



No Net Loss Report

City of North Bonneville
Shoreline Management Plan Update

City of North Bonneville, WA

June 30, 2015





Contents

1	Introduction.....	1
1.1	No Net Loss Framework.....	1
1.2	Ecological Functions and Indicators.....	1
2	Existing Conditions.....	2
2.1	Designated Shoreline Reaches.....	2
2.1.1	Reach 1–Lower Hamilton Creek.....	2
2.1.2	Reach 2 – Greenleaf Lake.....	2
2.1.3	Reach 3 – Upper Hamilton Creek.....	3
2.1.4	Reach 4 – Greenleaf Creek.....	3
2.1.5	Reach 5 – Columbia River.....	3
3	Reasonably Foreseeable Future Development and Restoration.....	3
3.1	General Population Trends.....	3
3.2	Demands for Water-dependent Uses.....	4
3.3	Proposed Restoration.....	4
3.4	Cumulative Impact Assessment.....	5
4	Conclusion.....	5
5	References.....	1



This page is intentionally left blank.

1 Introduction

This report supports the City of North Bonneville (City) Shoreline Master Program (SMP) update. The City's SMP is being updated to comply with the Washington State Shoreline Management Act (SMA) requirements (Revised Code of Washington [RWC] 90.58), and the state's shoreline guidelines (Washington Administrative Code [WAC] 173-26, Part III), which were adopted in 2003.

The SMP update process involved the following steps:

1. Reviewing and revising shoreline goals and policies;
2. Inventorying and analyzing shoreline conditions;
3. Determining shoreline environment designations (SEDs);
4. Assessing cumulative impacts of shoreline development; and
5. Preparing a restoration plan.

The guidelines suggest that “no net loss” of shoreline ecological function is achieved primarily through regulatory mechanisms including mitigation requirements but that restoration incentives and voluntary actions are also critical to achieving the “no net loss” goal. This report demonstrates how the City's SMP achieves “no net loss” of shoreline ecological functions. This work was funded in part through a grant from the Washington State Department of Ecology (Ecology).

1.1 No Net Loss Framework

No net loss incorporates the following concepts:

- The existing condition of shoreline ecological functions should not deteriorate due to permitted development. The existing condition or baseline is documented in the shoreline inventory and characterization. Shoreline functions may improve through shoreline restoration.
- New adverse impacts to the shoreline environment that result from planned development should be avoided. When this is not possible, impacts should be minimized through mitigation sequencing.
- Mitigation for development projects alone cannot prevent all cumulative adverse impacts to the shoreline environment, so restoration is also needed.

1.2 Ecological Functions and Indicators

Based on the findings of the City of North Bonneville Shoreline Inventory and Characterization Report (SICR) (City of North Bonneville 2012), the following ecological functions are considered to be the most at risk as a result of future development:

- Hydrology
- Sediment transport

- Water quality
- Organic materials (large woody debris)

Measuring and continuing to track these indicators will provide a picture of the shoreline conditions and ecological functions. The indicators will be evaluated to track loss or gain throughout the life of the SMP. As discussed in the Restoration Plan, restoration activities will focus on restoring these functions and the features associated with them relative to existing conditions.

2 Existing Conditions

2.1 Designated Shoreline Reaches

The city has designated its shoreline areas into five reaches that separate each shoreline into separate geographic locations that can better represent their designated environmental designations because of property ownership, current and planned uses, and environmental considerations.

2.1.1 Reach 1—Lower Hamilton Creek

Reach 1 consists of the lower reach of Hamilton Creek below the Evergreen Bridge and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Zone A, within the city limits. Two hundred feet landward of the western portion of Hamilton Creek is owned by either the City of North Bonneville and used and zoned as open space with a pathway system or the United States Fish & Wildlife maintained as a wildlife refuge. The eastern shoreline portion of this part of Hamilton Creek is made up of city owned open space along the entire shoreline, private owned residential development in the south and undeveloped Commercial zoned property to the north. Public access is limited to view only along the pathway system owned by the city. Steep slopes, extreme seasonal high water and sensitive environmental areas limit the opportunity for public access on both banks of the creek. The northern part of FEMA FIRM Zone A is zoned Commercial Recreation and is owned and used as a public golf course. The southern majority is zoned federal ownership and is owned and maintained as a federal wildlife refuge.

2.1.2 Reach 2 – Greenleaf Lake

Reach 2 includes all of Greenleaf Lake and the associated water body of Carpenter Creek. The south lake shoreline is zoned as Mixed Use and with the exception of the BPA Substation and transmission lines is developed as residential including some private docks located on the shoreline. The north shore is partially developed as residential on the two ends (zoned Commercial Recreation and Single Family Residential respectively) with a large vacant shoreline that is zoned for commercial recreation. The city has a public boat launch and park on the northeast end of the lake. Commercial recreational development could provide additional public water-oriented use opportunities to the shoreline.

2.1.3 Reach 3 – Upper Hamilton Creek

Reach 3 consists of the upper reach of Hamilton Creek above the Evergreen Bridge extending north to the BPA transmission lines crossing the creek. There is private ownership on both shorelines with an existing RV park zoned Commercial Recreation and vacant Industrial/Business Park zoned property on the west bank. The east bank is undeveloped property zoned Commercial Recreation that allows residential, commercial recreation and planned unit development. Steep banks and sugar diking prevent direct public access in this reach. Public view areas could be developed as part of a residential, commercial recreation or industrial development.

2.1.4 Reach 4 – Greenleaf Creek

Reach 4 includes Greenleaf Creek from Greenleaf Lake upstream to the city limits. These shorelines are in private ownership and are zoned Commercial Recreation except for a small eastern shoreline portion zoned Single Family Residential north of the Greenleaf Creek Bridge. The shoreline has been partially developed as commercial recreation with the portions zoned Single Family Residential being completely developed as residential. Direct shorelines are left mostly undisturbed with no public access because of the sensitive environment.

2.1.5 Reach 5 – Columbia River

Reach 5 includes the portion of the Columbia within the city limits on the north bank above and below the Bonneville Dam. This shoreline is owned and regulated property of the United States of America. It has a completely altered shoreline with steep slopes, riprap and provides very limited public access to the shoreline. It is used by the United States Corps of Engineers as part of Bonneville Dam and for an in-lieu tribal fishing site.

3 Reasonably Foreseeable Future Development and Restoration

This section provides a qualitative summary of:

- General growth in population and employment projected to 2018, and
- Shoreline use and development trends.

3.1 General Population Trends

In 1998 the city had an opportunity to review population projections as a result of capital facilities planning. The city anticipated that as many as 1,528 people could reside in North Bonneville in the year 2018 based upon an aggressive build-out of essential capital facilities. The city's April 2012 population was 1,000 as estimated by the Washington State Office of Financial Management (2015).

Future development in the subbasin will likely occur in areas along Highway 14, but the population of this subbasin is anticipated to remain small due in large part to the location of the subbasin within the Columbia River Gorge National Scenic Area (HDR/EES 2006).

Because of the National Scenic Area status, and due to the physical constraints of the gorge itself, future development is expected to be quite limited in this area (HDR/EES 2006). Specifically, most growth will be confined to the few urban areas in the County, including North Bonneville and the neighboring town of Stevenson.

3.2 Demands for Water-dependent Uses

The majority of the vacant land in North Bonneville is on the north shore of Greenleaf Lake. Almost all of the City's shoreline development has occurred on Greenleaf Lake, with 22 structures within the 200 feet of designated shoreline. There has been an increase of 13 structures since 1980. All are residential structures and only one is within 50 feet of the shoreline. With this development, Greenleaf Lake is almost fully developed on the south shore as large lot residential with City-owned open space and the BPA substation. The north shore has minimal development that is large lot residential and undeveloped vacant land that is zoned Commercial Recreation. Commercial Recreation zoning allows for a mix of both residential and/or commercial destination type development. There are a few privately owned small docks on the lake and a City-owned boat ramp on the eastern shore.

Carpenter and Greenleaf Creeks are privately owned, mostly undeveloped and are also zoned Commercial Recreation. Though not necessarily water dependent, both residential and commercial recreation development on the lake has and would most likely draw on at a minimum the location on the water for views if not water access.

Four structures have been added to Greenleaf Creek within the shoreline jurisdiction since 1980. These included two residential structures and two commercial developments; a hotel expansion and an RV park that was not completed. All are over 50 feet from the shoreline. Future development potential is limited mostly to parts of the western shorelines that would be outside the 50-foot setback, and would include the possible completion of commercial RV park on the upper west shoreline and residential or commercial recreational development on the lower west shoreline.

It should also be noted that significant water related activities occur just outside the city limits with fishing access on the banks and by boat on Kidney Lake, Bass Lake, and Columbia River. There are also numerous federally owned trails that access these and other water bodies in and around the city limits.

3.3 Proposed Restoration

As discussed in the Restoration Plan, the City will prioritize restoration efforts in Reaches 1 and 2, which provide the most opportunities to achieve meaningful restoration of shoreline function. Activities in Reach 1 will be coordinated with the Pierce National Wildlife Refuge and will include enhancing and maintaining stream flow restoration project, protecting and restoring wetlands, and adding large woody debris to the system. Priority activities in Reach 2 will focus on improved public access to limit human disturbance. Efforts in Reaches 3 and 4 will include canopy plantings and other vegetation enhancement as part of any new development within the shoreline jurisdiction. Cooperation with private property owners could produce some of the largest restoration return, without the need for additional funding.

3.4 Cumulative Impact Assessment

Reasonably foreseeable future uses in the shoreline jurisdiction are addressed through the policies and regulations of the City's Shoreline Master Program, the City's Critical Areas Ordinance (City of North Bonneville 2015), or other local, state, and federal laws and regulations. Overall, implementation of the SMP is expected to minimize cumulative effects of reasonably foreseeable future development in most of the shoreline jurisdiction, and in some areas conditions are expected to improve.

4 Conclusion

No net loss is a framework which establishes maintenance of current overall conditions as a minimum requirement for management of shoreline ecological functions under the SMP. Through implementation of the SMP and its associated Restoration Plan, the City anticipates no net loss of shoreline ecological functions.

Continued implementation of the City's zoning code (City of North Bonneville, 2014), critical areas ordinance (City of North Bonneville, 2015), and Shoreline Management Plan will effectively manage growth and development to minimize future impacts to all reaches. Mitigation requirements will be implemented for new projects constructed in the shoreline jurisdiction in order to offset potential impacts. Private property owner involvement in non-chemical shoreline landscape maintenance and vegetation enhancement will be encouraged. Planned restoration in Reaches 1 and 2 will offset and likely increase ecological function in these reaches, providing a net benefit to the City's shorelines as a whole.

5 References

- City of North Bonneville. 2012. History of North Bonneville. Accessed on May 3, 2012 at:
<http://www.northbonneville.net/history.html>.
- City of North Bonneville. 2014. North Bonneville Municipal Code, Title 20: Zoning. Last updated May 13, 2014.
<http://www.northbonneville.net/downloads/municipalcode/Title%2020%20Zoning.pdf>
- City of North Bonneville. 2015. North Bonneville Municipal Code. Title 21: Environmental Protection. Last updated January 13, 2015.
<http://www.northbonneville.net/downloads/municipalcode/Title%2021%20Environmental%20Protection.pdf>
- HDR/EES (HDR Engineering, Inc. / Economic and Engineering Services, Inc.). 2006. Salmon-Washougal & Lewis Watershed Management Plan – WRIAS 27 and 28. Prepared for the Lower Columbia Fish Recovery Board for submission to the Planning Area Counties. Adopted by Clark, Cowlitz, and Skamania Counties, July 21, 2006.