

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	Hydraulic Project Approval
km ²	Square kilometers
MTCA	Model Toxic Control Act
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
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
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

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 SMP Guidelines (Chapter 173-26 Washington Administrative Code [WAC]).

The guidelines require the Coalition members to demonstrate that the updated SMP 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 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.

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 [km²]), of which 2,681 square miles (6,943.8 km²) is land and 110 square miles (284.9 km²) (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 structures 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.

- **Land Capacity** – Presents the amount of developable acres and corresponding number of residential units, which are based on existing land use designations.
- **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.
- **Anticipated Development** – Includes the anticipated residential, commercial, or recreational development in the next 20 years.
- **Environment Designations** – Identifies environment designations for each reach that is tied to the anticipated development.

Table 1
County Shorelines

COLUMBIA RIVER – REACH 1 (Shoreline Inventory, Analysis, and Characterization Report [IAC] Map 1)	
Land Capacity 51 Developable Acres/8 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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
COLUMBIA RIVER – REACH 2 (IAC Map 2)	
Land Capacity 656 Developable Acres/34 Residential Units	Rate of Development 25-30%
Natural	None
Environment Designation	Anticipated Development
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.

COLUMBIA RIVER – REACH 3 (IAC Map 3)	
Land Capacity 726 Developable Acres/50 Residential Units	Rate of Development 3%
Environment Designation	Anticipated Development
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.
COLUMBIA RIVER – REACH 4 (IAC Map 4)	
Land Capacity 288 Developable Acres/14 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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.
COLUMBIA RIVER – REACH 5 (IAC Map 5)	
Land Capacity 0 Developable Acres/0 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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.
CRESCENT BAY AND LAKE ROOSEVELT (IAC Map 6)	
Land Capacity 0 Developable Acres/0 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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.

BANKS AND ASSOCIATED LAKES (IAC Map 7)	
Land Capacity 0 Developable Acres/0 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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.
COFFEE AND LONG LAKES (IAC Map 8)	
Land Capacity 62 Developable Acres/2 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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.
SUN LAKES – BLUE LAKE (IAC Map 9)	
Land Capacity 88 Developable Acres/98 Residential Units	Rate of Development 90-95%
Environment Designation	Anticipated Development
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.

SUN LAKES – ALL OTHERS (IAC Map 10)	
Land Capacity 248 Developable Acres/12 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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.
SUN LAKES – PARK LAKE (IAC Map 11)	
Land Capacity 32 Developable Acres/4 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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.
SOAP LAKE – UNINCORPORATED (IAC Map 12)	
Land Capacity 58 Developable Acres/20 Residential Units	Rate of Development 10%
Environment Designation	Anticipated Development
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 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.

RESERVOIRS ALONG MAIN CANAL (IAC Map 13)	
Land Capacity 180 Developable Acres/7 Residential Units	Rate of Development 0-90%
Environment Designation	Anticipated Development
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.
SMALL LAKES SOUTH OF WILSON CREEK (IAC Map 14)	
Land Capacity 132 Developable Acres/3 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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. .
EPHRATA/NORTH ROCKY FORD LAKES (IAC Map 15)	
Land Capacity 145 Developable Acres/30 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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.

MOSES LAKE – REACH 1 (IAC Map 16)	
Land Capacity 322 Developable Acres/90 Residential Units	Rate of Development 50%
Environment Designation	Anticipated Development
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.
MOSES LAKE – REACH 2 (IAC Map 17)	
Land Capacity 154 Developable Acres/456 Residential Units	Rate of Development 50%
Environment Designation	Anticipated Development
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 subreaches. Development potential is high within the UGA in Subreach 2a. Subreach 2b is partially developed and is most likely to have more new residential developments. Subreach 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

Reasonably Foreseeable Future Development and Potential Impacts to Ecological Function

	approximately 228 new residential units. This environment lacks public access and will need new public access as part of new development.
MOSES LAKE – REACH 3 (IAC Map 18)	
Land Capacity 177 Developable Acres/587 Residential Units	Rate of Development 25-50%
Environment Designation	Anticipated Development
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.
QUINCY BASIN LAKES (IAC Map 19)	
Land Capacity 1798 Developable Acres/81 Residential Units	Rate of Development 5-10%
Environment Designation	Anticipated Development
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.
POTHOLES/FRENCHMAN COULEE LAKES (IAC Map 20)	
Land Capacity 50 Developable Acres/198 Residential Units	Rate of Development 100%
Environment Designation	Anticipated Development
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.

Reasonably Foreseeable Future Development and Potential Impacts to Ecological Function

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.
POTHOLES RESERVOIR – REACH 1 (IAC Map 21)	
Land Capacity 75 Developable Acres/0 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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.
POTHOLES RESERVOIR – REACH 2 (IAC Map 22)	
Land Capacity 9 Developable Acres/9 Residential Units	Rate of Development 25%
Environment Designation	Anticipated Development
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.

DRUMHELLER CHANNELS LAKES (IAC Map 23)	
Land Capacity 57 Developable Acres/7 Residential Units	Rate of Development 40-50%
Environment Designation	Anticipated Development
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. .
LAKES NORTH OF LOWER CRAB CREEK (IAC Map 24)	
Land Capacity 289 Developable Acres/30 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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.
LOWER GRANT COUNTY LAKES (IAC MAP 25)	
Land Capacity 102 Developable Acres/5 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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.

Reasonably Foreseeable Future Development and Potential Impacts to Ecological Function

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.	
LIND COULEE (IAC Map 26)		
Land Capacity 856 Developable Acres/21 Residential Units		Rate of Development 0%
Environment Designation	Anticipated Development	
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.	
LOWER CRAB CREEK (IAC Map 27)		
Land Capacity 1405 Developable Acres/39 Residential Units		Rate of Development 0%
Environment Designation	Anticipated Development	
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.	
ROCKY FORD CREEK (IAC Map 28)		
Land Capacity 389 Developable Acres/53 Residential Units		Rate of Development 10%
Environment Designation	Anticipated Development	
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.	

UPPER CRAB CREEK REACH 1 – COUNTY LINE TO BROOK LAKE (IAC Map 29)	
Land Capacity 1141 Developable Acres/29 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
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.
UPPER CRAB CREEK REACH 2 – BROOK LAKE TO MOSES LAKE (IAC Map 30)	
Land Capacity 2,742 Developable Acres/217 Residential Units	Rate of Development 30-50%
Environment Designation	Anticipated Development
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.
SAND HOLLOW WASTEWAY (IAC Map 31)	
Land Capacity 2,742 Developable Acres/29 Residential Units	Rate of Development 0%
Environment Designation	Anticipated Development
Rural Conservancy	No major development is anticipated in this environment.

Table 2
City Shorelines

COULEE CITY (IAC Appendix C, Figure 1)	
Land Capacity	Rate of Development
0 Developable Acres/0 Residential Units	0%
Environment Designation	Anticipated Development
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.
ELECTRIC CITY (IAC Appendix D, Figure 1)	
Land Capacity	Rate of Development
28 Developable Acres/16 acres developable	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.
CITY OF GRAND COULEE (IAC Appendix E, Figure 1-3)	
Land Capacity	Rate of Development
0 Developable Acres/2 Residential Units	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.

TOWN OF KRUPP (IAC Appendix F, Figure 1)	
Land Capacity 1 Developable Acres/4 Residential Units	Rate of Development 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.
CITY OF SOAP LAKE (IAC Appendix G, Figure 1)	
Land Capacity 14 Developable Acres/57 Residential Units	Rate of Development 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. .
WILSON CREEK (IAC Appendix H, Figure 1)	
Land Capacity 0 Developable Acres/0 Residential Units	Rate of Development 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. Over-water structures can affect surface flow dynamics (creating eddies, which are 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 that are less conducive to threatened and endangered aquatic species. Artificial light and increased noise can disturb native wildlife species.

4 ESTABLISHED REGULATION, RESTORATION, AND PROTECTION PROVISIONS OF THE PROPOSED SMP

The County and Coalition Cities SMPs will work in conjunction with other city, state, and federal regulations and programs that aim to protect ecological resources and protect the health and well-being of citizens. The following section summarizes the beneficial effects of established regulations, restoration plans, and protective provisions of the SMP.

4.1 Beneficial Effects of Established Regulation

The SMP will work in coordination with all other applicable federal, state, and local laws relevant to properties in the shoreline jurisdiction. In the event that provisions of this SMP conflict with provisions of federal, state, or county regulations, the provision that is most protective of shoreline resources shall prevail.

4.1.1 Local Regulations

4.1.1.1 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 5-1 in the IAC Report summarizes protection standards for the County and Coalition Cities.

4.1.1.2 Regulations concerning on-site sewage disposal systems

Regulations that protect shorelines from unanticipated impacts associated with sewage disposal (i.e., septic) systems are found in the Grant County Code (GCC) 23.12.040, and County Health District Ordinance 2008-3. GCC 23.12.040 notes that land divisions within UGA areas must connect to a public sewer system, or applicants must demonstrate that septic development will not adversely affect water quality or watershed management objectives. Ordinance 2008-3 amends and provides additions to WAC 246-272A regarding on-site

sewage systems. These systems require setbacks from public drinking water wells (100 feet from soil dispersal reserve area) and drinking water springs (200 feet), surface water measured from ordinary high water mark (OHWM) (100 feet), and irrigation ditches (50 feet).

4.1.2 State and Federal Regulations

Certain state and federal agencies have jurisdiction over areas within the County, city, and town shoreline jurisdictions. Development thresholds that commonly lead to agency consultation include proposals that may impact federally listed fish or wildlife, wetlands, streams; affect the floodplain or floodway; or include clearing and grading of land.

The updated SMP regulations are meant to be consistent with and work in concert with the following existing state and federal regulations:

- **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 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.

4.2 Restoration Opportunities and Protective SMP Standards

4.2.1 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. A list of the more active groups is included below. This list is not intended to be comprehensive and may not name all groups that have contributed to shoreline restoration or protection in the past or may contribute in the future.

- 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 3 lists the site-specific 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 provides restoration and protection opportunities at a broader scale, which are discussed in more detail within the IAC Tables.

Table 3
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**
County	Crescent Bar Island Recreation Area (Columbia River Reach 1)	Stabilize shoreline using soft shoreline techniques	<i>Moderate</i>	GCPUD	Increased soil erosion	Reductions in soil erosion
		Protect/enhance shoreline vegetation	<i>Very High</i>			Increased native shrub-steppe habitat for terrestrial species foraging/breeding/nesting/migration
County	Priest Rapids Recreation Area/Desert Aire (Columbia River Reach 3)	Protect/enhance riparian vegetation	<i>Very High</i>	GCPUD	Habitat loss	Increased native shrub-steppe habitat for terrestrial species foraging/breeding/nesting/migration
		Protect existing shrub-steppe vegetation				Riparian vegetation recruitment
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
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	<i>High</i>	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
County	Buckshot Ranch Boat Launch (Columbia River Reach 3), Burkett Lake Recreation Area, Frenchman's Coulee (Potholes and Frenchman Coulee Lakes), and Sand Hollow South (Lakes North of Lower Crab Creek)	Protect/enhance riparian vegetation	<i>Very High</i>	GCPUD	Habitat loss	Increased native shrub-steppe habitat for terrestrial species foraging/breeding/nesting/migration
Coulee City	Coulee City Community Park (Subreach 1a)	Stabilize shoreline using soft shoreline techniques	Moderate	Coulee City	Increased soil erosion	Reductions in soil erosion
		Enhance riparian vegetation and remove invasives where present	Moderate	Coulee City	Habitat loss	Increased habitat for aquatic species foraging/spawning
	Protect existing shrub-steppe vegetation	<i>Very High</i>	Increased native shrub-steppe habitat for terrestrial species foraging/breeding/nesting/migration			
Electric City	Northeast (Subreach 1d) and southeast edge of lake (Subreach 1a)	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.	<i>Very High</i>			Reductions in soil erosion
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	<i>Very High</i>			
Soap Lake	Soap Lake shoreline along Highway 17 (Subreach 1d and parts of subreach 1c)	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	<i>Very High</i>		Fertilizer/Pesticide/Herbicide inputs	Reduced excess nutrient sources to improve water quality
					Temperature increases	Temperature/dissolved oxygen improvements
Bioaccumulation of toxins	Toxin/pathogen reduction					
Krupp	Upper Crab Creek shoreline	Remove invasive vegetation and protect existing riparian and shrub-steppe vegetation	<i>Very High</i>	Krupp	Habitat loss due to invasive species	Riparian vegetation recruitment for native terrestrial species foraging/breeding/nesting habitat
Wilson Creek	Upper Crab Creek shoreline	Remove invasive vegetation and protect existing riparian and shrub-steppe vegetation	<i>Very High</i>	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

**Table 4
General Restoration and Protection Opportunities in Grant County and Surrounding Cities and Towns**

Restoration / Protection Opportunities	Key Impairments*	Key Benefits to Ecological Functions*	Columbia River	Crescent Bay and Lake Roosevelt	City of Grand Coulee (Crescent Bay)	City of Grand Coulee (Lake Roosevelt)	Banks, Osborn, Thompson Lakes	Town of Coulee City (Banks Lake)	City of Electric City (Banks and Osborn Bay Lakes)	City of Grand Coulee (Banks Lake)	Coffee and Long Lakes	Blue Lake	Alkali, Deep, Dry Falls, Lenore, and Little Soap Lakes
			A	B	C	D	E	F	G	H	I	J	K
6	Protect intact shrub-steppe habitat	(none)	HR-CCP, GCPUD	SIAC	SIAC	SIAC	BLRMP	SIAC, BLRMP	SIAC, BLRMP	SIAC, BLRMP		CBWAMP	CBWAMP
7	Protect steep slope areas from runoff and sedimentation	Sediment cycle disruption		SIAC	SIAC	SIAC			SIAC				
8	Monitor shoreline periodically and evaluate protection measures if grazing impacts appear	NA			N/A	N/A	BLRMP	N/A	N/A	N/A	SIAC		
9	Protect existing wetland and riparian habitats	NA	HR-CCP, GCPUD				CBWAMP, BLRMP	BLRMP	BLRMP	BLRMP			
10	Grass or woody plant strips between agricultural fields and either lakes or streams	Habitat loss			N/A	N/A		N/A	N/A	N/A			
11	Concentrate livestock water access, including exclusion fencing if feasible	NA			N/A	N/A	BLRMP	N/A	N/A	N/A			

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General Restoration and Protection Opportunities in Grant County and Surrounding Cities and Towns**

Restoration / Protection Opportunities		Key Impairments*	Key Benefits to Ecological Functions*	Columbia River	Crescent Bay and Lake Roosevelt	City of Grand Coulee (Crescent Bay)	City of Grand Coulee (Lake Roosevelt)	Banks, Osborn, Thompson Lakes	Town of Coulee City (Banks Lake)	City of Electric City (Banks and Osborn Bay Lakes)	City of Grand Coulee (Banks Lake)	Coffee and Long Lakes	Blue Lake	Alkali, Deep, Dry Falls, Lenore, and Little Soap Lakes	
				A	B	C	D	E	F	G	H	I	J	K	
12	Manage nutrient and temperature loading at nearby hatchery	Effluent inputs - nutrient sources and elevated temperature water	Decrease nutrient sources												
		Temperature increases	Improved temperature/dissolved oxygen and protect against elevated toxin/pathogen conditions												
			Aquatic species - rearing/migration												
13	Evaluate opportunities for existing hardened shoreline/ armoring removal and native vegetation replanting with soft shoreline stabilization.	Habitat loss	Terrestrial and aquatic species - foraging/breeding/nesting/migration/rearing	GCPUD		SIAC				SIAC	SIAC				
		Increased wave energy due to shoreline armoring	Decrease soil erosion												
		Sediment cycle disruption	Riparian vegetation recruitment												
14	Substrate enhancement	Sediment cycle disruption due to periodic flooding and ice dams	Decrease sedimentation/excessive deposition												
15	Reconnect floodplain and/or wetland connectivity where appropriate	Habitat fragmentation	Increased water storage	HR-CCP				BLRMP	BLRMP	BLRMP	BLRMP				
		Reduced water storage, and reduced filtration of sediment, nutrient-, toxin-, or pathogen-laden water	Increased subsurface infiltration and flow, protect surface water quality												
		Habitat loss	Increased hyporheic exchange and groundwater recharge												
		Sediment and organic material cycle disruption	Terrestrial and aquatic species - foraging/breeding/nesting/migration/rearing												

**Table 4
General Restoration and Protection Opportunities in Grant County and Surrounding Cities and Towns**

Restoration / Protection Opportunities	Key Impairments*	Key Benefits to Ecological Functions*	Park Lake	Soap Lake	City of Soap Lake (Soap Lake)	Trail, Billy Clapp, and Brook Lakes	Sand Coulee Syphon, Round Lake, and Un-named Lake	Ephrata and Rocky Ford Lakes	Babcock Ridge Lake, Crater Lake, Frenchman Hills Lake, Hiawatha Lake, Martha Lake, Sand Lake, Un-named Lakes, Winchester Lakes	Moses Lake	Ancient Lake, Burke Lake, Dusty Lake, Evergreen Reservoir, Flat Lake, Hilltop Lake, Quincy Lake, Stan Coffin Lake	Potholes Reservoir
			L	M	N	O	P	Q	R	S	T	U
1	Establish riparian buffers where absent and/or remove invasives where present	Loss of nutrient and organic inputs, reduced evapotranspiration and bioinfiltration Riparian vegetation recruitment Increased habitat for aquatic and terrestrial species foraging/breeding/nesting/migration	SIAC		SIAC					SIAC, CCSBP		SIAC, CCSBP
2	Concentrate and better manage recreation and public access to intact riparian, wetland, and shrub-steppe habitats	Habitat loss - riparian and wetland Riparian vegetation recruitment for native terrestrial species foraging/breeding/nesting habitat Temperature/dissolved oxygen improvements Improve toxin/pathogen management capabilities	CBWAMP			CBWAMP			CBWAMP	CCSBP	CBWAMP	CBWAMP, CCSBP
3	Incorporate aquatic habitat complexity and vegetation with future development along with soft bank stabilization techniques	Habitat loss along shoreline Increased wave energy due to shoreline armoring Maintained or increased habitat for aquatic species – rearing/migration Reduced soil erosion	SIAC	SIAC	SIAC	SIAC	SIAC	SIAC		SIAC		SIAC
4	Implement stormwater controls consistent with Eastern WA Stormwater manual	Fertilizer/Pesticide/Herbicide inputs Temperature increases Bioaccumulation of toxins Reduced excess nutrient sources to improve water quality Temperature/dissolved oxygen improvements Toxin/pathogen reduction	SIAC		SIAC					SIAC	SIAC	
5	Restore shrub-steppe along shorelines	Habitat loss - shrub-steppe Increased native shrub-steppe habitat for terrestrial species foraging/breeding/nesting/migration								SIAC		

**Table 4
General Restoration and Protection Opportunities in Grant County and Surrounding Cities and Towns**

Restoration / Protection Opportunities	Key Impairments*	Key Benefits to Ecological Functions*	Park Lake	Soap Lake	City of Soap Lake (Soap Lake)	Trail, Billy Clapp, and Brook Lakes	Sand Coulee Syphon, Round Lake, and Un-named Lake	Ephrata and Rocky Ford Lakes	Babcock Ridge Lake, Crater Lake, Frenchman Hills Lake, Hiawatha Lake, Martha Lake, Sand Lake, Un-named Lakes, Winchester Lakes	Moses Lake	Ancient Lake, Burke Lake, Dusty Lake, Evergreen Reservoir, Flat Lake, Hilltop Lake, Quincy Lake, Stan Coffin Lake	Potholes Reservoir
			L	M	N	O	P	Q	R	S	T	U
6	Protect intact shrub-steppe habitat	(none)	CBWAMP		SIAC	CBWAMP			CBWAMP		SIAC, CBWAMP	SIAC, CBWAMP
7	Protect steep slope areas from runoff and sedimentation	Sediment cycle disruption								SIAC		
8	Monitor shoreline periodically and evaluate protection measures if grazing impacts appear	NA			N/A		SIAC	SIAC				
9	Protect existing wetland and riparian habitats	NA	CBWAMP	SIAC	SIAC	SIAC, CBWAMP			CBWAMP		CBWAMP	CBWAMP
10	Grass or woody plant strips between agricultural fields and either lakes or streams	Habitat loss			N/A						SIAC	SIAC
11	Concentrate livestock water access, including exclusion fencing if feasible	NA			N/A					SIAC		

**Table 4
General Restoration and Protection Opportunities in Grant County and Surrounding Cities and Towns**

Restoration / Protection Opportunities	Key Impairments*	Key Benefits to Ecological Functions*	Park Lake	Soap Lake	City of Soap Lake (Soap Lake)	Trail, Billy Clapp, and Brook Lakes	Sand Coulee Syphon, Round Lake, and Un-named Lake	Ephrata and Rocky Ford Lakes	Babcock Ridge Lake, Crater Lake, Frenchman Hills Lake, Hiawatha Lake, Martha Lake, Sand Lake, Un-named Lakes, Winchester Lakes	Moses Lake	Ancient Lake, Burke Lake, Dusty Lake, Evergreen Reservoir, Flat Lake, Hilltop Lake, Quincy Lake, Stan Coffin Lake	Potholes Reservoir
			L	M	N	O	P	Q	R	S	T	U
12 Manage nutrient and temperature loading at nearby hatchery	Effluent inputs - nutrient sources and elevated temperature water	Decrease nutrient sources										
	Temperature increases	Improved temperature/dissolved oxygen and protect against elevated toxin/pathogen conditions										
		Aquatic species - rearing/migration										
13 Evaluate opportunities for existing hardened shoreline/ armoring removal and native vegetation replanting with soft shoreline stabilization.	Habitat loss	Terrestrial and aquatic species - foraging/breeding/nesting/migration/rearing										
	Increased wave energy due to shoreline armoring	Decrease soil erosion			SIAC							
	Sediment cycle disruption	Riparian vegetation recruitment										
14 Substrate enhancement	Sediment cycle disruption due to periodic flooding and ice dams	Decrease sedimentation/excessive deposition										
15 Reconnect floodplain and/or wetland connectivity where appropriate	Habitat fragmentation	Increased water storage										
	Reduced water storage, and reduced filtration of sediment, nutrient-, toxin-, or pathogen-laden water	Increased subsurface infiltration and flow, protect surface water quality										
	Habitat loss	Increased hyporheic exchange and groundwater recharge										
	Sediment and organic material cycle disruption	Terrestrial and aquatic species - foraging/breeding/nesting/migration/rearing										

**Table 4
General Restoration and Protection Opportunities in Grant County and Surrounding Cities and Towns**

Restoration / Protection Opportunities		Key Impairments*	Key Benefits to Ecological Functions*	V	W	X	Y	Z	AA	BB	CC	DD
1	Establish riparian buffers where absent and/or remove invasives where present	Loss of nutrient and organic inputs, reduced evapotranspiration and bioinfiltration	Riparian vegetation recruitment Increased habitat for aquatic and terrestrial species foraging/breeding/nesting/migration		CCSBP			CCSBP, CNWR-CCP	SIAC, CCSBP	SIAC, CCSBP	SIAC, CCSBP	CCSBP
2	Concentrate and better manage recreation and public access to intact riparian, wetland, and shrub-steppe habitats	Habitat loss - riparian and wetland	Riparian vegetation recruitment for native terrestrial species foraging/breeding/nesting habitat Temperature/dissolved oxygen improvements Improve toxin/pathogen management capabilities	CBWAMP				CBWAMP, CNWR-CCP				
3	Incorporate aquatic habitat complexity and vegetation with future development along with soft bank stabilization techniques	Habitat loss along shoreline Increased wave energy due to shoreline armoring	Maintained or increased habitat for aquatic species – rearing/migration Reduced soil erosion				SIAC					
4	Implement stormwater controls consistent with Eastern WA Stormwater manual	Fertilizer/Pesticide/Herbicide inputs Temperature increases Bioaccumulation of toxins	Reduced excess nutrient sources to improve water quality Temperature/dissolved oxygen improvements Toxin/pathogen reduction		SIAC	SIAC	SIAC	SIAC		SIAC	SIAC	SIAC
5	Restore shrub-steppe along shorelines	Habitat loss - shrub-steppe	Increased native shrub-steppe habitat for terrestrial species foraging/breeding/nesting/migration	SIAC	SIAC		SIAC	SIAC	SIAC	SIAC	SIAC	

**Table 4
General Restoration and Protection Opportunities in Grant County and Surrounding Cities and Towns**

Restoration / Protection Opportunities		Key Impairments*	Key Benefits to Ecological Functions*	V	W	X	Y	Z	AA	BB	CC	DD
			Blythe Lake, Canal Lake, Chukar Lake, Corral Lake, Crescent Lake, Hampton Lake, Heart Lake, Long Lake (South), Lower Goose Lake, Marsh Unit One, North Teal Lake, Pit Lakes, Royal Lake, Soda Lake, South Teal Lake, South Warden Lake, Susan Lake, Un-named Lake in T17-0N R29-0E S34, Upper Goose Lake, Warden Lake, Windmill Lake		Bobby Lake, Burkett Lake, Lenice Lake, Nunnally Lake, Red Rock Lake, Sand Hollow Lake	Un-named Lake in T15 0N R23 0E S 28, Saddle Mountain Lake, Saddle Mountain Wasteway	Lind Coulee	Lower Crab Creek	Rocky Ford Creek	Upper Crab Creek	Town of Krupp (Upper Crab Creek)	Town of Wilson Creek (Upper Crab Creek)
6	Protect intact shrub-steppe habitat	(none)	Increase native shrub-steppe habitat for terrestrial species foraging/breeding/nesting/migration	CBWAMP	SIAC	SIAC		SIAC, CBWAMP				
7	Protect steep slope areas from runoff and sedimentation	Sediment cycle disruption	Increased subsurface infiltration and flow, protect surface water quality Reductions in soil erosion									
8	Monitor shoreline periodically and evaluate protection measures if grazing impacts appear	NA	Reductions in soil erosion Riparian vegetation recruitment Protections for temperature/dissolved oxygen conditions and protection against toxin/pathogen addition							SIAC		
9	Protect existing wetland and riparian habitats	NA	Protections for temperature/dissolved oxygen conditions and protection against toxin/pathogen addition Protection for aquatic and terrestrial species - foraging/greeding/nesting/rearing	CBWAMP	CCSBP			SIAC, CBWAMP, CCSBP, CNWR-CCP	CCSBP	CCSBP	CCSBP	CCSBP
10	Grass or woody plant strips between agricultural fields and either lakes or streams	Habitat loss	Soil erosion protection Support native grassland and shrub steppe features Increase habitat for terrestrial species - foraging/breeding/nesting/migration	SIAC	SIAC	SIAC	SIAC	SIAC		SIAC		
11	Concentrate livestock water access, including exclusion fencing if feasible	NA	Reductions in soil erosion Riparian vegetation recruitment Protections for temperature/dissolved oxygen conditions and protection against toxin/pathogen additon	SIAC	SIAC			SIAC	SIAC	CCSBP	SIAC	

**Table 4
General Restoration and Protection Opportunities in Grant County and Surrounding Cities and Towns**

Restoration / Protection Opportunities		Key Impairments*	Key Benefits to Ecological Functions*	V	W	X	Y	Z	AA	BB	CC	DD
12	Manage nutrient and temperature loading at nearby hatchery	Effluent inputs - nutrient sources and elevated temperature water	Decrease nutrient sources									
		Temperature increases	Improved temperature/dissolved oxygen and protect against elevated toxin/pathogen conditions Aquatic species - rearing/migration						SIAC			
13	Evaluate opportunities for existing hardened shoreline/ armoring removal and native vegetation replanting with soft shoreline stabilization.	Habitat loss	Terrestrial and aquatic species - foraging/breeding/nesting/migration/rearing									
		Increased wave energy due to shoreline armoring	Decrease soil erosion									
		Sediment cycle disruption	Riparian vegetation recruitment									
14	Substrate enhancement	Sediment cycle disruption due to periodic flooding and ice dams	Decrease sedimentation/excessive deposition									SIAC
15	Reconnect floodplain and/or wetland connectivity where appropriate	Habitat fragmentation	Increased water storage									
		Reduced water storage, and reduced filtration of sediment, nutrient-, toxin-, or pathogen-laden water	Increased subsurface infiltration and flow, protect surface water quality									
		Habitat loss	Increased hyporheic exchange and groundwater recharge									
		Sediment and organic material cycle disruption	Terrestrial and aquatic species - foraging/breeding/nesting/migration/rearing									

Notes:
 BLRMP - Banks Lake Resource Management Plan
 CBWAMP - Columbia Basin Wildlife Area Management Plan
 CCSBP – Crab Creek Subbasin Plan
 GCPUD - Grant County PUD Article 418 of Priest Rapids Project License
 HR-CCP - Hanford Reach National Monument Comprehensive Conservation Plan and Environmental Impact Statement
 SIAC – Shoreline Inventory, Analysis, and Characterization Report (Anchor QEA)
 * Impairment and benefits general categories come from Table 1 of this Restoration Plan

Grant County areas
Cities and Towns

4.2.2 Protective SMP Standards

This section describes regulations in the SMP that focus on protecting shoreline ecological function.

4.2.2.1 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 the County's shoreline into eight shoreline Environment Designations, listed here with their purpose:

- **Aquatic:** The “Aquatic” shoreline designation is used to protect, restore, and manage the unique characteristics and resources of the areas waterward of OHWM.
- **Natural:** The “Natural” shoreline designation is used 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 “Rural Conservancy” shoreline designation is used 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 “Recreation Conservancy” shoreline designation is used 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 “Recreation” environment designation is used 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 "High Intensity Public Facility" environment designation is used 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 “Shoreline Residential” environment designation is used 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 “Shoreline Residential – Low Intensity” environment designation is used to accommodate residential development while protecting and, where appropriate, enhancing ecological functions. An additional purpose is to provide appropriate public access and recreational uses.

The Coalition cities and towns each have 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 each city’s or town’s shoreline into multiple shoreline environment designations, shown here with their purpose:

- **Aquatic (Applicable for all Coalition cities and towns):** The “Aquatic” environment designation is used to protect, restore, and manage the unique characteristics and resources of the areas waterward of OHWM.
- **Conservancy (Krupp only):** The “Conservancy” environment designation is used to protect shoreline ecological functions and conserve existing natural resources and valuable historic and cultural areas in order to provide for sustained resource and agricultural uses, achieve natural floodplain processes when flow is present, and provide recreational and low-intensity residential development opportunities, as applicable. Examples of uses that are appropriate in a Conservancy shoreline designation include open-space preservation, agricultural uses, low-impact recreation uses, and low-intensity residential development.
- **Rural Conservancy (Wilson Creek only):** The “Rural Conservancy” environment designation is used to protect shoreline ecological functions and conserve existing natural resources and valuable historic and cultural areas in order to provide for sustained resource and agricultural uses, achieve natural floodplain processes when flow is present, and provide recreational opportunities, as applicable. Examples of uses that are appropriate in a Rural Conservancy shoreline designation include agricultural uses and low-impact passive recreation uses, and low-intensity residential development.
- **High Intensity Ag-Industrial (Wilson Creek only):** The “High Intensity Ag-Industrial” environment designation is used to provide for agriculture-based industrial and commercial uses while protecting existing ecological functions and restoring ecological functions in areas that have been previously degraded.
- **Urban Conservancy (Coulee City, Grand Coulee, and Soap Lake):** The “Urban Conservancy” environment designation is used to protect and restore ecological functions of open space, fully or partially unimproved areas, and sensitive lands where they exist in urban and developed settings, while allowing a variety of compatible uses.
- **Recreation (Coulee City, Electric City, and Soap Lake):** The “Recreation” environment designation is used 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.

- **Public Recreation Conservancy (Soap Lake only):** The “Public Recreation Conservancy” environment designation is used to provide continued and enhanced recreational opportunities while protecting shoreline ecological functions and conserving existing natural resources and valuable historic and cultural areas in order to provide for sustained resource use.
- **Recreation Conservancy (Electric City only):** The “Recreation Conservancy” environment designation is used to provide for water-oriented recreational opportunities while protecting shoreline ecological functions and conserving existing natural resources and valuable historic and cultural areas in order to provide for sustained resource use.
- **High Intensity – Public Facility (Grand Coulee only):** The "High Intensity – Public Facility" environment designation is to provide for higher-intensity public facility infrastructure that needs shoreline location for operation and that is 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 (Grand Coulee and Soap Lake):** The “Shoreline Residential” environment designation is to accommodate primarily residential development and appurtenant structures, but to also allow other types of development that are consistent with SMP regulations. An additional purpose is to provide appropriate public access and recreational uses.
- **Shoreline Residential – Low Intensity (Soap Lake only):** The “Shoreline Residential – Low Intensity” environment 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.

The Environment Designations for County and Coalition city and town shorelines are based on ecological function protection, physical limitations of the shoreline, and existing and planned or envisioned development. These Environment Designations are one of the key tools for achieving the “no net loss” standard for ecological function and achieving other policy goals within the SMP. For each Environment Designation, the SMP indicates which

shoreline activities, uses, developments, and modifications may be allowed or prohibited within the shoreline jurisdiction. Activities, uses, developments, and modifications are classified as follows:

1. “Permitted Uses” that require a Shoreline Substantial Development Permit or a Shoreline Exemption.
2. “Conditional Uses” that require a Shoreline Conditional Use Permit.
3. “Prohibited” activities, uses, developments, and modifications that are not allowed and cannot be permitted through a Variance (i.e., only allowed where extraordinary circumstances would impose unnecessary hardships or thwart State Use preference policies) or Shoreline Conditional Use Permit.

These designations are summarized within the Shoreline Use and Modification Matrix and Shoreline Development Standards tables within the SMP.

4.2.2.2 Mitigation Sequencing

Mitigation includes avoiding, minimizing, or compensating for adverse impacts to regulated critical areas or their buffers. Mitigation sequencing is required per WAC 173-26-201 (2)e. The following sequence of steps shall be followed to avoid or minimize significant adverse effects and significant ecological impacts, with item 1 being the top priority:

1. Avoid the adverse impact altogether by not taking a certain action or parts of an action;
2. Minimize adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;
3. Rectify the adverse impact by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project;
4. Reduce or eliminate the adverse impact over time by preservation and maintenance operations;
5. Compensate for the adverse impact by replacing, enhancing, or providing substitute resources or environments; and
6. Monitor the adverse impact and the compensation projects and taking appropriate corrective measures.

4.2.2.3 *Shoreline Vegetation Conservation*

Shoreline vegetation conservation and restoration planning provisions are a requirement per WAC 173-26-221(5)(b). The regulations for specifying and managing vegetative buffers are located in the Critical Areas section, and vegetation outside of buffer areas is managed through the Environmental Protection section of the SMP. Vegetation clearing shall be limited to the minimum amount necessary to accommodate the approved development, and mitigation sequencing shall be applied to minimize impacts.

Regulations specifying establishment and management of shoreline buffers related to vegetation conservation are located within the Critical Areas section of the SMP Code. Protective standards for vegetation conservation within wetland buffers are described in the Wetlands – Critical Areas section. Protective buffers are based on wetland categories and the impact of a proposed land use, with higher-impact land use types requiring larger buffer widths. Riparian area conservation is described within the Fish and Wildlife Habitat Conservation Areas – Critical Areas section. Riparian buffer widths are identified by Environment Designation, the smallest buffer widths are 25 feet (County: High Intensity Public Facility), and the largest 100-foot widths are specified for the more highly protective designation categories (Electric City: Recreation Conservancy). In the Natural environment designation, vegetation conservation applies to the entire shoreline jurisdiction area.

4.3 **Exempt Activities**

The following types of development are exempt from substantial development permit requirements (WAC 173-27-040); however, these activities must comply with all development standards, such as setbacks and other regulations, in the local SMP.

- **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** – These residences are exempt when they are less than 35 feet above ground level and appurtenant structures, such as garages, decks, driveways, fences, utilities, and grading requires moving less than 250 cubic yards of material.

- **Building bulkheads to protect single-family residences** – State rules specify that a bulkhead should be installed at or near 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 and 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 shall not exceed \$10,000 in fresh waters.
- **Certain agricultural construction activities and practices** – These practices include feedlots, processing plants, and other commercial ventures; irrigation and drainage activities, including operation and maintenance of existing canals, reservoirs, and irrigation facilities; and 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 actions include 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 the Model Toxic Control Act 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 they conform to conditions listed in RCW 90.58.030.(3).(e).xi.
- **Building navigation aids and marking property lines** – Navigational aids such as channel markers and anchor buoys are exempt from permit requirements.

4.4 Response to Unanticipated Impacts

Policies within the SMP provide the process for protecting shoreline ecological function from anticipated and unanticipated development through the Environment Designations,

setbacks, and mitigation standards. Additional provisions for unanticipated development, conditional uses, and unique development situations include the following:

- A reasonable description of shoreline uses through the Environment Designations
- Buffers and setbacks
- Public input required for conditional use permitted development
- Review by the County or Coalition City and Ecology for conditional use permitted development and variances
- Civil penalties for unauthorized development
- SMP provides a strict no net loss policy; the Restoration Plan provides actions to mitigate for development impacts

5 ASSESSMENT OF CUMULATIVE IMPACTS

The assessment of cumulative impacts combines existing conditions and environment designations and 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 5 and 6 summarize these elements for each shoreline reach in Grant County and the Coalition.

Anticipated development is based on a qualitative land capacity analysis and discussions with City Planners through the Environment designation development. The Environment Designations also determine permitted, permitted as an accessory unit, permitted as special use, and prohibited uses of the shoreline as shown in the Use Tables within the SMP regulations.

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	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	Impaired	None		<p>Environment Protection Requirements</p> <p>24.12.230 (b) Applicants shall apply the following sequence of steps in order of priority to avoid or minimize significant adverse effects and significant ecological impacts, with 1) being top priority: (1) Avoiding the adverse impact altogether by not taking a certain action or parts of an action;</p> <p>(2) Minimizing adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;</p> <p>(3) Rectifying the adverse impact by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project;</p> <p>(4) Reducing or eliminating the adverse impact over time by preservation and maintenance operations;</p> <p>(5) Compensating for the adverse impact by replacing, enhancing, or providing substitute resources or environments; and</p> <p>(6) Monitoring the adverse impact and the compensation projects and taking appropriate corrective measures.</p> <p>24.12.230 (d) The County shall require mitigation measures and/or permit conditions based on the provisions of this SMP, in order to mitigate adverse impacts. Mitigation plans shall outline how proposed mitigation measures would result in no net loss of shoreline ecological functions.</p> <p>24.12.230 (e) When compensatory measures are appropriate pursuant to the mitigation priority sequence above, preferential consideration shall be given to measures that replace the adversely impacted functions directly and in the immediate vicinity of the adverse impact. However, alternative compensatory mitigation may be authorized within the affected drainage area or watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or resource management plans, including the Shoreline Restoration Plan, applicable to the area of adverse impact. Authorization of compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions.</p>	<p>The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>Additionally, several high priority restoration actions are planned by GCPUD for this currently impaired shoreline reach to meet their federal license requirements to restore ecological functions, along with protecting high quality habitat areas. These include protection and restoration of shoreline vegetation and replacing existing residential development with a lower impact recreation development on the Island. Planned restoration is expected to more than offset development impacts in other portions of shoreline reach, and also improve public access opportunities.</p> <p>A net gain of ecological function is anticipated as SMP provisions are followed during future development, and as required restoration is implemented.</p>
	Recreation				<p>Shoreline Vegetation Conservation Requirements</p> <p>21.12.240(d) Vegetation clearing outside of wetlands and wetland and stream buffers shall be limited to the minimum necessary to accommodate approved shoreline development that is consistent with all other provisions of this SMP. Mitigation sequencing shall be applied so that the design and location of the structure or development minimizes native vegetation removal. Development or uses that require vegetation clearing shall be designed to avoid the removal of native and non-native vegetation, except as part of an effort to remove invasive, non-native vegetation species and replace these with native species.</p>	
	Recreation	Impaired	Residential, Recreation - trails, parks, campgrounds, water access points	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Water Quality, Stormwater, and Nonpoint Pollution Requirements</p> <p>24.12.250 (a) The location, design, construction, and management of all shoreline uses and activities shall protect the quality and quantity of surface and groundwater adjacent to the site.</p> <p>24.12.250 (b) (g) & (h) All shoreline development shall comply with the applicable requirements of the latest version of the Washington State Department of Ecology's (Ecology) Stormwater Management Manual for Eastern Washington.</p> <p>24.12.250 (c) & (f) Best management practices (BMPs) for control of erosion and sedimentation shall be implemented for all shoreline development.</p> <p>(d) Potentially harmful materials, including but not limited to oil, chemicals, tires, or hazardous materials, shall not be allowed to enter any body of water or wetland, or to be discharged onto the land. Potentially harmful materials shall be maintained in safe and leak-proof containers.</p> <p>(e) Herbicides, fungicides, fertilizers, and pesticides shall not be applied within twenty-five (25) feet of a water body, except by a qualified professional in accordance with state and federal laws. Further, pesticides subject to the final ruling in Washington Toxics Coalition, et al., v. EPA shall not be applied within sixty (60) feet for ground applications or within three hundred (300) feet for aerial applications of the subject water bodies and shall be applied by a qualified professional in accordance with state and federal law.</p> <p>(j) All materials that may come in contact with water shall be constructed of materials, such as untreated wood, concrete, approved plastic composites or steel, that will not adversely affect water quality or aquatic plants or animals. Materials used for decking or other structural components shall be approved by applicable state agencies for contact with water to avoid discharge of pollutants from wave or boat wake splash, rain, or runoff. Wood treated with creosote, copper chromium arsenic, or pentachlorophenol is prohibited in shoreline waterbodies.</p>	

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	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	Recreation	Impaired	Residential, Recreation - trails, parks, campgrounds, water access points	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Wetland Protection Requirements Table 24.12.520 (f)(1)(D)-2. Buffer Widths Category IV Wetlands, Buffer widths by Impact of Proposed Land Use: Low (25-ft), Moderate (40-ft), High (50 ft) Category III Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (75-ft), Moderate (110-ft), High (150 ft) Category II Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (100-ft), Moderate (150-ft), High (200 ft) Category I Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (125-ft), Moderate (190-ft), High (250 ft)</p> <p>24.12.520 (g) (2) Mitigation General Provisions. As a condition of any permit or other approval allowing alteration which results in the loss or degradation of a regulated wetland, or as an enforcement action pursuant to GCC § 25.16, mitigation shall be required to offset impacts resulting from the actions of the applicant or any violator of the GCC.</p> <p>Fish and Wildlife Habitat Conservation Area Requirements 24.12.530 (d) (1) No development permit or approval pursuant to this Chapter shall be granted unless adverse effects to Fish and Wildlife Habitat Conservation Areas resulting from proposed development activities located inside of or within 300 feet of a designated HCA are mitigated</p> <p>24.12.530 (d) 3 (A) Activities, uses, and alterations proposed to be located in waterbodies used by anadromous salmonids or in areas that affect such waterbodies shall give special consideration to the preservation and enhancement of anadromous salmonid habitat</p> <p>24.12.530 (d) 3 (B) Structures that prevent the migration of anadromous salmonids shall not be allowed in the portion of waterbodies currently or historically used by salmonids. Fish bypass facilities shall be provided that allow the upstream migration of adult fish and shall prevent juveniles migrating downstream from being trapped or harmed.</p> <p>24.12.530 (d) 3 (C) Fills waterward of the OHWM, when authorized, shall minimize the adverse impacts on anadromous salmonids and their habitat, shall mitigate any unavoidable impacts, and shall only be allowed for water-dependent uses or for uses that enable public access or recreation for significant numbers of the public.</p> <p>24.12.530 (4) Special provisions – Wildlife. Bald eagle habitat shall be protected pursuant to the Washington State Bald Eagle Protection Rules (WAC 232-12-292).</p> <p>Table 24.12.530 (d)(6)(F). Riparian Buffer Widths by Environment Designation; Rural Conservancy (75'), Public Recreation Conservancy (75'), Recreation (50'), Shoreline Residential (50'), Shoreline Residential - Low Intensity (75'), High Intensity - Public Facility (25')</p> <p>24.12.530 (e) Mitigation (1) Mitigation shall be required for loss of area or function and value of fish and wildlife habitat regulated under this subsection. The applicant shall mitigate to achieve no net loss of ecological functions to the maximum extent feasible and avoid any significant adverse impacts to habitat functions and values and to habitat buffers.</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>The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>Additionally, several high priority restoration actions are planned by GCPUD for this currently impaired shoreline reach to meet their federal license requirements to restore ecological functions, along with protecting high quality habitat areas. These include protection and restoration of shoreline vegetation and replacing existing residential development with a lower impact recreation development on the Island. Planned restoration is expected to more than offset development impacts in other portions of shoreline reach, and also improve public access opportunities.</p> <p>A net gain of ecological function is anticipated as SMP provisions are followed during future development, and as required restoration is implemented.</p>

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	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	Recreation	Impaired	Residential, Recreation - trails, parks, campgrounds, water access points	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Recreational Development Requirements</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>24.12.400 (j) 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.</p> <p>24.12.400 (l) Recreational development shall minimize effective impervious surfaces in shoreline jurisdiction and incorporate low-impact development techniques.</p>	<p>The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>Additionally, several high priority restoration actions are planned by GCPUD for this currently impaired shoreline reach to meet their federal license requirements to restore ecological functions, along with protecting high quality habitat areas. These include protection and restoration of shoreline vegetation and replacing existing residential development with a lower impact recreation development on the Island. Planned restoration is expected to more than offset development impacts in other portions of shoreline reach, and also improve public access opportunities.</p> <p>A net gain of ecological function is anticipated as SMP provisions are followed during future development, and as required restoration is implemented.</p>
	Rural Conservancy				None	

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	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 2	High Intensity - Public Facility	Partially Functioning	Recreation (facility upgrades planned but no new recreation development is proposed)		Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530	<p>The Shoreline Residential environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced.</p>
	Natural	Functioning	None		Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530	
	Rural Conservancy	Impaired (SR 2B), Functioning (2A&C), Partially Functioning (SR 2D)	Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low		
	Shoreline Residential	Impaired	Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Residential Development Requirements As Above SMP 24.12.410	
Columbia River-Reach 3	High Intensity - Public Facility	Partially Functioning	None		Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530	<p>The Rural Conservancy environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions. Planned restoration includes protecting and restoring shoreline and shrub steppe vegetation.</p> <p>A net gain of ecological function is anticipated as SMP provisions are strictly enforced and restoration is implemented.</p>
	Natural		None			
	Rural Conservancy		Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low		

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	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 4	Rural Conservancy	Functioning	Recreation - possible new boat launch	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530</p>	<p>Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. A riparian buffer will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced.</p>
					<p>Boating Facilities Requirements As Above - SMP 24.12.320</p>	
Columbia River-Reach 5	Natural	Functioning	None			No development is anticipated
Crescent Bay and Roosevelt Lake	High Intensity - Public Facility	Impaired	None			No development is anticipated
	Rural Conservancy	Impaired and Functioning (SR C&D)	None			
Banks and Assoc. Lakes	High Intensity - Public Facility	Functioning	None			<p>The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. A riparian buffer will be applied for in the environment designations to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced.</p>
	Natural		None			
	Recreation		Recreation - expansion of trails and campground	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530</p> <p>Recreational Development Requirements As Above - SMP 24.12.400</p>	
	Rural Conservancy		None			
Coffee and Long Lakes	Rural Conservancy	Functioning	None			No development is anticipated

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future Performance/Net Effect
Sun Lakes - Blue Lake	Recreation	Impaired	None			<p>The Shoreline Residential environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions. Private residential development could be as many as 80 units within the Residential-Low Intensity area. This development could include shared moorage equivalent to 40 overwater structures. The private moorage provisions include structural size and material requirements to reduce shading and requirements for replacement of degraded riparian buffer areas. The County will closely monitor dock development and stay in coordination with resource agencies to ensure no net loss related to these structures.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced.</p>
	Rural Conservancy	Partially Functioning (SR A), Impaired (SR F)	None			
	Shoreline Residential	Impaired	Residential, Recreation (facility upgrades planned but no new recreation development is proposed)	Hydrology: Low Sediment: Low Water Quality: Low Habitat: Low	<p>Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530</p> <p>Residential Development Requirements As Above - SMP 24.12.410</p>	
	Shoreline Residential Low Intensity	Functioning	Residential, Recreation	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	<p>Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530</p> <p>Residential Development Requirements As Above - SMP 24.12.410</p> <p>Recreational Development Requirements As Above - SMP 24.12.400</p> <p>Private Moorage Requirements</p> <p>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.</p> <p>24.12.390 (d)(3) Covered docks or structures are not permitted waterward of OHWM.</p> <p>24.12.390 (f) Width, Length, Area, Height, and Material requirements</p> <p>24.12.390 (g) Mooring buoys will be distanced to avoid nearshore habitat.</p> <p>24.12.390 (h) Swim floats shall be no larger than 8x8 feet. Least impacting method of anchoring shall be used.</p> <p>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.</p> <p>24.12.390 (j) Replacement of existing docks will follow requirements under 24.12.390 (f).</p> <p>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).</p> <p>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.</p> <p>Transportation: Trails, Roads, and Parking Requirements As Above - SMP 24.12.440</p>	
Sun Lakes-Other	High Intensity - Public Facility	Functioning	None			No development is anticipated in the next 20 years
	Natural		None			
	Public Recreation Conservancy		None			
	Recreation		None			
	Rural Conservancy		None			
Sun Lakes-Park	Natural	Impaired	None			No development is anticipated in the next 20 years
	Public Recreation Conservancy		None			
	Recreation		None			

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	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	Partially Functioning	Commercial, Recreation, Residential	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530	Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column. Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions. No net loss of ecological function is anticipated as SMP provisions are strictly enforced.
					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.	
					Recreational Development Requirements As Above - SMP 24.12.400	
					Residential Development Requirements As Above - SMP 24.12.410	
Reservoirs Along Main Canal	High Intensity - Public Facility	Functioning	None			The Shoreline Residential and Rural Conservancy environment designations were applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column. Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions. No net loss of ecological function is anticipated as SMP provisions are strictly enforced.
	Natural Recreation		None			
			None			
	Rural Conservancy		Residential	Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530		
				Residential Development Requirements As Above - SMP 24.12.410		
	Shoreline Residential		Recreation (improvements to boat ramp) parking may be expanded	Hydrology: Low Sediment; Low Water Quality: Low Habitat Low	Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530	
		Recreational Development Requirements As Above - SMP 24.12.400	Transportation: Trails, Roads, and Parking Requirements As Above - SMP 24.12.440			
Small Lakes South of Wilson Creek	Rural Conservancy	Functioning	None			No development is anticipated

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future Performance/Net Effect
Ephrata Lakes	Natural		None		Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530	<p>The Rural Conservancy environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. A riparian buffer will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced.</p>
	Rural Conservancy	Functioning	Residential - very limited	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Residential Development Requirements As Above SMP - 24.12.410	
Moses Lake-Reach 1	Recreation	Impaired	Recreation - picnic areas, boating, fishing, camping, trails, parking	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530	<p>The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. A riparian buffer will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced.</p>
					Recreational Development Requirements As Above - SMP 24.12.400	
					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 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.	
					Transportation: Trails, Roads, and Parking Requirements As Above - SMP 24.12.440	
	Rural Conservancy	Functioning and Partially Functioning	Residential	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530	
					Residential Development Requirements As Above - SMP 24.12.410	
	Shoreline Residential	Impaired and Partially Functioning	Residential (outside of shoreline jurisdiction boundary due to steep slopes)		Private Moorage Requirements As Above - SMP 24.12.390	

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	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	Partially functioning	None			<p>The Shoreline Residential environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions. Private residential development could be as many as 228 units within the Shoreline Residential area. This development could include shared moorage equivalent to 114 overwater structures. The private moorage provisions include structural size and material requirements to reduce shading and requirements for replacement of degraded riparian buffer areas. The County will closely monitor dock development and stay in coordination with resource agencies to ensure no net loss related to these structures. In coordination with the City of Moses and subject to City participation, an integrated mitigation program for the lake will be explored, as necessary, to include off-site mitigation area banking within the lake to address impacts from higher density development and future docks.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced.</p>
	Rural Conservancy	Partially functioning	None			
	Shoreline Residential	Impaired, Partially functioning	Residential	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530	
					Residential Development Requirements As Above - SMP 24.12.410	
					Private Moorage Requirements As Above - SMP 24.12.390	
				Shoreline Stabilization Requirements As Above - SMP 24.12.430		
Shoreline Residential Low Intensity	Partially functioning	None				
Moses Lake-Reach 3	Natural	Functioning	None			<p>The Shoreline Residential environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Other areas were designated Rural Conservancy and Shoreline Residential - Low Intensity to further minimize impacts to existing conditions and ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. A riparian buffer will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions. Private residential development could be as many as 150 units within the Shoreline Residential area. This development could include shared moorage equivalent to 75 overwater structures. The private moorage provisions include structural size and material requirements to reduce shading and requirements for replacement of degraded riparian buffer areas. The County will closely monitor dock development and stay in</p>
	Recreation	Functioning	None			
	Rural Conservancy	Partially functioning	Residential		Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530	
	Shoreline Residential	Impaired	Residential	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Residential Development Requirements As Above - SMP 24.12.410	
					Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530	
				Private Moorage Requirements As Above - SMP 24.12.390		
				Shoreline Stabilization Requirements As Above - SMP 24.12.430		

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	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 3	Shoreline Residential-Low Intensity	Functioning	None			<p>coordination with resource agencies to ensure no net loss related to these structures. In coordination with the City of Moses and subject to City participation, an integrated mitigation program for the lake will be explored, as necessary, to include off-site mitigation area banking within the lake to address impacts from higher density development and future docks.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced.</p>
Quincy Basin Lakes	Rural Conservancy	Partially functioning	Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530</p>	<p>Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. A riparian buffer of at least 75 feet will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p>
					<p>Residential Development Requirements As Above - SMP 24.12.410</p>	<p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced.</p>
Potholes Coulee and Frenchman Coulee Lakes	High Intensity - Public Facility	Functioning	None			<p>The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p>
	Natural		None			
Potholes Coulee and Frenchman Coulee Lakes	Public Recreation Conservancy	Functioning	Recreation (facility upgrades planned but no new recreation development is proposed)			<p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>Very high-priority restoration actions are planned by GCPUD for this area. This includes protection and restoration of riparian vegetation.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced and restoration is implemented.</p>
	Recreation		Residential, Recreation	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	<p>Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530</p> <p>Residential Development Requirements As Above - SMP 24.12.410</p>	
Potholes Reservoir-Reach 1	Natural	Functioning	Recreation (facility upgrades planned but no new recreation development is proposed)			No development is anticipated

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	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	Partially functioning	None			<p>The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced and restoration is implemented.</p>
	Natural		None			
	Recreation		Residential, Commercial	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530</p> <p>Residential Development Requirements As Above - SMP 24.12.410</p> <p>Commercial Development Requirements As Above - SMP 24.12.330</p>	
	Rural Conservancy		Recreation (facility upgrades planned but no new recreation development is proposed)			
Drumheller Channels Lakes	Natural	Functioning	None			<p>The Rural Conservancy environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. A riparian buffer will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced and restoration is implemented.</p>
	Public Recreation Conservancy		Recreation (facility upgrades planned but no new recreation development is proposed)			
	Rural Conservancy		Residential, Recreation (facility upgrades planned but no new recreation development is proposed)	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530</p>	
					<p>Residential Development Requirements As Above - SMP 24.12.410</p>	

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future Performance/Net Effect
Lakes North of Lower Crab Creek	Natural	Functioning	None			<p>The Public Recreation Conservancy environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. A riparian buffer will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced and restoration is implemented.</p>
	Public Recreation Conservancy		Recreation - fishing pier, kiosks, trails	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530</p>	
					<p>Recreational Development Requirements As Above - SMP 24.12.400</p>	
					<p>Boating Facilities: General Requirements As Above - SMP 24.12.320</p>	
Rural Conservancy	None					
Lower Grant County Lakes	Natural	Functioning	None			No development is anticipated
Rural Conservancy	None					
Lind Coulee	Rural Conservancy	Functioning and Partially functioning	None			No development is anticipated
Lower Crab Creek	Natural	Functioning and Partially functioning	Recreation (facility upgrades planned but no new recreation development is proposed)			<p>No development is anticipated. Very high-priority restoration planned by GCPUD.</p> <p>If these plans are implemented, a net gain in ecological function is anticipated.</p>
	Rural Conservancy		None			
Rocky Ford Creek	High Intensity - Public Facility	Functioning	None			<p>The Rural Conservancy environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. A riparian buffer will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>No net loss of ecological function is anticipated as SMP provisions are strictly enforced and restoration is implemented.</p>
	Natural		None			
	Rural Conservancy		Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530</p> <p>Residential Development Requirements As Above - SMP 24.12.410</p>	

**Table 5
Grant County Cumulative Impacts Analysis**

Location	Environment Designations	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future Performance/Net Effect
Upper Crab Creek	Rural Conservancy	Impaired, Partially functioning	Residential (Reach 2 only)	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Environment Protection Requirements As Above SMP 24.12.230; Shoreline Vegetation Conservation Requirements As Above SMP 24.12.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 24.12.250; Wetland Protection Requirements As Above SMP 24.12.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 24.12.530	Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column. Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. A riparian buffer will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.
					Residential Development Requirements As Above - SMP 24.12.410	High-priority restoration actions are planned by WDFW, BOR and WDOE for this area. These include enhancing wetland riparian habitat and applying BMPs to upland agricultural areas. A net gain of ecological function is anticipated as SMP provisions are strictly enforced and restoration is implemented.
Sand Hollow Wasteway	Rural Conservancy	Impaired, Partially functioning	None			Very high-priority restoration actions are planned by GCPUD for this area. This includes protecting and restoring riparian areas. A net gain of ecological function is anticipated as restoration is implemented.

Notes:

BOR = U.S. Bureau of Reclamation
 BMPS = best mangement practices
 GCC = Grant County Code
 GCPUD = Grant County Public Utility District

OHWL = ordinary high water mark
 SMP = Shoreline Master Program
 WDFW = Washington Department of Fish and Wildlife
 WDOE = Washington Department of Energy

**Table 6
Coalition Cities Cumulative Impacts Analysis**

Location	Environment Designations	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	Impaired	Recreation - improvements plus additional moorage, fueling station, and fishing pier	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Environment Protection Requirements</p> <p>16.12.230 (b) Applicants shall apply the following sequence of steps in order of priority to avoid or minimize significant adverse effects and significant ecological impacts, with 1) being top priority: (1) Avoiding the adverse impact altogether by not taking a certain action or parts of an action; (2) Minimizing adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts; (3) Rectifying the adverse impact by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project; (4) Reducing or eliminating the adverse impact over time by preservation and maintenance operations; (5) Compensating for the adverse impact by replacing, enhancing, or providing substitute resources or environments; and (6) Monitoring the adverse impact and the compensation projects and taking appropriate corrective measures.</p> <p>16.12.230 (d) The Town shall require mitigation measures and/or permit conditions based on the provisions of this SMP, in order to mitigate adverse impacts. Mitigation plans shall outline how proposed mitigation measures would result in no net loss of shoreline ecological functions.</p> <p>16.12.230 (e) When compensatory measures are appropriate pursuant to the mitigation priority sequence above, preferential consideration shall be given to measures that replace the adversely impacted functions directly and in the immediate vicinity of the adverse impact. However, alternative compensatory mitigation may be authorized within the affected drainage area or watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or resource management plans, including the Shoreline Restoration Plan, applicable to the area of adverse impact. Authorization of compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions.</p> <p>Shoreline Vegetation Conservation Requirements</p> <p>16.12.240(d) Vegetation clearing outside of wetlands and wetland and stream buffers shall be limited to the minimum necessary to accommodate approved shoreline development that is consistent with all other provisions of this SMP. Mitigation sequencing shall be applied so that the design and location of the structure or development minimizes native vegetation removal. Development or uses that require vegetation clearing shall be designed to avoid the removal of native and non-native vegetation, except as part of an effort to remove invasive, non-native vegetation species and replace these with native species.</p> <p>Water Quality, Stormwater, and Nonpoint Pollution Requirements</p> <p>16.12.250 (a) The location, design, construction, and management of all shoreline uses and activities shall protect the quality and quantity of surface and groundwater adjacent to the site.</p> <p>16.12.250 (b) (g) & (h) All shoreline development shall comply with the applicable requirements of the latest version of the Washington State Department of Ecology's (Ecology) Stormwater Management Manual for Eastern Washington.</p> <p>16.12.250 (c) & (f) Best management practices (BMPs) for control of erosion and sedimentation shall be implemented for all shoreline development.</p> <p>16.12.250 (d) Potentially harmful materials, including but not limited to oil, chemicals, tires, or hazardous materials, shall not be allowed to enter any body of water or wetland, or to be discharged onto the land. Potentially harmful materials shall be maintained in safe and leak-proof containers.</p>	<p>The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect riparian and upland ecological functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>Some protection and restoration actions are planned for impaired shoreline areas. These include soft bank shoreline protection and restoration/protection and recovery of shoreline and shrub steppe vegetation.</p> <p>No net loss of ecological functions is anticipated as SMP provisions are strictly enforced and restoration plans are implemented.</p>

**Table 6
Coalition Cities Cumulative Impacts Analysis**

Location	Environment Designations	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	Impaired	Recreation - improvements plus additional moorage, fueling station, and fishing pier	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>16.12.250 (e) Herbicides, fungicides, fertilizers, and pesticides shall not be applied within twenty-five (25) feet of a water body, except by a qualified professional in accordance with state and federal laws. Further, pesticides subject to the final ruling in Washington Toxics Coalition, et al., v. EPA shall not be applied within sixty (60) feet for ground applications or within three hundred (300) feet for aerial applications of the subject water bodies and shall be applied by a qualified professional in accordance with state and federal law.</p> <p>16.12.250 (j) All materials that may come in contact with water shall be constructed of materials, such as untreated wood, concrete, approved plastic composites or steel, that will not adversely affect water quality or aquatic plants or animals. Materials used for decking or other structural components shall be approved by applicable state agencies for contact with water to avoid discharge of pollutants from wave or boat wake splash, rain, or runoff. Wood treated with creosote, copper chromium arsenic, or pentachlorophenol is prohibited in shoreline waterbodies.</p> <p>Wetland Protection Requirements</p> <p>Table 16.12.420 (f)(1)(D)-2. Buffer Widths</p> <p>Category IV Wetlands, Buffer widths by Impact of Proposed Land Use: Low (25-ft), Moderate (40-ft), High (50 ft)</p> <p>Category III Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (75-ft), Moderate (110-ft), High (150 ft)</p> <p>Category II Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (100-ft), Moderate (150-ft), High (200 ft)</p> <p>Category I Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (125-ft), Moderate (190-ft), High (250 ft)</p> <p>Fish and Wildlife Habitat Conservation Area Requirements</p> <p>16.12.440 (B) 1. Flora (plant life) and Fauna (animal life) identified as protected, shall be sheltered from construction activities using Best Management Practices.</p> <p>16.12.440 (B) 2. Habitat conservation areas and buffers will be left undisturbed, unless the development proposal demonstrates that impacts to the habitat conservation area and/or buffer are unavoidable, demonstrated in a habitat management and mitigation plan described in Section 16.12.440 (C).</p> <p>16.12.440 (B) 3. Critical area reports for fish and wildlife habitat conservation areas shall include a habitat assessment to evaluate the presence or absence of a potential critical species or habitat.</p> <p>16.12.440 (B) 4. The Washington State Department of Fish and Wildlife priority habitat and species management recommendations shall be consulted in developing specific measures to protect a specific project site.</p> <p>16.12.440 (B) 7. As determined through the site-specific study, mitigation measures shall be implemented that maintain the base line populations and reproduction rates for the particular species.</p> <p>Table 16.12.440 (B)(9)(f). Riparian Buffer Widths by Environment Designation;Urban Conservancy (Waterward edge of paved trail), Recreation (Waterward edge of existing roadway and parking area or 50' for undeveloped areas, as applicable</p>	<p>The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect riparian and upland ecological functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>Some protection and restoration actions are planned for impaired shoreline areas. These include soft bank shoreline protection and restoration/protection and recovery of shoreline and shrub steppe vegetation.</p> <p>No net loss of ecological functions is anticipated as SMP provisions are strictly enforced and restoration plans are implemented.</p>

**Table 6
Coalition Cities Cumulative Impacts Analysis**

Location	Environment Designations	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	Impaired	Recreation - improvements plus additional moorage, fueling station, and fishing pier	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<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 OHWM.</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 (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.</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>The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect riparian and upland ecological functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>Some protection and restoration actions are planned for impaired shoreline areas. These include soft bank shoreline protection and restoration/protection and recovery of shoreline and shrub steppe vegetation.</p> <p>No net loss of ecological functions is anticipated as SMP provisions are strictly enforced and restoration plans are implemented.</p>

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Coalition Cities Cumulative Impacts Analysis**

Location	Environment Designations	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	Impaired	Recreation - improvements plus additional moorage, fueling station, and fishing pier	Hydrology: Low Sediment: Low Water Quality: Low Habitat: Low	<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>	
	Urban Conservancy	Functioning	None			
Electric City	Recreation	Impaired	Future recreational development next to the Osborn Bay causeway at Sun Banks Resort and at the US Bureau of Reclamation recreation land next to the golf course.	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Environment Protection Requirements	<p>The Recreation and Shoreline Residential environment designations were applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Split Recreation Conservancy and Recreation environment designation was applied adjacent to the golf course to protect riparian and wetland areas on Banks Lake. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p>
					<p>16.20.230 (2) Applicants shall apply the following sequence of steps in order of priority to avoid or minimize significant adverse effects and significant ecological impacts, with 1) being top priority: (a) Avoiding the adverse impact altogether by not taking a certain action or parts of an action; (b) Minimizing adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts; (c) Rectifying the adverse impact by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project; (d) Reducing or eliminating the adverse impact over time by preservation and maintenance operations; (e) Compensating for the adverse impact by replacing, enhancing, or providing substitute resources or environments; and (f) Monitoring the adverse impact and the compensation projects and taking appropriate corrective measures.</p> <p>16.20.230 (4) The City shall require mitigation measures and/or permit conditions based on the provisions of this SMP, in order to mitigate adverse impacts. Mitigation plans shall outline how proposed mitigation measures would result in no net loss of shoreline ecological functions.</p> <p>16.20.230 (5) When compensatory measures are appropriate pursuant to the mitigation priority sequence above, preferential consideration shall be given to measures that replace the adversely impacted functions directly and in the immediate vicinity of the adverse impact. However, alternative compensatory mitigation may be authorized within the affected drainage area or watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or resource management plans, including the Shoreline Restoration Plan, applicable to the area of adverse impact. Authorization of compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions.</p>	
					Shoreline Vegetation Conservation Requirements	
					<p>16.20.240 (4) Vegetation clearing outside of wetlands and wetland and stream buffers shall be limited to the minimum necessary to accommodate approved shoreline development that is consistent with all other provisions of this SMP. Mitigation sequencing shall be applied so that the design and location of the structure or development minimizes native vegetation removal. Development or uses that require vegetation clearing shall be designed to avoid the removal of native and non-native vegetation, except as part of an effort to remove invasive, non-native vegetation species and replace these with native species.</p>	

**Table 6
Coalition Cities Cumulative Impacts Analysis**

Location	Environment Designations	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future Performance/Net Effect
Electric City	Recreation	Impaired	Future recreational development next to the Osborn Bay causeway at Sun Banks Resort and at the US Bureau of Reclamation recreation land next to the golf course.	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	<p>Water Quality, Stormwater, and Nonpoint Pollution Requirements</p> <p>116.20.250 (1) The location, design, construction, and management of all shoreline uses and activities shall protect the quality and quantity of surface and groundwater adjacent to the site.</p> <p>116.20.250 (2) (6) & (7) All shoreline development shall comply with the applicable requirements of the latest version of the Washington State Department of Ecology's (Ecology) Stormwater Management Manual for Eastern Washington.</p> <p>116.20.250 (3) & (5) Best management practices (BMPs) for control of erosion and sedimentation shall be implemented for all shoreline development.</p> <p>116.20.250 (4) Potentially harmful materials, including but not limited to oil, chemicals, tires, or hazardous materials, shall not be allowed to enter any body of water or wetland, or to be discharged onto the land. Potentially harmful materials shall be maintained in safe and leak-proof containers.</p> <p>116.20.250 (9) All materials that may come in contact with water shall be constructed of materials, such as untreated wood, concrete, approved plastic composites or steel, that will not adversely affect water quality or aquatic plants or animals. Materials used for decking or other structural components shall be approved by applicable state agencies for contact with water to avoid discharge of pollutants from wave or boat wake splash, rain, or runoff. Wood treated with creosote, copper chromium arsenic, or pentachlorophenol is prohibited in shoreline waterbodies.</p>	<p>The Recreation and Shoreline Residential environment designations were applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions.</p> <p>Split Recreation Conservancy and Recreation environment designation</p> <p>was applied adjacent to the golf course to protect riparian and wetland areas on Banks Lake. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p>
					<p>Wetland Protection Requirements</p> <p>Table 16.20.520 (3)(g-2). Buffer Widths</p> <p>Category IV Wetlands, Buffer widths by Impact of Proposed Land Use: Low (25-ft), Moderate (40-ft), High (50 ft)</p> <p>Category III Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (75-ft), Moderate (110-ft), High (150 ft)</p> <p>Category II Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (100-ft), Moderate (150-ft), High (200 ft)</p> <p>Category I Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (125-ft), Moderate (190-ft), High (250 ft)</p>	
					<p>Fish and Wildlife Habitat Conservation Area Requirements</p> <p>16.20.540 (2) (a) Flora (plant life) and Fauna (animal life) identified as protected, shall be sheltered from construction activities using Best Management Practices.</p> <p>16.20.540 (2) (b) Habitat conservation areas and buffers will be left undisturbed, unless the development proposal demonstrates that impacts to the habitat conservation area and/or buffer are unavoidable, demonstrated in a habitat management and mitigation plan described in Section ECMC 16.20.540 (d).</p> <p>16.20.540 (2) (c) Critical area reports for fish and wildlife habitat conservation areas shall include a habitat assessment to evaluate the presence or absence of a potential critical species or habitat.</p> <p>16.20.540 (2) (d) The Washington State Department of Fish and Wildlife priority habitat and species management recommendations shall be consulted in developing specific measures to protect a specific project site.</p> <p>16.20.540 (2) (g) As determined through the site-specific study, mitigation measures shall be implemented that maintain the base line populations and reproduction rates for the particular species.</p>	

**Table 6
Coalition Cities Cumulative Impacts Analysis**

Location	Environment Designations	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future Performance/Net Effect
Electric City	Recreation	Impaired	Future recreational development next to the Osborn Bay causeway at Sun Banks Resort and at the US Bureau of Reclamation recreation land next to the golf course.	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	<p>Table 16.20.540 (2)(i)(vi) Riparian Buffer Widths by Environment Designation: Recreation Conservancy (100' or edge of wetland buffer as applicable); Recreation (50' or edge of wetland buffer as applicable)</p> <p>Recreational Development Requirements</p> <p>16.12.370(2)(a) 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>16.12.370(2)(b) 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>16.12.370(2)(c) 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>16.12.370(2)(e) 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>16.12.370(5) 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>16.12.370(6) 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> <p>16.12.370(10) Recreational development shall minimize effective impervious surfaces in shoreline jurisdiction and incorporate low-impact development techniques.</p> <p>Transportation: Trails, Roads, and Parking Development Requirements</p> <p>16.20.410 (1) 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> <p>16.20.410 (2) New roads or road expansions shall meet mitigation sequencing provisions in ECMC 16.20.230, they will be setback from OHWM 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>16.20.410 (7) Parking facilities are not a water-dependent use and shall only be permitted in the shoreline jurisdiction to support an authorized use where it can be demonstrated to the satisfaction of the Shoreline Administrator that there are no feasible alternative locations away from the shoreline. Parking as a primary use shall not be allowed in any shoreline jurisdiction. Accessory parking facilities shall be subject to the same permit type as the primary use.</p> <p>16.20.410 (8) Accessory parking shall not result in a net loss of shoreline ecological functions. Parking facilities shall be located upland of the principal structure, building, or development they serve, and preferably outside of shoreline jurisdiction, except where the proponent demonstrates that an alternate location would reduce adverse impacts on the shoreline and adjacent uses; where another location is unfeasible; when ADA standards require otherwise.</p>	<p>The Recreation and Shoreline Residential environment designations were applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Split Recreation Conservancy and Recreation environment designation</p> <p>was applied adjacent to the golf course to protect riparian and wetland areas on Banks Lake. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p>

**Table 6
Coalition Cities Cumulative Impacts Analysis**

Location	Environment Designations	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future Performance/Net Effect
Electric City	Recreation	Impaired	Future recreational development next to the Osborn Bay causeway at Sun Banks Resort and at the US Bureau of Reclamation recreation land next to the golf course.	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	16.20.410 (11) Improvements to all existing transportation facilities shall provide for the reestablishment and enhancement of natural vegetation along the shoreline when appropriate. 16.20.410 (13) Shoreline crossings and culverts shall be designed to minimize adverse impacts on riparian and aquatic habitat and shall allow for fish passage.	The Recreation and Shoreline Residential environment designations were applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Split Recreation Conservancy and Recreation environment designation was applied adjacent to the golf course to protect riparian and wetland areas on Banks Lake. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.
	Shoreline Residential	Impaired	Future residential redevelopment potential or additions to existing residential structures.	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Environment Protection Requirements As Above SMP 16.20.230; Shoreline Vegetation Conservation Requirements As Above SMP 16.20.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 16.20.250; Wetland Protection Requirements As Above SMP 16.20.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 16.20.540 Residential Requirements 16.20.380 (2) 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 to avoid future stabilization and other provisions of this SMP related to shoreline stabilization, vegetation management, and on-site sewage disposal. 16.20.380 (4) Accessory uses and structures shall be located outside of the riparian buffer, unless the structure is or supports a water-dependent use. 16.20.380 (5) 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. 16.20.380 (6) Applications for new shoreline residences shall ensure that shoreline stabilization and flood control structures are not necessary to protect proposed residences. 16.20.380 (7) New floating residences and over-water residential structures shall be prohibited in shoreline jurisdiction. 16.20.380 (9) All new residential development shall be required to meet the vegetation management provisions contained in ECMC 16.20.240, Shoreline Vegetation Conservation and ECMC 16.20.540, Fish and Wildlife Habitat Conservation Areas.	
	Urban Conservancy	Partially Functioning, Functioning	None			
Grand Coulee	High Intensity - Public Facility	Partially functioning	Recreation - fishing jetty and pier	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Environment Protection Requirements 17.82.230 (b) Applicants shall apply the following sequence of steps in order of priority to avoid or minimize significant adverse effects and significant ecological impacts, with 1) being top priority: (1) Avoiding the adverse impact altogether by not taking a certain action or parts of an action; (2) Minimizing adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts; (3) Rectifying the adverse impact by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project; (4) Reducing or eliminating the adverse impact over time by preservation and maintenance operations; (5) Compensating for the adverse impact by replacing, enhancing, or providing substitute resources or environments; and (6) Monitoring the adverse impact and the compensation projects and taking appropriate corrective measures. 17.82.230 (d) The City shall require mitigation measures and/or permit conditions based on the provisions of this SMP, in order to mitigate adverse impacts. Mitigation plans shall outline how proposed mitigation measures would result in no net loss of shoreline ecological functions.	

**Table 6
Coalition Cities Cumulative Impacts Analysis**

Location	Environment Designations	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future Performance/Net Effect
Grand Coulee	High Intensity - Public Facility	Partially functioning	Recreation - fishing jetty and pier	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	<p>17.82.230 (e) When compensatory measures are appropriate pursuant to the mitigation priority sequence above, preferential consideration shall be given to measures that replace the adversely impacted functions directly and in the immediate vicinity of the adverse impact. However, alternative compensatory mitigation may be authorized within the affected drainage area or watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or resource management plans, including the Shoreline Restoration Plan, applicable to the area of adverse impact. Authorization of compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions.</p> <p>Shoreline Vegetation Conservation Requirements</p> <p>17.82.240 (d) Vegetation clearing outside of wetlands and wetland and stream buffers shall be limited to the minimum necessary to accommodate approved shoreline development that is consistent with all other provisions of this SMP. Mitigation sequencing shall be applied so that the design and location of the structure or development minimizes native vegetation removal. Development or uses that require vegetation clearing shall be designed to avoid the removal of native and non-native vegetation, except as part of an effort to remove invasive, non-native vegetation species and replace these with native species.</p> <p>Water Quality, Stormwater, and Nonpoint Pollution Requirements</p> <p>17.82.250 (a) The location, design, construction, and management of all shoreline uses and activities shall protect the quality and quantity of surface and groundwater adjacent to the site.</p> <p>17.82.250 (b) (g) & (h) All shoreline development shall comply with the applicable requirements of the latest version of the Washington State Department of Ecology's (Ecology) Stormwater Management Manual for Eastern Washington.</p> <p>17.82.250 (c) & (f) Best management practices (BMPs) for control of erosion and sedimentation shall be implemented for all shoreline development.</p> <p>17.82.250 (d) Potentially harmful materials, including but not limited to oil, chemicals, tires, or hazardous materials, shall not be allowed to enter any body of water or wetland, or to be discharged onto the land. Potentially harmful materials shall be maintained in safe and leak-proof containers.</p> <p>17.82.250 (e) Herbicides, fungicides, fertilizers, and pesticides shall not be applied within twenty-five (25) feet of a water body, except by a qualified professional in accordance with state and federal laws. Further, pesticides subject to the final ruling in Washington Toxics Coalition, et al., v. EPA shall not be applied within sixty (60) feet for ground applications or within three hundred (300) feet for aerial applications of the subject water bodies and shall be applied by a qualified professional in accordance with state and federal law.</p> <p>17.82.250 (j) All materials that may come in contact with water shall be constructed of materials, such as untreated wood, concrete, approved plastic composites or steel, that will not adversely affect water quality or aquatic plants or animals. Materials used for decking or other structural components shall be approved by applicable state agencies for contact with water to avoid discharge of pollutants from wave or boat wake splash, rain, or runoff. Wood treated with creosote, copper chromium arsenic, or pentachlorophenol is prohibited in shoreline waterbodies.</p> <p>Wetland Protection Requirements</p> <p>Table 17.82.520 (C)(7-2). Buffer Widths</p> <p>Category IV Wetlands, Buffer widths by Impact of Proposed Land Use: Low (25-ft), Moderate (40-ft), High (50 ft)</p> <p>Category III Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (75-ft), Moderate (110-ft), High (150 ft)</p>	<p>The High Intensity Public Facility and Shoreline Residential environment designations were applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions, and functional breaks from existing development. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland and riparian buffers will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>A few protection and restoration actions are planned for the partially functioning portions of this shoreline. These include protecting existing functions, and invasive species removal and shoreline vegetation enhancement.</p> <p>No net loss of ecological functions is anticipated as SMP provisions are strictly enforced, and protection and restoration actions are implemented.</p>

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Location	Environment Designations	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future Performance/Net Effect
Grand Coulee	High Intensity - Public Facility	Partially functioning	Recreation - fishing jetty and pier	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	<p>Category II Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (100-ft), Moderate (150-ft), High (200 ft)</p> <p>Category I Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (125-ft), Moderate (190-ft), High (250 ft)</p> <p>Fish and Wildlife Habitat Conservation Area Requirements</p> <p>17.82.540 (B) 1. Flora (plant life) and Fauna (animal life) identified as protected, shall be sheltered from construction activities using Best Management Practices.</p> <p>17.82.540 (B) 2. Habitat conservation areas and buffers will be left undisturbed, unless the development proposal demonstrates that impacts to the habitat conservation area and/or buffer are unavoidable, demonstrated in a habitat management and mitigation plan described in Section 16.12.440 (C).</p> <p>17.82.540 (B) 3. Critical area reports for fish and wildlife habitat conservation areas shall include a habitat assessment to evaluate the presence or absence of a potential critical species or habitat.</p> <p>17.82.540 (B) 4. The Washington State Department of Fish and Wildlife priority habitat and species management recommendations shall be consulted in developing specific measures to protect a specific project site.</p> <p>17.82.540 ((B) 7. As determined through the site-specific study, mitigation measures shall be implemented that maintain the base line populations and reproduction rates for the particular species.</p> <p>Table 17.82.540 (B)(9)(f). Riparian Buffer Widths by Environment Designation; Urban Conservancy (75'), High Intensity Public Facility (25'); Shoreline Residential (Not Applicable, functionally disconnected by Highway 155)</p> <p>Docks and Piers Requirements</p> <p>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)).</p> <p>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)).</p> <p>17.82.310 (b) 2 Docks dimensional material, and other standards shall be according to the State and Federal requirements.</p> <p>Groins and Weirs Requirements:</p> <p>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.</p> <p>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.</p>	<p>The High Intensity Public Facility and Shoreline Residential environment designations were applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions, and functional breaks from existing development. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland and riparian buffers will be applied to protect both riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions.</p> <p>A few protection and restoration actions are planned for the partially functioning portions of this shoreline. These include protecting existing functions, and invasive species removal and shoreline vegetation enhancement.</p> <p>No net loss of ecological functions is anticipated as SMP provisions are strictly enforced, and protection and restoration actions are implemented.</p>
	Shoreline Residential	Partially functioning	Residential (only a few potential units)	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Environment Protection Requirements As Above SMP 17.82.230; Shoreline Vegetation Conservation Requirements As Above SMP 17.82.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 17.82.250; Wetland Protection Requirements As Above SMP 17.82.520; Fish and Wildlife Habitat Conservation Area Requirements As Above 17.82.540	

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Location	Environment Designations	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future Performance/Net Effect
Grand Coulee	Shoreline Residential	Partially functioning	Residential (only a few potential units)	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Residential Requirements</p> <p>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.</p> <p>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.</p> <p>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 Stabilization Requirements:</p> <p>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.</p> <p>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.</p>	
	Urban Conservancy	Partially Functioning, Functioning	None			
Krupp	Conservancy	Functioning	Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Environment Protection Requirements</p> <p>14.19.230 (b) Applicants shall apply the following sequence of steps in order of priority to avoid or minimize significant adverse effects and significant ecological impacts, with 1) being top priority: (1) Avoiding the adverse impact altogether by not taking a certain action or parts of an action;</p> <p>(2) Minimizing adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;</p> <p>(3) Rectifying the adverse impact by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project;</p> <p>(4) Reducing or eliminating the adverse impact over time by preservation and maintenance operations;</p> <p>(5) Compensating for the adverse impact by replacing, enhancing, or providing substitute resources or environments; and</p> <p>(6) Monitoring the adverse impact and the compensation projects and taking appropriate corrective measures.</p> <p>14.19.230 (d) The City shall require mitigation measures and/or permit conditions based on the provisions of this SMP, in order to mitigate adverse impacts. Mitigation plans shall outline how proposed mitigation measures would result in no net loss of shoreline ecological functions.</p> <p>14.19.230 (e) When compensatory measures are appropriate pursuant to the mitigation priority sequence above, preferential consideration shall be given to measures that replace the adversely impacted functions directly and in the immediate vicinity of the adverse impact. However, alternative compensatory mitigation may be authorized within the affected drainage area or watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or resource management plans, including the Shoreline Restoration Plan, applicable to the area of adverse impact. Authorization of compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions.</p>	No development is anticipated.

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Krupp	Conservancy	Functioning	Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Shoreline Vegetation Conservation Requirements</p> <p>14.19.240 (d) Vegetation clearing outside of wetlands and wetland and stream buffers shall be limited to the minimum necessary to accommodate approved shoreline development that is consistent with all other provisions of this SMP. Mitigation sequencing shall be applied so that the design and location of the structure or development minimizes native vegetation removal. Development or uses that require vegetation clearing shall be designed to avoid the removal of native and non-native vegetation, except as part of an effort to remove invasive, non-native vegetation species and replace these with native species.</p> <p>Water Quality, Stormwater, and Nonpoint Pollution Requirements</p> <p>14.19.250 (a) The location, design, construction, and management of all shoreline uses and activities shall protect the quality and quantity of surface and groundwater adjacent to the site.</p> <p>14.19.250 (b) (g) & (h) All shoreline development shall comply with the applicable requirements of the latest version of the Washington State Department of Ecology's (Ecology) Stormwater Management Manual for Eastern Washington.</p> <p>14.19.250 (c) & (f) Best management practices (BMPs) for control of erosion and sedimentation shall be implemented for all shoreline development.</p> <p>14.19.250 (d) Potentially harmful materials, including but not limited to oil, chemicals, tires, or hazardous materials, shall not be allowed to enter any body of water or wetland, or to be discharged onto the land. Potentially harmful materials shall be maintained in safe and leak-proof containers.</p> <p>14.19.250 (e) Herbicides, fungicides, fertilizers, and pesticides shall not be applied within twenty-five (25) feet of a water body, except by a qualified professional in accordance with state and federal laws. Further, pesticides subject to the final ruling in Washington Toxics Coalition, et al., v. EPA shall not be applied within sixty (60) feet for ground applications or within three hundred (300) feet for aerial applications of the subject water bodies and shall be applied by a qualified professional in accordance with state and federal law.</p> <p>14.19.250 (j) All materials that may come in contact with water shall be constructed of materials, such as untreated wood, concrete, approved plastic composites or steel, that will not adversely affect water quality or aquatic plants or animals. Materials used for decking or other structural components shall be approved by applicable state agencies for contact with water to avoid discharge of pollutants from wave or boat wake splash, rain, or runoff. Wood treated with creosote, copper chromium arsenic, or pentachlorophenol is prohibited in shoreline waterbodies.</p> <p>Wetland Protection Requirements</p> <p>Table 14.19.420 (C)(7-2). Buffer Widths</p> <p>Category IV Wetlands, Buffer widths by Impact of Proposed Land Use: Low (25-ft), Moderate (40-ft), High (50 ft)</p> <p>Category III Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (75-ft), Moderate (110-ft), High (150 ft)</p> <p>Category II Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (100-ft), Moderate (150-ft), High (200 ft)</p> <p>Category I Wetlands (most protective wetland categories), Buffer widths by Impact of Proposed Land Use: Low (125-ft), Moderate (190-ft), High (250 ft)</p>	No development is anticipated.

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Krupp	Conservancy	Functioning	Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Fish and Wildlife Habitat Conservation Area Requirements</p> <p>14.19.440 (B) 1. Flora (plant life) and Fauna (animal life) identified as protected, shall be sheltered from construction activities using Best Management Practices.</p> <p>14.19.440 (B) 2. Habitat conservation areas and buffers will be left undisturbed, unless the development proposal demonstrates that impacts to the habitat conservation area and/or buffer are unavoidable, demonstrated in a habitat management and mitigation plan described in Section 16.12.440 (C).</p> <p>14.19.440 (B) 3. Critical area reports for fish and wildlife habitat conservation areas shall include a habitat assessment to evaluate the presence or absence of a potential critical species or habitat.</p> <p>14.19.440 (B) 4. The Washington State Department of Fish and Wildlife priority habitat and species management recommendations shall be consulted in developing specific measures to protect a specific project site.</p> <p>14.19.440 (B) 7. As determined through the site-specific study, mitigation measures shall be implemented that maintain the base line populations and reproduction rates for the particular species.</p> <p>Table 14.19.440 ((B)(9)(f). Riparian Buffer Widths by Environment Designation;Conservancy (75')</p> <p>Fish and Wildlife Habitat Conservation Area Requirements</p> <p>14.19.440 (B) 1. Flora (plant life) and Fauna (animal life) identified as protected, shall be sheltered from construction activities using Best Management Practices.</p> <p>14.19.440 (B) 2. Habitat conservation areas and buffers will be left undisturbed, unless the development proposal demonstrates that impacts to the habitat conservation area and/or buffer are unavoidable, demonstrated in a habitat management and mitigation plan described in Section 16.12.440 (C).</p> <p>14.19.440 (B) 3. Critical area reports for fish and wildlife habitat conservation areas shall include a habitat assessment to evaluate the presence or absence of a potential critical species or habitat.</p> <p>14.19.440 (B) 4. The Washington State Department of Fish and Wildlife priority habitat and species management recommendations shall be consulted in developing specific measures to protect a specific project site.</p> <p>14.19.440 (B) 7. As determined through the site-specific study, mitigation measures shall be implemented that maintain the base line populations and reproduction rates for the particular species.</p> <p>Table 14.19.440 ((B)(9)(f). Riparian Buffer Widths by Environment Designation;Conservancy (75')</p> <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>	No development is anticipated.

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Krupp	Conservancy	Functioning	Residential	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<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>	No development is anticipated.
Soap Lake	Recreation	Partially functioning	Recreation - boat launch	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>Environment Protection Requirements</p> <p>14.08.240 (b) Applicants shall apply the following sequence of steps in order of priority to avoid or minimize significant adverse effects and significant ecological impacts, with 1) being top priority: (1) Avoiding the adverse impact altogether by not taking a certain action or parts of an action; (2) Minimizing adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts; (3) Rectifying the adverse impact by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project; (4) Reducing or eliminating the adverse impact over time by preservation and maintenance operations; (5) Compensating for the adverse impact by replacing, enhancing, or providing substitute resources or environments; and (6) Monitoring the adverse impact and the compensation projects and taking appropriate corrective measures.</p> <p>14.08.240 (d) The City shall require mitigation measures and/or permit conditions based on the provisions of this SMP, in order to mitigate adverse impacts. Mitigation plans shall outline how proposed mitigation measures would result in no net loss of shoreline ecological functions.</p> <p>14.08.240 (e) When compensatory measures are appropriate pursuant to the mitigation priority sequence above, preferential consideration shall be given to measures that replace the adversely impacted functions directly and in the immediate vicinity of the adverse impact. However, alternative compensatory mitigation may be authorized within the affected drainage area or watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or resource management plans, including the Shoreline Restoration Plan, applicable to the area of adverse impact. Authorization of compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions.</p> <p>Water Quality, Stormwater, and Nonpoint Pollution Requirements</p> <p>14.08.250 (a) The location, design, construction, and management of all shoreline uses and activities shall protect the quality and quantity of surface and groundwater adjacent to the site.</p> <p>14.08.250 (b) (g) & (h) All shoreline development shall comply with the applicable requirements of the latest version of the Washington State Department of Ecology's (Ecology) Stormwater Management Manual for Eastern Washington.</p> <p>14.08.250 (c) & (f) Best management practices (BMPs) for control of erosion and sedimentation shall be implemented for all shoreline development.</p>	<p>The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions. Several restoration actions are planned for the Soap Lake shoreline. These include soft bank shoreline protection, removing invasive species, enhancing riparian vegetation, and implementing stormwater controls. No net loss of ecological functions is anticipated as SMP provisions are strictly enforced and restoration plans are implemented.</p>

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Soap Lake	Recreation	Partially functioning	Recreation - boat launch	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	<p>14.08.250 (d) Potentially harmful materials, including but not limited to oil, chemicals, tires, or hazardous materials, shall not be allowed to enter any body of water or wetland, or to be discharged onto the land. Potentially harmful materials shall be maintained in safe and leak-proof containers.</p> <p>14.08.250 (e) Herbicides, fungicides, fertilizers, and pesticides shall not be applied within twenty-five (25) feet of a water body, except by a qualified professional in accordance with state and federal laws. Further, pesticides subject to the final ruling in Washington Toxics Coalition, et al., v. EPA shall not be applied within sixty (60) feet for ground applications or within three hundred (300) feet for aerial applications of the subject water bodies and shall be applied by a qualified professional in accordance with state and federal law.</p> <p>14.08.250 (j) All materials that may come in contact with water shall be constructed of materials, such as untreated wood, concrete, approved plastic composites or steel, that will not adversely affect water quality or aquatic plants or animals. Materials used for decking or other structural components shall be approved by applicable state agencies for contact with water to avoid discharge of pollutants from wave or boat wake splash, rain, or runoff. Wood treated with creosote, copper chromium arsenic, or pentachlorophenol is prohibited in shoreline waterbodies.</p> <p>Wetland Protection Requirements</p> <p>Table 14.08.600 (E)(6). Buffer Widths by Land Use Intensity: I (250'); II (200'); III (150'); IV (50')</p> <p>Fish and Wildlife Habitat Conservation Area Requirements</p> <p>14.08.560 (C) 2. Land uses adjacent to naturally occurring ponds and other fish and wildlife habitat areas will not negatively impact the habitat areas. If a change in land use occurs, adequate buffers based on the most current, accurate, and complete scientific or technical information available will be provided to protect the habitat areas.</p> <p>14.08.560 (K) A fish/wildlife habitat management and mitigation plan is required for all proposed developments determined to be within a priority habitat area. For those proposed developments determined to be within important habitat area, a fish/wildlife habitat management and mitigation plan may be required if it is determined by the City that the proposal will have probable adverse impacts on the habitat area.</p> <p>Table 14.08.560 (J). Riparian Buffer Widths by Environment Designation; Urban Conservancy (75'); Recreation (50'); Public Recreation Conservancy (75'); Shoreline Residential (50'); Shoreline Residential - Low Density (75')</p>	<p>The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column.</p> <p>Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions. Several restoration actions are planned for the Soap Lake shoreline. These include soft bank shoreline protection, removing invasive species, enhancing riparian vegetation, and implementing stormwater controls. No net loss of ecological functions is anticipated as SMP provisions are strictly enforced and restoration plans are implemented.</p>

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Coalition Cities Cumulative Impacts Analysis**

Location	Environment Designations	Level of Existing Function	Types of Anticipated Development	Degree of Impact to Ecological Functions	Provisions to Address Risk	Future Performance/Net Effect
Soap Lake	Recreation	Partially functioning	Recreation - boat launch	Hydrology: Low Sediment: Low Water Quality: Low Habitat Low	Boat Launch Requirements 14.08.300 (b) 3 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.	The Recreation environment designation was applied to impacted areas that are suitable for future development or redevelopment based upon existing impairment of ecological functions. Impacts to remaining ecological functions in this reach will be avoided, minimized, and mitigated per the SMP provisions described in the Provisions to Address Risk column. Wetland buffers will be applied based upon wetland type and land use intensity to protect wetland functions. Riparian buffers will be applied to protect riparian and upland habitat, water quality and other functions. Additionally, environmental and water quality protection, and vegetation conservation provisions will be applied to protect shoreline functions from future development. Unavoidable impacts from future development will be mitigated consistent with mitigation sequencing provisions. Several restoration actions are planned for the Soap Lake shoreline. These include soft bank shoreline protection, removing invasive species, enhancing riparian vegetation, and implementing stormwater controls. No net loss of ecological functions is anticipated as SMP provisions are strictly enforced and restoration plans are implemented.
					Environment Protection Requirements As Above SMP 14.08.240; Water Quality, Stormwater, and Nonpoint Pollution Requirements As Above SMP 14.08.250; Wetland Protection Requirements As Above SMP 14.08.600; Fish and Wildlife Habitat Conservation Area Requirements As Above 14.08.560	
	Shoreline Residential	Impaired	Residential	Hydrology: Moderate Sediment: Low Water Quality: Moderate Habitat: Moderate	Residential Requirements 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, 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.	
	Shoreline Residential - Low Intensity	Functioning			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.	
	Public Recreation Conservancy	Partially functioning	Recreation (improvements only)			
	Urban Conservancy	Partially functioning	None			
Wilson Creek	High Intensity Ag-Industrial	Partially functioning	None		No development is anticipated outside of existing developed and ecologically impacted areas. Existing agriculture activity is expected to continue for the next 20 years.	
	Rural Conservancy		None			

Notes:
BMPs = best management practices
OHWM = ordinary high water mark
SMP = Shoreline Master Program

As described in Tables 5 and 6, 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 policies, Environment Designations, and regulations that are all consistent with existing zoning and planning regulations and are consistent with the finding of supporting documents of the SMP. In addition to these requirements, the Restoration Plan will also contribute to the enhancement and protection of shoreline ecological functions. It is expected that the SMP will accommodate reasonable foreseeable shoreline development, while affording these protections and restoration initiatives throughout the next 20 years. All of this will result in no net loss of shoreline ecological function in County and Coalition City shorelines, and may actually lead to an improvement or gain of ecological function over time.

6 REFERENCES

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