, power, recreation, and flood control. Grand Coulee, Wanapum, and Priest Rapids Dams are the key structure that provide water and energy for the CBP (Anchor Environmental 2007). Much of the irrigation water delivered is recycled and reused before returning to the Columbia River. It is initially used for irrigation and then recaptured in drains, wasteways, and natural channels before being used again to irrigate additional farmland (Anchor Environmental 2007). Development of the CBP has caused an increase of water available for recreation. Before the CBP was developed, there were 35 lakes in the project area, including portions of Grant, Lincoln, Adams, and Franklin counties. There are now more than 140 lakes, ponds, and reservoirs (USBR 2011).

Existing land use throughout the county, cities, and towns' shoreline is primarily a mix of agricultural, residential, recreational, and commercial uses. There is also a significant portion of open space land within the entire County. Agricultural land within the County includes irrigate and non-irrigated lands. Non-irrigated lands primarily used for rangeland, wildlife areas, and non-irrigated cropland. Commercial use is minimal within the County's shoreline. Recreational uses are mostly located in parks and wildlife refuge areas under public ownership. Recreational uses are also available in privately owned land within shoreline. Developed urban areas make up a small percentage of the County land use.

Coulee City shoreline land use is entirely recreational (Coulee City Community Park). Land use within Electric City shoreline contains a mix of commercial, recreational, and single-family residential with recreational being the primary use. Grand Coulee City shoreline land use is predominantly open space. This also includes public facilities to support the Columbia Basin Project. Soap Lake shoreline is a mix of recreational and residential uses with a significant portion of undeveloped land within the UGA. Both Towns of Krupp and Wilson Creek have agriculture and supporting uses as primary uses along the shoreline.

### 3 REASONABLY FORESEEABLE FUTURE DEVELOPMENT AND POTENTIAL IMPACTS TO ECOLOGICAL FUNCTION

#### 3.1 Foreseeable Future Development

Grant County has a population of about 91,000 people as of 2012. Since 1981, the annual growth rate has ranged from 0.5 percent to 5 percent, with the highest growth occurring in the early and mid-1990s; the average annual growth rate has been about 2 percent (Grant County Trends 2012). A large portion of Grant County citizens reside in unincorporated areas (45 percent) and the most populated city is Moses Lake with 23 percent of the total (OFM 2012). With the positive population trends, further development within the County is anticipated over the next 20 years and is summarized within Table 1 for the County and Table 2 for Coalition. These Tables presents a number of development indicators and details for each shoreline reach. The Land Capacity section presents the amount of developable acres and corresponding number of residential units, which are based on existing land use designations. The Rate of Development includes the percentage of this total land capacity that is anticipated to be developed for residential or commercial use in the next 20 years based on the past development trend. The Environment Designations for each reach are identified and the anticipated residential, commercial, or recreational development within each designation is described. These descriptions are based on existing planning efforts and discussions with planning staff.

**Table 1  
County Shorelines**

<b>COLUMBIA RIVER - Reach 1</b>	
<b>Land Capacity</b> 51 Developable Acres/8 Residential Units	<b>Rate of Development</b> 0%
<b>Environment Designation</b>	<b>Anticipated Development</b>
Recreation	Central segment of the mainland portion of this designation will contain the majority of new residential development. But removal of condos and RV development on the island will result in a net reduction of residential development in this Reach. Recreational development will replace residential development on the island; these improvements will include trails, parks, campgrounds, viewing areas, and water access points.
Natural	None

Rural Conservancy	None
<b>COLUMBIA RIVER - Reach 2</b>	
<b>Land Capacity</b> 656 Developable Acres/34 Residential Units	<b>Rate of Development 25-30%</b>
Natural	None
<b>Environment Designation</b>	<b>Anticipated Development</b>
Rural Conservancy	Much of the Rural Conservancy area is under the State and Federal ownership and part of the Quincy Wildlife area. Grant PUD also owns or retains easements along shoreline. Anticipated development in Rural Conservancy, therefore, is limited to certain locations such as areas south of Sunland Estates, and north of Wanapum Dam. Only 30% of the existing capacity is anticipated to be utilized which may result in development of 10 dwelling units in future. On Grant PUD land near Wanapum Dam and Frenchman Coulee area, several public access opportunities have been identified including boat launch, overlook, kiosks etc.
Shoreline Residential	Shoreline area in this environment is mostly developed. Southern segment of this designation has limited development potential.
High-Intensity Public Facility	On Grant PUD land near Wanapum Dam, several public access improvements for the boat launches, Overlook, Heritage Center, interpretive kiosks, and signs have been identified.
<b>COLUMBIA RIVER - Reach 3</b>	
<b>Land Capacity</b> 726 Developable Acres/50 Residential Units	<b>Rate of Development</b> 3%
<b>Environment Designation</b>	<b>Anticipated Development</b>
Rural Conservancy	State and Grant PUD own or lease most of the shoreline in Rural Conservancy environment. Limited development is anticipated in Schawana and south of Lower Crab Creek which may result in couple of new dwelling units in future.
High-Intensity Public facility	None other than regular maintenance and operation.
<b>COLUMBIA RIVER - Reach 4</b>	
<b>Land Capacity</b> 288 Developable Acres/14 Residential Units	<b>Rate of Development</b> 0%
<b>Environment Designation</b>	<b>Anticipated Development</b>
Rural Conservancy	There is limited privately owned land in this environment. But due to the proximity of Hanford Federal Reserve and Grant PUD's efforts to purchase remaining private land, development in this reach may not be practical. Therefore, this reach is most likely will not have any new residential development. There is potential for public

	access improvement near existing boat launches.
<b>COLUMBIA RIVER - Reach 5</b>	
<b>Land Capacity</b> 0 Developable Acres/0 Residential Units	<b>Rate of Development</b> 0%
<b>Environment Designation</b>	<b>Anticipated Development</b>
Rural Conservancy	This entire reach is restricted under Hanford Federal Reserve land use. No development is anticipated in this reach. Public access could be limited to seasonal use of the shoreline for hunting and fishing.
<b>Crescent Bay and Lake Roosevelt</b>	
<b>Land Capacity</b> 0 Developable Acres/0 Residential Units	<b>Rate of Development</b> 0%
<b>Environment Designation</b>	<b>Anticipated Development</b>
Rural Conservancy	The entire shoreline is owned by the National Park Services. No development is anticipated in this reach. Public access improvement is limited due to the rocky and steep nature of the shoreline
High-Intensity Public facility	None other than regular maintenance and operation.
<b>Banks and Associated Lakes</b>	
<b>Land Capacity</b> 0 Developable Acres/0 Residential Units	<b>Rate of Development</b> 0%
<b>Environment Designation</b>	<b>Anticipated Development</b>
Natural	The entire shoreline is Federally owned. No residential development is anticipated in this environment. Public access improvements have been identified in Banks Lake. Public access improvement would add camping and boat parking areas, and signage.
Recreation	No residential development is anticipated in this environment. There is potential for improvement of recreational amenities in Steamboat Rock State Park. Improvements would include expansion of existing trail system, and addition of campground.
<b>Coffee and Long Lakes</b>	
<b>Land Capacity</b> 62 Developable Acres/2 Residential Units	<b>Rate of Development</b> 0%
<b>Environment Designation</b>	<b>Anticipated Development</b>
Rural Conservancy	Although the environment has some residential development capacity, but development is not practical due to lack of access and utilities. No development is

	anticipated in this reach. No public access improvement is anticipated.	
<b>Sun Lakes – Blue Lake</b>		
<b>Land Capacity</b> 88 Developable Acres/98 Residential Units	<b>Rate of Development</b> 90-95%	
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Recreation	The Recreation environment is already developed with resorts and recreational facilities. Recreational uses could include maintenance and modifications but no new residential development is anticipated in this area.	
Shoreline Residential	Most of the shoreline is already developed in this environment. Additional infill development can occur in future which would add about 10 new residential units. There is one boat launch in this environment. USFW is likely to improve the boat launch or add more public access points in this environment.	
Shoreline Residential - Low Intensity	The Shoreline Residential - Low Intensity environment is mostly undeveloped. Most of the development in Blue Lake is anticipated to occur in this environment. About 95 percent of the area could be developed in future adding about 80 new dwelling units. New public access will be required as part of the new development.	
Rural Conservancy	Much of the Rural Conservancy environment is anticipated to remain unchanged. The west bank of the lake contains high bank and abuts State Route (SR) 17/Coulee Corridor. No additional public access improvement is expected in this area.	
<b>Sun Lakes – All Others</b>		
<b>Land Capacity</b> 248 Developable Acres/12 Residential Units	<b>Rate of Development</b> 0%	
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Natural	Lenore Lake is mostly under Federal ownership with high bank on the east side. East bank of Alkali Lake and the wildlife refuge area of Deep lake are undeveloped. No change is anticipated in any of the Natural environment.	
Rural Conservancy	The Little Soap and Alkali Lakes are undeveloped. No development is anticipated in this environment.	
High-Intensity Public facility	Except for ongoing maintenance and operation, no new development is anticipated in this environment.	
Recreation	Recreational opportunities in Deep Lake would be improved over time. This would not result in additional development.	
Public-Recreation Conservancy	Passive recreation opportunities could be improved in Deep Lake and Dry Falls Lake. No new development is anticipated.	
<b>Sun Lakes – Park Lake</b>		
<b>Land Capacity</b>	<b>Rate of Development</b>	

32 Developable Acres/4 Residential Units		0%
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Recreation	Existing resort and recreational opportunities on the north and south sides of the lake are expected to continue. No new development is anticipated in the Recreation environment.	
Public-Recreation Conservancy	Passive recreation opportunities could be improved. No new development is anticipated.	
<b>Soap lake - Unincorporated</b>		
<b>Land Capacity</b> 58 Developable Acres/20 Residential Units		<b>Rate of Development</b> 10%
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Rural Conservancy	Development is anticipated on the north end of the lake near SR-17. Confederated Tribes of Indian Reservation owns property next to the RV park which could be developed with intense recreational and commercial uses. Such development will likely to have public access. The existing RV park also likely to improve or add new public access. Within the remaining shoreline area, only 10 percent of the total residential capacity is anticipated to be absorbed over the next 20 years, which will result in 2 to 3 dwelling units.	
<b>Reservoirs along Main Canal</b>		
<b>Land Capacity</b> 180 Developable Acres/7 Residential Units		<b>Rate of Development</b> 0-90%
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Natural	This environment is mostly under federal ownership. It contains steep bank on both sides of the Billy Clap Lake. No change or new development is anticipated in the Natural environment.	
Rural Conservancy	Development is anticipated on the west end of Brook Lake in the Rural Conservancy environment. This area can add about 5 to 6 lots in future.	
Shoreline Residential	The existing Shoreline Residential environment is fully developed and no new development is anticipated in future. Existing boat ramp and parking can be improved in future to add more parking.	
High-Intensity Public facility	Except for ongoing maintenance and operation, no new development is anticipated in this environment.	
<b>Small Lakes South of Wilson Creek</b>		
<b>Land Capacity</b> 132 Developable Acres/3 Residential Units		<b>Rate of Development</b> 0%

<b>Environment Designation</b>	<b>Anticipated Development</b>
Rural Conservancy	This environment is mostly agricultural or undeveloped. Future development in this area is not practical due to land of facilities and ground water issues. .
<b>Ephrata/North Rocky Ford Lakes</b>	
Land Capacity 145 Developable Acres/30 Residential Units	<b>Rate of Development</b> 0%
<b>Environment Designation</b>	<b>Anticipated Development</b>
Natural	No new development is anticipated in the Natural environment.
Rural Conservancy	This environment is mostly under State ownership. Although DNR owned land has development capacity, but development is not practical in this environment due to lack of adequate access. Only 1 or 2 units can be developed over time. No future public access is anticipated.
<b>Moses Lake – Reach 1</b>	
Land Capacity 322 Developable Acres/90 Residential Units	<b>Rate of Development</b> 50%
<b>Environment Designation</b>	<b>Anticipated Development</b>
Rural Conservancy	This environment is currently undeveloped and is largely under a single ownership. Anticipated Development in this environment would largely depend on the market condition. Based on the past trends it is anticipated that half of the development capacity of the shoreline will be absorbed in the next 20 years timeframe to add approximately 15 new residential units. Public access is expected to be added as part of the future development.
Shoreline Residential	Most of the Shoreline Residential environment is partially developed. Subreach 1b is currently undeveloped. Any future development in this subreach is anticipated to occur outside of the 200 feet of shoreline due to steep slope in this location. Considering the past trends, development in this reach is anticipated at half of its full capacity which will add approximately 26 new residential units. Public access is expected to be added as part of the future development.
Recreation	Connelly Park in this environment is anticipated to have park, recreation and public access improvements. Preferred uses has been identified from a public input and survey in 2010, which includes facilities such as picnic area, boating, fishing, camping, trail, parking, and similar uses.
<b>Moses Lake – Reach 2</b>	
Land Capacity 154 Developable Acres/456 Residential Units	<b>Rate of Development</b> 50%
<b>Environment Designation</b>	<b>Anticipated Development</b>

Natural	No new residential development is anticipated in this environment.	
Rural Conservancy	No major residential development is anticipated in this environment.	
Shoreline Residential - Low Intensity	Shoreline Residential - Low Intensity environment in subreach 2a is under the same single ownership that extends from the abutting Rural Conservancy environment in Moses Lake Reach 1. Development in this area is likely to occur outside the shoreline jurisdiction due to steep slopes and high banks. The area to the east under this environment also has low potential of development within shoreline.	
Shoreline Residential	Most of the future development in Moses Lake – Reach 2 is expected to occur in this environment. New development intensity will vary between sub-reaches. Development potential is high within the UGA in sub-reach 2a. Sub-reach 2b is partially developed and is most likely to have more new residential developments. Sub-reach 2f is already platted and is vacant. This area is likely to have new residential developments. Subreach 2g is almost built out. New infill residential development can occur in this area. Overall, about half of the total development capacity is anticipated to be materialized in this environment. This will add approximately 228 new residential units. This environment lacks public access and will need new public access as part of new development.	
<b>Moses Lake – Reach 3</b>		
Land Capacity 177 Developable Acres/587 Residential Units	<b>Rate of Development</b> 25-50%	
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Natural	No new residential development is anticipated in this environment.	
Rural Conservancy	This environment is partially developed and is anticipated to have more residential development in future.	
Shoreline Residential - Low Intensity	No major residential development within shoreline is anticipated in this environment due to high banks and SR-17.	
Shoreline Residential	Most of the future development of Moses Lake – Reach 3 is anticipated to take place in the Shoreline Residential environment. However, future development will be limited in certain areas. Although Cascade Valley area indicates high development capacity, the area lacks adequate facilities for future development. Unless the City of Moses Lake adds water and sewer facilities to support development in this UGA area, development is least likely to occur. Based on this, anticipated development in this reach could be 25 to 50 percent of its actual capacity. This could add from 150 to 290 new residential units in this environment. The area currently lacks public access; therefore, it is likely that future developments would require the addition of new public access features.	
<b>Quincy Basin Lakes</b>		
Land Capacity 1798 Developable Acres/81 Residential Units	<b>Rate of Development</b> 5-10%	

<b>Environment Designation</b>	<b>Anticipated Development</b>
Rural Conservancy	About half of this environment is publicly owned. Due to limited access, development would be limited in this environment. Only 10 percent of the total development capacity is anticipated to occur in future which would include about 8 new residential units in this environment.
<b>Potholes/Frenchman Coulee Lakes</b>	
Land Capacity 50 Developable Acres/198 Residential Units	<b>Rate of Development</b> 100%
<b>Environment Designation</b>	<b>Anticipated Development</b>
Natural	Most of the area is difficult to access. Therefore, major residential or recreational development is not anticipated in this environment. Some of the lakes have public access and passive recreation opportunities. Limited passive public access improvements can occur as part of the Columbia Basin Wildlife Area Management Plan.
Public-Recreation Conservancy	No new major development is anticipated in this environment. Some of the lakes have public access and passive recreation opportunities. Limited passive public access improvements can occur as part of the Columbia Basin Wildlife Area Management Plan
Recreation	Hilltop Lake is privately owned and access from Interstate 90. This area is anticipated to be fully developed. This will add 198 residential units in this environment. New development will most likely have public access improvements.
High-Intensity Public Facility	Except for ongoing maintenance and operation of the irrigation facility, no new development is anticipated in this environment.
<b>Potholes Reservoir – Reach 1</b>	
Land Capacity 75 Developable Acres/0 Residential Units	<b>Rate of Development</b> 0%
<b>Environment Designation</b>	<b>Anticipated Development</b>
Natural	This environment is publicly owned by USBR (Potholes Wildlife Refuge Area). No major development is anticipated. Potential public access improvements will be passive and low impact types with access for foot traffic and minor road improvement.
<b>Potholes Reservoir – Reach 2</b>	
Land Capacity 9 Developable Acres/9 Residential Units	<b>Rate of Development</b> 25%
<b>Environment Designation</b>	<b>Anticipated Development</b>

Rural Conservancy	Shoreline in this environment is publicly owned. No major development is anticipated. Potential public access improvements will be passive and low impact types with access for foot traffic and minor road improvement.	
Recreation	Potholes State Park and Mardon Resort in this environment offer recreational and shoreline access facilities. Except for the recreational areas, the management area is largely unimproved. Development could occur in Mardon Resort at a lower intensity to add couple of new residential units. New public access features could be added as part of the hotel development outside the shoreline jurisdiction.	
High-Intensity Public Facility	Except for ongoing maintenance and operation, no new development is anticipated in this environment.	
<b>Drumheller Channels Lakes</b>		
Land Capacity 57 Developable Acres/7 Residential Units	<b>Rate of Development</b> 40-50%	
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Public-Recreation Conservancy	This environment is part of the Potholes Wildlife Area, Seep Lake Wildlife Area, and Columbia National Wildlife Area. All of the lakes have public access through local roads. No new major development is anticipated. Public access improvement could add campground, hunting, fishing and wildlife viewing areas.	
Rural Conservancy	This environment is part of the Potholes Wildlife Area, Seep Lake Wildlife Area, and Columbia National Wildlife Area. All of the lakes have public access through local roads. Public access improvement could add campground, hunting, fishing, and wildlife viewing areas. New development can take place in the RV park along Warden Lake which could add 3 to 4 additional units. .	
<b>Lakes North of Lower Crab Creek</b>		
Land Capacity 289 Developable Acres/30 Residential Units	<b>Rate of Development</b> 0%	
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Natural	This environment is mostly publicly owned as part of Columbia National Wildlife Refuge Area and Crab Creek Wildlife area. Lakes in this environment have limited public access to shoreline due to the sensitive nature of the wildlife area. No new development or major public access improvement are anticipated here.	
Public-Recreation Conservancy	Shoreline along Burkett Lake is owned by Grant PUD as part of the Burkett Lake Recreation Area. No new residential development is anticipated here. Recreational and public access improvements are anticipated only on Burkett Lake which would add fishing pier, kiosks, and trails associated with FERC 2010 licensing.	
Rural Conservancy	No new development in anticipate in this environment in Red Rock Lake.	
<b>Lower Grant County Lakes</b>		

Land Capacity 102 Developable Acres/5 Residential Units		<b>Rate of Development</b> 0%
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Natural	Saddle Mountain Lake shoreline in this environment is publicly owned as part of the Hanford Reach National Monument, Saddle Mountain Unit. No new development is anticipated in this environment. Public access is mostly restricted in this environment. Anticipated public access will depend on Hanford Reach National Monument Comprehensive Conservation Plan implementation and will be of passive type such as hunting and fishing.	
Rural Conservancy	Shoreline in this environment is part of the Priest Rapids Wildlife area and is owned by WDFW. No new development or public access improvements are anticipated in this environment.	
<b>Lind Coulee</b>		
Land Capacity 856 Developable Acres/21 Residential Units		<b>Rate of Development</b> 0%
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Natural	No new residential development is anticipated in this environment.	
Rural Conservancy	This environment is mostly privately owned and heavily used for agriculture. New residential development is not practical here. No public access is anticipated due to private ownership of and.	
<b>Lower Crab Creek</b>		
Land Capacity 1405 Developable Acres/39 Residential Units		<b>Rate of Development</b> 0%
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Natural	This environment is mostly under public ownership and is part of the Columbia National Wildlife Area and Crab Creek Wildlife Area. No new development is anticipated in this environment. Improvements in public access include creating hunting areas, improving trails and overall access to limited areas.	
Rural Conservancy	Shoreline in this environment lacks access and public facilities for future development. No major development or public access is anticipated in this environment.	
<b>Rocky Ford Creek</b>		
Land Capacity 389 Developable Acres/53 Residential Units		<b>Rate of Development</b> 10%
<b>Environment Designation</b>	<b>Anticipated Development</b>	

Natural	Southern segment of this environment is part of the Gloyd Seeps Wildlife Area. Limited shoreline access is available. No new development is anticipated in this environment.	
Rural Conservancy	Lack of access and public facilities will prohibit future development in this area. No public access is anticipated in this environment. About 10% of the current development capacity could be utilized in future which will add about 5 residential units.	
High-Intensity Public Facility	Except for ongoing maintenance and operation, no new development is anticipated in this environment.	
<b>Upper Crab Creek Reach 1 – County Line to Brook Lake</b>		
Land Capacity 1141 Developable Acres/29 Residential Units	<b>Rate of Development</b> 0%	
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Rural Conservancy	Shoreline in this environment is entirely under private ownership and is mostly used for agricultural purposes. Opportunity for new major development or public access are limited due to private ownership and the current agriculture uses.	
<b>Upper Crab Creek Reach 2 – Brook Lake to Moses Lake</b>		
Land Capacity 2,742 Developable Acres/217 Residential Units	<b>Rate of Development</b> 30-50%	
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Rural Conservancy	This environment is partly within the North Columbia Basin Gloyd Seeps Wildlife Recreation area. About half of the environment is publicly owned. USBR is in the process of buying additional land. This would limit new developments. Development pressure will be higher near the airport area. About 30% to 40% of the total potential may be utilized over time to add about 60 to 80 new residential units in this environment. New public access could be added on the WDFW land.	
<b>Sand Hollow Wasteway</b>		
Land Capacity 2,742 Developable Acres/29 Residential Units	<b>Rate of Development</b> 0%	
<b>Environment Designation</b>	<b>Anticipated Development</b>	
Rural Conservancy	No major development is anticipated in this environment.	

**Table 2**  
**City Shorelines**

<b>COULEE CITY</b>	
<b>Land Capacity</b> 0 Developable Acres/0 Residential Units	<b>Rate of Development</b> 0%
<b>Environment Designation</b>	<b>Anticipated Development</b>
Urban Conservancy	The unimproved portion of the Coulee City Community Park is not anticipated to have any new development. The existing trail will be maintained.
Recreation	The Coulee City Community Park is under a lease agreement from USBR. No residential development is anticipated in this environment. The park provides ample public access and recreation opportunities. Anticipated park improvement includes road and infrastructure improvement, boat launch, and campground improvement and addition of moorage, fueling station, fishing platform, and cleaning station.
<b>ELECTRIC CITY</b>	
<b>Land Capacity</b> 28 Developable Acres/16 acres developable	<b>Rate of Development</b> 0%
Urban Conservancy	No major development is anticipated in this environment.
Recreation Conservancy	Shoreline in this environment is owned by the Department of Natural Resources. The area is anticipated to have recreational development. This could add approximately 20-25 tent sites in the next 8 years, and 15 dry use cabins in the next 20 years. This area is also anticipated to include hiking trails.
Recreation	Sandbanks Resort currently has recreational facilities such as boat moorage and launch, campgrounds, RV facilities, cabins, banquets, recreational rental facilities, and parking. Coulee Playland area is also developed with public access and recreational facilities such as boat moorage and launch, campgrounds and RV facilities. No new development is anticipated in this environment.
<b>CITY OF GRAND COULEE</b>	
<b>Land Capacity</b> 0 Developable Acres/2 Residential Units	<b>Rate of Development</b> 0%
Urban Conservancy	No major development is anticipated in this environment.
Shoreline Residential	Two new residential units can be built in future which would be south of SR 155.
High-Intensity Public facility	According to USBR plan, the North Dam Park could add a fishing jetty and fishing pier for persons with disabilities. No other major development is anticipated.
<b>TOWN OF KRUPP</b>	
<b>Land Capacity</b> 1 Developable Acres/4 Residential Units	<b>Rate of Development</b> 25%
Conservancy	A portion of the agricultural and residential lands is set aside through a land

	conservation effort in a cooperative effort among the landowner, Ecology, and the Lincoln Conservation District. It is anticipated that some of the residential lands could be developed in future to add from 2 to 4 new residential developments. No new public access is anticipated.
<b>CITY OF SOAP LAKE</b>	
<b>Land Capacity</b> 14 Developable Acres/57 Residential Units	<b>Rate of Development</b> 30%
Urban Conservancy	This environment mostly contains SR 17. No major development or public access opportunity is anticipated in this environment.
Shoreline Residential - Low Intensity	Most of the City's future residential development is anticipated in this environment. This environment could add approximately 40 new residential development in this shoreline. New development is anticipated to add public access opportunities.
Shoreline Residential	Most of the shoreline is already developed in this environment. Additional infill development can occur in future which would add about 10 to 12 new residential units. New public access is not anticipated in this environment.
Public Recreation Conservancy	Improvements of existing amenities on the West Beach Park could occur in future. No residential development is anticipated in this environment.
Recreation	The City is planning to build a boat launch on the park. Improvements of existing amenities could occur in future. No residential development is anticipated in this environment. .
<b>WILSON CREEK</b>	
<b>Land Capacity</b> 0 Developable Acres/0 Residential Units	<b>Rate of Development</b> 0%
Rural Conservancy	No new development is anticipated in this environment.
High-Intensity - Ag Industrial	No new development is anticipated in this environment. Regular operation and maintenance of the agricultural- industrial facilities are anticipated to continue.

### 3.2 Potential Impacts to Ecological Function from Development

Conventional development can lead to negative impacts to the ecological function of shorelines. The degree of impacts can be tied to the intensity of development, the intensity of human use, the buffer distance between upland development and the shoreline, whether shoreline features such as over-water structures and bank hardening are included, and the maintenance operation procedures and materials used. Potential impacts are described below based on the categories of Hydrology, Sediment, Water Quality, and Habitat.

**Hydrology:** Impervious surfaces affect subsurface storage and flows, shoreline hardening can affect subsurface water supply cycle impacting hyporheic exchange. Overwater structures can affect surface flow dynamics (creating eddies, localized changes in water velocity).

**Sediment:** Sheet flow from impervious surfaces can increase soil erosion and impact the natural nutrient cycles. Vegetation removal also increases soil erosion. Shoreline hardening can affect the sediment supply cycle impacting hyporheic exchange; it can also increase wave energy and thus soil/sediment erosion at the toe of slope and transfer energy downstream/down current of the hardened area. Wakes from recreation vessels can further exacerbate soil and sediment erosion issues.

**Water Quality:** Impervious surfaces affect nutrient cycling and run-off from these surfaces may include toxins or pathogens affecting water quality. Vegetation alterations have similar impacts and may also increase water temperatures due to the loss of overhanging canopies. Landscaped areas where fertilizers, herbicides, and/or pesticides are used, contribute to harmful toxin inputs into the aquatic environment. At boat ramps, gasoline and other chemicals associated with vessel and truck operations and maintenance can potentially enter the aquatic environment.

**Habitat:** Development including shoreline infrastructure can replace habitat patches and fragment patches and/or corridors. Disturbance may increase invasive wildlife and plant species limiting resources for native species. Over-water structures alter sediment, organic material pathways and the photic zone, aquatic fill can affect spawning habitat and shoreline hardening may replace variable sized nearshore sediment materials with large homogenous substrates less conducive to threatened and endangered aquatic species. Artificial light and increased noise can disturb native wildlife species.

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## **4 PROTECTION PROVISIONS OF THE PROPOSED SMP AND ESTABLISHED REGULATION**

The County and Coalition Cities SMPs will work in conjunction with other city, state, and federal regulations and programs, which aim to protect ecological resources and protect the health and well-being of citizens. The following section summarizes Critical Area and state and federal regulations, restoration plans, and also describes activities that will be exempt from shoreline development permits that are administered through the SMP.

### **4.1 Critical Area Protection and Mitigation**

Grant County and the Coalition each have critical areas regulations for wetlands, frequently flooded areas, geologically hazardous areas, aquifer recharge areas, and fish and wildlife habitat conservation areas. Existing regulations provide provisions for the protection and mitigation of environmentally sensitive areas within Grant County's shoreline jurisdiction. Unified Development Code (UDC) Chapter 24.08 Article II describes general mitigation requirements including avoiding, minimizing, rectifying, or compensating for adverse impacts to regulated critical areas or their buffers. Table 3 includes a summary of these regulations by jurisdiction:

**Table 3  
Critical Areas Regulation Summary (as of 2012)**

Jurisdiction	Date of Last Update	Wetland Rating System	Stream Classification System	Protection Standards				
<b>Grant County</b>	2011	Ecology E.WA (1991 version)	None	<b>Wetlands</b>				
<b>Title No.</b>				<b>Cat 1</b>	<b>Cat 2</b>	<b>Cat 3</b>	<b>Cat 4</b>	
UDC 24.09.010 - 24.08.630				<b>Buffer (feet)</b>	100	75	50	25
General; Wetlands; Fish & Wildlife Cons. Areas; Critical Aquifer Recharge Areas; Geologically Haz. Areas; Freq. Flooded Areas.				<b>Mitigation Ratio</b>	Cat 1 4:1	Cat 2 2:1	Cat 3 1.5:1	Cat 4 1.25:1
				<b>HCA (Habitat Conservation Area)</b>				
		<b>Buffer (feet)</b>	No permit unless development activities are mitigated within 300 feet of HCA, possible conditions including buffer zones (24.08.340).					
		<b>Mitigation</b>	Mitigation shall be required for loss of area or function and value of fish and wildlife habitat regulated under this subsection.					
		<b>Habitat Management Plan</b>	If it is determined by the Administrative Official that a proposed development will likely have a significant adverse impact on a HCA, the applicant shall prepare and implement a Habitat Management Plan in accordance with GCC § 24.08.360					
Jurisdiction	Date of Last Update	Wetland Rating System	Stream Classification System	Protection Standards				
<b>Coulee City</b>	2006	Ecology E.WA (not specified)	None	<b>Wetlands</b>				
<b>Title No.</b>				<b>Cat 1</b>	<b>Cat 2</b>	<b>Cat 3</b>	<b>Cat 4</b>	
16.08.160 - 16.08.230				<b>Buffer (feet)</b>	50	25	20	10
Wetlands; Critical Aquifer Recharge Areas; Geologically Haz. Areas; Freq. Flooded Areas; Fish & Wildlife Habitat Cons. Areas.								
				<b>Aquatic Habitat</b>				
		References compliance with general species population standards but these are not specified						
Jurisdiction	Date of Last Update	Wetland Rating System	Stream Classification System	Protection Standards				
<b>Soap Lake</b>	2009	Ecology E.WA (not specified)	<u>Priority/Important</u> Two-tiered system based on sensitivity of habitat to development related disruption	<b>Wetlands</b>				
<b>Title No.</b>				<b>Cat 1</b>	<b>Cat 2</b>	<b>Cat 3</b>	<b>Cat 4</b>	
14.12.100 - 14.12.140				<b>Buffer (feet)</b>	250	200	150	50
Critical Aquifer Recharge Areas; Fish & Wildlife Habitat Cons. Areas; Freq. Flooded Areas; Geologically Haz. Areas; Wetlands.				Major Development	125	100	75	25
				<b>Mitigation</b>	Mitigation efforts, when allowed, shall ensure that development activity does not yield a net loss of the area or function.			
		<b>Aquatic Habitat</b>						
		<b>Buffer (feet)</b>	Establishment of appropriate and adequate buffer zones within mitigation plans					
		<b>Habitat Management Plan</b>	A fish/wildlife habitat management and mitigation plan is required for all proposed developments determined to be within a "Priority Habitat Area". For					

**Table 3  
Critical Areas Regulation Summary (as of 2012)**

Jurisdiction	Date of Last Update	Wetland Rating System	Stream Classification System	Protection Standards				
<b>Grand Coulee</b>	2011	Ecology E.WA (2004/2007)	Federal, State, Priority, Local. Four-tiered system based on sensitivity of habitat to development related disruption	<b>Wetlands</b>				
<b>Title No.</b>				<b>Buffer (feet)</b>	Cat 1	Cat 2	Cat 3	Cat 4
17.18.070 - 17.18-090				Standard	250	200	150	50
Critical Aquifer Recharge Areas; Fish & Wildlife Habitat Cons. Areas; Freq. Flooded Areas; Geologically Haz. Areas; Wetlands.				Additional (20-28 habitat points)	Add 50 feet	Add 50 feet	Add 70 feet	N/A
				Additional (29-36 habitat points)	Add 100 feet	Add 100 feet	N/A	N/A
				<b>Mitigation Ratio</b>	Cat 1 6:1	Cat 2 3:1	Cat 3 2:1	Cat 4 1.5:1
				<b>Riparian</b>				
		<b>Buffer (feet)</b>	Residential	Commercial and Industrial	Open Space			
			50	100	150			
<b>Wilson Creek</b>	2009	Ecology E.WA (2004/2007)	Priority, Feeding, Habitat. Three-tiered system based on sensitivity of habitat to development related disruption	<b>Wetlands</b>				
<b>Title No.</b>				<b>Buffer (feet)</b>	Cat 1	Cat 2	Cat 3	Cat 4
Critical Areas Regulations (Draft)					250	200	150	50
Aquifer Recharge Areas; Fish & Wildlife Habitat Cons. Areas; Freq. Flooded Areas; Wetlands; Geologically Haz. Areas.				<b>Mitigation Ratio</b>	Mitigation ratios shall be established using Best Available Science. Table 8D-11 in Wetlands in Washington State, Volume 2: Guidance for Protecting and Managing Wetlands shall be the preferred source of BAS for wetland mitigation projects.			
				<b>Aquatic Habitat</b>				
		<b>Buffer (feet)</b>	Buffer widths shall reflect the classification and sensitivity of the habitat and the intensity of activity proposed, and shall be consistent with any management recommendations issued by the WDFW or other Best Available Science					
<b>Krupp</b>	2006	Ecology E.WA (2004/2007)	none	<b>Wetlands</b>				
<b>Title No.</b>				<b>Buffer (feet)</b>	Cat 1	Cat 2	Cat 3	Cat 4
Critical Areas Ordinance 7.2					250	150	75	50
Wetlands; Aquifer Recharge Areas; Fish & Wildlife Habitat Cons. Areas; Freq. Flooded Areas; Geologically Haz. Areas.		<b>Aquatic Habitat</b>						
		General species population standards						

**Table 3  
Critical Areas Regulation Summary (as of 2012)**

Jurisdiction	Date of Last Update	Wetland Rating System	Stream Classification System	Protection Standards				
Electric City	2005	Ecology E.WA (2004/2007)	Critical, Awareness. Two-tiered system based on sensitivity of habitat to development related disruption	<b>Wetlands</b>				
<b>Title No.</b>				<b>Buffer (feet)</b>	Cat 1	Cat 2	Cat 3	Cat 4
16.10.130-16.10.270					250	200	150	50
Wetlands; Aquifer Recharge Areas; Fish & Wildlife Habitat Cons. Areas; Freq. Flooded Areas; Geologically Haz. Areas.				<b>Mitigation Ratio</b>	Cat 1	Cat 2	Cat 3	Cat 4
				6:1	3:1	2:1	1.5:1	
				<b>Aquatic Habitat</b>				
				<b>Buffer (feet)</b>	When needed to protect the functions and values of habitat conservation areas, the administrator shall require the establishment of buffer areas for activities in or adjacent to such areas.			
				<b>Habitat Management Plan</b>	Appropriate habitat conservation, management and monitoring plan(s) shall be developed and implemented, with any necessary surety to ensure compliance with such plan(s) being provided as described in this chapter. (Ord. 367 § 2, 2005)			

## 4.2 Beneficial Effects of Established Regulation

The updated SMP regulations will work in concert with these existing state and federal regulations. Multiple state and federal agencies may have jurisdiction over the land, water, or other natural elements within the City's shoreline jurisdiction. The major regulations that could have affects include:

- Hydraulic Project Approval (HPA): The HPA is administered by the Washington Department of Fish and Wildlife (WDFW). Any work that uses, diverts, obstructs, or changes the natural flow of beds or banks of state waters is subject to WDFW regulation and could require HPA approval. This could include any projects within the shoreline jurisdiction that require construction below the OHWM of lakes, rivers, and streams. This could also include projects that propose creating new impervious surfaces that would increase stormwater runoff to the waters of the state.
- National Pollutant Discharge Elimination System (NPDES): NPDES permits are administered by the Washington Department of Ecology. Any activity that results in the discharge of wastewater to surface water from industrial facilities to municipal wastewater treatment plants requires a NPDES permit. In addition, activities that result in stormwater discharge from industrial facilities, construction sites larger than five acres, or municipal stormwater systems that serve over 100,000 people require a NPDES permit.
- Clean Water Act Section 404 Permit (Section 404): The federal Clean Water Act provides the regulatory structure that authorizes the discharge of pollutants from point sources to waters of the United States. Section 404 of the Clean Water Act regulates the discharge of dredged or fill material into the water of the United States, including wetlands. The U.S. Army Corps of Engineers administers and enforces the 404 permit, including individual permit decisions and jurisdictional determinations.
- Clean Water Act Section 401 Water Quality Certification (Section 401): Section 401 of the Clean Water Act requires that activities under Section 404 meet the state water quality standards. Ecology reviews and certifies that a proposed project meets the state's standards with the issuance of the Section 401 Water Quality Certification (WQC). The WQC is required for all general and individual Section 404 permits.
- Section 10 Rivers and Harbors Act (Section 10): In conjunction with the Section 404 permit, the U.S. Corps of Engineers also administers the Section 10 permit. All

projects and activities that take place in navigable waters of the United States are subject to Section 10.

- Endangered Species Act (ESA) Compliance: The ESA serves to protect and recover threatened and endangered species and the habitat that the species depend upon. The National Oceanic and Atmospheric Administration (NOAA) Fisheries and U.S. Fish and Wildlife Service (USFWS) jointly administer ESA compliance. Projects that are associated with federal funding or that require approvals for activities that may affect ESA listed species will trigger compliance.

### **4.3 Restoration Opportunities**

The SMP objective is to maintain no net loss of ecological shoreline functions necessary to sustain shoreline natural resources. It also should aim to improve the shoreline natural resources through restoration planning. Many groups are involved in shoreline restoration and protection in and around Grant County, including the federal and state government, the public utilities, the Grant/Columbia Basin Conservation District, and the local cities and towns. Key parties include:

- U.S. Bureau of Land Management (BLM)
- U.S. Bureau of Reclamation (BOR)
- U.S. Department of Agriculture (USDA)
- U.S. Department of Energy (USDOE)
- National Park Service (NPS)
- NOAA Fisheries
- USFWS
- U.S. Forest Service (USFS)
- WDFW
- Washington State Parks and Recreation Commission (WSPRC)
- Washington State Conservation Commission (WSCC)
- Ecology
- Washington State Department of Natural Resources (DNR)
- Grant County Public Utility District (Grant PUD)
- Grant County Conservation District
- The Nature Conservancy (TNC)

While most restoration plans and programs from the SMP jurisdictional area address large-scale direction and management, there is a small set of actions that are named or planned for specific areas. Table 4 lists these locations and opportunities, and includes the source document or project proponent, as well as the impairment to be addressed and the key benefits to ecological function expected as a result of the project implementation.

**Table 4**  
**Site-specific Restoration and Protection Opportunities in Grant County and Surrounding Cities and Towns**

	Area	Site	Restoration / Protection Opportunities	Priority*	Source	Key Impairments**	Key Benefits to Ecological Functions**	
1	County	Upper Crab Creek (above Moses Lake)	Apply agricultural Best Management Practices (BMPs) on lands draining into creek	High	TBA	Increased soil erosion	Reductions in soil erosion and resulting reductions in sediment inputs into creek, creek tributaries, irrigation drains, and ultimately Moses Lake	
2	County	Upper Crab Creek between Brook Lake and Moses Lake (known as Potholes Supplemental Feed Route)	Establish wetlands/waterfowl habitat and associated riparian enhancement and bank stabilization	High	WDFW, BOR, WDOE	Restricted water movement	Increased subsurface infiltration and flow	
						Restricted sediment movement	Increased habitat for terrestrial species foraging/breeding/nesting/migration	
						Habitat loss	Improved temperature/dissolved oxygen conditions and protection against toxin/pathogen addition	
						Increased soil erosion	Reductions in soil erosion	
3	County	Buckshot Ranch Boat Launch, Burkett Lake Recreation Area, Frenchman's Coulee, and Sand Hollow South	Protect/enhance riparian vegetation	Very High	GCPUD	Habitat loss	Increased native shrub-steppe habitat for terrestrial species foraging/breeding/nesting/migration	
							Riparian vegetation recruitment	
4	County	Priest Rapids Recreation Area/Desert Aire	Protect/enhance riparian vegetation	Very High	GCPUD	Habitat loss	Increased native shrub-steppe habitat for terrestrial species foraging/breeding/nesting/migration	
			Protect existing shrub-steppe vegetation				Riparian vegetation recruitment	
5	County	Crescent Bar Island Recreation Area	Stabilize shoreline using soft shoreline techniques	Moderate	GCPUD	Increased soil erosion	Reductions in soil erosion	
			Protect/enhance shoreline vegetation	Very High			Increased native shrub-steppe habitat for terrestrial species foraging/breeding/nesting/migration	
6	Coulee City	Coulee City Community Park	Stabilize shoreline using soft shoreline techniques	Moderate	Coulee City	Increased soil erosion	Reductions in soil erosion	
			Conservancy Area	Enhance riparian vegetation and remove invasives where present	Moderate	Coulee City	Habitat loss	Riparian vegetation recruitment for native terrestrial species foraging/breeding/nesting habitat
				Protect existing shrub-steppe vegetation	Very High			Increased native shrub-steppe habitat for terrestrial species foraging/breeding/nesting/migration
7	Electric City	Northeast and southeast edge of lake	Beach restoration and shoreline stabilization using soft shore techniques	Moderate	Electric City	Habitat loss due to invasive species and shoreline erosion	Riparian vegetation recruitment for native terrestrial species foraging/breeding/nesting habitat	
			Protect/enhance shoreline vegetation and remove invasive vegetation.	Very High			Reductions in soil erosion	
8	Grand Coulee	Columbia River/Lake Roosevelt shoreline	Remove invasive vegetation	Moderate	Grand Coulee	Habitat loss due to invasive species	Riparian vegetation recruitment for native terrestrial species foraging/breeding/nesting habitat	
			Protect/enhance riparian vegetation	Very High				
9	Soap Lake	Soap Lake shoreline along Highway 17	Shoreline stabilization using soft shore techniques	Moderate	Soap Lake	Increased soil erosion	Riparian vegetation recruitment for native terrestrial species foraging/breeding/nesting habitat	
			Enhance riparian vegetation and remove invasives where present	Moderate		Habitat loss due to invasive species and shoreline erosion	Reductions in soil erosion	
			Protect lake water quality by implementing stormwater controls consistent with Eastern WA Stormwater manual; and evaluating feasibility of establishing a stormwater management mitigation program	Very High		Fertilizer/Pesticide/Herbicide inputs	Reduced excess nutrient sources to improve water quality	
						Temperature increases	Temperature/dissolved oxygen improvements	
<td>Bioaccumulation of toxins</td> <td>Toxin/pathogen reduction</td>	Bioaccumulation of toxins	Toxin/pathogen reduction						
10	Krupp	Upper Crab Creek shoreline	Remove invasive vegetation and protect existing riparian and shrub-steppe vegetation	Very High	Krupp	Habitat loss due to invasive species	Riparian vegetation recruitment for native terrestrial species foraging/breeding/nesting habitat	
11	Wilson Creek	Upper Crab Creek shoreline	Remove invasive vegetation and protect existing riparian and shrub-steppe vegetation	Very High	Wilson Creek	Habitat loss due to invasive species	Riparian vegetation recruitment for native terrestrial species foraging/breeding/nesting habitat	

Notes:

BOR - Bureau of Reclamation project

GCPUD - Grant County PUD Article 418 of Priest Rapids Project License

WDFW - Washington Department of Fish and Wildlife project

\* Categories are Very High (habitat protection actions), High (actions that restore ecosystem function), and Moderate (actions that restore habitat structure). Funded projects take priority over other projects within each category. *Italics* indicate funded projects as of the date of this Plan.

\*\* Impairment and Benefits categories come from Table 1 of this Restoration Plan

#### 4.4 Environment Designations

The County has designated shorelines pursuant to chapter 90.58 RCW by defining them, providing criteria for their identification, and establishing the shoreline ecological functions to be protected. Project proponents are responsible for determining whether a shoreline exists and is regulated pursuant to this Program. The SMP classifies Grant County shoreline into eight shoreline environment designations, shown here with their purpose:

- **Aquatic:** The purpose of the “Aquatic” shoreline designation is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high water mark (OHWM).
- **Natural:** The purpose of the “Natural” shoreline designation is to protect those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline ecological functions less tolerant of human use. These systems require that only very low-intensity uses be allowed in order to maintain the ecological functions and ecosystem-wide processes. Consistent with the policies of the designation, restoration of degraded shorelines within this environment is appropriate.
- **Rural Conservancy:** The purpose of the “Rural Conservancy” shoreline designation is to protect shoreline ecological functions, conserve existing natural resources and valuable historic and cultural areas in order to provide for sustained resource use, achieve natural floodplain processes where applicable, and provide recreational opportunities. In addition to existing agriculture uses, examples of uses that are appropriate in a Rural Conservancy shoreline designation include low-impact, passive recreation uses, water-oriented commercial development, and low-intensity residential development.
- **Public Recreation Conservancy:** The purpose of the “Recreation Conservancy” shoreline designation is to provide continued and enhanced recreational opportunities while protecting shoreline ecological functions, conserve existing natural resources and valuable historic and cultural areas in order to provide for sustained resource use, and achieve natural floodplain processes where applicable, recognizing many of the functions in these areas in Grant County are a result of the CBP. Examples of uses that are appropriate in a Recreation Conservancy shoreline designation in addition to

CBP and irrigation district facilities and operations include public lands with low-impact recreation uses, and water-oriented commercial development.

- **Recreation:** The purpose of the “Recreation” environment is to provide for water-oriented recreational uses with some commercial uses and residential mixed-uses to support recreational uses while protecting existing ecological functions, conserving existing natural resources, and restoring ecological functions in areas that have been previously degraded.
- **High Intensity Public Facility:** The purpose of the "High Intensity Public Facility" environment is to provide for higher intensity public facility utility or infrastructure that needs shoreline location for operation and that are associated with high intensity water-oriented power generation, irrigation water supply conveyance, transportation, or navigation uses. This environment may also provide for some recreational uses while protecting public safety, existing ecological functions, conserving existing natural resources, and restoring ecological functions in areas that have been previously degraded.
- **Shoreline Residential:** The purpose of the “Shoreline Residential” designation is to accommodate primarily residential development and appurtenant structures, but to also allow other types of development consistent with this chapter. An additional purpose is to provide appropriate public access and recreational uses.
- **Shoreline Residential – Low Intensity:** The purpose of the “Shoreline Residential – Low Intensity” designation is to accommodate residential development while protecting and, where appropriate, enhancing ecological functions. An additional purpose is to provide appropriate public access and recreational uses.

Table 5 summarizes the Shoreline use and modifications that within each Environment Designation are (A) Allowed with Substantial Development Permit; (C) constitute a Conditional Use; (P) are Prohibited; or (N/A) are Not Applicable. Section 5 will discuss in more detail the provisions of the SMP that serve to address risk from anticipated development.

**Table 5a**  
**Grant County Shoreline Use and Modification Matrix**

<b>Abbreviations</b> A = Allowed with Substantial Development Permit; C = Conditional Use; P = Prohibited; N/A = Not Applicable;								
<b>Use/ Modification</b>	<b>Aquatic</b>	<b>Natural</b>	<b>Rural Conservancy</b>	<b>Public Recreation Conservancy</b>	<b>Recreation</b>	<b>High Intensity - Public Facility</b>	<b>Shoreline Residential</b>	<b>Shoreline Residential - Low Intensity</b>
<b>Resource Uses</b>								
Agriculture	P	P	A	C	P	P	A	A
Aquaculture	C	P	A	A	P	P	P	P
Mining	P	P	C	P	P	P	P	C
<b>Boating Facilities</b>								
Boat launch (motorized boats)	A	C	C	C	A	A	C	C
Boat launch (non-motorized boat - canoe / kayak)	A	C	A	A	A	A	A	A
Marina	A	P	C	C	A	A	C	P
<b>Docks, Piers, Mooring Facilities</b>								
Private and shared moorage	A	P	A <sup>1</sup>	A <sup>1</sup>	A <sup>1</sup>	A <sup>1</sup>	A <sup>1</sup>	A <sup>1</sup>
Public moorage	A	C	C	C	C	C	C	C
Covered moorage accessory to permitted moorage	P	P	P	P	A	A	C	C
<b>Commercial Development</b>								
Water dependent	C	P	A	C	A	A	A	P
Water-related, Water-enjoyment	P	P	P	C	A	C	C	P
Non-water-oriented	P	P	P	P	C <sup>2</sup>	C	P	P
<b>Dredging Activities</b>								
Dredging	C	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dredge Material Disposal	C <sup>3</sup>	P	P	C <sup>3</sup>	C <sup>3</sup>	C <sup>3</sup>	C <sup>3</sup>	C <sup>3</sup>
Dredging & Disposal as	A	C	A	A	A	A	A	A

Protection Provisions of the Proposed SMP and Established Regulation

<b>Abbreviations</b> A = Allowed with Substantial Development Permit; C = Conditional Use; P = Prohibited; N/A = Not Applicable;								
<b>Use/ Modification</b>	<b>Aquatic</b>	<b>Natural</b>	<b>Rural Conservancy</b>	<b>Public Recreation Conservancy</b>	<b>Recreation</b>	<b>High Intensity - Public Facility</b>	<b>Shoreline Residential</b>	<b>Shoreline Residential - Low Intensity</b>
part of Ecological Restoration/ Enhancement								
<b>Fill and Excavation</b>								
Waterward of OHWM and in floodways	C	C	C	C	C	C	C	C
Other upland fill	A	C	A	A	A	A	A	A
Industrial Uses	P	P	P	P	P	A	P	P
<b>In-water Modifications</b>								
Breakwater	P	P	P	P	C	C	P	P
Groins and Weirs	C	CU <sup>4</sup>	C	C	C	C	C	C
In-stream structures	C	C	C <sup>5</sup>	C	C	C	C	C
<b>Institutional Uses</b>								
Water-dependent	C	P	C	C	A	A	C	C
Water-related, Water-enjoyment	P	P	C	C	A	A	C	C
Non-water-oriented	P	P	P	P	C	C	P	P
<b>Recreational Development</b>								
Water-dependent	A	A <sup>6</sup>	A	A	A	A	A	A
Water-related/enjoyment (trails, accessory buildings)	C	C <sup>5</sup>	A	A	A	A	A	A
Non-water-oriented	P	P	C	C	A	A	C	C
Residential Development	P	P	A	P	A	P	A	A
Shoreline Habitat and Natural Systems Enhancement Projects	A	A	A	A	A	A	A	A
<b>Shoreline Stabilization and Flood Control</b>								
<b>Flood Control</b>								

Protection Provisions of the Proposed SMP and Established Regulation

<b>Abbreviations</b> A = Allowed with Substantial Development Permit; C = Conditional Use; P = Prohibited; N/A = Not Applicable;								
<b>Use/ Modification</b>	<b>Aquatic</b>	<b>Natural</b>	<b>Rural Conservancy</b>	<b>Public Recreation Conservancy</b>	<b>Recreation</b>	<b>High Intensity - Public Facility</b>	<b>Shoreline Residential</b>	<b>Shoreline Residential - Low Intensity</b>
Modification of existing flood control facilities (Dams, Dikes and Levees), including replacement landward of existing location	A	A	A	A	A	A	A	A
New flood control facilities (Dams, Dikes and Levees)	C	C <sup>7</sup>	C	C	C	C	C	C
<b>Shoreline Stabilization</b>								
<b>New</b>								
Hard	C	P	C	C	C	C	C	C
Soft	A	A	A	A	A	A	A	A
Replacement: hard replaced with hard	C	C	C	C	P	P	P	C
Replacement: hard replaced with soft	A	A	A	A	A	A	A	A
<b>Transportation</b>								
Highways, Arterials, Railroads (parallel to OHWM)	C	P	A	A	A	A	A	A
Secondary/Public Access Roads (parallel to OHWM)	P	P	A	A	A	A	A	A
Roads perpendicular to the OHWM	P	C	A	A	A	A	A	A
Bridges (perpendicular to shoreline)	C	C	C	C	A	A	C	C
Existing bridges, trails, roads, and parking facilities:	A	A	A	A	A	A	A	A

Protection Provisions of the Proposed SMP and Established Regulation

<b>Abbreviations</b> <b>A = Allowed with Substantial Development Permit;</b> <b>C = Conditional Use;</b> <b>P = Prohibited; N/A = Not Applicable;</b>  <b>Use/ Modification</b>	Aquatic	Natural	Rural Conservancy	Public Recreation Conservancy	Recreation	High Intensity - Public Facility	Shoreline Residential	Shoreline Residential - Low Intensity
improvement or expansion								
New Parking, Accessory	Takes permit types of primary use							
New Parking, Primary <sup>7</sup>	P	P	P	P	A <sup>8</sup>	A <sup>8</sup>	P	P
<b>Utility</b>								
Above-ground and Underground Utilities (parallel and across shoreline)	C	C	A	A	A	A	A	A
<sup>1</sup> Subject to provisions under this SMP and regulations under section 24.12.390, Private Moorage Facilities <sup>2</sup> Allowed as part of mixed use <sup>3</sup> Permitted outside of channel migration zones <sup>4</sup> To protect Columbia Basin Project and irrigation district facilities and infrastructure <sup>5</sup> Habitat restoration and/or fish habitat enhance purposes only <sup>6</sup> Low intensity only <sup>7</sup> Only when no other alternatives are available and related to Columbia Basin Project <sup>8</sup> Not allowed within 50ft of edge of riparian vegetation corridor								

**Table 5b**  
**Coulee City Shoreline Use and Modification Matrix**

<b>Abbreviations</b> PRM = Permitted use with Substantial Development Permit; CUP = Conditional Use Permit; X= Prohibited; N/A = Not Applicable;			
<b>Use/ Modification</b>	<b>Aquatic</b>	<b>Urban Conservancy</b>	<b>Recreation</b>
Resource Uses			
Aquaculture	PRM	N/A	N/A
Boating Facilities			
Boat launch (motorized boats)	PRM	PRM	PRM
Boat launch (non-motorized boat - canoe / kayak)	PRM	PRM	PRM
Marina	PRM	CUP	PRM
Docks, Piers, Mooring Facilities			
Public moorage	PRM	CUP	PRM
Dredging Activities			
Dredging	CUP	N/A	N/A
Dredge Material Disposal	CUP	X	CUP
Dredging & Disposal as part of Ecological Restoration/ Enhancement	PRM	PRM	PRM
Fill and Excavation			
Waterward of OHWM	CUP	N/A	N/A
Other upland fill	N/A	PRM	PRM
In-water Modifications			
Breakwater	CUP	CUP	CUP
Groins and Weirs	CUP	CUP	CUP
In-stream structures	CUP	CUP <sup>1</sup>	CUP
Recreational Development			
Water-dependent	PRM	PRM	PRM
Water-related/enjoyment (trails, accessory buildings)	CUP	PRM	PRM
Non-water-oriented	X	CUP	PRM <sup>2</sup>
Shoreline Habitat and Natural Systems Enhancement Projects	PRM	PRM	PRM
Shoreline Stabilization			

Protection Provisions of the Proposed SMP and Established Regulation

New			
Hard	CUP	CUP	CUP
Soft	PRM	PRM	PRM
Replacement: hard replaced with hard	CUP	CUP	CUP
Replacement: hard replaced with soft	PRM	PRM	PRM
Transportation			
Highways, Arterials, Railroads (parallel to OHWM)	CUP	PRM	PRM
Secondary/Public Access Roads (parallel to OHWM)	X	PRM	PRM
Roads perpendicular to the OHWM	X	PRM	PRM
Bridges (perpendicular to shoreline)	CUP	CUP	PRM
Existing bridges, trails, roads, and parking facilities: improvement or expansion	PRM	PRM	PRM
New Parking, Accessory <sup>3</sup>	Permitted under the primary use permit process		
New Parking, Primary	X	X	X
Utility			
Above and under-ground Utilities (parallel or cross shoreline)	CUP	PRM	PRM
<sup>1</sup> Habitat restoration and enhancement purposes only <sup>2</sup> Allowed only to support existing water-oriented uses <sup>3</sup> Not allowed within 50 ft of edge of riparian vegetation corridor, or when surface material is fully paved			

**Table 5c**  
**Electric City Shoreline Use and Modification Matrix**

<b>Abbreviations</b> <b>A = Allowed with Substantial Development Permit; CU = Conditional Use;</b> <b>X= Prohibited; N/A = Not Applicable;</b>  <b>Use/ Modification</b>	<b>Aquatic</b>	<b>Recreation Conservancy</b>	<b>Recreation</b>
Resource Uses			
Boating and Moorage Facilities			
Boat launch (motorized boats)	A	CU	A
Boat launch (non-motorized boat - canoe / kayak)	A	A	A
Public moorage / Piers and Docks	A	CU	A
Commercial Development			
Water dependent	CU	CU	A
Water-related, Water-enjoyment	X	CU	A
Non-water-oriented	X	X	CU <sup>1</sup>
Dredging Activities			
Dredging	CU	N/A	N/A
Dredge Material Disposal	CU	X	CU
Dredging & Disposal as part of Ecological Restoration/Enhancement	A	A	A
Fill and Excavation			
Waterward of OHWM	CU <sup>2</sup>	N/A	N/A
Other upland fill	A	A	A
In-water Modifications			
Breakwater	CU	CU	CU
In-stream structures <sup>3</sup>	CU	CU	CU
Groins and Weirs	CU	CU	CU
Recreational Development			
Water-dependent	A	A	A
Water-related/enjoyment (trails, accessory buildings)	CU	A	A
Non-water-oriented	X	CU	A <sup>4</sup>
Residential Development	X	CU	A <sup>5</sup>
Shoreline Habitat and Natural Systems	A	A	A

<b>Abbreviations</b> <b>A = Allowed with Substantial Development Permit; CU = Conditional Use;</b> <b>X= Prohibited; N/A = Not Applicable;</b>  <b>Use/ Modification</b>	<b>Aquatic</b>	<b>Recreation Conservancy</b>	<b>Recreation</b>
Enhancement Projects			
Shoreline Stabilization and Flood Control			
Shoreline Stabilization			
New			
Hard	CU	CU	CU
Soft	A	A	A
Replacement: hard replaced with hard	CU	CU	CU
Replacement: hard replaced with soft	A	A	A
Transportation			
Highways, Arterials, Railroads (parallel to OHWM)	CU	A	A
Secondary/Public Access Roads (parallel to OHWM)	X	A	A
Roads perpendicular to the OHWM	X	A	A
Bridges (perpendicular to shoreline)	CU	CU	A
Existing bridges, trails, roads, and parking facilities: improvement or expansion	A	A	A
New Parking, Accessory <sup>5</sup>	Permitted under the primary use permit process		
New Parking, Primary	X	X	X
Utility			
Above-ground Utilities (parallel to shoreline)	CU	A	A
Underground Utilities (parallel to shoreline)	CU	A	A

<sup>1</sup> Allowed as part of mixed use

<sup>2</sup> Allowed for Coulee Playland beach restoration and stabilization

<sup>3</sup> Habitat restoration and/or fish habitat enhance purposes only

<sup>4</sup> Allowed only to support existing water-oriented uses

<sup>5</sup> Allowed only as part of recreational uses

<sup>6</sup> Not allowed within 50 ft of edge of riparian vegetation corridor

**Table 5d**  
**Grand Coulee Shoreline Use and Modification Matrix**

<b>Abbreviations</b> <b>PRM = Permitted use with Substantial Development Permit; CUP = Conditional Use Permit;</b> <b>X= Prohibited; N/A = Not Applicable;</b>  <b>Use/ Modification</b>	<b>Aquatic</b>	<b>Urban Conservancy</b>	<b>High-Intensity Public Facility</b>	<b>Shoreline Residential</b>
Boating Facilities				
Boat launch (motorized boats)	PRM	PRM	PRM	X
Boat launch (non-motorized boat - canoe / kayak)	PRM	PRM	PRM	X
Marina	PRM	CUP <sup>1</sup>	X	X
Docks and Piers	PRM	CUP	X	X
Dredging Activities				
Dredging	CUP	N/A	N/A	N/A
Dredge Material Disposal	CUP	X	CUP	CUP
Dredging & Disposal as part of Ecological Restoration/ Enhancement	PRM	PRM	PRM	PRM
Fill and Excavation				
Waterward of OHWM	CUP <sup>2</sup>	N/A	N/A	N/A
Other upland fill	N/A	PRM	PRM	PRM
In-water Modifications				
Breakwater	X	X	X	X
Groins and Weirs	CUP	CUP	CUP	N/A
Recreational Development				
Water-dependent	PRM	PRM	PRM	PRM
Water-related/enjoyment (trails, accessory buildings)	CUP	PRM	PRM	PRM
Non-water-oriented	X	CUP	CUP	PRM
Residential Development	X	X	X	PRM
Shoreline Habitat and Natural Systems Enhancement Projects	PRM	PRM	PRM	PRM
Shoreline Stabilization				
New				

Protection Provisions of the Proposed SMP and Established Regulation

<b>Abbreviations</b> <b>PRM = Permitted use with Substantial Development Permit; CUP = Conditional Use Permit;</b> <b>X= Prohibited; N/A = Not Applicable;</b>  <b>Use/ Modification</b>	Aquatic	Urban Conservancy	High-Intensity Public Facility	Shoreline Residential
Hard	CUP	CUP	CUP	CUP
Soft	PRM	PRM	PRM	PRM
Replacement: hard replaced with hard	CUP	CUP	CUP	CUP
Replacement: hard replaced with soft	PRM	PRM	PRM	PRM
Transportation				
Highways, Arterials, Railroads (parallel to OHWM)	CUP	PRM	PRM	PRM
Secondary/Public Access Roads (parallel to OHWM)	X	PRM	PRM	PRM
Roads perpendicular to the OHWM	X	PRM	PRM	PRM
Bridges (perpendicular to shoreline)	CUP	CUP	PRM	CUP
Existing bridges, trails, roads, and parking facilities: improvement or expansion	PRM	PRM	PRM	PRM
New Parking, Accessory <sup>3</sup>	Permitted under the primary use permit process			
New Parking, Primary	X	X	X	X
Utility				
Above and under-ground Utilities (parallel or cross shoreline)	CUP	PRM	PRM	PRM
<sup>1</sup> On Lake Roosevelt only, not allowed on Crescent Bay <sup>2</sup> Habitat restoration and enhancement purposes only <sup>3</sup> Not allowed within 50ft of edge of riparian vegetation corridor				

**Table 5e**  
**Krupp Shoreline Use and Modification Matrix**

<b>Abbreviations</b> <b>A = Allowed with Substantial Development Permit; CU = Conditional Use;</b> <b>X= Prohibited; N/A = Not Applicable;</b>  <b>Use/ Modification</b>	<b>Aquatic</b>	<b>Conservancy</b>
Resource Uses		
Agriculture	X	A
Fill and Excavation		
Waterward of OHWM	CU	N/A
Other upland fill	N/A	A
In-water Modifications		
In-stream structures	CU	CU <sup>1</sup>
Recreational Development		
Water-dependent	A	A
Water-related/enjoyment (trails, accessory buildings)	CU	A
Non-water-oriented	X	CU
Residential Development	X	A
Shoreline Habitat and Natural Systems Enhancement Projects	A	A
Shoreline Stabilization and Flood Control		
Flood Control		
Modification of existing flood control facilities (Dikes and Levees), including replacement landward of existing location	A	A
New flood control facilities (Dikes and Levees)	C	C
Shoreline Stabilization New		
Hard	CU	CU
Soft	A	A
Shoreline Stabilization Replacement: Hard replaced with hard	CU	CU
Shoreline Stabilization Replacement: Hard replaced with soft	A	A
Transportation		

<b>Abbreviations</b> <b>A = Allowed with Substantial Development Permit; CU = Conditional Use;</b> <b>X= Prohibited; N/A = Not Applicable;</b>  <b>Use/ Modification</b>	<b>Aquatic</b>	<b>Conservancy</b>
Highways, Arterials, Railroads (parallel to OHWM)	CU	A
Secondary/Public Access Roads (parallel to OHWM)	X	A
Roads perpendicular to the OHWM	X	A
Bridges (perpendicular to shoreline)	CU	CU
Existing bridges, trails, roads, and parking facilities: improvement or expansion	A	A
New Parking, Accessory <sup>2</sup>	Permitted under the primary use permit process	
New Parking, Primary	X	X
Utility		
Above and under-ground Utilities (parallel or across shoreline)	CU	A
<sup>1</sup> Habitat restoration and/or fish habitat enhance purposes only		
<sup>2</sup> Not allowed within 50ft of edge of riparian vegetation corridor		

**Table 5f**  
**Soap Lake Shoreline Use and Modification Matrix**

<b>Abbreviations</b> <b>A = Allowed with Substantial Development Permit; CU = Conditional Use;</b> <b>X= Prohibited; N/A = Not Applicable;</b>  <b>Use/ Modification</b>	<b>Aquatic</b>	<b>Conservancy</b>
Resource Uses		
Agriculture	X	A
Fill and Excavation		
Waterward of OHWM	CU	N/A
Other upland fill	N/A	A
In-water Modifications		
In-stream structures	CU	CU <sup>1</sup>
Recreational Development		
Water-dependent	A	A
Water-related/enjoyment (trails, accessory buildings)	CU	A
Non-water-oriented	X	CU
Residential Development	X	A
Shoreline Habitat and Natural Systems Enhancement Projects	A	A
Shoreline Stabilization and Flood Control		
Flood Control		
Modification of existing flood control facilities (Dikes and Levees), including replacement landward of existing location	A	A
New flood control facilities (Dikes and Levees)	C	C
Shoreline Stabilization New		
Hard	CU	CU
Soft	A	A
Shoreline Stabilization Replacement: Hard replaced with hard	CU	CU
Shoreline Stabilization Replacement: Hard replaced with soft	A	A
Transportation		

<b>Abbreviations</b> <b>A = Allowed with Substantial Development Permit; CU = Conditional Use;</b> <b>X= Prohibited; N/A = Not Applicable;</b>  <b>Use/ Modification</b>	<b>Aquatic</b>	<b>Conservancy</b>
Highways, Arterials, Railroads (parallel to OHWM)	CU	A
Secondary/Public Access Roads (parallel to OHWM)	X	A
Roads perpendicular to the OHWM	X	A
Bridges (perpendicular to shoreline)	CU	CU
Existing bridges, trails, roads, and parking facilities: improvement or expansion	A	A
New Parking, Accessory <sup>2</sup>	Permitted under the primary use permit process	
New Parking, Primary	X	X
Utility		
Above and under-ground Utilities (parallel or across shoreline)	CU	A
<sup>1</sup> Habitat restoration and/or fish habitat enhance purposes only		
<sup>2</sup> Not allowed within 50ft of edge of riparian vegetation corridor		

**Table 5g**  
**Wilson Creek Shoreline Use and Modification Matrix**

<b>Abbreviations</b> <b>A = Allowed with Substantial Development Permit; CU = Conditional Use;</b> <b>X= Prohibited; N/A = Not Applicable;</b>			
<b>Use/ Modification</b>	<b>Aquatic</b>	<b>Rural Conservancy</b>	<b>High Intensity Ag-Industrial</b>
Resource Uses			
Agriculture	X	A	A
Agricultural Industrial	X	C	A
Fill and Excavation			
Waterward of OHWM	CU	N/A	N/A
Other upland fill	N/A	A	A
In-water Modifications			
In-stream structures	CU	CU <sup>1</sup>	CU <sup>1</sup>
Recreational Development			
Water-dependent	A	A	A
Water-related/enjoyment (trails, accessory buildings)	CU	A	A
Non-water-oriented	X	CU	CU
Residential Development	X	X	X
Shoreline Habitat and Natural Systems Enhancement Projects	A	A	A
Shoreline Stabilization and Flood Control			
Shoreline Stabilization			
New			
Hard	CU	CU	CU
Soft	A	A	A
Replacement: hard replaced with hard	CU	CU	CU
Replacement: hard replaced with soft	A	A	A
Transportation			
Highways, Arterials, Railroads (parallel to OHWM)	CU	A	A
Secondary/Public Access Roads (parallel to OHWM)	X	A	A
Roads perpendicular to the OHWM	X	A	A
Bridges (perpendicular to shoreline)	CU	CU	CU
Existing bridges, trails, roads, and parking	A	A	A

<b>Abbreviations</b> <b>A = Allowed with Substantial Development Permit; CU = Conditional Use;</b> <b>X= Prohibited; N/A = Not Applicable;</b>  <b>Use/ Modification</b>	<b>Aquatic</b>	<b>Rural Conservancy</b>	<b>High Intensity Ag-Industrial</b>
facilities: improvement or expansion			
New Parking, Accessory <sup>2</sup>	Permitted under the primary use permit process		
New Parking, Primary	X	X	X
Utility			
Above and under-ground Utilities (parallel or across shoreline)	CU	A	A
<sup>1</sup> Habitat restoration and/or fish habitat enhance purposes only			
<sup>2</sup> Not allowed within 50 feet of edge of riparian vegetation corridor			

#### 4.5 Exempt Activities

The following types of developments are exempt from substantial development permit (SDP) requirements (WAC 173-27-040). However, these activities must still comply with all development standards, such as setbacks and other regulations in the local shoreline master program.

- Normal maintenance or repair of existing structures: Maintenance or repair of existing lawful structures and developments is exempted when they are subject to damage by accident, fire or the elements.
- Owner-occupied single family residences, less than 35 feet above ground level and appurtenant structures such as garages, decks, driveways, fences, utilities, and grading that moves less than 250 cubic yards of material.
- Building bulkheads to protect single family residences: State rules state that a bulkhead should be installed at or near the OHWM, and be for the sole purpose of protecting an existing single-family residence and/or appurtenant structures. A bulkhead cannot be exempted if constructed for the purpose of creating dry land.
- Constructing docks designed for pleasure craft: This exemption is only for a dock designed for pleasure craft only, for the private noncommercial use of the owner,

lessee, or contract purchaser of single and multiple family residences. The fair market value of the dock should not exceed \$10,000 in fresh waters.

- Certain farming and ranching construction and practices, including feedlots, processing plants and other commercial ventures; irrigation and drainage activities including operation and maintenance of existing canals, reservoirs, and irrigation facilities, operation of dikes, ditches, drains, and other facilities existing on September 8, 1975.
- Emergency construction to protect property from the elements : This exemption applies for emergency construction that is necessary to protect property from damage by the elements. Emergency construction does not include building new permanent protective structures which previously did not exist. Restoration including control of aquatic noxious weeds improving fish or wildlife habitat or fish passage; cleaning toxic waste, controlling weeds, or restoring watersheds. A special kind of exemption defined in Model Toxic Control Act (MTCA) RCW 70.105D is exempt from all procedural requirements, but not substantive requirements of the SMA and the local SMP.
- Site exploration and investigation activities: Activities performed in preparation for applying for a development authorization are exempt if conform to conditions listed in RCW 90.58.030.(3).(e).xi.
- Building navigation aids, marking property lines: Navigational aids such as channel markers and anchor buoys are exempt from permit requirements.

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## **5 ASSESSMENT OF CUMULATIVE IMPACTS**

The assessment of cumulative impacts combines existing conditions and environment designations, anticipated development by proposed environment designation, with the potential ecological risks that characterize unregulated development. The provisions within the proposed SMP that can address the risks to ecological function are also identified, allowing an assessment of the future performance of net effect. Tables 6 and 7 summarize these elements for each shoreline reach in Grant County and the Coalition.

**Table 6  
Grant County Cumulative Impacts Analysis**

	Environment Designations	Percent of Total Area	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future performance / Net effect
Columbia River-Reach 1	Natural	20%	Impaired	None	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	High priority restoration planned by GCPUD. Planned restoration will offset development impacts in other portions of shoreline reach.	Several restoration actions are planned for this currently impaired shoreline reach. This includes protection and restoration of shoreline vegetation and replacing existing residential development with a lower-impact recreation development on the Island. If these plans are implemented a <b>net gain in ecological function</b> is anticipated.
	Recreation	57%		Residential, Recreation - trails, parks, campgrounds, water access points		<p>Island recreation development will replace existing residential development.</p> <p>Boating facility general requirements:            24.12.320 (a)(2) Sited and Designed for no net loss of function            24.12.320 (a)(4) Not located or impacting channel migration zone features            24.12.320 (a)(6) In-water work scheduled to protect biological productivity            24.12.320 (a)(12) Installation of pump-outs/portable dump stations required at marinas and encouraged at boat ramps            24.12.320 (a)(15) Facilities shall be constructed of materials that will not adversely affect water quality, aquatic plants and animals over long term. Wood treated with creosote, copper chromium, arsenic, pentachlorophenol or other similarly toxic materials is prohibited for use in moorage facilities.            24.12.320 (b)(3) Boat launches shall be designed and constructed to minimize adverse impacts on fluvial processes, biological functions, aquatic and riparian habitats, and water quality.</p> <p>Recreational Development requirements:            24.12.400 (b) (1) The potential adverse impacts of all recreational uses shall be mitigated and adequate provisions for shoreline rehabilitation shall be made part of any proposed recreational use or development to ensure no net loss of shoreline ecological function.            24.12.400 (b) (2) Sites with fragile and unique shoreline conditions, such as high-quality wetlands and wildlife habitats, shall be used only for non-intensive recreation activities, such as trails, viewpoints, interpretive signage, and similar passive and low-impact facilities that result in no net loss of shoreline ecological function, and do not require the construction and placement of permanent structures.             24.12.400 (b) (3) For proposed recreation developments that require the use of fertilizers, pesticides, or other toxic chemicals, the proponent shall specify the BMPs to be used to prevent these applications and resultant leachate from entering adjacent waters.            24.12.400 (e) The removal of on-site native vegetation shall be limited to the minimum necessary for the development of permitted structures or facilities, and shall be consistent with provisions of GCC 24.12.240, Shoreline Vegetation Conservation and GCC 24.12, Article V, Critical Areas.            24.12.400 (i) Recreational or structures are only allowed to be built over water when they provide public access or facilitate a water-dependent use and shall be the minimum size necessary to accommodate the permitted activity            24.12.400 (l) Recreational development shall minimize effective impervious surfaces in shoreline jurisdiction and incorporate low-impact development techniques</p> <p>Residential development requirements:            24.12.410(b) Residential development shall be located and constructed to result in no net loss of shoreline ecological function. No net loss of shoreline ecological functions shall be assured through application of shoreline buffers specified in GCC 24.12.530, Fish and Wildlife Habitat Conservation Areas, to avoid future stabilization and other provisions of this SMP related to shoreline stabilization, vegetation management, and on-site sewage disposal.            24.12.410 (d) Accessory uses and structures shall be located outside of the riparian buffer, unless the structure is or supports a water-dependent use.            24.12.410 (e) All residential development shall be located or designed in such a manner as to prevent measurable degradation of water quality from stormwater runoff. Adequate mitigation measures shall be required and implemented where there is the reasonable potential for such adverse effect on water quality.            24.12.410 (f) Applications for new shoreline residences and appurtenant structures be sufficiently set back from steep slopes and shorelines vulnerable to erosion so that structural improvements, including bluff walls and other that shoreline stabilization and flood control structures are not necessary to protect proposed residences and associated uses.             24.12.410 (j) All new residential development shall be required to meet the vegetation management provisions contained in GCC 24.12.240, Shoreline Vegetation Conservation and GCC 24.12.530, Fish and Wildlife Habitat Conservation Areas            24.12.410 (k) Residential development clustering may be required by the Shoreline Administrative Official where appropriate to minimize ecological and visual impacts on shorelines, including minimization of impacts on shoreline vegetation consistent with GCC 24.12.240, Shoreline Vegetation Conservation.</p> <p>Transportation requirements:            24.12.440 (a) New or expanded transportation facilities will not be located within shoreline jurisdiction unless upland sites are unfeasible and the project is demonstrated to be needed to serve a permitted shoreline use or further a substantial public interest (crossings).</p>	

**Table 6  
Grant County Cumulative Impacts Analysis**

	Environment Designations	Percent of Total Area	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future performance / Net effect
	Rural Conservancy	23%		None		<p>24.12.440 (b) New roads or road expansions shall meet mitigation sequencing provisions in 24.12.230, they will be setback from OWHM to allow for vegetation conservation, minimize grading and clearing, and BMPs will be used to minimize erosion and degradation of surface water quality.</p> <p>24.12.440 (g) Parking shall not be allowed within 50 feet of edge of riparian vegetation corridor.</p> <p>24.12.440 (h) Accessory parking shall not result in a net loss of shoreline ecological functions.</p> <p>24.12.440 (k) Improvements to all existing transportation facilities shall provide for the reestablishment and enhancement of natural vegetation along the shoreline when appropriate.</p>	
Columbia River-Reach 2	High Intensity - Public Facility	5%	Partially Functioning	Recreation (improvements only)			Development is only anticipated in partially functioning and impaired subreaches. Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for residential development. Provided that SMP provisions are strictly enforced, <b>no net loss</b> of ecological functions is anticipated.
	Natural	11%	Functioning	None			
	Rural Conservancy	81%	Impaired (SR 2B), Functioning (2A & C), Partially Functioning (SR 2D)	Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k)	
	Shoreline Residential	3%	Impaired	Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k)	
Columbia River-Reach 3	High Intensity - Public Facility	2%	Partially Functioning	None		Moderate and very high priority restoration planned by GCPUD. Planned restoration will offset very limited development.	Very limited development is anticipated within a reach that is only partially functioning. Planned restoration includes protecting and restoring shoreline and shrub steppe vegetation. If these plans are implemented a <b>net gain in ecological function</b> is anticipated.
	Natural	4%		None			
	Rural Conservancy	95%		Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low		
Columbia River-Reach 4	Rural Conservancy	100%	Functioning	Recreation - possible new boat launch	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Boating Facilities: General Requirements As Above - SMP 24.12.320 (a)2,4,6,12,15</p> <p>Boat Launch Facilities Requirements As Above - SMP 24.12 320 (b) 3</p>	Very limited recreational development is a slight possibility for this reach. Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for boating facilities. Provided that provisions are enforced, <b>no net loss of ecological functions</b> is anticipated.
Columbia River-Reach 5	Natural	100%	Functioning	None			No change
Crescent Bay and Roosevelt Lake	High Intensity - Public Facility	19%	Impaired	None			No change
	Rural Conservancy	81%	Impaired and Functioning (SR C & D)	None			

**Table 6  
Grant County Cumulative Impacts Analysis**

	Environment Designations	Percent of Total Area	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future performance / Net effect
Banks and Assoc. Lakes	High Intensity - Public Facility	0%	Functioning	None	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Recreational Development Requirements As Above - SMP 24.12.400 (b)1-3, (e) (i) (l)	Limited low-intensity recreational development is planned for this reach. Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for recreational development. Provided that provisions are enforced, no net loss of ecological functions is anticipated.
	Natural	84%		None			
	Recreation	14%		Recreation - expansion of trails and campground			
	Rural Conservancy	1%		None			
Coffee and Long Lakes	Rural Conservancy	100%	Functioning	None			No change
Sun Lakes - Blue Lake	Recreation	12%	Impaired	None			Infill development is likely but within an already impaired subreach. Future low intensity development is planned within a functioning subreach. Impacts to ecological function will be avoided, minimized, and mitigated per the SMP provisions for residential and transportation (trail) development. Provided that provisions are enforced, <b>no net loss of ecological functions</b> is anticipated.
	Rural Conservancy	67%	Partially Functioning (SR A), Impaired (SR F)	None			
	Shoreline Residential	14%	Impaired	Residential, Recreation (improvements only)	Hydrology: Low Sediment: Low Water Quality: Low Habitat: Low	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k)	
	Shoreline Residential - Low Intensity	7%	Functioning	Residential, Recreation	Hydrology: moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k) Recreational Development Requirements As Above - SMP 24.12.400 (b)1-3, (e) (i) (l) Transportation: Trails, Roads, and Parking Requirements As Above - SMP 24.12.440 (a) (b) (g) (h) (k) (m)	
Sun Lakes-Other	High Intensity - Public Facility	1%	Functioning	None			No change
	Natural	55%		None			
	Public Recreation Conservancy	5%		None			
	Recreation	8%		None			
	Rural Conservancy	31%		None			
Sun Lakes-Park	Natural	3%	Impaired	None			No change
	Public Recreation Conservancy	47%		None			
	Recreation	50%		None			

**Table 6  
Grant County Cumulative Impacts Analysis**

	Environment Designations	Percent of Total Area	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future performance / Net effect
Soap Lake	Rural Conservancy	100%	Partially Functioning	Commercial, Recreation, Residential	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Commercial development requirements: 24.12.330 (h) Commercial uses shall provide for suitable measures to rehabilitate and enhance the shoreline ecology as a condition of approval. 24.12.330 (k) The storage of potentially hazardous or dangerous substances or wastes is prohibited in the floodway or within 200 feet of the OHWM, whichever boundary extends farthest landward. 24.12.330 (l) Development shall be located, designed, and constructed in a manner that assures no net loss of shoreline ecological functions.	Infill RV park development is likely but within an already developed areas of the shoreline. Future commercial (hotel or casino) development is proposed by Tribe, this would occur in a partially functioning shoreline. Impacts to ecological function will be avoided, minimized, and mitigated per the SMP provisions for commercial and recreational development. Provided that provisions are enforced, <b>no net loss of ecological functions</b> is anticipated.
						Recreational Development Requirements As Above - SMP 24.12.400 (b)1-3, (e) (i) (l)	
						Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k)	
Reservoirs Along Main Canal	High Intensity - Public Facility	5%	Functioning	None	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k) Recreational Development Requirements As Above - SMP 24.12.400 (b)1-3, (e) (i) (l) Transportation: Trails, Roads, and Parking Requirements As Above - SMP 24.12.440 (a) (b) (g) (h) (k) (m)	Very limited development is a slight possibility near Brook Lake. Low-intensity recreational development and improvements are also planned. Impacts to ecological function will be avoided, minimized, and mitigated per the SMP provisions for residential, transportation (parking area), and recreational development. Provided that provisions are enforced, <b>no net loss of ecological functions</b> is anticipated.
	Natural	54%		None			
	Recreation	14%		None			
	Rural Conservancy	26%		Residential			
	Shoreline Residential	1%		Recreation (improvements to boat ramp) parking			
Small Lakes South of Wilson Creek	Rural Conservancy	100%	Functioning	None			No change
Ephrata Lakes	Natural	1%	Functioning	None		Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k)	Very limited development (1 or 2 units) is a slight possibility within this area. Impacts to ecological function will be avoided, minimized, and mitigated per the SMP provisions for residential development. Provided that provisions are enforced, <b>no net loss of ecological functions</b> is anticipated.
	Rural Conservancy	99%		Residential - very limited			
Moses Lake-Reach 1	Recreation	3%	Impaired	Recreation - picnic areas, boating, fishing, camping,	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Recreational Development Requirements As Above - SMP 24.12.400 (b)1-3, (e) (i) (l) Transportation: Trails, Roads, and Parking Requirements As Above - SMP 24.12.440 (a) (b) (g) (h) (k) (m)	Recreational development and potential residential development is most likely within reaches that are impaired or partially functioning. Development could occur in the functioning subreach 1C if the market has this capacity though other portions of Moses Lake are more likely to develop that this area. Impacts to ecological function will be avoided, minimized, and mitigated per the SMP provisions for residential, recreational and transportation (trails) development. Provided that provisions are enforced, <b>no net loss of ecological functions</b> is anticipated.
	Rural Conservancy	55%	Functioning & Partially Functioning	Residential	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k) Private moorage requirements: 24.12.390 (d)1) Docks, swim floats, buoys, watercraft lifts, and moorage piles shall be sited to avoid adversely impacting shoreline ecological functions or processes. 24.12.390 (d)3) Covered docks or structures are not permitted waterward of OWHM. 24.12.390 (f) Width, Length, Area, Height, and Material requirements 24.12.390 (g) Mooring buoys will be distanced to avoid nearshore habitat. 24.12.390 (h) Swim floats shall be no larger than 8x8 feet. Least impacting method of anchoring shall be used. 24.12.390 (i) Mitigation requirements for new or expanded overwater/in-water structures, general mitigation ratio is 1:1, alternative mitigation strategies are possible. 24.12.390 (j) Replacement of existing docks will follow requirements under 24.12.390 (f) 24.12.390 (k) Additions to private docks may be allowed if applicant demonstrates the need due to safety concerns or inadequate water depths. Design and mitigation requirements per 24.12.390 (i) 24.12.390 (l) Repair of Existing docks, toxic compounds shall not be utilized to repair piles or as treatment for replacement piles. Repair proposals for 50% or greater area must use grating.	
	Shoreline Residential	43%	Impaired	Residential		Shoreline stabilization requirements:  24.12.430 (e) Except for Columbia Basin Project and Irrigation District facilities, new or expanded structural shoreline stabilization is prohibited except when necessity is demonstrated consistent with the requirements of WAC 173-26-231(3)(a)(iii). Necessity is demonstrated through conclusive evidence documented by a geotechnical analysis that there is a significant possibility that the structure will be damaged within three (3) years as a result of shoreline erosion caused by wind/wave action or other hydraulic forces, and only when significant adverse impacts are mitigated to ensure no net loss of shoreline ecological functions and/or processes  24.12.430 (k) New stabilization structures, when found to be necessary, will limit the size of the project to minimum amount needed, include measures to assure no net loss of function, use biotechnical bank stabilization (soft bank) techniques unless demonstrated to be infeasible or ineffective, before implementing "hard" stabilization measures.	

**Table 6  
Grant County Cumulative Impacts Analysis**

	Environment Designations	Percent of Total Area	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future performance / Net effect
Moses Lake-Reach 2	Natural	21%	Partially functioning	None	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k) Private Moorage Requirements As Above - SMP 24.12.390 (d)1,3, (f) (g) (h) (i) (j) (k) (l) Shoreline Stabilization Requirements As Above - SMP 24.12.430 (e) (k)	Development is only anticipated in partially functioning and impaired subreaches. Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for residential development. Provided that SMP provisions are strictly enforced, <b>no net loss of ecological functions</b> is anticipated.
	Rural Conservancy	8%	Partially functioning	None			
	Shoreline Residential	57%	Impaired, Partially functioning	Residential			
	Shoreline Residential - Low Intensity	13%	Partially functioning	None			
Moses Lake-Reach 3	Natural	8%	Functioning	None	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k) Private Moorage Requirements As Above - SMP 24.12.390 (d)1,3, (f) (g) (h) (i) (j) (k) (l) Shoreline Stabilization Requirements As Above - SMP 24.12.430 (e) (k)	Development is only anticipated in partially functioning and impaired subreaches. Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for residential development. Provided that SMP provisions are strictly enforced, <b>no net loss of ecological functions</b> is anticipated.
	Recreation	1%	Functioning	None			
	Rural Conservancy	6%	Partially functioning	Residential			
	Shoreline Residential	81%	Impaired	Residential			
	Shoreline Residential - Low Intensity	5%	Functioning	None			
Quincy Basin Lakes	Rural Conservancy	100%	Partially functioning	Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k)	Only very limited development is anticipated and the shorelines are only partially functioning. Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for residential development. Provided that SMP provisions are strictly enforced, <b>no net loss of ecological functions</b> is anticipated.
Potholes Coulee and Frenchman Coulee Lakes	High Intensity - Public Facility	0%	Functioning	None	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k)	Restoration actions are planned for this area. This includes protection and restoration of riparian vegetation. Where development is planned, Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for residential development. Provided that SMP provisions are strictly enforced, <b>no net loss of ecological functions</b> is anticipated.
	Natural	58%		None			
	Public Recreation Conservancy	32%		Recreation (improvements only)			
	Recreation	10%		Residential, Recreation			
Potholes Reservoir-Reach 1	Natural	100%	Functioning	Recreation (improvements only)			No change

**Table 6  
Grant County Cumulative Impacts Analysis**

	Environment Designations	Percent of Total Area	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future performance / Net effect
Potholes Reservoir-Reach 2	High Intensity - Public Facility	18%	Partially functioning	None	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k) Commercial Development Requirements As Above - SMP 24.12.330 (h) (k) (l)	Only very limited development is anticipated, much of which will occur outside the shoreline jurisdiction in addition the shorelines are currently only partially functioning. Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for residential and commercial development. Provided that SMP provisions are strictly enforced, <b>no net loss of ecological functions</b> is anticipated.
	Natural	6%		None			
	Recreation	15%		Residential, Commercial			
	Rural Conservancy	61%		Recreation (improvements only)			
Drumheller Channels Lakes	Natural	1%	Functioning	None	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k)	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k)	Limited development is a possibility near Goose Lake, though this would be very low-intensity rural development if it occurred. Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for residential development. Provided that SMP provisions are strictly enforced, <b>no net loss of ecological functions</b> is anticipated.
	Public Recreation Conservancy	85%		Recreation (improvements only)			
	Rural Conservancy	14%		Residential, Recreation (improvements only)			
Lakes N. of Lower Crab Creek	Natural	69%	Functioning	None	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Recreational Development Requirements As Above - SMP 24.12.400 (b)1-3, (e) (i) (l) Boating Facilities: General Requirements As Above - SMP 24.12.320 (a)2,4,6,12,15 Transportation: Trails, Roads, and Parking Requirements As Above - SMP 24.12.440 (a) (b) (g) (h) (k) (m)	Limited low-intensity recreational development is planned for this reach though this would predominately include improvements to existing features. Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for recreational development. Provided that provisions are enforced, <b>no net loss of ecological functions</b> is anticipated.
	Public Recreation Conservancy	28%		Recreation - fishing pier, kiosks, trails			
	Rural Conservancy	3%		None			
Lower Grant County Lakes	Natural	80%	Functioning	None			No change
	Rural Conservancy	20%		None			
Lind Coulee	Rural Conservancy	100%	Functioning & Partially functioning	None			No change
Lower Crab Creek	Natural	48%	Functioning & Partially functioning	Recreation (improvements only)		Very high priority restoration planned by GCPUD.	No change
	Rural Conservancy	52%		None			
Rocky Ford Creek	High Intensity - Public Facility	4%	Functioning	None	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k)	Very limited development (1 or 2 units) is a slight possibility within this area. Impacts to ecological function will be avoided, minimized, and mitigated per the SMP provisions for residential development. Provided that provisions are enforced, <b>no net loss of ecological functions</b> is anticipated.
	Natural	51%		None			
	Rural Conservancy	44%		Residential			
Upper Crab Creek	Rural Conservancy	100%	Impaired, Partially functioning	Residential (Reach 2 only)	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	High priority restoration planned by WDFW, BOR, WDOE. Planned restoration will offset very limited development.	Restoration actions are planned for this area. This includes enhancing wetland riparian habitat and applying BMPs to upland agricultural areas. Where development is planned, Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for residential development. Provided that SMP provisions are strictly enforced, <b>no net loss of ecological functions</b> is anticipated.
						Residential Development Requirements As Above SMP 24.12.410 (b) (d) (e) (f) (j) (k)	
Sand Hollow Wasteway	Rural Conservancy	100%	Impaired, Partially functioning	None		Very high priority restoration planned by GCPUD.	Restoration actions are planned for this area. This includes protecting and restoring riparian areas. Provided these actions are implemented, this area will have a <b>net gain in ecological functions</b> .

**Table 7  
Coalition Cities Cumulative Impacts Analysis**

City	Environment Designations	Percent of Total Area	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future performance / Net effect
Coulee City	Recreation	49%	Impaired	Recreation - improvements plus additional moorage, fueling station, and fishing pier	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Moderate and very high priority Restoration planned by City. Planned restoration will offset development impacts in other portions of shoreline reach.</p> <p>Boating facility general requirements:</p> <p>16.12.300 (a) 3 Boating and moorage facilities shall be sited and designed to ensure no net loss of shoreline ecological functions, and shall meet federal, state and local requirements, as applicable.</p> <p>16.12.300 (a) 7 In-water work shall be scheduled to protect biological productivity</p> <p>16.12.300 (a) 10 Boating and moorage facilities shall be constructed of materials that will not adversely affect water quality or aquatic plants and animals over the long term. Materials used for submerged portions, decking and other components that may come in contact with water shall be approved by applicable state agencies for use in water to avoid discharge of pollutants from wave splash, rain or runoff. Wood treated with creosote, copper chromium, arsenic, pentachlorophenol or other similarly toxic materials is prohibited for use in moorage facilities.</p> <p>Marina requirements:</p> <p>16.12.300 (c) 1 Marinas shall be designed to provide flushing of all enclosed water areas, allow the free movement of aquatic life in shallow water areas; and avoid and minimize any interference with geohydraulic processes and disruption of existing shore forms.</p> <p>16.12.300 (c) 2 Open pile or floating breakwater designs shall be used unless it can be demonstrated that riprap or other solid construction would not result in any greater net impacts to shoreline ecological functions, processes, fish passage, or shore features.</p> <p>16.12.300 (c) 5 If a marina is to include gas and oil handling facilities, such facilities shall be separate from main centers of activity in order to minimize the fire and water pollution hazard, and to facilitate fire and pollution control. Marinas shall have adequate facilities and procedures for fuel handling and storage, and the containment, recovery, and mitigation of spilled petroleum, sewage, and other potentially harmful or hazardous materials, and toxic products.</p> <p>Docks and Piers requirements:</p> <p>16.12.310 (a) Shall be located to avoid adversely impacting shoreline ecological functions or processes. Covered docks or other covered structures are not permitted waterward of the OWHM.</p> <p>16.12.310 (c) Docks dimensional material, and other standards shall be according to the State and Federal requirements.</p> <p>Recreational Development requirements:</p> <p>16.12.350 (a) 1 The potential adverse impacts of all recreational uses shall be mitigated and adequate provisions for shoreline rehabilitation shall be made part of any proposed recreational use or development to ensure no net loss of shoreline ecological function.</p> <p>16.12.350 (b) 2 Sites with fragile and unique shoreline conditions, such as high-quality wetlands and wildlife habitats, shall be used only for non-intensive recreation activities, such as trails, viewpoints, interpretive signage, and similar passive and low-impact facilities that result in no net loss of shoreline ecological function, and do not require the construction and placement of permanent structures.</p> <p>16.12.350 (b) 3 For proposed recreation developments that require the use of fertilizers, pesticides, or other toxic chemicals, the proponent shall specify the BMPs to be used to prevent these applications and resultant leachate from entering adjacent waters.</p> <p>16.12.350 (b) 5 In approving shoreline recreational developments, the Town shall ensure that the development will maintain, enhance, or restore desirable shoreline features including unique and fragile areas, scenic views, and aesthetic values. The Town may, therefore, adjust or prescribe project dimensions, on-site location of project components, intensity of use, screening, lighting, parking, and setback requirements.</p> <p>16.12.350 (d) Proposals for recreational developments shall include a landscape plan indicating how native, self-sustaining vegetation is incorporated into the proposal to maintain ecological functions. The removal of on-site native vegetation shall be limited to the minimum necessary for the development of permitted structures or facilities, and shall be consistent with provisions of Section 16.12.240, Shoreline Vegetation Conservation and Article V, Critical Areas.</p> <p>16.12.350 (e) Accessory uses and support facilities such as maintenance facilities, utilities, and other non-water-oriented uses shall be consolidated and located in upland areas outside shoreline, wetland, and riparian buffers unless such facilities, utilities, and uses are allowed in shoreline buffers based on the regulations of this SMP.</p>	Several restoration actions are planned for this currently impaired shoreline reach. This includes soft bank shoreline protection and restoration of shoreline and shrub steppe vegetation. Development is only anticipated in the impaired subreach. Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for residential development. Provided that SMP provisions are strictly enforced, <b>no net loss of ecological functions</b> is anticipated.
	Urban Conservancy	51%	Functioning	None			

**Table 7  
Coalition Cities Cumulative Impacts Analysis**

Electric City	Recreation	33%	Impaired	None		Moderate and very high priority Restoration planned by City.	No change
	Urban Conservancy	67%	Partially Functioning, Functioning	None			
Grand Coulee	High Intensity - Public Facility	26%	Partially functioning	Recreation - fishing jetty and pier	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Moderate and very high priority Restoration planned by City. Planned restoration will offset development impacts in other portions of shoreline reach.	Several restoration actions are planned for this partially functioning portions of this shoreline. This includes invasive species removal and shoreline vegetation enhancement. Development is only anticipated in the partially functioning subreaches. Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for residential development. Provided that SMP provisions are strictly enforced, <b>no net loss of ecological functions</b> is anticipated.
						Docks and Piers requirements: 17.82.310 (a) 2 Docks, swim floats, buoys, shall be sited to avoid adversely impacting shoreline ecological functions or processes. (WAC 173-26-321(2)(d)) 17.82.310 (a) 4 Covered docks or other covered structures are not permitted waterward of the OHWM. (WAC 173-26-321(2)(b, d)) 17.82.310 (b) 2 Docks dimensional material, and other standards shall be according to the State and Federal requirements.	
						Groins and Weirs requirements: 17.82.340 (b) New, expanded or replacement groins and weirs shall only be permitted if the applicant demonstrates that the proposed groin or weir will not result in a net loss of shoreline ecological functions, and the structure is necessary for water-dependent uses, public access, shoreline stabilization, or other specific public purposes. 17.82.340 (d) Groins and weirs shall be located, designed, constructed and operated consistent with mitigation sequencing principles, including avoiding critical areas, as provided in Section 17.82.510.	
						Residential Requirements: 17.82.360 (b) Residential development shall be located and constructed to result in no net loss of shoreline ecological function. No net loss of shoreline ecological functions shall be assured through application of shoreline buffers specified in Article V, Critical Areas to avoid future stabilization and other provisions of this SMP related to shoreline stabilization, vegetation management, and on-site sewage disposal. 17.82.360 (c) All residential development shall be located or designed in such a manner as to prevent measurable degradation of water quality from stormwater runoff. Adequate mitigation measures shall be required and implemented where there is the reasonable potential for such adverse effect on water quality. 17.82.360 (f) All new residential development shall be required to meet the vegetation management provisions contained in Section 17.82.240, Shoreline Vegetation Conservation and Section 17.82.540, Fish and Wildlife Habitat Conservation Areas.	
Shoreline Residential	4%	Partially functioning	Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Shoreline Stabilization Requirements: 17.82.380 (b) New shoreline stabilization for new development is prohibited unless it can be demonstrated that the proposed use cannot be developed without shore protection or is necessary to restore ecological functions or hazardous substance remediation. 17.82.380 (k) New stabilization structures, when found to be necessary will limit the size of the project to the minimum amount necessary, include measures to assure no net loss of shoreline ecological functions, use biotechnical bank stabilization techniques unless those are demonstrated to be infeasible or ineffective before implementing "hard" structural stabilization measures.		
Urban Conservancy	70%	Partially Functioning, Functioning	None				

**Table 7  
Coalition Cities Cumulative Impacts Analysis**

Krupp	Conservancy	100%	Functioning	Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Very high priority Restoration planned by City. Planned restoration will offset development impacts in other portions of shoreline reach.	No change
						<p>Residential Requirements:</p> <p>14.19.340 (a) Single-family residential development is a preferred use when it is developed in a manner consistent with pollution control and preventing damage to the natural environment.</p> <p>14.19.340 (b) Residential development shall be located and constructed to result in no net loss of shoreline ecological function. No net loss of shoreline ecological functions shall be assured through application of riparian buffers specified in Section 14.19.440, Fish and Wildlife Habitat Conservation Areas to avoid future stabilization and other provisions of this SMP related to shoreline stabilization, vegetation management, and on-site sewage disposal.</p> <p>14.19.340 (d) Accessory uses and structures shall be located outside of the riparian buffer, unless the structure is or supports a water-dependent use.</p> <p>14.19.340 (e) All residential development shall be located or designed in such a manner as to prevent measurable degradation of water quality from stormwater runoff. Adequate mitigation measures shall be required and implemented where there is the reasonable potential for such adverse effect on water quality.</p> <p>14.19.340 (f) Applications for new shoreline residences and appurtenant structures shall be sufficiently set back from steep slopes and shorelines vulnerable to erosion so that structural improvements, including bluff walls and other shoreline stabilization and flood control structures are not necessary to protect proposed residences and associated uses.</p> <p>14.19.340 (i) All new residential development shall be required to meet the vegetation management provisions contained in Section 14.19.240, Shoreline Vegetation Conservation and Section 14.19.440, Fish and Wildlife Habitat Conservation Areas.</p>	
Soap Lake	Recreation	16%	Partially functioning	Recreation - boat launch	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Moderate and very high priority Restoration planned by City. Planned restoration will offset development impacts in other portions of shoreline reach.	Several restoration actions are planned for the Soap Lake shoreline. This includes soft bank shoreline protection, removing invasive species, enhancing riparian vegetation, and implementing stormwater controls. These projects will address the cumulative impacts from planned low-intensity development within the Shoreline Residential-Low Intensity environment designation. Impacts to ecological function will be avoided, minimized and mitigated per the SMP provisions for residential and recreation development. Provided that SMP provisions are strictly enforced, <b>no net loss of ecological functions</b> is anticipated.
	Shoreline Residential	9%	Impaired	Residential	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	14.08.300 (b) 1 Boat launch and haul-out facilities, such as ramps, marine travel lifts and marine railways, and minor accessory buildings shall be designed and constructed in a manner that minimizes adverse impacts on biological functions, aquatic and riparian habitats, water quality, navigation and neighboring uses.	
	Shoreline Residential - Low Intensity	21%	Functioning			14.08.380 (b) Residential development shall be located and constructed to result in no net loss of shoreline ecological function. No net loss of shoreline ecological functions shall be assured through application of shoreline buffers specified in Article V of this Chapter to avoid future stabilization and other provisions of this SMP related to shoreline stabilization, vegetation management, and on-site sewage disposal.	
	Public Recreation Conservancy	6%	Partially functioning	Recreation (improvements only)		14.08.380 (d) Accessory uses and structures shall be located outside of the riparian buffer, unless the structure is or supports a water-dependent use.	
	Urban Conservancy	48%	Partially functioning	None		14.08.380 (e) All residential development shall be located or designed in such a manner as to prevent measurable degradation of water quality from stormwater runoff. Adequate mitigation measures shall be required and implemented where there is the reasonable potential for such adverse effect on water quality.	
						14.08.380 (f) Applications for new shoreline residences shall ensure that shoreline stabilization and flood control structures are not necessary to protect proposed residences.	
						14.08.380 (i) All new residential development shall be required to meet the vegetation management provisions contained in Section 14.08.240, Shoreline Vegetation Conservation and Section 14.08.570, Fish and Wildlife Habitat Conservation Areas.	
Wilson Creek	High Intensity - Ag-Industrial	90%	Partially functioning	None			No change
	Rural Conservancy	10%		None			

As described in the tables above, the SMP will protect the baseline ecological functions within Grant County and the Coalition Cities. The features that will provide this protection include the SMP environment designations and general requirements, the shoreline modification and use provisions, and finally, the Restoration Plan. It is expected that the SMP will accommodate reasonable foreseeable shoreline development, while affording these protections and restoration initiatives over the next 20 years. All of which will result in no net loss of shoreline ecological function in Grant County and Coalition City shorelines, and may actually lead to an improvement or gain of ecological function over time.

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