

ANALYSIS OF CUMULATIVE IMPACTS
CITY OF BLAINE SHORELINE MASTER PROGRAM
UPDATE

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1.0 INTRODUCTION

Pursuant to the updated Shoreline Master Program Guidelines, WAC 173-26, shoreline master program updates are required to evaluate and address the cumulative impacts to shoreline functions that may result from future shoreline development. The policies and regulations incorporated into the Blaine Shoreline Master Program were developed to assure no net loss of ecological function to the shorelines of the state within the City of Blaine shoreline jurisdiction. These provisions must be evaluated to address possible cumulative impacts and methods to avoid or minimize such impacts. Evaluating cumulative impacts shall be consistent with the guiding principle in WAC 173-26-186(8)(d) and should consider:

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

It is recognized that the methods used to determine reasonably foreseeable future development and associated impacts may vary according to local circumstances, including demographic and economic characteristics and the nature and extent of local shorelines.

This evaluation of cumulative impacts shall also consider the effect on the ecological functions of the shoreline that are caused by unregulated activities, development exempt from permitting, effects such as the incremental impact of residential bulkheads, or runoff from newly developed properties. For development projects that may have un-anticipatable or uncommon impacts that cannot be reasonably identified at the time of master program development, the master program policies and regulations shall use the permitting or conditional use permitting processes to ensure that all impacts are addressed and that there is no net loss of ecological function of the shoreline after mitigation.

2.0 EXISTING CONDITIONS

As part of the City of Blaine Shoreline Inventory completed in 2006, the various areas within the City and urban growth area (UGA) that are within shoreline jurisdiction were divided into a series of reaches based on environmental features, existing development, zoning, and future development plans and potential. The following sections present a summary of the existing conditions in each reach. For more detailed information, refer to the Blaine Shoreline Inventory and Analysis Report (2006). The locations of the various reaches are shown on the City of Blaine Shoreline Jurisdiction and Environment Designation Map.

2.1 REACH 1

Reach 1 is described as the marine shoreline on Semiahmoo Bay from the Canadian border south to the mouth of Cain Creek. This reach is dominated by the international border crossing facility, Peace Arch Park and the Burlington-Northern and Santa Fe Railway Company railroad tracks located immediately adjacent to the shoreline.

Semiahmoo Bay provides important bird habitat, and water quality problems have been identified in this reach. Cain Creek provides a source of fresh water to the Bay.

2.2 REACH 2

Reach 2 includes the marine shoreline on Semiahmoo Bay from Cain Creek to the west end of the Marine Drive peninsula. Marine Park is the main feature located within the eastern two-thirds of this reach. There is some undeveloped commercial land that is owned by the City located in the middle of Marine Park. As indicated for Reach 1, Semiahmoo Bay provides important bird habitat, and Cain Creek provides a freshwater input to the Bay. Some shoreline erosion near the west end of this reach has been experienced in the past, and the City has tried to stabilize the area through the placement of old concrete slabs.

2.3 REACH 3

Reach 3 includes the marine shoreline along Drayton Harbor from the tip of the Marine Drive spit back to the north-south shoreline adjacent to, but not including, the Burlington-Northern railroad right-of-way. This reach includes the Blaine Marina, marine commercial and industrial uses and the public boat launch. This area is protected by a large breakwater, which affects the movement of water and sediment. A disturbed wetland is also present in the eastern portion of this reach near the boat launch.

2.4 REACH 4

Reach 4 includes the marine shoreline along Drayton Harbor south from the boat launch (and including the railroad right-of-way) to the point where Peace Portal Drive is located immediately landward of the Burlington-Northern railroad (near Cedar Street right-of-way). This reach is dominated by the presence of the railroad located adjacent to the shoreline. Portions of the commercial properties located on the west side of Peace Portal Drive are also within shoreline jurisdiction. Some degraded saltwater wetlands are also present within this reach.

2.5 REACH 5

Reach 5 includes the marine shoreline along Drayton Harbor where the Burlington-Northern railroad right-of-way is located immediately adjacent to Peace Portal Drive (approximately from Cedar Street to north of Albert Street). This reach is dominated by the presence of the railroad and Peace Portal Drive immediately adjacent to the shoreline. These transportation corridors provide a substantial physical separation between any future development and the shoreline.

2.6 REACH 6

Reach 6 includes the marine shoreline along Drayton Harbor from the point where the railroad leaves the shoreline south to the mouth of Dakota Creek. The majority of this area is already developed with residential uses, although a few undeveloped areas remain. There is an area of intact native vegetation in the middle of this reach that provides valuable eagle habitat. Residential development predominates.

2.7 REACH 7

Reach 7 is defined as the shoreline of Dakota Creek from the mouth of the creek upstream to the city limits line (on the north bank) near Interstate-5. The south bank is located in unincorporated Whatcom County in the Blaine urban growth area (UGA). Some of the reach has been developed with residences. Important areas of intact native vegetation remain within this reach.

2.8 REACH 8

Reach 8 is defined as the shoreline of Dakota Creek upstream of the city limits to the limits of the former Blaine UGA. This reach has been removed from the Blaine UGA as of November 2009. Existing development in this reach includes rural residential development and agriculture. Some intact vegetation corridors are also present within this reach..

2.9 REACH 9

Reach 9 includes the marine shoreline along Drayton Harbor from the mouth of Dakota Creek to the mouth of California Creek. The entire reach is located within unincorporated Whatcom County within the former Blaine UGA. This reach has been removed from the Blaine UGA as of November 2009. This reach contains rural residential development on the bluff above the shoreline.

2.10 REACH 10

Reach 10 is defined as the shoreline of California Creek from the mouth of the creek to the bridge at Blaine Road. The entire reach is located in unincorporated Whatcom County within the former Blaine UGA. This reach has been removed from the Blaine UGA as of November 2009. Some rural residential development is present in this reach, and some native vegetation corridors remain, as well.

2.11 REACH 11

Reach 11 is defined as the shoreline of California Creek from the bridge at Blaine Road upstream to the eastern extent of the former Blaine UGA. The entire reach is located in unincorporated Whatcom County within the former Blaine UGA. This reach has been removed from the Blaine UGA as of November 2009. This reach includes some rural residential development and agriculture. Important native vegetation corridors remain intact in this reach, as well.

2.12 REACH 12

Reach 12 includes the marine shoreline along Drayton Harbor from the mouth of California Creek west to the City limits. The entire reach is located within unincorporated Whatcom County within the former Blaine UGA. This reach has been removed from the Blaine UGA as of November 2009. Drayton Harbor Road is located in close proximity to the shoreline throughout this reach. Limited rural and agricultural development is present within this reach. Water quality in Drayton Harbor is significantly impacted by non-point sources of pollution in the California Creek watershed. A major complex of wetlands is also present in the larger contributing basin. Drayton Harbor intertidal areas also provide important habitat for marine birds.

2.13 REACH 13

Reach 13 includes the marine shoreline along Drayton Harbor from the city limits line to the beginning of Semiahmoo Spit. This reach includes existing residential development on both sides of Drayton Harbor Road. Some areas of intact vegetation remain, especially on the hillside in the western portion of this reach. The shellfish beds in Drayton Harbor adjacent to this reach have been closed to shellfish harvesting due to high levels of pollution.

2.14 REACH 14

Reach 14 includes the marine shoreline along Drayton Harbor from the beginning of the neck of Semiahmoo Spit to the southwest edge of the Semiahmoo Marina. Semiahmoo Park, a predominantly undeveloped county park, occupies the majority of this reach. A multifamily residential development known as Seagrass Cottages II was recently approved for development in the eastern portion of Reach 14. Significant eelgrass beds are located in the offshore area of this reach, which also provides important habitat for marine birds.

2.15 REACH 15

Reach 15 is identified as the marine shoreline along Drayton Harbor and Semiahmoo Bay from the southern edge of the Semiahmoo Marina to the northwestern extent of the Inn at Semiahmoo Resort. This reach includes the expansion area for the Semiahmoo Marina plus some sites for future mixed-use development. The marina bulkhead, numerous relic pilings and a number of old piers and buildings are present within Reach 15. Significant eelgrass beds are also located in the Aquatic portion of this reach.

2.16 REACH 16

Reach 16 is identified as the marine shoreline along Semiahmoo Bay from the western extent of the Inn at Semiahmoo Resort to the western edge of Semiahmoo Park (just east of the wastewater treatment plant). Semiahmoo Park occupies the majority of this reach. The eastern portion of the reach contains existing multifamily residential development, including the recently approved Seagrass Cottages II. Significant eelgrass beds are also located in the Aquatic portion of this reach.

2.17 REACH 17

Reach 17 is defined as the marine shoreline along Semiahmoo Bay from just east of the wastewater treatment plant southwest to the existing City limits and continuing southwesterly to the southern extent of the Blaine UGA. Approximately one-third of this reach is located within the City and the remaining two-thirds is located in unincorporated Whatcom County within the former Blaine UGA. This reach includes the wastewater treatment plant, currently being decommissioned, and residential development along the shoreline. Some areas of intact native vegetation remain. Significant eelgrass beds are also located in the Aquatic portion of this reach.

3.0 INTENT OF ENVIRONMENT DESIGNATIONS TO MITIGATE IMPACTS

3.1 AQUATIC

As specified in the draft Blaine Shoreline Master Program, the Aquatic designation allows only a very limited number of activities to take place within the areas waterward of the ordinary high water mark. This designation will serve to protect, restore, and manage the unique characteristics and resources of the water bodies within Blaine's shoreline jurisdiction. This designation is intended to promote no net loss of shoreline ecological functions and wise use of the natural features and resources of shorelines of the state. Except for habitat restoration projects, aquaculture, marina and port-related activities, no development is anticipated in the Aquatic area, and most activity with the potential to impact shoreline functions in this shoreline environment would require approval of a shoreline conditional use permit.

3.2 NATURAL

Reaches proposed to be included in the Natural shoreline environment should not see any future impacts that result in a net loss of ecological functions. Those portions of reaches designated Natural will remain relatively untouched by development. The existing native vegetation in these areas will be allowed to mature to help restore the existing ecological functions. Enhanced restoration efforts, such as the planting of native vegetation, will also be encouraged in areas under this designation. A Natural designation serves to protect and repair shoreline areas throughout the Blaine shoreline area. This designation requires that only very low intensity uses be allowed in order to maintain the ecological functions and ecosystem-wide processes and to support restoration over time. To promote access to the shoreline, trails and public access facilities are permitted in the Natural environment. Due to the geography of the city's shoreline, some Natural environment areas include roads and utilities that will need to be maintained.

3.3 HIGH-INTENSITY

Reach 3 (Blaine Marina), a portion of Reach 4, Reach 15 (Semiahmoo Marina and Resort) and a portion of Reach 2 (new treatment plant site) are the only areas designated as High-Intensity within the City of Blaine's shoreline jurisdiction. The intent of this designation is to provide for high-intensity water-oriented commercial, transportation, industrial and port uses while protecting existing ecological functions and restoring ecological functions in areas that have previously been degraded. Future development within the High-Intensity area will be required to include restoration and mitigation plans if deemed necessary by the City to protect ecological functions. More stringent regulations apply to nonwater-oriented commercial/industrial uses, such as significantly increased setbacks from the shoreline.

3.4 SHORELINE RESIDENTIAL

Areas designated as Shoreline Residential include primarily those areas in Blaine planned for single-family residential development. The intent of this designation is to accommodate residential development that is consistent with shoreline goals while protecting and restoring ecological functions by minimizing shoreline modifications. As growth continues to occur in the area, the City of Blaine will need locations for additional

residential development in proximity to the shoreline. By designating areas Shoreline Residential under this master program, the City can accommodate future development that will serve not only to enhance the local economy, but also that will include restoration and mitigation plans to maintain the quality of the shoreline environment. At all locations where the Shoreline Residential designation has been proposed, a strip of land adjacent to the shoreline has been included in the Natural designation to serve as a protective buffer between new development and the shoreline.

3.5 URBAN CONSERVANCY

The intent of the Urban Conservancy designation is to protect and restore ecological functions in all systems including fish and wildlife habitat conservation areas, open space, and other sensitive lands where they exist in urban and developed settings. This designation provides opportunity for a mixture of different uses that are all regulated to include the protection of the ecological functions and to provide ecological restoration when necessary.

3.6 SPECIAL MANAGEMENT UNIT

The intent of the special management unit is to provide guidance and direction for the development of permitted and conditionally permitted uses in those area designated SMU. These areas are limited to the tip of Semiahmoo Spit and Blaine Wharf District. These two areas are regulated by master plans. The master plans provide the regulatory framework for development and use of the shoreline areas, and the SMP provides the regulatory framework for protecting shoreline functions and values.

4.0 POTENTIAL FUTURE IMPACTS

4.1 REACH 1

The great majority of the area within Reach 1 is under federal jurisdiction; therefore, it is unlikely that the Blaine Master Program will have much of an effect on this area. Future development associated with the border crossing could contribute to impacts to the water quality in Semiahmoo Bay; however, several important restoration opportunities have been identified for this reach that should lead to no net loss of shoreline functions within this reach. Examples of identified restoration opportunities include control on non-native plant species and enhancement of the terrestrial vegetation associated with Cain Creek and maintaining the freshwater source to Cain Creek. Restoration opportunities identified for Reach 2 will also enhance water quality and other shoreline functions in Reach 1. Refer to the City of Blaine Draft Restoration Plan (2006) for more details regarding restoration opportunities.

4.2 REACH 2

Future development within Reach 2 will likely include improvements to Marine Park facilities, possible development of a new wastewater treatment plant in the western portion of the reach and shoreline enhancement projects, such as enhancing native vegetation to provide screening for critical bird habitat, creation or enhancement of tidepools, removal of asphalt rip-rap, and removal of creosote pilings. All future development activities within this reach will be through public projects. These projects,

including the new wastewater treatment plant, will be conditioned to ensure no net loss of shoreline function. This may involve additional mitigation and restoration not yet identified for this reach.

4.3 REACH 3

Future development within Reach 3 will likely include enhancement of marina facilities owned and managed by the Port of Bellingham, redevelopment of underutilized commercial and industrial sites and restoration activities, such as enhancement of the disturbed wetland located south of Marine Drive between the parking area and the railroad to provide marine bird habitat. Some public pedestrian trails are also planned in this reach. The ability of the City to achieve no net loss of shoreline function within this reach will depend in large part on the City's working with the Port to ensure that Marina redevelopment and enhancement projects include appropriate mitigating conditions. This area has been designated High Intensity, and many of the uses with the greatest potential for impacting the shoreline are required to go through the conditional use permitting process during which the City can insure that unavoidable impacts will be mitigated.

4.4 REACH 4

Future development within Reach 4 will likely be limited to development and redevelopment of the commercial and mixed-use properties located on the west side of Peace Portal Drive. All of these development sites are separated from the water's edge by the railroad right-of-way. The shoreline regulations contained in the Blaine Shoreline Master Program will ensure that all impacts from such developments, such as increased stormwater runoff, will be fully mitigated to ensure no net loss of shoreline functions. City projects planned for this area include the Blaine Boardwalk and a pedestrian overpass over the railroad to connect the downtown to the Marina. Potential impacts from such projects are very limited, and the City would require that any unavoidable impacts would be fully mitigated. Restoration activities within this reach, such as enhancement of the degraded saltwater wetland, will likely result in a net increase in shoreline ecological functions in this reach over time.

4.5 REACH 5

The shoreline area within Reach 5 is almost entirely taken up by the railroad and Peace Portal Drive. Given the large separation between any future development and the shoreline, cumulative impacts are possible but unlikely. Efforts to enhance the thin band of native vegetation between the railroad tracks and the OHWM may lead to improved ecological function of this reach. The Blaine Master Program, as well as Blaine development regulations in general, will ensure that potential impacts, such as increased stormwater runoff, will be fully addressed through project permitting.

4.6 REACH 6

Future development within Reach 6 will likely be limited to residential in-fill. The developable areas are located on a bluff that sits above the water's edge. The presence of the bluff, plus required shoreline setbacks of between 100 and 150 feet will maintain an adequate separation from the shoreline to ensure no net loss shoreline function in this reach. The tidal nature of Drayton Harbor at this location makes the development of residential docks that would significantly affect shoreline functions highly unlikely.

Shoreline regulations will also limit the development of any new structures, such as residential bulkheads, that would block the transport of shoreline sediment.

4.7 REACH 7

Future development within Reach 7 will likely include residential in-fill and possibly some limited commercial or light industrial development. The City has also planned to develop a new community park within this reach. The inclusion of a 100-foot strip of land adjacent to the shoreline designated Natural will serve to separate development from the shoreline and maintain the existing vegetation corridors that remain. Major City parks and recreation projects will be required to fully mitigate their impacts to ensure no net loss of shoreline functions. Restoration efforts undertaken by Whatcom County or other opportunities in the upper watershed of Dakota Creek will also serve to help improve water quality within this reach over time.

4.8 REACH 8

Reach 8 is located outside the city limits and the UGA. Restoration efforts undertaken by Whatcom County or other organizations in the upper watershed of Dakota Creek will also serve to help improve water quality within this reach and Drayton Harbor over time.

4.9 REACH 9

Most of Reach 9 is located outside the city limits and UGA; however, one section in the northern edge is within the UGA. This area is mostly developed and subdivided with and for single-family homes. The tidal nature of Drayton Harbor at this location makes the development of additional residential docks that would significantly affect shoreline functions highly unlikely. Shoreline regulations will also limit the development of any new structures, such as residential bulkheads, that would block the transport of shoreline sediment.

4.10 REACH 10

Reach 10 is located outside the city limits and the UGA.

4.11 REACH 11

Reach 11 is located outside the city limits and UGA. Restoration efforts undertaken by Whatcom County or other organizations in the upper watershed of California Creek will also serve to help improve water quality within this reach and Drayton Harbor over time.

4.12 REACH 12

Reach 12 is located outside the city limits and UGA.

4.13 REACH 13

Future development in Reach 13 will likely include limited residential in-fill or redevelopment. The inclusion of a portion of the reach in the Natural designation will help preserve the existing native vegetation along the shoreline. Shoreline regulations limiting the construction of new bulkheads and jetties will protect natural sediment

transport regimes. Ongoing efforts to improve water quality throughout the Drayton Harbor watershed will help improve shoreline functions in Reach 13 over time.

4.14 REACH 14

It is anticipated that Semiahmoo Park will remain a natural, undeveloped park. Recently approved residential development (Seagrass Cottages II) will be set back from the ordinary high water mark a distance of at least ninety feet and will be required to mitigate impacts from the project, such as increased stormwater runoff. The results of scientific studies are unclear as to whether planned development within this reach and other similar development will result in long-term cumulative impacts to marine birds. Recent information indicates that construction activity has limited impact on overwintering water fowl that appear to be habituated to the activity levels on the shoreline. Potential restoration projects, such as the planting of native vegetation screens, will decrease the long-term impact of such permitted uses.

4.15 REACH 15

Future development within Reach 15 is likely to include expansion of the Semiahmoo Marina and development of several mixed-use or multifamily residential developments. City development regulations, including proposed shoreline regulations will require all such developments to fully mitigate their impacts to the shoreline environment. Restoration projects, such as re-design of the marina bulkhead, replacement of creosote pilings with non-toxic materials and planting of native vegetation on the upland area adjacent to a portion of the shoreline, will likely help improve shoreline functions over time.

4.16 REACH 16

It is anticipated that Semiahmoo Park will remain a natural, undeveloped park. Recently approved multifamily residential development (Seagrass Cottages II) will be set back from the ordinary high water mark a distance of at least ninety feet and will be required to mitigate impacts from the project, such as increased stormwater runoff. Potential restoration projects, such as the planting of native vegetation screens, will decrease the long-term impact of permitted uses.

4.17 REACH 17

Future development within Reach 17 will likely include residential in-fill once the balance of the area is annexed into the City. The inclusion of a 100-foot strip of land adjacent to the shoreline designated Natural will serve to separate development from the shoreline and will support a maintenance of native shoreline vegetation and its increase over time. Shoreline regulations will limit the development of any new structures, such as residential bulkheads, that would block the transport of shoreline sediment.

5.0 ASSURE NO NET LOSS

An important goal of the Blaine Shoreline Master Program is to assure no net loss of ecological functions to the shorelines of the state located within the City's shoreline jurisdictional area. The goals, policies, and regulations, that together form this Blaine Shoreline Master Program, include development requirements to assure no net loss.

The goal of no net loss will be achieved through a number of mechanisms, including development regulations, established vegetation buffers, restoration planning, mitigation requirements, volunteer efforts and conditional use permitting. Although much of the shoreline area within the City has already been developed, new development in Blaine is inevitable. However, by limiting the location and types of development allowed within the Blaine shoreline area, the City will be able to ensure no net loss of ecological functions on a project-by-project basis and for the Blaine shoreline area as a whole.