

CITY OF FIFE SHORELINE MASTER PROGRAM UPDATE

CUMULATIVE IMPACTS ANALYSIS

PREPARED FOR:



CITY OF FIFE
COMMUNITY DEVELOPMENT
5411 23RD STREET EAST
FIFE, WASHINGTON 98424

PREPARED BY:

GRETTE ASSOCIATES, LLC
2102 NORTH 30TH SUITE A
TACOMA, WASHINGTON 98403
(253) 573-9300

151 SOUTH WORTHEN, SUITE 101
WENATCHEE, WASHINGTON 98801
(509) 663-6300

FINAL



TABLE OF CONTENTS

1	INTRODUCTION	3
1.1	Shoreline Management Act.....	3
1.2	Shoreline Master Program Update Process.....	3
1.3	Purpose of the Cumulative Impact Analysis.....	4
1.4	What are cumulative impacts?.....	4
1.5	Key Aspects of the Cumulative Impact Analysis	5
1.6	Methodology and Document Organization	6
2	EXISTING CONDITIONS SUMMARY	8
3	REASONABLY FORSEEABLE FUTURE DEVELOPMENT AND ANTICIPATED IMPACT TO EXISTING SHORELINE FUNCTION	13
4	ENVIRONMENTAL DESIGNATIONS.....	16
5	GENERAL SHORELINE MANAGEMENT POLICIES AND REGULATIONS.....	23
5.1	Critical Areas	23
5.2	Flood Hazards	23
5.3	Shoreline Vegetation Conservation	24
5.4	Shoreline Modifications.....	24
5.5	Structural Flood Hazard Reduction Measures (Dikes and Levees)	26
5.6	Environmental impact mitigation	27
6	CUMULATIVE IMPACTS ANALYSIS BY REACH.....	28
7	INCREMENTAL AND UNANTICIPATED IMPACTS.....	37
8	SUMMARY OF NET IMPACT TO ECOLOGICAL FUNCTION.....	38
9	REFERENCES	39
	NO NET LOSS STATEMENT	1

APPENDICIES

Appendix A: Cumulative Impact Analysis Figures

Appendix B: No Net Loss Statement

1 INTRODUCTION

1.1 SHORELINE MANAGEMENT ACT

Washington State's Shoreline Management Act was passed by the State Legislature in 1971 and adopted by voters in 1972. The legislative purpose and overarching goal for passing this Act is identified in RCW 90.58.020:

“The legislature finds that the shorelines of the state are among the most valuable and fragile of its natural resources and that there is great concern throughout the state relating to their utilization, protection, restoration, and preservation. In addition it finds that ever increasing pressures of additional uses are being placed on the shorelines necessitating increased coordination in the management and development of the shorelines of the state. The legislature further finds that much of the shorelines of the state and the uplands adjacent thereto are in private ownership; that unrestricted construction on the privately owned or publicly owned shorelines of the state is not in the best public interest; and therefore, coordinated planning is necessary in order to protect the public interest associated with the shorelines of the state while, at the same time, recognizing and protecting private property rights consistent with the public interest. There is, therefore, a clear and urgent demand for a planned, rational, and concerted effort, jointly performed by federal, state, and local governments, to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines.”

In order to facilitate the overarching goals of the Act, the legislature tasked the Department of Ecology with developing regulatory guidelines to assist local governments with the implementation of the Act. These guidelines, WAC 173-26, provide state standards which local governments must use in drafting shoreline master programs and updates and translate the broad policies of the Act into standards for regulation of shoreline uses.

1.2 SHORELINE MASTER PROGRAM UPDATE PROCESS

The Shoreline Master Program Update Process, as identified within WAC 173-26 and guided by the Department of Ecology, is divided into six phases. These phases are designed to assist the jurisdiction through the update process requirements as defined by the Revised Code of Washington (RCW) 90.58 and supplemented by the Washington Administrative Code (WAC) 173-26 and 173-27. These phases, including data on where the City of Fife is within the update process, are summarized as follows¹:

- Phase 1:** Identify Preliminary Shoreline Jurisdiction and Create a Public Participation Plan (Completed on March 1, 2010)
- Phase 2:** Conduct a Shoreline Inventory, Analysis and Characterization (Completed October 15, 2010)

¹ Timelines for the in-process Phases have been modified as a result of on-going efforts to generate a Shoreline Master Program in adherence with the Shoreline Management Act and guidelines and best suited to the shorelines of with the City of Fife

- Phase 3:** Create Environment Designations, Policy and Regulation Development, Cumulative Impacts Analysis
(In Process, Initial Draft completed June 15, 2011, Secondary Draft completed September 21, 2011, and Tertiary Draft completed February 21, 2012)
- Phase 4:** Create Restoration Plan, Revisit Phase 3 products
(To be completed May 19, 2012)
- Phase 5:** Local Approval
(To be completed August 31, 2012)
- Phase 6:** State Approval

More information about the specific update Phases is available on the Washington State Department of Ecology website.²

The City of Fife is currently within Phase 4 of the Shoreline Update process. This document has been generated to address the Cumulative Impact Analysis requirement.

1.3 PURPOSE OF THE CUMULATIVE IMPACT ANALYSIS

The purpose of the cumulative impact analysis (CIA), as described by WAC 173-26-186(8)(d), is to

“[E]valuate and consider cumulative impacts of reasonably foreseeable future development on shoreline ecological functions fostered by the policy goals of the act. To ensure no net loss of ecological functions and protection of other shoreline functions and/or uses, master programs shall contain policies, programs, and regulations that address adverse cumulative impacts among development opportunities”.

To summarize, the overarching purpose of the CIA is to demonstrate that the policies and regulations developed during the Shoreline Master Program (SMP) update process will fully address cumulative impacts related to development and use within the shoreline and, as a result, will achieve no net loss of shoreline function over time. Similar to the Inventory and Characterization documents generated during earlier phases of the SMP update process, the CIA is intended to be a supporting document.

1.4 WHAT ARE CUMULATIVE IMPACTS?

Unfortunately, neither the Shoreline Management Act (RCW 90.58) nor the Shoreline Master Program Guidelines (WAC 173-26) provides a specific definition for the term *cumulative impacts*. However, the SMP handbook, provided by the Department of Ecology to guide jurisdictions through the update process, contains a whole chapter dedicated to the drafting of CIA documents. This chapter identifies two definitions from federal and state regulations related to term of cumulative impact and its analysis.

² This Washington State Department of Ecology Website that provides information on the Phases of the Shoreline Master Program update can be found at: <http://www.ecy.wa.gov/programs/sea/shorelines/smp/toolbox.html>.

The first definition is taken from the National Environmental Policy Act (Sec 1508.7) which defines cumulative impacts as follows:

“[Cumulative Impacts are] the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time”.

The second definition is taken from the Washington State of Ecology (DOE) State Environmental Policy Act (SEPA) Online Handbook (Chapter 3.3.3)³, which states that review of cumulative impacts should address:

“[Cumulative Impacts show] how the impacts of the proposal will contribute towards the total impact of development in the region over time. Example – Increased runoff and contaminants from the development would be added to the volumes and levels of contamination from similar developments surrounding the wetland (resulting in cumulative impacts)”.

1.5 KEY ASPECTS OF THE CUMULATIVE IMPACT ANALYSIS

The SMP handbook encourages jurisdictions to utilize the CIA process as a means to consider the existing landscape, contemplate future development and define actions that need to be taken to avoid future impacts to shoreline function, including development and use regulations. A complete evaluation of the cumulative impacts document should identify the following⁴:

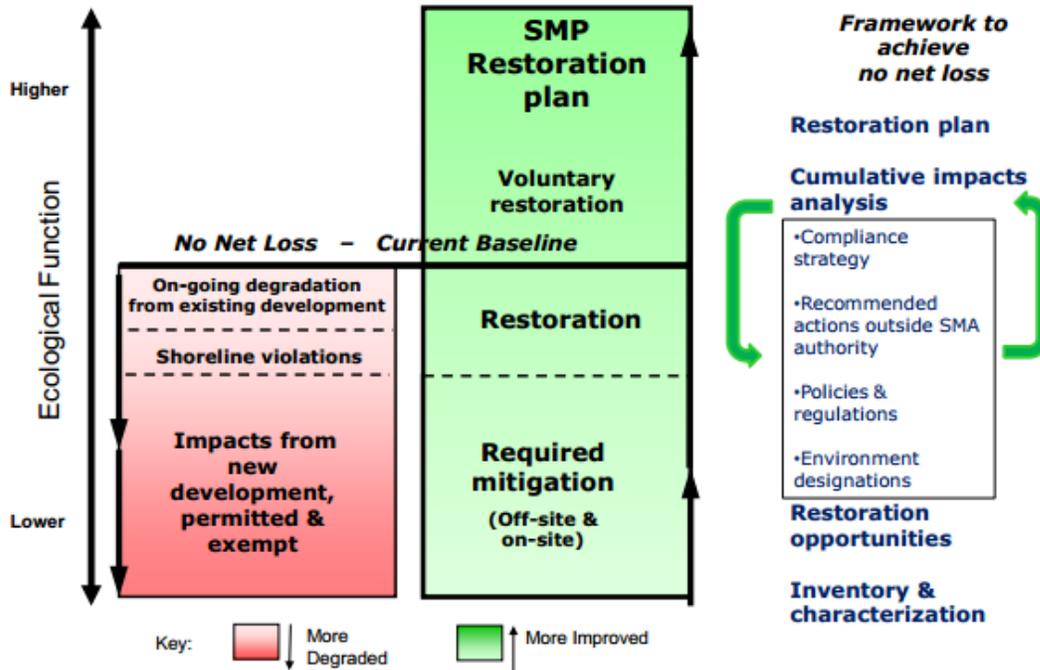
- existing shoreline conditions affecting the shorelines and relevant natural process, usually summarized from the inventory and characterization documents generated during Phase 2 of the update process
- reasonably foreseeable future development and use of the shoreline, and
- the beneficial effect, including but not limited to restoration or public access, of any established regulatory programs under other local state and federal laws.

The overarching goal is to avoid cumulative impacts through appropriate shoreline designations and use standards and to use cumulative impacts analysis as part of the framework of achieving no net loss, as shown in the figure below:

³ This language can be obtained on-line at <http://www.ecy.wa.gov/programs/sea/sepa/handbk/hbch03.html>.

⁴ The items contained within this bulleted list are summarized from WAC 173-26-186(8)(d)(i-iii) and the Cumulative Impact Analysis guidance provided by Ecology.

SMP updates: Achieving no net loss of ecological function



1.6 METHODOLOGY AND DOCUMENT ORGANIZATION⁵

The approach utilized to generate the CIA as described below has been designed to address the requirements outlined in WAC 173-26-186(8)(d) and Ecology's draft SMP Handbook Chapter 17 *Cumulative Impacts Analysis* and Chapter 4 *No Net Loss of Shoreline Ecological Functions* (Ecology 2010).

In preparing to generate this document, multiple sources of information were reviewed, including the following data resources:

- ◆ City of Fife Shoreline Inventory and Characterization (2010)
- ◆ Shoreline Use Analysis, with a projection of reasonably foreseeable future development generated utilizing GIS data resources and City staff knowledge
- ◆ Draft SMP with environmental designations, policies and regulations

A full listing of the data resources utilized for this CIA is provided within Chapter 8 of this document.

This Cumulative Impacts Analysis document is organized in a matrix-based framework designed to build upon analyses in the Inventory and Characterization document. Chapter 2 provides a

⁵ Although shoreline impacts from areas outside of the shoreline jurisdiction do occur (i.e., water quality impacts from stormwater flows), analysis of upland impacts is not a requirement of this document (DOE SMP Handbook).

summary of general shoreline functions identified in the characterization document for both the Puyallup River and Hylebos Creek shorelines and their associated reaches. Chapter 3 provides a matrix of reasonably foreseeable future development and anticipated impacts by reach. Chapter 4 describes the shoreline environmental designations, the designation criteria, and identifies the environment designation assigned to each reach. Chapter 5 describes general shoreline management policies and regulations that are applicable to all shoreline environment designations within the City.

The Cumulative Impacts Analysis per reach is provided in a matrix format within Chapter 6. This matrix summarizes the existing land use as described in Chapter 2 as well as the reasonably foreseeable future development and the impacts to shoreline function that may occur as described in Chapter 3. This matrix contains additional columns that address how the proposed Shoreline Master Program regulations and other beneficial restoration actions⁶ may offset these impacts within the reach. The final column of this matrix makes a qualitative determination as to whether there is impact to shoreline function, no net loss to shoreline function, or improvement to shoreline function that will occur as a result of the reasonably foreseeable future development and the SMP provisions and beneficial restoration projects.

Chapter 7 describes how the City plans to address incremental and unanticipated impacts. Chapter 8 provides a summary of the resultant net impact to ecological function within the City as a result of the draft shoreline master program regulations.

⁶ The beneficial restoration described in this matrix builds upon the possible restoration elements identified in the Inventory and Characterization document and will be described in greater detail in the draft Restoration Plan which will be made available during Phase 4 of the update process.

2 EXISTING CONDITIONS SUMMARY

The shoreline jurisdiction within the City of Fife includes two separate riverine systems, the Puyallup River and Hylebos Creek. The existing conditions within the City of these two systems were initially described in the Shoreline Master Program Update: Inventory and Characterization document (I/C document) dated September 2010 (Grette Associates). That document included descriptions of the shoreline jurisdiction, the ecosystem context and watershed processes that serve to define the shoreline function within the City. The I/C document also provided reach specific analysis including data on current land use and shoreline function including hydrologic, vegetative and habitat function. A summary of the findings of that document, divided by riverine system, is provided in the remainder of this Chapter.

Puyallup River

The lower extent of the Puyallup River channel, including the portion of the river within the City, has been historically modified to reduce flooding impacts and allow development along the river. Modifications to the river primarily include levees, dikes and revetments. Within the City, a levee extends along the bank of the extent of the river. These modifications have resulted in the straightening and hardening of the channel and have subsequently reduced shoreline function, including hydrologic, vegetation, and habitat functions. For example, historic records of the Puyallup River indicate that the lower mainstem of the river was coniferous riparian habitat with associated side and off channel habitat. During the construction of the levee, the coniferous riparian habitat was removed and the majority of connectivity to side and off channel habitat was also disturbed. Continued maintenance of the levees often eliminates adjacent vegetation and eliminates sources of LWD. It is currently estimated that only 5% of the mainstem of the Puyallup contains high quality habitat (Kerwin 1999). During the inventory and characterization process, no designated high quality habitat areas were identified directly adjacent to the OHWM of the Puyallup River within the City.

Within the City of Fife, the Puyallup River shoreline jurisdiction was divided into three separate reaches. These reaches are described in the table as follows:

Table 1: City of Fife Puyallup River Shoreline Jurisdiction Reach Summary

Reach	Land Use Types ¹	Shoreline Function			Qualitative Summary Function Score ¹
		Hydrologic	Vegetation	Habitat	
P1	Total Acreage – 206.76 Commercial/Service – 9.36 acres (4.52%) Open Space/Recreation – 0.06 acres (0.03%) Resource Land – 34.62 acres (16.74%) Single Family Residential – 20.34 acres (9.84%) Vacant – 136.68 acres (66.11 %) Water Body – 5.70 acres (2.76 %)	Low: This reach contains high amounts of channel modification, including the levee that extends along the entire length of the reach, as well as the impaired water quality evidenced by the 303(d) listings.	Low: This reach contains high amounts of alteration to the vegetation as well as the potential for future alteration.	Low: This reach has a minimal amount of mapped habitat. Existing shoreline habitat coincides with the levee and is subject to disturbance.	Low
P2	Total Acreage – 138.61 Open Space/Recreation – 25.27 acres (18.23 %) Resource – 42.14 acres (30.40%) Vacant – 60.17 acres (43.41%) Single Family Residential – 7.87 acres (5.68%) Transportation, Communication, Utility – 3.16 acres (2.28%)	Medium-High: This reach provides high levels of stormwater storage capacity for the City	Medium-High: This reach contains two protected wetlands. Each wetland is primarily emergent but also contains forested areas. Both wetlands contain Tribal Land.	Medium – High: Both wetlands within this reach have been mapped as containing Priority Habitat.	Medium-high

Reach	Land Use Types ¹	Shoreline Function			Qualitative Summary Function Score ¹
		Hydrologic	Vegetation	Habitat	
P3	Total Acreage- 116.87 Commercial/Service – 1.6 acres (1.37%) Industrial – 16.39 acres (14.02%) Open Space/Recreation – 0.38 acres (0.34%) Resource Land – 52.44 acres (44.87%) Single-Family Residential – 22.19 Acres (23.93%) Vacant – 13.94 acres (11.93%) Mobile Home Park – 8.20 Acres (7.01%)	Low: This reach contains high amounts of channel modification, including the levee that extends along the entire length of the reach, as well as the impaired water quality evidenced by the 303(d) listings.	Low: This reach contains high amounts of alteration to the vegetation as well as the potential for future alteration.	Low: This reach has a minimal amount of mapped habitat. Existing shoreline habitat coincides with the levee and is subject to disturbance.	Low

¹ Data derived from Pierce County and City of Fife GIS data. Percentages may not equal 100% due to rounding.

Hylebos Creek

Similar to the lower extent of the Puyallup River, the Hylebos Creek has been altered, including channelization of the creek, residential development, and the modification and filling of adjacent wetlands. Historically, Hylebos Creek is thought to have been one of the most productive small stream systems in southern Puget Sound. However, Hylebos Creek is currently characterized as “one of the most heavily urbanized subbasins in the State” (Kerwin 1999). Due to the altered state of the creek, salmonid production is greatly reduced.

Within the City, most of the land along Hylebos Creek is developed for single family residential use or is vacant, undeveloped land. A small area on the south side of Pacific Highway within the shoreline jurisdiction is designated for high-density residential and commercial uses. The Hylebos creek system also contains two habitat areas, the Milgard and Hylebos Estuary.

The shoreline jurisdiction associated with Hylebos Creek within the City is also divided into three reaches. These reaches are summarized as follows:

Table 2: City of Fife Hylebos Creek Shoreline Jurisdiction Reach Summary

Reach	Land Use Types ¹	Shoreline Function			Qualitative Summary Function Score ¹
		Hydrologic	Vegetation	Habitat	
H1	<p>Total Acreage – 23.31</p> <p>Multi-Family Residential – 1.34 acres (5.76%)</p> <p>Residential Outbuildings – 0.22 acres (0.92%)</p> <p>Single Family Residential – 19.97 acres (88.58%)</p> <p>Vacant – 1.10 acres (4.73%)</p> <p>Mobile Home Park – 0.39 Acres (1.65%)</p>	<p>Medium: Shoreline vegetation within this reach has been modified, which often leads to modification of the hydrologic process. Shoreline also contains an undetermined amount of shoreline armoring.</p>	<p>Medium-low: Vegetation on both the right and left banks within this reach are modified as a result of residential development.</p>	<p>Medium-high: This segment contains a number of critical areas. However, existing impacts to hydrology and vegetation prevent a rating of “high”.</p>	Medium
H2	<p>Total Acreage – 30.36</p> <p>Mobile Homes – 1.37 acres (4.51%)</p> <p>Open Space – 24.33 acres (80.15 %)</p> <p>Single Family Residential – 0.38 acres (1.25 %)</p> <p>Transportation, Communication, Utility – 4.28 acres (14.10 %)</p>	<p>Medium-High: Segment has relatively intact vegetation and low amounts of impervious surfaces, based upon visual estimation of aerial photographs. Shoreline also contains an undetermined amount of shoreline armoring.</p>	<p>Medium-High: Shoreline vegetation within this reach is relatively intact, when compared to adjacent segments. Segment contains two restoration projects (Milgard and Hylebos Estuary Nature Areas)</p>	<p>Medium-High: This segment contains a number of critical areas. However, existing impacts to hydrology and vegetation prevent a rating of “high”.</p>	Medium-High

H3	<p>Total Acreage -2.03 Single Family Residential – 2.03 acres (100.00%)</p> <p><i>Note: The urban growth area associated with this reach is primarily commercial land use.</i></p>	<p>Medium-Low: Review of aerial photographs indicates that portions of the segment have been channelized. Shoreline also contains an undetermined amount of shoreline armoring.</p>	<p>Medium-Low: The majority of the vegetation within this reach has been disturbed by both residential and commercial development. However, review of aerial photography indicates that central portions of the left bank do contain tree canopy that extends over the Hylebos.</p>	<p>Medium-Low: This segment contains a number of critical areas. However, impacts to hydrology and vegetation function prevent higher habitat functionality.</p>	<p>Medium-Low</p>
----	--	---	---	--	--------------------------

¹ Data derived from Pierce County and City of Fife GIS data. Percentages may not equal 100% due to rounding.

3 REASONABLY FORSEEABLE FUTURE DEVELOPMENT AND ANTICIPATED IMPACT TO EXISTING SHORELINE FUNCTION

The following table identifies reasonably foreseeable future development within the City of Fife by reach. The foreseeable future land use has been determined based upon existing vacant parcels, current and future zoning designations, and current land use development patterns which are based upon existing staff knowledge and general development statistics within the City. The reasonably foreseeable future development listed below is also based upon the assumption that development of all vacant parcels within the shoreline jurisdiction is equally likely and that full build out is likely to occur in the future. The anticipated impact to existing shoreline function column identifies the impact to shoreline function that is likely to occur as a result of the future development if no shoreline function protection measures, including Shoreline Master Program policies and regulations, were in place.

Table 3: Reasonably Foreseeable Future Development and Anticipated Impact to Existing Shoreline Function by Reach

Reach	Shoreline Environment Designation	Reasonably Foreseeable future Development.	Anticipated Impact to Shoreline Function
Puyallup River			
P1	Levee	<p>Future land may include the development of the currently undeveloped parcels. The majority of the undeveloped parcels are primarily located in areas zoned for Industrial use. However smaller, undeveloped parcels exist within this reach and are zoned for Community Commercial and Neighborhood Residential uses.</p> <p>Future development is also likely to include improvements/modifications to the levee system adjacent to the Puyallup River, such as a setback of the existing levee. Levee improvements are likely to move development further away from the shoreline.</p>	<p>Future land use may impact shoreline function by increasing impervious surface (hydrologic function) but is unlikely to affect vegetation directly adjacent to the shoreline as all parcels are separated from the shoreline by Levee Road.</p> <p>In addition, although levee improvement/modification projects may initially impact shoreline habitat, these projects are likely to have a long term positive effect on flood function and shoreline habitat.</p>
P2	Conservancy	Future development of	Shoreline function is expected to

Reach	Shoreline Environment Designation	Reasonably Forseeable future Development.	Anticipated Impact to Shoreline Function
		<p>these parcels is unlikely as both the Sha-Dadx and Oxbow wetland areas serve as either restoration or open space.</p> <p><i>Note: The Sha-Dadx wetland and the hydrologic connection between the Oxbow wetland and the Puyallup River are under the jurisdiction of the Puyallup Tribe.</i></p>	remain similar to current shoreline function.
P3	Levee	<p>Future land use is likely to include development of undeveloped parcels as well as increased development and/or redevelopment of parcels with existing development. Zoning within this reach includes Neighborhood Residential, Medium density residential, Industrial, Community Commercial, and Single Family Residential. Future development may also include improvements to the levee system adjacent to the Puyallup River.</p>	Shoreline functionality in this segment is impacted; it is unlikely that future development will result in additional impact to shoreline function beyond the current condition.
Hylebos River			
H1	Shoreline Residential	<p>Future land use is likely to include the redevelopment of existing residential parcels to include neighborhood commercial land use.</p>	<p>Redevelopment is unlikely to have an impact on existing shoreline function. However, subdivision and new development may result in an increase of impervious surface and a subsequent decrease in hydrologic function. In addition, new residential development</p>

Reach	Shoreline Environment Designation	Reasonably Forseeable future Development.	Anticipated Impact to Shoreline Function
			may impact existing vegetative function.
H2	Conservancy	Future land use within the existing City boundaries is likely to be limited to restoration activities within the Milgard Nature Area and the Hylebos Estuary Nature area. Future land use within the Urban Growth Area is likely to include redevelopment and new development of single-family residential use.	<p>Within the existing boundaries of the City, shoreline function is expected to remain similar to current shoreline function.</p> <p>Within the Urban Growth Area, increase residential development may result in impact shoreline function by increasing impervious surface (hydrologic function) as well as removal of shoreline vegetation associated with development (vegetation function and habitat function).</p>
H3	Urban	<p>No undeveloped land exists within the current shoreline jurisdiction within city boundaries.</p> <p>However, annexations of areas within this reach may occur. Future land use in the areas likely to be annexed may include increased residential development, reconfiguration of State Route 167 extension and the development and redevelopment of commercial uses.</p>	<p>Within the existing boundaries of the City, shoreline function is expected to remain similar to current shoreline function.</p> <p>If annexations occur, Shoreline function in the area to be annexed is generally extremely impacted and part of an urban area. As such, future shoreline function is expected to remain similar to current shoreline function.</p>

4 ENVIRONMENTAL DESIGNATIONS

Shoreline environment designations are used to classify the shoreline areas. Pursuant to the SMP update guidance, shoreline environment designations should correspond to local shoreline conditions, including ecological functions and shoreline development and provide “the framework for implementing shoreline policies and regulatory measures specific to the environment designation” (WAC 173-26-191(1)(d)). Environmental designations are also one of the primary methods utilized to avoid cumulative impacts, to offset the impact of future development, and to ensure no-net-loss is to provide the most accurate environmental designation for a reach based upon existing shoreline function and land use criteria.

Shoreline Environmental Designations selected for the City of Fife are as follows:

(Remainder of page intentionally left blank. Please refer to the Table 4 on the following page)

Table 4: Environmental Designations within the City of Fife ⁷

Designation	Description	Designation Criteria	Reach
Conservancy	<p>The Conservancy Shoreline Environment consists of areas that have been modified from their natural state, but have retained significant ecological functions.</p> <p>The Conservancy Shoreline Environment objectives [SMP (6) E (1)] are as follows:</p> <ul style="list-style-type: none"> • Protect ecological functions of open space and sensitive lands; • Preserve and protect cultural and historical resources; • Allow low-intensity recreational uses that are designed and constructed in a manner that respects the limiting environmental condition and does not degrade or deplete resources; • Prohibit uses that would compromise the integrity of the shoreline to maintain the ecological functions; • Protect those shoreline areas that possess unique or fragile features which are relatively free of human influence or that include intact or minimally degraded shoreline functions; • Encourage restoration activities. <p>In order to protect existing habitat, industrial and commercial development is prohibited in this</p>	<p>The Conservancy environment is applied to shoreline areas that have been modified from their natural state, but have retained significant ecological functions. These lands often have historic or culturally significant resources that require preservation respectful of the modified natural environment. If, due to annexation, any new shoreline areas become part of the City they will automatically be designated as Conservancy until the property undergoes the appropriate planning process.</p> <p>[SMP (6) E (2)]</p>	<p>Reach P2 was designated Conservancy due to the relatively intact and/or improved functionality of the Sha-Dadx and Oxbow wetlands.</p> <p>Reach H2 was designated Conservancy due to the improved functionality associated with the Milgard and Hylebos Habitat areas. In addition, the Conservancy designation within the Urban Growth Area corresponds to the designation assigned to this area by Pierce County.</p>

⁷ Draft Shoreline Master Program text cited within this document, i.e. objectives, policies, and/or regulations, is followed by a reference in brackets to the specific section of the SMP.

Designation	Description	Designation Criteria	Reach
	designation. Refer to the Shoreline Use Matrix Provided below.		
Shoreline Residential	<p>The purpose of the Shoreline Residential Environment [SMP (6) F (1)] is to meet the following objectives:</p> <ul style="list-style-type: none"> • Accommodate residential development and recreational development and structures; • Minimize the impacts of residential development on the shoreline ecology; and • Provide appropriate public access and recreational uses. • Restore ecological functions as a condition of project approval in areas that have been previously degraded. <p>In compliance with zoning regulations as well as the request of Fife citizens that participated in the SMP visioning process, industrial development is prohibited in this designation. Refer to the Shoreline Use Matrix Provided below.</p>	<p>The Shoreline Residential Environment is applied to shoreline areas that are characterized with a pattern of predominantly single-family or multi-family residential development or are planned and platted for residential uses. These areas contain the following characteristics: The shoreline contains or is proposed for residential development; and The shoreline does not contain significant environmental hazards or sensitive areas.</p> <p>[SMP (6) F (2)]</p>	<p>The primary land use of the parcels within reach H1 and the east bank of reach H3 are residential.</p>
Urban	<p>The purpose of the Urban Environment is to accommodate high intensity commercial, industrial, and residential land uses and provide protection and restoration of ecological functions.</p> <p>The Urban Shoreline Environment Designation objectives [SMP (6) G (1)] are as follows:</p>	<p>The Urban Shoreline Environment Designation is applied to shorelines that exhibit the following characteristics: Areas that can support high-intensity uses without</p>	<p>The west bank of H3 currently supports Urban land uses, including commercial use, and has an existing low shoreline function.</p>

Designation	Description	Designation Criteria	Reach
	<ul style="list-style-type: none"> • Due to the position of the Urban shoreline designation along un-navigable waters of Hylebos Creek, the City of Fife is precluded from having water dependent uses within this designation. As such, the City uses this program to promote water enjoyment uses where feasible, but also allows for non-water related uses within it shoreline designations to provide for development as required within the Growth Management Act. • Ensure optimum use of shorelines that are either presently urbanized or planned for urbanization; • Manage the shore land environment for a variety of urban uses; • Assure compatibility between upland and aquatic uses by requiring sensitive site design for the upland-aquatic interface; • Provide visual and physical public access to shoreline areas; • Ensure that uses and activities permitted in areas adjacent to the Urban Shoreline Environment designation will not compromise the existing integrity of the shoreline. • Prevent degradation of existing ecological functions; and • Restore ecological functions as a condition of project approval in areas that have been previously degraded. <p>In compliance with zoning regulations, new agricultural use is prohibited in this designation. Refer to the Shoreline Use Matrix Provided below.</p>	<p>degradation to existing shoreline function; Shorelines used or designated by zoning for high intensity commercial, industrial, or multi-family development; and Shorelines that have few biophysical limitations to development, such as floodplains, steep slopes, or landslide hazard areas.</p> <p>[SMP (6) G (2)]</p>	

Designation	Description	Designation Criteria	Reach
Levee	<p>The purpose of the Levee Environment is to ensure the continued existence of the levee structure along the Puyallup River for its important flood management principles and to allow for a mixture of residential, commercial, and industrial uses.</p> <p>The Levee Shoreline Environment Designation objectives [SMP (6) H (1)] are as follows:</p> <ul style="list-style-type: none"> • Ensure that the levee is protected and maintained; • Minimize the potential for downstream properties to be flooded; • The majority of the parcels within the Levee shoreline designation are separated from direct access to the Puyallup River by the Levee. This positioning within the landscape precludes these parcels from having water dependent uses within this designation. As such, the City uses this Program to promote water enjoyment uses where feasible, but also allows for non-water related uses within it shoreline designations to provide for development as required within the Growth Management Act. • Allow a mix of residential, commercial, and industrial uses; • Ensure that uses and activities permitted in areas adjacent to the Levee Environment designation are compatible; • Prevent degradation of existing ecological functions; and 	<p>The Levee Environment is applied to those shorelines along the Puyallup River.</p> <p>[SMP (6) H (2)]</p>	<p>P1 and P3 are adjacent to the Puyallup River and are designated Levee.</p>

Designation	Description	Designation Criteria	Reach
	<ul style="list-style-type: none"> Restore ecological functions as a condition of project approval in areas that have been previously degraded. 		
Aquatic	<p>The purpose of the Aquatic Environment is to manage, maintain, protect and enhance the characteristics of the areas waterward of the ordinary high-water mark. [SMP (6) I (1)]</p> <p>In order to protect existing aquatic functions, most uses are either prohibited or require a conditional use permit. Refer to the Shoreline Use Matrix Provided below.</p>	<p>The Aquatic Designation is applied to shoreline areas within the City of Fife Jurisdiction that lie waterward of the ordinary high-water mark (OHWM). [SMP (6) I (2)]</p>	<p>This designation applies to all reaches of the Hylebos Creek waterward of the Ordinary High Water Mark (OHWM). Waterward of the Puyallup River is under the jurisdiction of the Puyallup Tribe.</p>

Table 5: Shoreline Use Matrix (This table is Chapter 8 of the SMP)

Land Uses	Environmental Designations				
	Conservancy	Shoreline Residential	Urban	Levee	Aquatic
Agriculture	P	P	X	P	X
Aquaculture	C	C	C	C	C
Boating Facilities	P	P	X	P	P
Clearing and Grading	P	P	P	P	X
Commercial Development	X	C	P	P	X
Dredging	X	X	X	X	C
Forest Practices	N/A	N/A	N/A	N/A	N/A
Industrial development	X	X	P	P	X
In-stream structures	N/A	N/A	N/A	N/A	C
Fill	C	C	C	C	C
Marinas, Docks	X	X	X	X	X
Mining	X	X	X	X	X
Parking	X	C	P	P	X
Public Access	P	P	P	P	P
Restoration Activity	P	P	P	P	P
Recreational Development	P	P	P	P	P
Residential	P	P	P	P	X
Shoreline Modifications	C	C	C	C	C
Signs	X	X	P	P	X
Transportation	C	P	P	P	P
Utilities	P	P	P	P	P
Scientific, historical, cultural and educational research activities	P	P	P	P	P
Structural Flood Hazard Reduction measures (Dikes and levees)	C	X	X	C	X
Unclassified Uses	C	C	C	C	C

P – Permitted, may require Shoreline Exemption Review or Shoreline Substantial Development Permit
 C – Conditional Use
 X – Prohibited
 N/A – Not Applicable

5 GENERAL SHORELINE MANAGEMENT POLICIES AND REGULATIONS

General shoreline management policies are applicable to all shoreline areas, without regard to environmental designation. These policies protect existing shoreline function throughout the shoreline jurisdiction.

5.1 CRITICAL AREAS

Critical areas within the shoreline jurisdiction will be protected to the same standards provided in the existing Environmental Protection code FMC Title 17, with the exception of Title 17.17 which is updated in the SMP to comply with the SMA and associated guidelines. These regulations are incorporated into the SMP as an appendix. Existing critical area regulations were utilized to ensure consistent protection of critical areas throughout the City.

The City's critical areas regulations are designed to protect areas within the city identified as critical areas from the adverse impacts of development and incompatible land use through the use of clear and reasonable land use regulations and criteria based on best available science. Critical areas within the City include:

- Wetlands
- Critical aquifer recharge areas
- Fish and wildlife habitat conservation areas
- Frequently flooded areas
- Geologically hazardous areas
- Seismic hazard areas

5.2 FLOOD HAZARDS

The shoreline within the City may be subject to flooding during storm events. The extent of this flooding depends upon the size of the event. The City of Fife is currently working with the United States Geological Service (USGS) and adjacent jurisdictions, including Pierce County regarding several matters related to flood hazard and flood protection. One of these efforts includes revisions to the existing boundaries of the flood plain. These revisions are currently in process and are unlikely to be adopted prior to the adoption of this SMP update. As such, flood hazards within the shoreline jurisdiction will be reduced by requiring all development to comply with the existing Flood Damage Prevention Ordinance, Fife Municipal Code, Title 15.40. Existing flood regulations were utilized to ensure consistent flood management throughout the City.

In general, the City's flood hazard regulations are designed to promote public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas. This is accomplished by restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities; requiring that uses vulnerable to floods be protected against flood damage at the time of initial construction; controlling the alteration of natural

floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters; and controlling filling, grading, dredging, and other development which may increase flood damage. All development permitted under flood hazard standards must be designed to a zero-rise standard (e.g. shall not result in an increase to flood hazards, water velocities or flood elevations).

5.3 SHORELINE VEGETATION CONSERVATION

The shoreline within Fife has historically been heavily developed so that very little native vegetation remains adjacent to the Puyallup River and Hylebos Creek. In addition, the vegetation adjacent to the Puyallup River is subject to removal for levee maintenance and to prevent flooding.

In order to protect the remaining vegetation within the shoreline jurisdiction, excluding those activities necessary for levee maintenance, the draft Shoreline Master Program includes development regulations which require preservation of native vegetation including trees to the greatest extent possible. Policies include the prohibition of speculative clearing (SMP 7 (E) 2 (a) and SMP 7 (E) 3 (a)), limitations to alterations of the natural landscape (SMP 7 (E) 2 (b)), and general restrictions to clearing and grading to maintain shoreline function (SMP 7 (E) 2 (c)). Regulations include requirements that construction include appropriate erosion and sediment controls and maintain the required shoreline setback (SMP 7 (E) 3 (b)). Invasive species may be removed from the shoreline setback by hand and replanted with native species to prevent erosion (SMP 7 (E) 3 (c)).

5.4 SHORELINE MODIFICATIONS

As noted in Chapter 2 of this document and detailed extensively in the Inventory and Characterization, the shoreline within the City of Fife has been subjected to fairly extensive shoreline modification. Shoreline modifications include the following: clearing and grading, dredging and dredge material disposal, fill, and shoreline stabilizations. Each of these items is discussed under its own heading in the remaining text. Shoreline modifications also commonly include Structural Flood Hazard Reduction Measures (Dikes and Levees). However, due to the importance of the Puyallup River Levee within the City this Shoreline Modification is described in its own section.

Clearing and Grading

Clearing and grading includes the activities associated with developing any kind of residential, agricultural, commercial, or industrial project. Clearing involves the removal of vegetation and /or topsoil, while grading means the movement or redistribution of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land. SMP policies limit clearing and grading to those activities done in concert with permitted shoreline development (SMP 7 (G) 1 (b) 1), limit clearing and grading activities to only the extent necessary to accomplish the scope of work (SMP 7 (G) 1 (b) 2), and require utilization of best management practices to ensure consistency with the City's surface water management manual and critical areas ordinance (SMP 7 (G) 1 (b) 3).

Clearing and grading regulations support the aforementioned policies by requiring clearing and grading to be minimized (SMP 7 (G) 1 (c) 3) and requiring control of surface and stormwater runoff (SMP 7 (G) 1 (c) 6). In addition, the clearing and grading regulations allow for hand clearing of invasive species (SMP 7 (G) 1 (c) 5) and the normal maintenance of vegetation, excluding tree topping (SMP 7 (G) 1 (c) 4).

Dredging and Dredge Material Disposal

Dredging is described as the scooping or suction activity to remove materials from the bottom of waterways for the purpose of deepening the waterbody or harbor. SMP policies support dredging as part of ecological restoration or enhancement, beach nourishment, public access, or flood storage if it is consistent with the regulations of the SMP (SMP 7 (G) 2 (b) 3) but does not allow for dredging waterward of the Ordinary High water mark strictly for the purposes of obtaining fill (SMP 7 (G) 2 (b) 2). Also, dredging and disposal of dredge materials shall minimize or avoid ecological impacts (SMP 7 (G) 2 (b) 1).

Associated dredge and dredge disposal regulations require dredging and disposal of dredge material disposal to be done in a manner which avoids or minimizes significant ecological impacts and impacts which cannot be avoided should be mitigated in a manner that assures no net loss of shoreline ecological functions (SMP 7 (G) 2 (c) 1). Regulations also require that new developments shall be sited to avoid the need for new and maintenance dredging (SMP 7 (G) 2 (c) 2).

Fill

"Fill" means the addition of soil, sand, rock, gravel, sediment, earth retaining structure, or other material to an area waterward of the OHWM, in wetlands, or on shorelands in a manner that raises the elevation or creates dry land (SMP 4). A conditional use permit is required for all fill proposals (SMP 7 (G) 3 (c) 3). Fills must be the minimum necessary to accomplish the proposed use (SMP 7 (G) 3 (c) 5) and prior to filling must demonstrate that it will not result in net loss to water quality or wildlife habitat, alter natural drainage or significantly reduce flood water capacities, or adversely interfere with shoreline geological processes (SMP 7 (G) 3 (c) 2).

Shoreline Stabilization

Shoreline stabilization includes structural and non-structural measures, such as revetments and rip-rap used to minimize erosion and/or residential flooding. New stabilization measures include enlargements to existing stabilization structures. However, this section does not address structural modifications associated with the levee along the Puyallup River which are addressed under SMP Section 7 (H) Structural Flood Hazard Reduction Measures (Dikes and Levees) and described in Chapter 5.5 of this document.

The SMP shoreline stabilization policies reflect a preference for soft-bank over hard-bank shoreline modification (SMP 7 (G) 4 (b) 2). New development should be located and designed to avoid the need for future shoreline stabilization to the extent feasible (SMP 7 (G) 4 (b) 5 and 6). In addition, shoreline modification requests shall include information on the impacts that such modifications would have on the

likely migration of the stream channel (SMP 7 (G) 4 (b) 1).

The shoreline stabilization regulations generally prohibit the development of structures that require new shoreline stabilization (SMP 7 (G) 4 (c) 4). Exceptions include new stabilization necessary for water dependent uses and to protect existing structures (SMP 7 (G) 4 (c) 4 (a, b, and c). However, new stabilization is only permitted in instances where the following circumstances are met:

- The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage.
- Nonstructural measures, such as placing the development further from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.
- The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report. The damage must be caused by natural processes.
- The erosion control structure will not result in a net loss of shoreline ecological functions.

Existing shoreline stabilization structures may be replaced with a similar structure if there is a demonstrated need to protect principal uses or structures from erosion caused by natural conditions.

- The replacement structure should be designed, located, sized, and constructed to assure no net loss of ecological functions.
- Replacement walls or bulkheads shall not encroach waterward of the ordinary high-water mark or existing structure unless the residence was occupied prior to January 1, 1992, and there are overriding safety issues or environmental concerns. In such cases, the replacement structure shall abut the existing shoreline stabilization structure.
- Soft shoreline stabilization measures that provide restoration of shoreline ecological functions may be permitted waterward of the ordinary high-water mark.
- For purposes of this section standards on shoreline stabilization measures, "replacement" means the construction of a new structure to perform a shoreline stabilization function of an existing structure which can no longer adequately serve its purpose. Additions to or increases in size of existing shoreline stabilization measures shall be considered new structures.

All shoreline modifications, including shoreline stabilization, may only occur after the granting of a conditional use permit (SMP 7 (G) 4 (c) 1).

5.5 STRUCTURAL FLOOD HAZARD REDUCTION MEASURES (DIKES AND LEVEES)

The purpose of structural flood hazard reduction measures are to provide structural stabilization to the shoreline, such as levees or dikes, specifically utilized to address flooding within and adjacent to the Levee shoreline designation within the City of Fife. Ultimately, the City shall manage flood protection through Comprehensive Planning, stormwater and flood hazard

regulations (SMP 7 (H) 2 (a)). However, it is the City's policy to assure that flood hazard protection measures result in no net loss of ecological functions (SMP 7 (H) 2 (c)) and that new development should be located and designed to avoid the need for future shoreline stabilization to the extent feasible (SMP 7 (H) 2 (d)).

The proposed SMP regulations allow for normal maintenance and repair of existing flood hazard structures shall be allowed pursuant to WAC 173-27-040 (2)(b) (SMP 7 (H) 3 (a)). In addition, modification of existing structural flood hazard measures shall be allowed where it can be demonstrated by engineering analysis that the existing structure does not provide an adequate level of protection for the surrounding lands or that the existing structure does not meet appropriate engineering design standards for stability (SMP 7 (H) 3 (c)), and hydraulic analysis is required to demonstrate that the stabilization strategy allows sediment conveyance to mimic natural conditions (SMP 7 (H) 3 (g)). Ultimately, in order to comply with the SMP, all shoreline modifications must be designed to ensure no net loss of ecological functions and value (SMP 7 (H) 3 (e)).

5.6 ENVIRONMENTAL IMPACT MITIGATION

One of the overarching goals of the City's SMP is to assure no net loss of shoreline ecological functions by requiring mitigation for impacts to shoreline functions. As such, it is a policy of the SMP to avoid or mitigate impacts to the City of Fife's shoreline areas to ensure the standards of no net loss to shoreline function are met (SMP 7 (I) 2). New development proposals are required to analyze environmental impacts and include measures to mitigate impacts that are not otherwise avoided or mitigated for compliance with other regulations (SMP 7 (I) 3 (a)). General regulations require mitigation measures to be applied in the following priority:

1. *Avoiding the impact altogether by not taking a certain action or parts of an action;*
2. *Minimizing 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 impact by repairing, rehabilitating, or restoring the affected environment;*
4. *Reducing or eliminating the impact over time by preservation and maintenance operations;*
5. *Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and*
6. *Monitoring the impact and the compensation projects and taking appropriate corrective measures.* (SMP 7 (I) 3 (b))

Mitigation that exceeds that necessary to assure the development will result in no net loss of shoreline ecological functions will not be required (SMP 7 (I) 3 (d)).

6 CUMULATIVE IMPACTS ANALYSIS BY REACH

Existing Conditions	Reasonably Foreseeable Future Development and Anticipated impacts on Functions/ Processes	Mitigation for impacts		Net Effect (Improvement to Function, No Net Loss of Function, or Impact to Function)
		SMP Provisions and existing Municipal Code ^{1,2}	Beneficial Restoration Programs ³	
Puyallup River				
<p>P1:</p> <p>The majority of this reach is undeveloped land. The majority of this land is currently or has been used for agriculture in the past. The dominant feature of this reach is the levee and associated Levee Road which runs adjacent to the shoreline for the entire reach. Overall shoreline function within this reach, including hydrologic, vegetative, and habitat functions, is low.</p>	<p>Reasonably Foreseeable Future Development: Future land may include the development of the currently undeveloped parcels. The majority of the undeveloped parcels are primarily located in areas zoned for Industrial use. However smaller, undeveloped parcels exist within this reach and are zoned for Community Commercial and Neighborhood Residential uses. Note: future development within this reach may be limited by revised FEMA flood maps that are anticipated to be finalized within 2012.</p> <p>Future development may also to include improvements/modifications to the levee system adjacent to the Puyallup River, such as a setback of the existing levee. Levee improvements are likely to move development further away from the shoreline.</p> <p>Effects on Shoreline Function: If development within this reach is not prohibited as a result of new flood mapping, future land use may result in an increase to impervious surface. Impacts to shoreline vegetation directly adjacent to the Puyallup River as a result of this development will not occur as all parcels are separated from the shoreline by Levee Road.</p> <p>Levee modification/improvement projects may initially impact shoreline habitat. However, these projects are likely to have a long term positive effect on flood function and shoreline habitat by increasing development setbacks, flood plain area, and habitat.</p>	<p>Shoreline Designation for this reach is Levee.</p> <p>The SMP defined objectives for the Levee designation are as follows:</p> <ul style="list-style-type: none"> • Ensure that the levee is protected and maintained; • Minimize the potential for downstream properties to be flooded; • The majority of the parcels within the Levee shoreline designation are separated from direct access to the Puyallup River by the Levee. This positioning within the landscape precludes these parcels from having water dependent uses within this designation. As such, the City uses this Program to promote water enjoyment uses where feasible, but also allows for non-water related uses within it shoreline designations to provide for development as required within the Growth Management Act. • Allow a mix of residential, commercial, and industrial uses; • Ensure that uses and activities permitted in areas adjacent to the Levee Environment designation are compatible; • Prevent degradation of existing ecological functions; and • Restore ecological functions as a condition of project approval in areas that have been previously degraded. 	<p>No existing or proposed restoration or analysis plans have been identified for this segment.</p> <p>Opportunities to improve shoreline function within this segment are limited, but could include:</p> <ul style="list-style-type: none"> • The purchase of undeveloped parcels and creation of shoreline vegetation and flood storage areas. • Removal of invasive species from the levee. 	<p>Overall, future development is likely to have result in no net loss of shoreline function and may result in a net improvement as new development and redevelopment consistent with the provisions of the SMP and FEMA standards occurs.</p>

Existing Conditions	Reasonably Foreseeable Future Development and Anticipated impacts on Functions/ Processes	Mitigation for impacts		Net Effect (Improvement to Function, No Net Loss of Function, or Impact to Function)
		SMP Provisions and existing Municipal Code ^{1,2}	Beneficial Restoration Programs ³	
		<p>[SMP (6) H (1)]</p> <p>Bulk and dimensional requirements limit impervious surfaces to 45% of the parcel and the required shoreline setback is 100 feet. [SMP (6) H (4)] However, it is anticipated that all parcel will exceed this setback due to Levee Road.</p> <p>Additionally, development within this reach shall comply with the general shoreline management policies and regulations, including Shoreline Vegetation Conservation and Critical Area protection as described in Chapter 5 of this document. All shoreline development proposals must result in no net loss of shoreline function either through avoidance of impact or through minimization and mitigation of unavoidable impact.</p> <p>Development within this reach with also be required to comply with City of Fife Storm water regulations and Low Intensity Development requirements which are designed to off set the impacts of the increased impervious surfaces related to development.</p>		
<p>P2:</p> <p>This reach includes the Sha-Dadx and Oxbow wetlands associated with the Puyallup River. Overall shoreline function within this reach, including hydrologic, vegetative and habitat functions, is medium high.</p>	<p>Reasonably Foreseeable Future Development:</p> <p>Future development of these parcels is unlikely as both the Sha-Dadx and Oxbow wetland areas serve as either restoration or open space. <i>Note: both wetland areas are under the jurisdiction of the Puyallup Tribe.</i></p> <p>Overall, future land use is likely to remain similar to current land use.</p>	<p>Shoreline Designation for this Reach is Conservancy. However, as noted, it is anticipated that all development within this reach will be under the jurisdiction of the Puyallup Tribe.</p> <p>The SMP defined objectives for the Conservancy designation are as follows:</p> <ul style="list-style-type: none"> • Protect ecological functions of open space and sensitive lands; • Preserve and protect cultural and historical resources; • Allow low-intensity recreational uses that are designed and constructed in a manner 	<p>City and Tribe may work together to identify restoration projects, including but not limited to the installation of native plants adjacent to the Oxbow wetland.</p>	<p>Overall, future development, inclusive of anticipated restoration plans, is likely to have result in an improvement of shoreline function as existing habitat area mature.</p>

Existing Conditions	Reasonably Foreseeable Future Development and Anticipated impacts on Functions/ Processes	Mitigation for impacts		Net Effect (Improvement to Function, No Net Loss of Function, or Impact to Function)
		SMP Provisions and existing Municipal Code ^{1,2}	Beneficial Restoration Programs ³	
	<p>Effects on Shoreline Function: Shoreline function is expected to remain similar to current shoreline function – No effect.</p>	<p>that respects the limiting environmental condition and does not degrade or deplete resources;</p> <ul style="list-style-type: none"> • Prohibit uses that would compromise the integrity of the shoreline to maintain the ecological functions; • Protect those shoreline areas that possess unique or fragile features which are relatively free of human influence or that include intact or minimally degraded shoreline functions; • Encourage restoration activities. <p>[SMP (6) E (1)]</p> <p>Bulk and dimensional requirements limit impervious surfaces to 25% of the parcel and the required shoreline setback is 100 feet. [SMP (6) E (4)]</p> <p>New development and redevelopment shall comply with City of Fife Low Intensity Development and Stormwater management regulations as applicable.</p> <p>Additionally, development within this reach shall comply with the general shoreline management policies and regulations, including Shoreline Vegetation Conservation and Critical Area protection as described in Chapter 5 of this document. All shoreline development proposals must result in no net loss of shoreline function either through avoidance of impact or through minimization and mitigation of unavoidable impact.</p>		
<p>P3: The majority of this reach is either</p>	<p>Reasonably Foreseeable Future Development: Future land use is likely to include development of undeveloped parcels as well as increased</p>	<p>Shoreline Designation for this reach is Levee. The SMP defined objectives for the Levee</p>	<p>No existing or proposed restoration or analysis plans have been identified for this</p>	<p>Overall, future development is likely to have result in no net loss of shoreline function and improvement</p>

Existing Conditions	Reasonably Foreseeable Future Development and Anticipated impacts on Functions/ Processes	Mitigation for impacts		Net Effect (Improvement to Function, No Net Loss of Function, or Impact to Function)
		SMP Provisions and existing Municipal Code ^{1,2}	Beneficial Restoration Programs ³	
resource land or single-family residential. Similar to reach P1, the dominant feature of this reach is the levee and associated Levee Road which runs adjacent to the shoreline for the entire reach. Overall shoreline function within this reach, including hydrologic, vegetative, and habitat functions, is low.	<p>development and/or redevelopment of parcels with existing development. Zoning within this reach includes Neighborhood Residential, Medium density residential, Industrial, Community Commercial, and Single Family Residential. Future development may also include improvements to the levee system adjacent to the Puyallup River. This development will be separated from the shoreline by Levee Road therefore direct impacts to shoreline function are not anticipated.</p> <p>Effects on Shoreline Function: Shoreline functionality in this segment is impacted, and most development occurred prior to or under the existing regulations. New development and redevelopment will be required to comply with the new regulations which are more protective of shoreline function. As such it is unlikely that new development will have an adverse impact on the shoreline environment and redevelopment, if it occurs, is likely to reduce the amount of existing impact.</p>	<p>designation are as follows:</p> <p>Ensure that the levee is protected and maintained;</p> <ul style="list-style-type: none"> Minimize the potential for downstream properties to be flooded; The majority of the parcels within the Levee shoreline designation are separated from direct access to the Puyallup River by the Levee. This positioning within the landscape precludes these parcels from having water dependent uses within this designation. As such, the City uses this Program to promote water enjoyment uses where feasible, but also allows for non-water related uses within it shoreline designations to provide for development as required within the Growth Management Act. Allow a mix of residential, commercial, and industrial uses; Ensure that uses and activities permitted in areas adjacent to the Levee Environment designation are compatible; Prevent degradation of existing ecological functions; and Restore ecological functions as a condition of project approval in areas that have been previously degraded. <p>[SMP (6) H (1)]</p> <p>Bulk and dimensional requirements limit impervious surfaces to 45% of the parcel and the required shoreline setback is 100 feet. [SMP (6) H (4)] However, it is anticipated that all parcel will exceed this setback due to Levee Road.</p> <p>Additionally, development within this reach shall comply with the general shoreline management policies and regulations, including Shoreline Vegetation Conservation and Critical Area protection as described in Chapter 5 of this</p>	<p>segment.</p> <p>Opportunities to improve shoreline function within this segment are limited, but could include:</p> <ul style="list-style-type: none"> The purchase of undeveloped parcels and creation of shoreline vegetation and flood storage areas. Removal of invasive species from the levee. 	may occur as new development and redevelopment activities comply with new policies and regulations.

Existing Conditions	Reasonably Foreseeable Future Development and Anticipated impacts on Functions/ Processes	Mitigation for impacts		Net Effect (Improvement to Function, No Net Loss of Function, or Impact to Function)
		SMP Provisions and existing Municipal Code ^{1,2}	Beneficial Restoration Programs ³	
		document. All shoreline development proposals must result in no net loss of shoreline function either through avoidance of impact or through minimization and mitigation of unavoidable impact.		
Hylebos Creek				
<p>H1:</p> <p>The primary use within this reach is single-family residential. Overall shoreline function within this reach including hydrologic, vegetative, and habitat functions, is medium.</p>	<p>Reasonably Foreseeable Future Development:</p> <p>The number of vacant parcels within this reach is exceedingly limited. As such, future land use is likely to include the redevelopment of existing residential parcels to include neighborhood commercial land use as allowed by existing zoning.</p> <p>Effects on Shoreline Function:</p> <p>Redevelopment is unlikely to have an impact on existing shoreline function. However, subdivision and new development may result in an increase of impervious surface and a subsequent decrease in hydrologic function. In addition, new residential development may impact existing vegetative function.</p>	<p>Shoreline Designation for this reach is Shoreline Residential.</p> <p>The SMP defined objectives for the Shoreline Residential designation are as follows:</p> <ul style="list-style-type: none"> • Accommodate residential development and recreational development and structures; • Minimize the impacts of residential development on the shoreline ecology; and • Provide appropriate public access and recreational uses. • Restore ecological functions as a condition of project approval in areas that have been previously degraded. <p>[SMP (6) F (1)]</p> <p>Bulk and dimensional requirements limit impervious surfaces to 30% of the parcel and the required shoreline setback is 50 feet. [SMP (6) F (4)].</p> <p>New development and redevelopment shall comply with City of Fife Low Intensity Development and Stormwater management regulations as applicable.</p> <p>Additionally, development within this reach shall comply with the general shoreline management policies and regulations, including Shoreline Vegetation Conservation and Critical Area protection as described in Chapter 5 of this document. All shoreline development proposals</p>	<p>No existing or proposed restoration or analysis plans have been identified for this segment.</p> <p>Opportunities to improve shoreline function within this segment are limited, but could include:</p> <ul style="list-style-type: none"> • Removal of invasive species adjacent to the shoreline. 	<p>Overall, future development is likely to have result in no net loss of shoreline function and improvement may occur as new development and redevelopment activities comply with new policies and regulations.</p>

Existing Conditions	Reasonably Foreseeable Future Development and Anticipated impacts on Functions/ Processes	Mitigation for impacts		Net Effect (Improvement to Function, No Net Loss of Function, or Impact to Function)
		SMP Provisions and existing Municipal Code ^{1,2}	Beneficial Restoration Programs ³	
		must result in no net loss of shoreline function either through avoidance of impact or through minimization and mitigation of unavoidable impact.		
<p>H2:</p> <p>This reach contains multiple open space/park/restoration areas including the Milgard Nature Area, and the Hylebos Estuary Nature Area. Portions of this segment are currently located within the City of Fife Urban Growth Area. Overall shoreline function within this reach is medium-high.</p>	<p>Reasonably Foreseeable Future Development: Future land use within the existing City boundaries is likely to be limited to restoration activities within the Milgard Nature Area and the Hylebos Estuary Nature area. Future land use within the Urban Growth Area is likely to include redevelopment and new development of single-family residential use.</p> <p>Effects on Shoreline Function: Within the existing boundaries of the City, shoreline function is expected to remain similar to current shoreline function – No effect.</p> <p>Within the Urban Growth Area, increase residential development may result in impact shoreline function by increasing impervious surface (hydrologic function) as well as removal of shoreline vegetation associated with development (vegetation function and habitat function).</p>	<p>Shoreline Designation for this Reach is Conservancy.</p> <p>The SMP defined objectives for the Conservancy designation are as follows: Protect ecological functions of open space and sensitive lands;</p> <ul style="list-style-type: none"> • Preserve and protect cultural and historical resources; • Allow low-intensity recreational uses that are designed and constructed in a manner that respects the limiting environmental condition and does not degrade or deplete resources; • Prohibit uses that would compromise the integrity of the shoreline to maintain the ecological functions; • Protect those shoreline areas that possess unique or fragile features which are relatively free of human influence or that include intact or minimally degraded shoreline functions; • Encourage restoration activities. <p>[SMP (6) E (1)]</p> <p>Bulk and dimensional requirements limit impervious surfaces to 25% of the parcel and the required shoreline setback is 100 feet. [SMP (6) E (4)]</p> <p>Additionally, development within this reach shall comply with the general shoreline management policies and regulations, including Shoreline Vegetation Conservation and Critical Area</p>	<p>Further restoration activities in the Milgard and Hylebos Habitat Areas.</p> <p>Work with Pierce County to identify restoration opportunities in the Urban Growth Area.</p>	<p>Overall, future development, is likely to have result in an improvement of shoreline function, as existing restoration sites mature and new development and redevelopment of the residential areas (if annexed) will be subject to more protective regulations.</p>

Existing Conditions	Reasonably Foreseeable Future Development and Anticipated impacts on Functions/ Processes	Mitigation for impacts		Net Effect (Improvement to Function, No Net Loss of Function, or Impact to Function)
		SMP Provisions and existing Municipal Code ^{1,2}	Beneficial Restoration Programs ³	
		protection as described in Chapter 5 of this document. All shoreline development proposals must result in no net loss of shoreline function either through avoidance of impact or through minimization and mitigation of unavoidable impact.		
<p>H3:</p> <p>The majority of the reach is located in the City's urban growth area and contains residential land use. Overall shoreline function within this reach is medium-low.</p>	<p>Reasonably Foreseeable Future Development: No undeveloped land exists within the current shoreline jurisdiction within city boundaries.</p> <p>However, annexations of areas within this reach may occur. Future land use in the areas likely to be annexed may include increased residential development, reconfiguration of State Route 167 extension and the development and redevelopment of commercial uses.</p> <p>Effects on Shoreline Function: Within the existing boundaries of the City, shoreline function is expected to remain similar to current shoreline function.</p> <p>If annexations occur, Shoreline function in the area to be annexed is generally extremely impacted and part of an urban area. As such, future shoreline function is expected to improve upon current shoreline function as future development will be required to comply with the more stringent regulations based upon current best available science. .</p>	<p>Shoreline Designation for this reach is Shoreline residential (North Bank) and Urban (South Bank).</p> <p><u>Shoreline Residential (North Bank)</u></p> <p>The SMP defined objectives for the Shoreline Residential designation are as follows:</p> <ul style="list-style-type: none"> • Accommodate residential development and recreational development and structures; • Minimize the impacts of residential development on the shoreline ecology; and • Provide appropriate public access and recreational uses. • Restore ecological functions as a condition of project approval in areas that have been previously degraded. <p>[SMP (6) F (1)]</p> <p>Bulk and dimensional requirements within the Shoreline Residential designation limit impervious surfaces to 30% of the parcel and the required shoreline setback is 50 feet. [SMP (6) F (4)]</p> <p><u>Urban (South Bank)</u></p> <p>The SMP defined objectives for the Urban designation are as follows:</p> <ul style="list-style-type: none"> • Due to the position of the Urban shoreline designation along un-navigable waters of 	<p>No existing or proposed restoration or analysis plans have been identified for this segment.</p>	<p>Overall, future development is likely to either result in no net loss (if no annexation or development occurs) or improvement (if annexation and development) of shoreline function.</p>

Existing Conditions	Reasonably Foreseeable Future Development and Anticipated impacts on Functions/ Processes	Mitigation for impacts		Net Effect (Improvement to Function, No Net Loss of Function, or Impact to Function)
		SMP Provisions and existing Municipal Code ^{1,2}	Beneficial Restoration Programs ³	
		<p>Hylebos Creek, the City of Fife is precluded from having water dependent uses within this designation. As such, the City uses this program to promote water enjoyment uses where feasible, but also allows for non-water related uses within it shoreline designations to provide for development as required within the Growth Management Act.</p> <ul style="list-style-type: none"> • Ensure optimum use of shorelines that are either presently urbanized or planned for urbanization; • Manage the shore land environment for a variety of urban uses; • Assure compatibility between upland and aquatic uses by requiring sensitive site design for the upland-aquatic interface; • Provide visual and physical public access to shoreline areas; • Ensure that uses and activities permitted in areas adjacent to the Urban Shoreline Environment designation will not compromise the existing integrity of the shoreline. • Prevent degradation of existing ecological functions; and • Restore ecological functions as a condition of project approval in areas that have been previously degraded. <p>[SMP (6) G (1)]</p> <p>Bulk and dimensional requirements within the Urban designation limit impervious surfaces to 45% of the parcel and the required shoreline setback is 50 feet. [SMP (6) G (4)]</p> <p>Additionally, development within both shoreline jurisdictions within this reach shall comply with the general shoreline management policies and</p>		

Existing Conditions	Reasonably Foreseeable Future Development and Anticipated impacts on Functions/ Processes	Mitigation for impacts		Net Effect (Improvement to Function, No Net Loss of Function, or Impact to Function)
		SMP Provisions and existing Municipal Code ^{1,2}	Beneficial Restoration Programs ³	
		regulations, including Shoreline Vegetation Conservation and Critical Area protection as described in Chapter 5 of this document. All shoreline development proposals must result in no net loss of shoreline function either through avoidance of impact or through minimization and mitigation of unavoidable impact.		

¹ Draft Shoreline Master Program text cited within this document, i.e. objectives, policies, and/or regulations, is followed by a reference in brackets to the specific section of the SMP.

² In addition, all areas within the shoreline jurisdiction are required to comply with the Critical Areas Ordinance (based upon FMC, Title 17 incorporated into the SMP as an Appendix) and the Flood Hazard Reduction Ordinance (FMC, Title 15.40).

³ For all reaches work at or waterward of the OHWM requires permits or approvals from one or more of the following state and federal agencies: U.S. Army Corps of Engineers, Washington Department of Fish and Wildlife, Washington State Department of Natural Resources, or Washington State Department of Ecology. Each of these regulatory agencies would apply shoreline mitigation requirements and design standards focused on minimizing adverse impacts and improving ecological function.

7 INCREMENTAL AND UNANTICIPATED IMPACTS

WAC 173-26-201(3)(d)(iii) requires that each jurisdiction avoids “*unanticipatable or uncommon impacts that cannot be reasonably identified at the time of master program development*”. In addition, the DOE SMP handbook recommends that the Cumulative Impacts Analysis include an evaluation of incremental impacts, which if not addressed can add up to larger cumulative impacts. However, it should be noted that there is no metric to define incremental or unanticipated impacts or those methods designed to address said impacts to determine efficacy.

Generally, the City will address impacts by requiring strict adherence to the SMP, including requiring a conditional use permit for unclassified uses (SMP 8) and that mitigation sequencing be adhered to for each project within the shoreline jurisdiction (SMP I.3.b.), thus reducing the amount of incremental impacts due to things such as mitigation failure. In addition, areas of redevelopment will be required to improve shoreline functionality, (e.g., creating new vegetative strips along the shoreline) which will result in a net habitat lift that would not occur without such standards for redevelopment.

In addition, the City of Fife will also seek out restoration projects both within the City’s jurisdiction as well as in conjunction with adjacent jurisdictions where appropriate to provide an overall lift to functionality and temporarily address incremental and unintended impacts until such time as metrics for these impacts are available.

8 SUMMARY OF NET IMPACT TO ECOLOGICAL FUNCTION

As described in this document, the provisions of the draft SMP have been designed to maintain existing shoreline function, produce functional lift where feasible, and result in no net loss of ecological function as required by WAC 173-26-186(8)(d). As discussed in Chapters 4, 5 and 7, the City of Fife has worked to meet this standard through environmental designations, shoreline policies, and shoreline regulations.

Based upon the amount of foreseeable future development, the policies and regulations of the SMP, and the projects outlined in the Shoreline Restoration Plan, no net loss of ecological function is anticipated with the City of Fife.

9 REFERENCES

City of Fife, *Draft Shoreline Master Program*, May 2011 version.

Grette Associates. *City of Fife, Shoreline Master Program Update: Inventory and Characterization*. September 2010.

Kerwin, J. *Salmon Habitat Limiting Factors Report for the Puyallup River Basin (Water Resource Inventory Area 10)*. Washington Conservation Commission, Olympia, Washington. 1999.

CITY OF FIFE
SHORELINE MASTER PROGRAM UPDATE

APPENDIX A: CUMULATIVE IMPACTS ANALYSIS
FIGURES

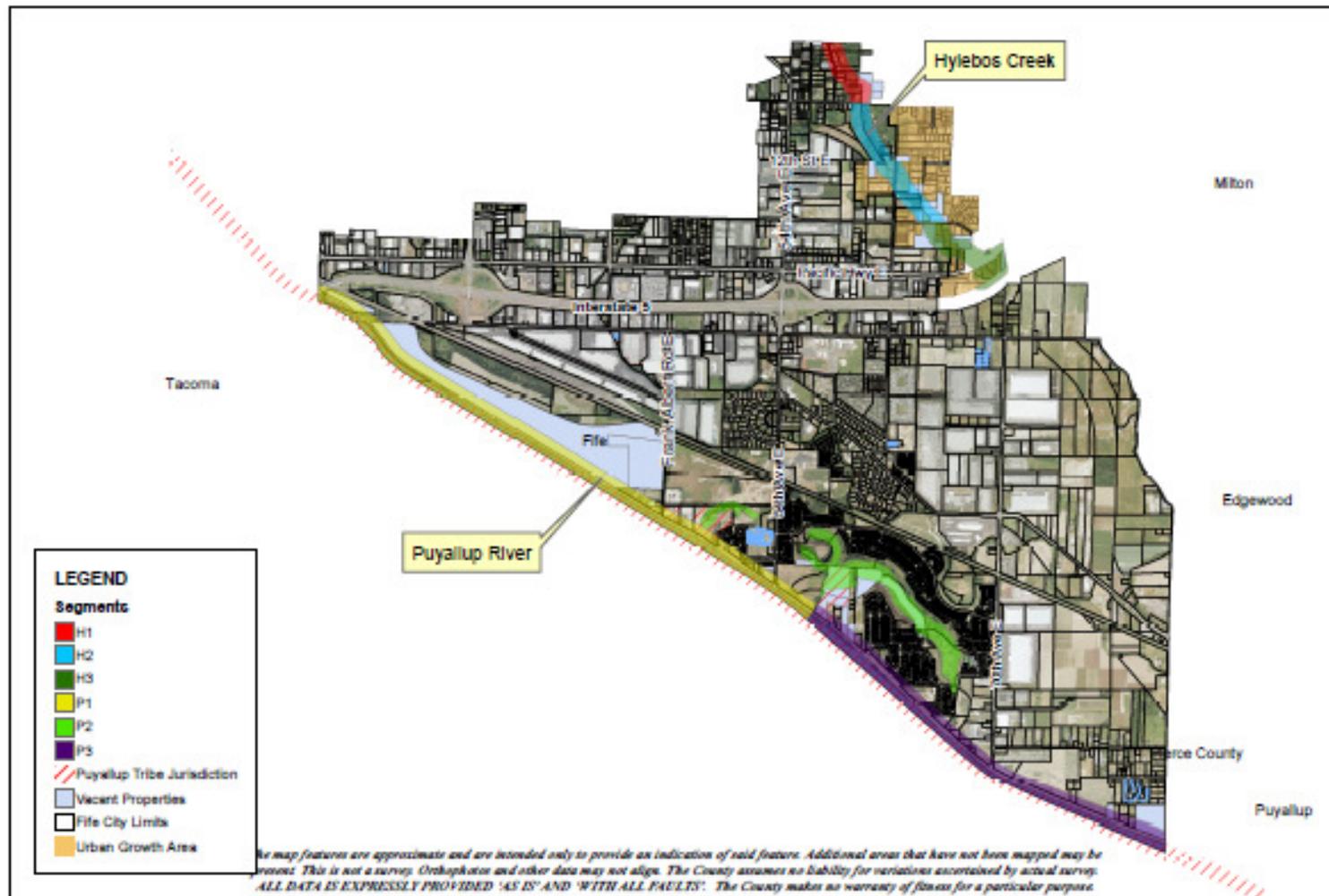
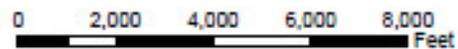


FIGURE 1
 Cumulative Impacts Analysis
 Fife Shoreline Master Plan
 Fife, WA



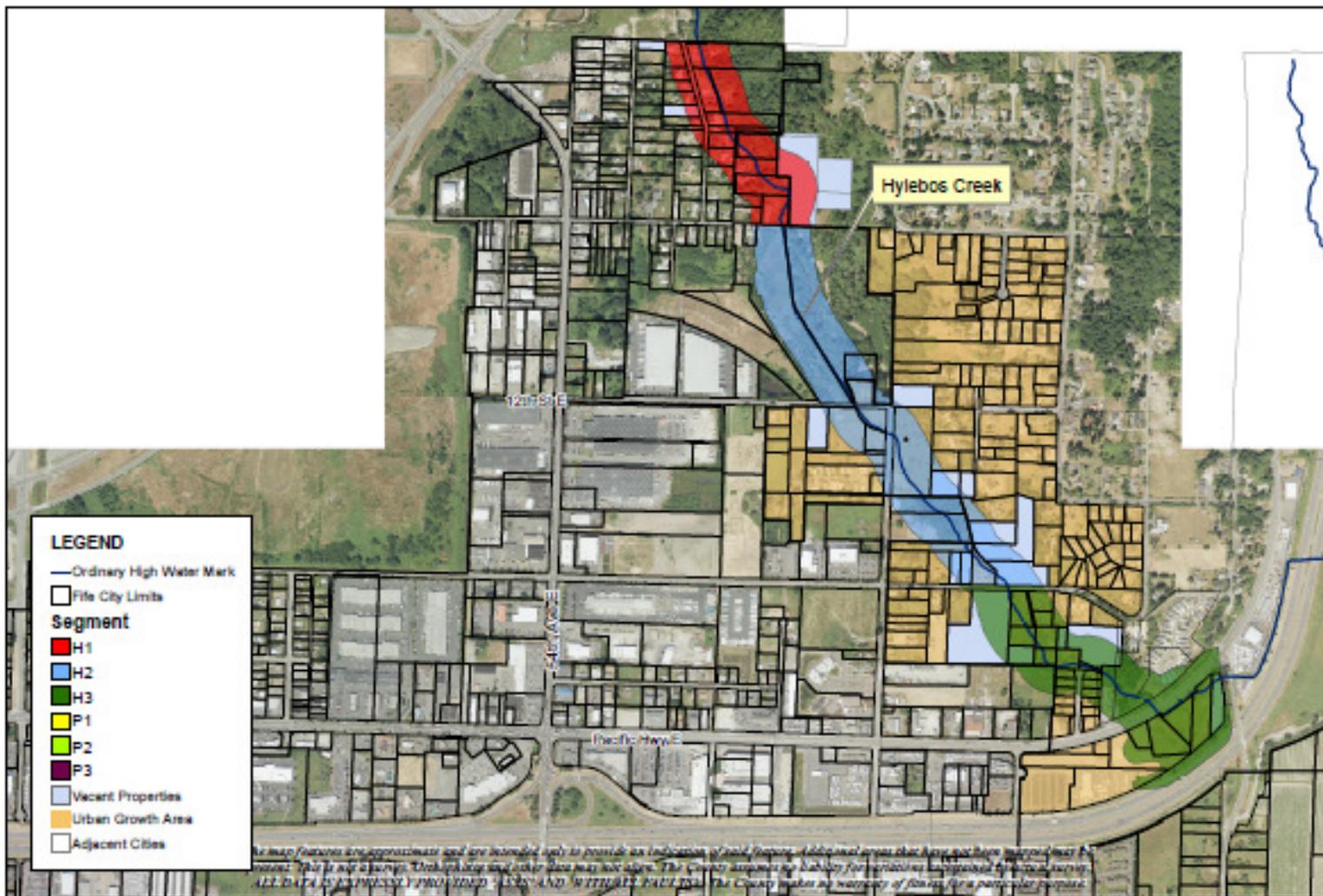
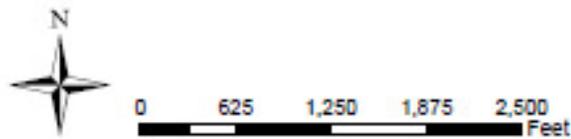


FIGURE 2
 Cumulative Impact Analysis
 Fife Shoreline Master Plan
 Fife, WA



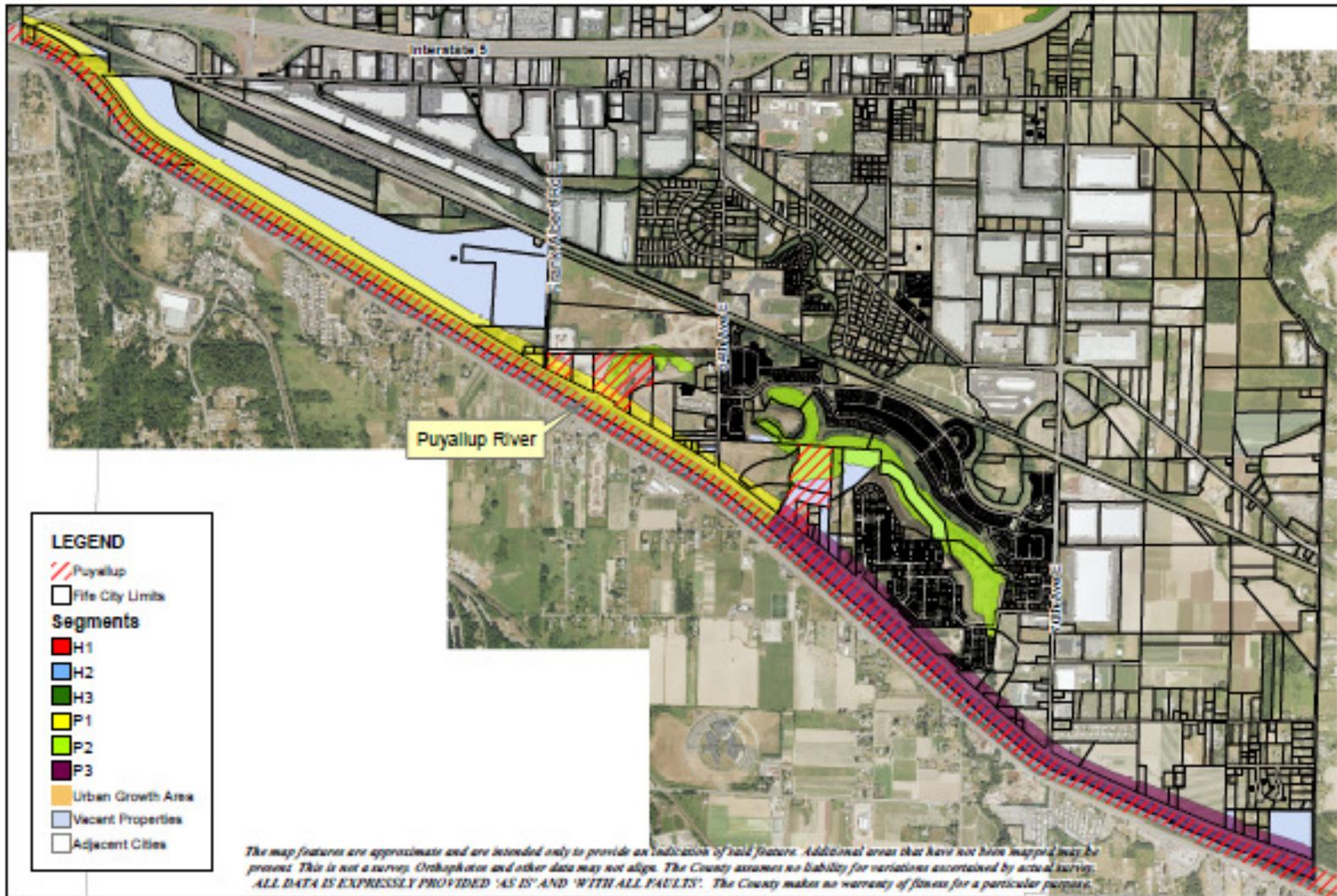


FIGURE 3
 Cumulative Impacts Analysis
 Fife Shoreline Master Plan
 Fife, WA



CITY OF FIFE
SHORELINE MASTER PROGRAM UPDATE

APPENDIX B: NO NET LOSS STATEMENT

NO NET LOSS STATEMENT

The Shoreline Management Act Guidelines provided by the Washington State Department of Ecology require jurisdictions to regulate new development within and adjacent to the shoreline in such a way as “to ensure no net loss of ecological function.” The guidelines, as defined within WAC 173-26, require that shoreline master programs contain policies, programs, and regulations that address adverse cumulative impacts and fairly allocate the burden of addressing cumulative impacts to ensure no net loss of ecological functions and protection of other shoreline functions and/or uses.

The guidelines provide further direction on the concept of no net loss in WAC 173-26-201(2)(c) as follows:

“...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...”

The SMP update process has provided the opportunity for the City of Fife to establish baseline conditions within the shoreline, anticipated future impacts to shoreline habitat and functions, and identify restoration opportunities within the shoreline jurisdiction. Consistent requirements of the SMA and the associated guidelines, the City of Fife’s SMP provides new shoreline environment designations, updated policies and goals, and updated development standards. The revised SMP provides better protection for shoreline processes and functions and are consistent with best available science in protecting shoreline resources.

Based upon the Cumulative Impacts Analysis and the Restoration Plan, it is anticipated that cumulative development and redevelopment actions taken over time, conducted in accordance with the Shoreline Master Program and associated regulations and requirements will result in either no net loss or a net improvement of shoreline function within the City of Fife.