

ACKNOWLEDGMENTS

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INTRODUCTION

BACKGROUND

This report is the cumulative impacts analysis for the City of Napavine and its urban growth area. This plan is meant to provide a planning-level framework for understanding how and where shoreline ecological functions are anticipated to be affected by future development and whether this development will cause a net loss of shoreline functions in the City and its urban growth area.

TIMELINE

The report has been created as part of the Shoreline Master Program and is included in Phase 4 of the overall update. A timeline for the complete Shoreline Master Program update is shown below:

TABLE 1

Timeline for the Shoreline Master Program Update for the City of Napavine

Phase	Update Schedule	Timeline
1	<ul style="list-style-type: none">• Prepare Jurisdiction Maps• Prepare a Public Participation Plan	Fall 2012
2	<ul style="list-style-type: none">• Analyze and characterize shoreline conditions	Winter 2012
3	<ul style="list-style-type: none">• Complete Draft Shoreline Master Program Update• Complete Cumulative Impact Analysis Report	Spring 2013
4	<ul style="list-style-type: none">• Complete Draft Restoration plan and Implementation Strategy• Complete No Net Loss Report	Winter 2013 Spring 2014
5	<ul style="list-style-type: none">• Conduct public hearings• Planning Commission Recommendation• City Council Action	Spring- Summer 2014
6	<ul style="list-style-type: none">• Ecology Review• Ecology Action• Final Adoption by Ecology and the City Council	Spring- Summer 2014

PURPOSE AND SCOPE OF PLAN

This document has been prepared to comply with the state's Shoreline Master Program (SMP) guidelines for cumulative impact analyses (WAC 173-26-201(2)). The guidelines are meant to ensure that SMP updates include shoreline policies and regulations that ensure that future development will cause no net loss of shoreline ecological functions in the shoreline environment. The concept of cumulative impacts and no net loss from the SMA is depicted within Figure 1.

Cumulative Impacts and No Net Loss of Shoreline Ecological Functions

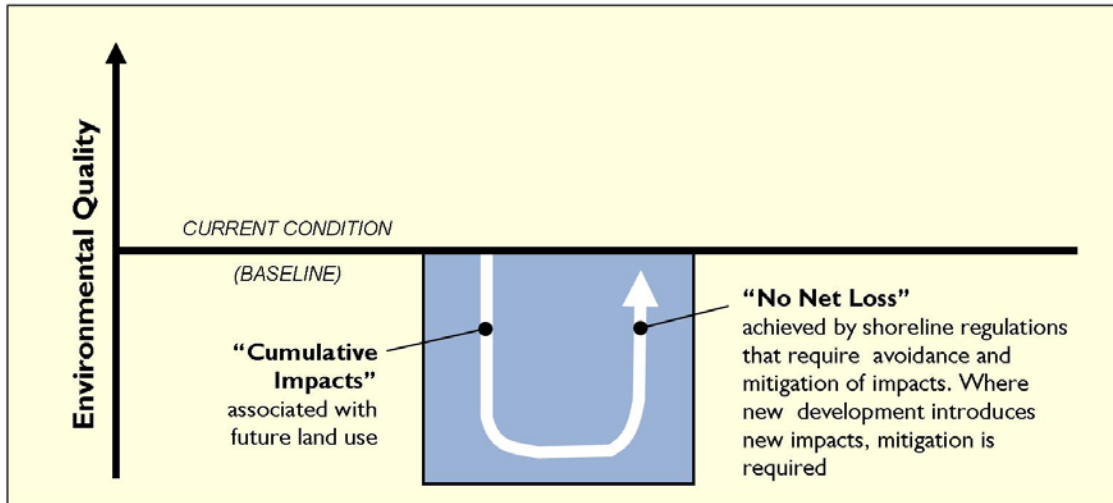


FIGURE 1

Conceptual View of Cumulative Impacts and No Net Loss

This cumulative impact analysis describes the anticipated shoreline development within the City of Napavine over time and assesses the total collective impacts of such development on future shoreline ecological functions. This analysis is a key step in forecasting the future and proactively dealing with potential impacts to shoreline functions. The SMP guidelines recommend that the analysis consider:

- Current circumstances affecting the shorelines and relevant natural processes;
- Reasonably foreseeable future development and use of the shoreline; and
- Beneficial effects of any established regulatory programs under other local, state, and federal laws.

Further, as part of this analysis, the Shoreline Management Act directs master programs to “include policies and regulations designed to achieve no net loss of those ecological functions” (WAC 173-26-186). This protection of shoreline ecological functions, according to the guidelines that implement the act, is accomplished through the following:

- Meaningful understanding of current shoreline ecological conditions;

- Regulations and mitigation standards that ensure that permitted developments do not cause net loss of ecological functions;
- Regulations that ensure exempt developments do not result in net loss of ecological functions;
- Goals and policies for restoring ecologically impaired shorelines;
- Regulations and programs that fairly allocate the burden of mitigating cumulative impacts among development opportunities; and
- Incentives and voluntary measures designed to restore and protect ecological functions.

METHODS AND SOURCES OF INFORMATION

To determine whether the Napavine Shoreline Master Program has achieved this standard of no net loss of shoreline functions, this document has considered:

- Existing development within the shoreline environment;
- Allowed development under the Shoreline Master Program;
- Foreseeable development within the City and the potential impacts of this development on the shoreline environment;
- The effect of the proposed Shoreline Master Program and other regulations on these potential impacts; and
- Whether the regulations will ensure no net loss of shoreline ecological functions.

EXISTING LAND USE WITHIN THE NAPAVINE SHORELINE ENVIRONMENT

Existing land uses within the segments of the Newaukum River that are located in Napavine are detailed within the *Shoreline Inventory and Characterization - Shoreline Master Program Update for Napavine* (2013). This section largely duplicates the information from the inventory, but presents the information in a slightly modified version for this report.

ASSESSMENT UNIT 1

Assessment Unit 1 is a 54 acre area with 1,400 feet of shoreline that lies upstream of the I-5 Bridge crossing over the Newaukum River. The segment is primarily located on the north and west side of the river but also includes the 2006 LOMR overflow floodway along Bond Road and Kirkland Road that becomes inundated during times of extreme rainfall events. A small area of wetlands occurs within the southern tip of this section (at the river bend) but is more limited throughout the rest of the unit due to past land fill activities. The entire unit is located within the 100-year floodplain, but floodwaters are typically limited to the areas within the 2006 LOMR floodway boundary.

The segment contains five parcels, ranging from 4 acres to 30 acres in size. All of the parcels are zoned commercial/industrial and all but one has been fully or partially developed for commercial use. Future land use designations for the area will remain Commercial/Industrial.

TABLE 2

Existing Shoreline Development Characteristics for Unit 1

Napavine: Unit 1	Acreage	Total Number of Lots Subject to SMP	Total Number of Buildings on Lots Subject to SMP	Total Number of Buildings Located within the Shoreline Environment
Commercial/Industrial	54	5	7	1

ASSESSMENT UNIT 2

Assessment unit 2 is a 47 acre area with 6,000 feet of shoreline that lies downstream of the I-5 Bridge crossing the Newaukum River. Wetlands are also limited in this area due to past land fill activities.

The area contains ten parcels ranging in size from 2 acres to 17 acres in size. All properties are zoned commercial or commercial/industrial and three have been fully or partially developed for commercial use.

Six buildings are present on three of the lots, and all of the lots are within the 100-year floodplain, but floodwaters are typically limited to the areas within the 2006 LOMR floodway boundary.

TABLE 3

Existing Shoreline Development Characteristics for Unit 2

Napavine: Unit 2	Acreage	Total Number of Lots Subject to SMP	Total Number of Buildings on Lots Subject to SMP	Total Number of Buildings Located within the Shoreline Environment
Commercial/Industrial	54	8	0	0

ALLOWED LAND USE WITHIN THE NAPAVINE SHORELINE ENVIRONMENT

Recognizing these existing conditions, the Shoreline Master Program has established two Shoreline Designations for the City of Napavine: Urban Conservancy, High Intensity and Aquatic. The Urban Conservancy designation has been crafted to recognize the relatively undeveloped nature of the existing shorelines within Napavine, the High Intensity designation applies to those shoreline areas outside of the 200 foot buffer from the Ordinary High Water Mark (OHWM) and the aquatic designation applies to those portions of the Newaukum River that are waterward of the OHWM.

These designations generally allow different land uses and are subject to different land use regulations. A list of the uses and activities that are allowed within the shoreline designations is presented in Table 4 and a list of required development standards for the designations is provided in Table 5. Additional use standards applicable to each of these uses and activities can be found in Section 7 of the Shoreline Master Program.

TABLE 4

Allowed Uses and Activities within the Shoreline Environment Designations

Uses and Activities	Urban Conservancy	High Intensity	Aquatic
Agriculture	P	NA	NA
Aquaculture	X	X	X
Boating Facilities	X	C ¹	X
Commercial	C ²	C ² /P ²	X
Forest Practices	X	X	X
Industrial	X	C ² /P ²	X
Mining	X	X	X
Recreation	C ¹ /P ²	C ¹ /P ²	C
Residential			
• Single-Family	X	C ² /P ²	X

TABLE 4 – (continued)

Allowed Uses and Activities within the Shoreline Environment Designations

Uses and Activities	Urban Conservancy	High Intensity	Aquatic
Solid Waste Disposal	X	X	X
Transportation			
• Roads and Railroads	C ¹ /P ²	C ¹ /P ²	C
• Shared Use Path	P	P	C
Utilities	C ¹ /P ²	C ¹ /P ²	C

P = Permitted Use; Use may require Substantial Development Permit or statement of exemption approval.

C = Requires a Shoreline Conditional Use Permit.

X = Prohibited; not eligible for a Substantial Development Permit or Shoreline Conditional Use Permit.

NA = Not applicable.

1 = Within 200 feet from the ordinary high water mark.

2 = Beyond 200 feet from the ordinary high water mark.

TABLE 5

Regulations within the Shoreline Environment Designations

Regulations	Urban Conservancy	High Intensity	Aquatic
Agriculture			
OHWM setback	*	*	NA
Building height	35'	35'	NA
Mining			
OHWM setback	*	*	NA
Building Height	25'	25'	NA
Recreation Development			
OHWM setback	*	*	NA
Building Height	25'	25'	NA
Residential/Commercial Development			
Single-Family Dwellings	*	*	NA
OHWM setback	Per Zoning	Per Zoning	NA
Maximum Density	35'	35'	NA
Building Height	30%	30%	NA
Maximum Impervious Surfaces			

TABLE 5 – (continued)

Regulations within the Shoreline Environment Designations

Regulations	Urban Conservancy	High Intensity	Aquatic
Transportation			
Roads and Railroads			
OHWM setback	*	*	NA
Trails/Shared Use Paths			
OHWM setback	*	*	NA
Utilities			
OHWM setback	*	*	NA
Building height	35'	35'	NA

* = Use must be located outside of the 200 foot buffer from OHWM.

OHWM = Ordinary high water mark.

NA = Not applicable.

In addition to these requirements, shoreline modifications are also allowed within the shoreline environment. Standards for these modifications are listed within Table 6 and supplemented by the policies and regulations within Section 8 of the Shoreline Master Program.

TABLE 6

Shoreline Modifications by Shoreline Environment Designation

Shoreline Modifications	Urban Conservancy	High Intensity	Aquatic
Dredging	NA	C	C
Fill			
• Ecological Restoration Project	P	P	P
• All Other Activities	C	C	C
Shoreline Stabilization			
• Restoration and Enhancement	P	P	P
• Bioengineering	P	C	C
• Revetment and Gabion	C	C	C
• Bulkhead	C	C	C
• Dike, Levee, and Instream Structure	C	C	C

P = Modification may require Substantial Development Permit or statement of exception approval.

C = Requires a Shoreline Conditional Use Permit.

NA = Not applicable.

FORESEEABLE DEVELOPMENT

Given these types of development that are allowed within the Shoreline Master Program, as well as the existing character of the shoreline within the Napavine, the following amount of development is anticipated. This amount of foreseeable development has been derived from the following sources:

- The City of Napavine Municipal Code and Critical Areas Ordinance; and
- The City of Napavine Comprehensive Plan and Capital Facilities Plans.

TABLE 7

Foreseeable Development for the Shoreline Environment – Newaukum River

Shoreline Segment	Proposed Designation	Foreseeable Development
Unit 1	Urban Conservancy within 200 foot buffer from OHWM	No structures are anticipated, public access points to the river, utilities and some level of shoreline modification may occur.
Unit 2	Urban Conservancy within 200 foot buffer from OHWM	No structures are anticipated, public access points to the river, utilities and some level of shoreline modification may occur.

With this anticipated level of development, some impacts will occur to the shoreline environment. However, the Shoreline Master Program has been designed to mitigate any potential environmental impacts that may occur. Tables 8 through 11 contain an analysis of the potential impacts that a development may have, proposed measures to mitigate the potential impact provided within the Shoreline Master Program, and the cumulative impacts of several developments given the proposed SMP is adopted.

TABLE 8

Commercial Development Adjacent to the 200-Foot Buffer from the OHWM

Foreseeable Development	Potential Impact	Mitigation	Cumulative Impact
Commercial Development within and adjacent to Unit 1 and 2 areas	Removal of riparian vegetation and addition of impervious surfaces within the 200-foot buffer from OHWM.	All commercial development must comply with the Critical Areas Ordinance and regulations as adopted within the Shoreline Master Program.	No net loss in ecological functions is anticipated.

TABLE 9

Transportation

Foreseeable Development	Potential Impact	Mitigation	Cumulative Impact
Roads and Parking Associated with Commercial Development within and adjacent to Unit 1 and 2 areas	New roadways and parking lots have the potential to increase pervious surfaces and stormwater runoff into the Newaukum River, and could affect habitat, depending on the placement of the facility.	Transportation infrastructure within the shoreline environment is expected to be controlled by the standards within the Critical Areas Ordinance and regulations as adopted within the Shoreline Master Program.	No net loss in ecological functions is anticipated.

TABLE 10

Utilities

Foreseeable Development	Potential Impact	Mitigation	Cumulative Impact
Utility installations associated with Commercial Development within and adjacent to Unit 1 and 2 areas	Utility installations have the potential to affect habitat quality and sediment generation.	All utilities must be designed and located to assure no net loss of shoreline ecological functions, preserve the natural landscape and minimize conflicts with planned land and shoreline uses.	No net loss in ecological functions is anticipated.

TABLE 11

Public Access

Foreseeable Development	Potential Impact	Mitigation	Cumulative Impact
Public Access within and adjacent to Unit 1 and 2 areas	Public Access to the Newaukum River may adversely impact the environmental functions of shoreline areas through the destruction of habitat and the delivery and transport of sediment, among other items.	Public access points and recreational facilities are to be designed to minimize the impact on shoreline functions, in part by being buffered from sensitive ecological features and providing limited and controlled access to sensitive features and the water's edge where appropriate.	No net loss in ecological functions is anticipated.

POTENTIAL BENEFITS OF OTHER REGULATIONS

In addition to the *Proposed Shoreline Master Program*, other state and federal regulations apply to Napavine's shoreline jurisdiction. These state and federal regulations include, but are not limited to: the Endangered Species Act (ESA), which seeks to protect and recover federally listed endangered species; the Clean Water Act (CWA), which seeks to protect water quality and regulate the excavation and dredging of rivers; Hydraulic Project Approval (HPA), which regulates projects that change waters of the state and affect fish habitat; and the National Pollution Discharge and Elimination System (NPDES) which regulates discharges into surface waters.

Additionally, the State Environmental Protection Act (SEPA) requires an assessment of environmental impacts for projects or a jurisdiction's legislative actions that are subject to the act, and this review is intended to provide a list of possible environmental impacts that may occur as a result of a project or a change in policy. This SEPA process helps identify potential impacts that may need to be mitigated or conditioned as result of a proposal, and could ultimately result in the denial of a project.

Taken together, these additional federal and state regulations will further ensure that there is no net loss of shoreline ecological functions along the Newaukum River within the City of Napavine.

SUMMARY

Considering current conditions, the regulatory framework, and the foreseeable development along shorelines, it is anticipated that there will be no net loss of ecological functions under the *Proposed Shoreline Master Program for the City of Napavine* (2013). Foreseeable development within the Napavine shoreline environment will include some commercial development, and the creation of amenities and facilities to support this development. The regulations within the Shoreline Master Program will ensure that these future potential developments will be mitigated in a manner commensurate with the impacts expected from each of the future developments.

RESOURCES

City of Napavine, 2013, Napavine Municipal Code

City of Napavine Subdivision and Zoning Standard, August 15, 2006

Letter of Map Revision (LOMR) Application and Supporting Documentation for City of Napavine Flood Map Revision, Pacific International Engineering, November 15, 2006