Shoreline Master Program
Town of La Conner,
Washington

Department of Ecology approval effective _____

Adopted September 24, 2013 by Town of La Conner Ordinance No.1106
Amended May 13, 2014 by Town of La Conner Ordinance No. 1118

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Chapter 1 - Introduction

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1.1 Title

This chapter shall be known and may be cited as the “Shoreline Master Program.”

1.2 Purpose

The purpose of this chapter is to update the shoreline master program to enable the Town to manage its shorelines in accordance with Chapter 90.58 RCW and Chapter 173-26 WAC and to adopt goals, policies, and regulations designed to promote the health, safety, and general welfare of the people of La Conner.

Washington’s Shoreline Management Act (SMA) (Chapter 90.58 RCW, the Shoreline Management Act of 1971) was passed by the State Legislature in 1971 and adopted by the public in a referendum. The Act was created in response to a growing concern among residents of the state that serious and permanent damage was being done to shorelines by unplanned and uncoordinated development. The goal of the Act was "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." While protecting shoreline resources by regulating development, the Act is also intended to provide for appropriate shoreline growth by encouraging land uses that enhance and conserve shorelines functions and values.

The SMA established a cooperative program of shoreline management between local government and the state. Local governments have the primary responsibility for initiating the planning and administration of the local Shoreline Master Program (SMP). The Washington State Department of Ecology (Ecology) is responsible for supporting and assisting local governments and insuring compliance with the SMA and its provisions, primarily WAC Sections 173-26 – *State Master Program Approval/Amendment Procedures and Master Program Guidelines* and 173-27-*Shoreline Management Permit and Enforcement Procedures.*

The SMP is a comprehensive use plan for local shoreline areas that includes desired goals and policies consistent with SMA policy (RCW 90.58.020); maps, diagrams and charts or other descriptive material and text; use and development regulations; and administrative procedures for the shoreline permitting process. The Ecology SMP guidelines (WAC 173-26) establish general goals and policies, and standards and criteria for regulations. The SMP is based on State guidelines, but tailored to the specific conditions and needs of

individual communities. The SMP is also meant to be a comprehensive vision of how the shoreline area will be used and developed over time.

All shoreline development shall be consistent with the Shoreline Management Act (SMA), this shoreline master program (SMP) and with applicable sections of the Town's land use zoning ordinances, including the Uniform Development Code, FEMA flood control, historic preservation and management codes and regulations, the State Environmental Policy Act, and other applicable local, state and federal laws and regulations.

1.3 Findings

(1) There are approximately 9,300 feet of shoreline in La Conner adjacent to the Swinomish Channel, a navigable waterway.

(2) Approximately 1,600 feet of the shoreline is within the historic preservation district.

(3) The Town of La Conner finds that its shorelines are a valuable resource having statewide significance that should be protected and used in the best interest of private and public entities while protecting private property rights and allowing public access to the greatest extent feasible.

(4) Ordinance 705, adopting the La Conner Shoreline Master Program, was adopted on November 18, 1997.

(5) Ordinance 792, amending Ordinance 705 was adopted on November 14, 2000.

(6) Ordinance 828, amending Ordinance 792 was adopted on October 9, 2001.

1.4 Key Shoreline Concepts and Terms

The Washington Shoreline Management Act (SMA) has three broad, overarching policies:

(1) Preferred shoreline uses: "uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the states' shorelines...."

(2) Promote public access: "the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally."

(3) Protect shoreline natural resources, including "...the land and its vegetation and wildlife, and the water of the state and their aquatic life...."

1.5 Preferred Uses

In establishing preferred uses of the state's shorelines, the SMA defines "water-dependent", "water-related", and "water-enjoyment" uses. These terms are officially defined in Section 8 of the SMP. General descriptions and examples are included below:

"**Water-dependent use**" means a use that requires direct access to the water to accomplish its primary function. In other words, a use or portion of a use, which cannot exist in a location that is not adjacent to the water and which is dependent on the water by reason of the intrinsic nature of its operations. Examples may include commercial fishing, marinas, aquaculture, shipbuilding, and ferry terminals.

"**Water-related use**" means a use that does not require direct access to the water, but provides goods or services associated with water dependent uses. In other words, a use or portion of a use which is not intrinsically dependent on a waterfront location but whose economic viability is dependent upon a waterfront location. Examples include boat supply and repair services, and kayak rentals.

"**Water-enjoyment use**" means a use that does not require access to the water, but is enhanced by a waterfront location. This includes uses that facilitate public access to the shoreline as a primary characteristic of the use; or uses that provide for recreational use or aesthetic enjoyment of the shoreline for a substantial number of people. The use must be open to the general public and the shoreline-oriented space within the project must be devoted to the specific aspects of the use that fosters shoreline enjoyment. Examples include restaurants and aquariums.

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1.6 Public Access

In preserving and promoting public access, the SMA and state shoreline guidelines (WAC 173- 26) recognize that shorelines of the state are a resource to be used and enjoyed by all citizens of Washington State. While balancing the rights of privacy and private property, the SMA promotes public access as a "preferred use" in terms of water-oriented recreation, and requires public access amenities to be incorporated into certain waterfront development. In this context, public access can mean many things, including physical access to the water and beach, public access to piers and docks, or development of overlooks providing visual access to the shoreline.

1.7 No Net Loss of Ecological Functions

The state shoreline guidelines (WAC 173-26), updated and adopted in 2003, emphasize the protection and restoration of shoreline natural resources. The guidelines refer to the protection of shoreline ecological processes (such as hydrology and sediment transport) and shoreline ecological functions (provided by water quality, vegetation, and habitat). A major concept in the protection of ecological functions is termed "no net loss."

"No Net Loss" – means the maintenance of the aggregate total of the Town's shoreline ecological functions. The no net loss standard requires that the impacts of each shoreline development and/or use, whether permitted or exempt, be identified and mitigated such that there are no resulting adverse impacts on ecological functions or processes. The concept of "net" as used herein, recognizes that any development has potential or actual, short-term or long-term impacts and that by applying appropriate development standards and mitigation measures (including avoiding impacts), implementing the SMP will not diminish the shoreline resources and values as they currently exist.

1.8 Shoreline Jurisdiction

Concepts and terms related to the Town's shoreline jurisdiction are specific to those described in RCW 90.58.030, WAC 173-26-020, WAC 173-27-030, and WAC 173-22-

030. Definitions and significant terms related to the Shoreline Management Act and the Town's SMP are included within Section 8 of this document. Under the SMA, the shoreline jurisdiction includes all water areas of the state, the lands underlying them, and areas that are 200 feet landward of the ordinary high water mark **(**OHWM**)** of waters that have been designated as "shorelines of statewide significance" or "shorelines." "Shorelines of the state" include all "shorelines of statewide significance" and "shorelines". The upland areas are referred to as "shorelands". These designations were established in 1971, and are described in RCW 90.58.030.

Generally, "shorelines of statewide significance" include designated portions of Puget Sound and other marine water bodies, rivers west of the Cascade Range that have a mean annual flow of 1,000 cubic feet per second (cfs) or greater, rivers east of the Cascade Range that have a mean annual flow of 200 cfs or greater, and freshwater lakes with a surface area of 1,000 acres or more. The area seaward of the extreme low tide in La Conner is considered a shoreline of statewide significance. "Shorelines" are generally described as all other marine waters and all other streams or rivers having a mean annual flow greater than 20 cfs and lakes with a surface area 20 acres and greater. The Town of La Conner does not have any stream, river or lake shoreline areas.

The La Conner shoreline jurisdiction extends to the middle of the Swinomish Channel, an offshore boundary shared with Skagit County, as RCW 35.21.160 extends jurisdiction to the middle of water bodies, such as bays, sounds, lakes and rivers. The actual seaward and landward extent of shoreline jurisdiction will be determined on a case-by-case basis. Appendix A, illustrates the shoreline designations and the *approximate* location of the upland extent of the shoreline jurisdiction in La Conner. Given that the Shoreline Designation Map is an integral part of this Master Program, no part of the map may be altered or revised unless a Master Program amendment has been approved by the Town Council and the Washington State Department of Ecology (RCW 90.58.090).

1.9 Document Organization

Chapter 1 - Introduction: provides purpose, findings, key concepts and terms, preferred uses, public access, jurisdiction and the "No Net Loss" imperative.

Chapter 2 - Shoreline Inventory and Characterization – provides purpose of the inventory, a regulatory overview, definitions and an explanation of relationship to other plans, methods, ecosystem profile, existing land use and cover, physical and biological features, conclusions and recommendations.

Chapter 3 - Shoreline Vision, Goals and Policies – provides a high-level summary of how the Town's local circumstances and priorities shape the degree and manner in which the SMP embodies key SMA goals, sets forth general goals and policies for all SMP Elements, as well as Shoreline Goals and Policies by Element.

Chapter 4 - Restoration Planning - provides an overview of the opportunities for shoreline restoration, goals, policies, plans and programs, and a discussion of funding, implementation and monitoring of restoration efforts.

Chapter 5 - Shoreline Environment Designations – explains the purpose, location, land use and policy framework for the creation of the six Environment Designations: Historic Commercial Environment (HCE); Commercial Environment (CE); Industrial Environment (IE); Residential Environment (RE); Public Use Environment (PUE); and

Aquatic Environment (AE).

Chapter 6 - Shoreline Development Policies, Standards and Use Regulations – provides general regulations and standards that apply to all Shoreline Environments, as well as detailed regulations and tables, specific standards and performance regulations for use and modification of shorelines.

Chapter 7 - Administrative Procedures - provides procedures and process for permit applications associated with shoreline development.

Chapter 8 – Definitions – provides definitions of terms used throughout the SMP.

Chapter 2 – Shoreline Inventory and Characterization – Summary of Findings

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2.1 Purpose

The Town of La Conner (Town) conducted a comprehensive Shoreline Master Program (SMP) update. This process was partially funded by a grant administered through the Washington State Department of Ecology (Ecology) (SMA Grant No. G1100003). Substitute Senate Bill (SSB) 6012, an Act passed in 2003 relating to shoreline management and amending RCW 90.58.060, 90.58.080, and 90.58.250, requires cities and counties to update their SMPs consistent with the state Shoreline Management Act (SMA), Revised Code of Washington (RCW) 90.58 and its implementing guidelines, Washington Administrative Code (WAC) 173-26.

This document presents results of the Town of La Conner Shoreline Inventory and Characterization. According to Ecology, the purpose of the Shoreline Inventory and Characterization is to develop an understanding of the relationship between shoreline processes and functions and the built environment. Together, the combined Inventory and Characterization (Ecology 2010a):

- Identify ecosystem wide processes and shoreline functions.
- Set a baseline for evaluating cumulative impacts of the draft SMP and determining no net loss of shoreline ecological functions.
- Identify potential sites for protection, restoration and public access.
- Guide development of the shoreline management strategy that will lead to policies, regulations and environment designations that achieve no net loss of shoreline ecological functions.

2.2 Regulatory Overview

Washington's 1971 SMA was created in response to a growing concern among Washington residents that irrevocable damage was being done to Washington's shorelines through unplanned and unbridled use.

The SMA policy goals harbor potential for conflict as set forth in WAC 173-6-176(2):

> *"The act recognizes that the shorelines and the waters they encompass are "among the most valuable and fragile" of the state's natural resources. They are valuable for economically productive industrial and commercial uses, recreation, navigation, residential amenity, scientific research and education. They are fragile because they*

depend upon balanced physical, biological, and chemical systems that may be adversely altered by natural forces (earthquakes, volcanic eruptions, landslides, storms, droughts, floods) and human conduct (industrial, commercial, residential, recreation, navigational).”

The SMA is intended to provide a balance between shoreline development and conservation or enhancement of shoreline ecological functions and values by encouraging water-dependent, water- related, and water-enjoyment uses within shoreline jurisdiction.

The legislative findings and policy goals of the SMA are as follows (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."

"It is the policy of the state to provide for the management of the shorelines by planning for and fostering all reasonable and appropriate uses."

"Uses shall be preferred which are. . .unique to or dependent upon use of the state's shoreline."

"Alterations of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for single-family residences and their appurtenant structures, ports, shoreline recreational uses including but not limited to parks, marinas, piers, and other improvements facilitating public access to shorelines of the state, industrial and commercial developments which are particularly dependent on their location on or use of the shorelines of the state and other development that will provide an opportunity for substantial numbers of the people to enjoy the shorelines of the state."

RCW 90.58.090 authorizes and directs the Department of Ecology (Ecology) to adopt:

"*…guidelines consistent with RCW 90.58.020, containing the elements specified in RCW 90.58.100" for development of local master programs for regulation of the uses of "shorelines" and "shorelines of statewide significance.*"

RCW 90.58.200 authorizes the department and local governments "*to adopt such rules as are necessary and appropriate to carry out the provisions of*" the Shoreline Management Act.

Local governments are assigned the primary responsibility for administering a regulatory program consistent with the policies and provisions of the SMA through local shoreline master programs (SMPs). The SMP guidelines (WAC 173-26), established by the Department of Ecology (Ecology), offer goals and policies (see above) to guide local jurisdictions in developing use regulations and development standards within the shoreline. Local governments are allowed substantial discretion to adopt SMPs that reflect local circumstances, and regulatory/non-regulatory programs.

The SMA thus provides the policy goals and a set of guidelines (WAC 173-26) to assist local jurisdictions in developing, adopting and amending local Shoreline Master Programs (SMPs), to provide 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*" (RCW 90.58.020).

2.3 Shoreline Jurisdiction and Definitions

The Town of La Conner shoreline jurisdiction extends from the center line of the Swinomish Channel to a line that is 200 feet landward from the Ordinary High Water Mark (OHWM) of the Swinomish Channel (Town of La Conner 2003a). The Town has seven shoreline environmental designations including Commercial, Industrial, Historic Commercial, Aquatic, Residential and Public Use (Figure 3 – Town of La Conner Shorelines Map). "Residential" is not a current established environmental designation, however it has been recognized as a pre-existing use and will be established as an environmental designation during the update of the Shoreline Master Program.

The Department of Natural Resources (DNR) and the Town of La Conner are in discussion about the location of the official Town limits along the shoreline of the Swinomish Channel, relative to the OHWM and harbor lines. Future maps of the Town will reflect any changes in the Town limits that occur as a result of these discussions.

2.4 Relationship to Other Plans and Programs

WAC 173-26-010 and RCW 90.58.080 direct local governments to develop and administer local shoreline master programs (SMPs) for regulation of uses on shorelines of the state. WAC 173-26-010 directs local governments to develop SMPs that are integrated with other local government systems for administration and enforcement of land use regulations.

2.4.1 Town Plans and Programs

Regulation of development near the Swinomish Channel and management of shoreline resources is conducted under various regulatory plans and programs that have been adopted by the Town Council and administered by the Planning Department. Some of these plans have been developed pursuant to the Washington State Growth Management Act (GMA) and Shoreline Management Act (SMA), while others have been independently established by the Town to meet the unique vision of La Conner. Town planning documents that affect activities and development within the shoreline zone include, but may not be limited to: current Shoreline Master Program, Comprehensive Plan, Parks and Recreation Plan, Parking Plan, Capital Facilities Plan, Climate Change Action Plan, Floodplain Management Program, Critical Areas Ordinance , and various other Chapters within the LCMC that establish development standards and zoning.

The Comprehensive Plan is the unifying document that outlines how the Town will direct development and retain certain desirable qualities. The Comprehensive Plan provides guidance regarding general land use and development patterns with regard to the following primary elements: economic, land use, housing, transportation, utilities, capital facilities and essential facilities. The scope of jurisdiction subject to guidance contained in the Comprehensive Plan includes the entire town, both within and beyond the extent of shoreline jurisdiction.

Other planning documents developed by the Town, including the Shoreline Master Program, should be developed to be consistent with the Comprehensive Plan to achieve a

consistent use policy. The update to the Shoreline Master Program therefore should also strive to be consistent with the other planning documents listed above. A complete reference list of Town Plans & Programs is provided in the Shoreline Inventory prepared during this update process and summarized below in Section 2.5.1.

2.4.2 Regional, State and Federal Programs

Shoreline planning must also take into consideration other regional, state and federal programs and/or laws that may influence development of shorelines within the local jurisdiction. As discussed in the preceding section, several local plans and programs have been mandated at the state level under the authority of the state GMA and SMA. In addition to these programs, several other state, regional and federal programs and regulations are also relevant to the shoreline planning process. These include but are not necessarily limited to: Washington's Hydraulic Code (see RCW 77.55 and WAC 220-110), SEPA rules (see RCW 43.21C and WAC 197-11), and Aquatic Land Management (see RCW 79.105 and WAC 332-30) at the state level; National Flood Insurance Program, Clean Water Act, Endangered Species Act and Magnuson-Stevens Fisheries Management Act at the federal level; and various plans and programs developed at the regional or county level, a comprehensive list of which is included in the Shoreline Inventory document previously prepared as part of the update process and summarized below in Section 2.2.

2.5 Methods

2.5.1 Shoreline Inventory

On August 31, 2011, the Town of La Conner submitted to Ecology a Shoreline Inventory. Features identified in the Shoreline Inventory included:

- Shorelines of the State,
- General location of channel/floodplain features,
- Critical Areas,
- Shoreline and adjacent land use patterns/density and transportation and utility facilities,
- Degraded areas and sites with potential for ecological restoration,
- Areas of special interest,
- Existing and potential shoreline public access sites,
- Historical aerial photographs documenting past conditions to assist in preparing an analysis of cumulative impacts of development,
- Archaeological and historic resources in shoreline jurisdiction, and
- Policies and regulations in shoreland and adjacent areas that affect shorelines. Issues identified in the Shoreline Inventory that will be characterized in this report include:
    - Climate Change
    - Flooding
    - Eroding shorelines
    - Sedimentation within Swinomish Channel

Appendix B contains the Shoreline Inventory including the list of references.

2.5.2 Characterizing Ecosystem Wide Processes and Shoreline Functions

Ecosystem wide characterization of processes and functions within the Town's shoreline environment includes a coarse scale analysis of the broader area that influences the shoreline jurisdiction. Shoreline functions within the limits of jurisdiction of the Town do not exist in isolation and are dependent on, and result from, ecosystem wide processes that operate on scales not necessarily limited to the Town boundary. According to Ecology:

> *Ecosystem wide processes refer to dynamic physical and chemical interactions that form and maintain natural landscapes, including the movement of water, sediment, nutrients, pathogens, toxins and wood as they enter into, pass through, and eventually leave, the watershed.*

These processes occur over larger landscapes that include both the shoreline and watershed features draining to the shoreline and are influenced by precipitation, geology, topography, soils, land cover and land use.

The first step needed to characterize ecosystem-wide processes and shoreline functions is to identify the contributing watersheds that may influence and interact with the shoreline environment within the Town (Section 3.0). Ecology WRIA maps and USGS topography maps were used for this purpose in addition to a shallow groundwater study of the Skagit River Delta (Ecology 2009 and 2002, Savoca et al 2009).

The second step is to identify and analyze the ecosystem-wide processes within contributing watersheds that may influence shoreline functions within the Town's jurisdiction. Guidance from Ecology identifies methods by which the influence of each ecosystem process on ecological functional groups is identified and described based on specific structures (natural resources) and biological/ecological functions.

The goal is to identify those ecosystem-wide processes that may influence shoreline functions at the site scale that will be considered at a detailed level in the reach assessment (see Section 2.4). This information is used to establish an environmental baseline at both the watershed and reach scales during the shoreline planning process and to help identify appropriate uses, modifications and/or restoration that should be recommended.

Inventory data sources used to identify ecosystem wide processes, shoreline structures, and functions are provided in Section 10 – References and in Appendix B (Shoreline Inventory). Results of the ecosystem-wide analysis are presented in Section 3 of Appendix B.

2.5.3 Inventory and Characterization Approach for Shoreline Reaches

To facilitate shoreline planning at the scale needed to make specific recommendations within the Town's jurisdiction, the shoreline environment has been divided into three "reaches". Reaches are specific segments of the shoreline that will be the basis for in depth discussion of shoreline functions. Reaches in the Town were identified using

guidance from Ecology with consideration for the physical and biological changes, relative intensity and type of development along the shoreline, and adjacent land use. These patterns were identified using available resources including shoreline oblique photos obtained from Ecology (Ecology 1994; Figure 2), a reconnaissance level site visit, planning documents prepared by the Town's Planning Department and others, and discussion with local planners and experts.

Baseline conditions within each reach were assessed using methods developed by Ecology. Natural resources and ecological/biological functions within each reach were evaluated in the context of the ecosystem wide processes that have been identified for the Town's location (see Section 3.4). The functional integrity and/or relative levels of impairment of the shoreline environment were then described on a reach by reach basis and specific management recommendations were made as warranted.

Inventory and characterization of each of the three reaches identified using these methods are presented in Section 5.

2.6 Ecosystem Wide Profile

The purpose of this section is to present the results of an ecosystem wide characterization of processes and functions that affect the Town's shoreline environment at a coarse scale. To understand the processes that influence and interact with shoreline functions at the reach scale, it is important to first examine the Town's location relative to other geographical and physical features at a broader watershed scale. The information presented includes areas that extend beyond the jurisdiction of the Town's shoreline environment within the Swinomish Channel to include baseline environmental data for the Lower Skagit/Samish (WRIA 3) and Puget Sound (HUC 17110019) watersheds. Specifically, the geographic scope of this section includes the following areas: the Swinomish Channel in its entirety; the Skagit and Samish Rivers, as well as associated deltas, floodplains and tributaries; Padilla and Skagit Bays; and portions of Puget Sound within Skagit County.

Watershed Overview (WRIA 3 – Lower Skagit/Samish)

The Town of La Conner lies within the Lower Skagit/Samish Watershed (WRIA 3) in northwestern Washington. WRIA 3 contains the entirety of the Samish River basin, including Friday Creek which is the outlet to Lake Samish, and the lower reaches of the Skagit River, which includes approximately eleven major tributaries and the north and south forks of the Skagit River which together with Skagit Bay bound Fir Island. La Conner lies between the Samish River and the North Fork of the Skagit River along the eastern banks of the Swinomish Channel, an 11 mile man made channel connecting Padilla and Skagit Bays (Figure 1 – Vicinity Map).

2.6.1 Padilla Bay

Padilla Bay is an estuary (eight miles long and three miles wide) at the northern edge of the Skagit River delta. Since 1980, Padilla Bay has been part of the National Estuarine Research Reserve System, a program that protects more than 1.3 million acres of near-shore coastal and estuarine areas across 22 states and Puerto Rico for purposes of long-term research, environmental monitoring, education and stewardship (Ecology 2011a, NOAA 2000).

Padilla Bay was originally formed by sediments from the Skagit River. In the last 5,000 years, only floodwaters from Skagit River have flowed to Padilla Bay and since the late 1800s, the construction of dikes has artificially reduced input from the Skagit River. A number of sloughs deliver freshwater to the bay (e.g., Joe Leary Slough and Indian Slough), and some of these sloughs are experiencing water quality problems such as low dissolved oxygen, high levels of fecal coliform, high temperatures, and low and high pH excursions (Ecology 2008 and 2010b, Smith et al. 2009).

Currently, Padilla Bay is a shallow bay with exposed mudflats on out-going tides. Intertidal flats cover approximately 75 percent of the surface area of the bay with the other 25 percent consisting of a system of dendritic channels that distribute and drain the semi diurnal tides (Bulthuis 2003). Hat Island, on the western edge of Padilla Bay, straddles the contrasting topography with eelgrass covered intertidal flats on one side and deep waters on the other side.

Existing Land Use and Cover

Agriculture surrounds the bay to the south, east and west with a few small areas of forested areas that are bisected by single family residences, roads and agricultural uses. Habitat conditions within and adjacent to Padilla Bay mostly include non forested habitat with less than 5 percent forested area surrounding the bay (Smith et al. 2009). A coarse estimation of shoreline modifications indicated that approximately 95 percent of Padilla Bay has extensive modifications that are comprised mostly of dikes and riprap (DNR 1998a).

Water Quality

The shallow nature of Padilla Bay results in naturally warm temperatures in the summer. Warm water temperatures, as high as 23 degrees Celsius, have been documented in Padilla Bay (Bulthuis 1993). Low dissolved oxygen levels have also been recorded with 4 percent of the samples below 6mg/L in August and 6 percent below the standard in September of 1985 to 1986 (Bulthuis 1993). Because the warm water temperatures appear to be natural and low dissolved oxygen levels are few, water quality in Padilla Bay is tentatively rated “good” in the salmonid limiting factors report for the watershed (Smith et al. 2009).

Several sloughs input freshwater to Padilla Bay: Joe Leary, No Name, Big Indian, Little Indian, and Telegraph Sloughs. These sloughs have been severely impacted both in terms of access conditions (loss of habitat) and quality of habitat. Most lack shrub or tree cover and most have been ditched. These water quality problems contribute to increased turbidity, nutrients and fecal coliform levels in Padilla Bay (NOAA 2000). The sources of the water quality problems in the Padilla Bay sloughs appear to be from a combination of agricultural, urban, and industrial sources. Based on a review of aerial photographs, nearly all the riparian and marine riparian areas within the Padilla Bay area have been converted to a non-forest land use, which is unable to provide functions such as shade, bank stabilization and organic inputs.

Non-Native Invaders

Control, monitoring and research on non-native species has been part of the protection plan for Padilla Bay for long term research and education (Padilla Bay NERR 2008). One of the controversial non-native species has been smooth cordgrass (*Spartina alterniflora*)

that was introduced to Padilla Bay in the 1940s as an intentional planting by the Dike Island Gun Club (Riggs 1992). Padilla Bay began a control program that has eliminated most of the smooth cordgrass from the bay. However, seedlings appear each year from infestations in surrounding bays and require annual monitoring and control.

Another non-native plant, Japanese eelgrass (*Zostera japonica*), has become well established in the bay and has received a certain level of protection from Washington State agencies (Bulthuis 2003). Padilla Bay is the location of one of the early introductions of Japanese eelgrass and recent mapping projects indicate that it is spreading into areas that had been covered by the native species of eelgrass (Padilla Bay NERR 2008). Little research has been done regarding the interaction of the two species.

A non-native species that has been moving north up the west coast is the European Green Crab, (*Carcinus maenus*) (Yamada and Randall 2006, Bulthuis 2003). Padilla Bay has joined several other National Estuarine Research Reserves, including South Slough in Oregon and Elkhorn Slough in California in a pilot invasive crab monitoring project (Bulthuis 2003). Replicate trays with appropriate habitat for crabs are set out and collected every three months, and sizes and numbers of native and non-native crabs determined. The project is still in progress, but the European Green Crab has not reached Padilla Bay yet although it has been found in Oregon and California (Yamada and Randall 2006, Bulthuis 2003).

2.6.2 The Skagit River & Skagit Bay

The Skagit River is the largest Puget Sound river system and enters Puget Sound near Whidbey and Camano Islands. The Skagit River produces the most salmonid and salmonid stocks in Puget Sound including all five species of Pacific salmon (e.g., Chinook (*Oncorhynchus tshawytscha*), chum (*O. keta*), coho (*O. kisutch*), pink (*O. gorbuscha*), and sockeye (*O. nerka*) salmon) as well as other salmonids and char such as cutthroat (*O. clarkii*), steelhead (*O. mykiss*), and bull trout (PWA and Skagit Systems Cooperative 2004). The Skagit River discharges approximately 39% of total sediment and 20% of freshwater input into Puget Sound (Downing 1983).

Skagit Bay is located at the southern edge of the Skagit River delta and is a ten mile long by four mile wide shallow estuary, with most depths ranging 0 to 5 feet below Mean Sea Level (MSL). The main stem of the Skagit River splits at Fir Island (river mile 9.5) into the North and South Forks of the Skagit River before entering Skagit Bay. The construction of dikes around the perimeter of Fir Island has altered wildlife habitat and disconnected pathways of freshwater and sediment delivery to Skagit Bay mudflats and intertidal areas.

Existing Land Use and Cover

Agriculture is the dominant land use surrounding Skagit Bay along with some single unit residential areas on Whidbey and Camano Islands to the west and a Washington Department of Fish and Wildlife (WDFW) wildlife refuge at the mouth of the South Fork of the Skagit (Ecology 2002). Commercial and recreational shellfish harvests are also conducted in Skagit Bay. Agricultural areas are primarily drained by slough and ditches with tide gates and pump stations to prevent flooding from high tides and high surface water flow. Based on a review of aerial photographs, the majority of marine riparian

areas adjacent to Skagit Bay have been converted to non-forested cover, with associated decreases in functions such as shade, bank stabilization and organic inputs.

Water Quality

Water quality within the lower Skagit River and Skagit Bay has been degraded by development, agriculture and wastewater impacts. Elevated levels of nutrients and chronic levels of lead and copper have been documented in the lower main stem Skagit River. Most of the lower Skagit tributaries have very warm water temperatures in the summer months in addition to elevated nutrients, low dissolved oxygen levels, and increased turbidity. Skagit Bay and several freshwater tributaries exceed Washington State's surface water quality criteria for dissolved oxygen and fecal coliform and are listed on the 2008 303 (d) impaired water body list (Ecology 2008).

Non-Native Invaders

Smooth cordgrass (*Spartina alterniflora*) was introduced to north Puget Sound in the 1940s and again in the 1960s to control eroding shorelines and to serve as cattle forage (Riggs 1992; Dept. Agriculture 2000). Removal efforts have occurred throughout Skagit Bay with particular focus on a large colony at the southern end of Skagit Bay (Dept. of Agriculture 2000). However continued monitoring and effort is needed to control the spread of smooth cordgrass (Smith et al. 2009).

2.6.3 The Swinomish Channel

The Swinomish Channel is a navigable man-made cut through what was once a complex of mud flats, salt marshes and shallow tidal sloughs referred to as the "Swinomish Slough" (Hood 2004). A proposed U.S. Army Corps of Engineers (Corps) dredging and diking project, to make the Swinomish Slough into an inland passage, was approved by Congress in 1892. The project was completed in 1937.

The 11 mile long channel connecting Padilla Bay on the north with Skagit Bay on the south provides an alternate route to Rosario Strait for fishing boats, tugs, recreational craft, and shallow draught freight vessels heading north from Saratoga Passage or south from Bellingham Bay or Padilla Bay. The new channel separated the area now known as Fidalgo Island from the mainland. Historically, funded through the Corps' annual budget, the channel has been dredged every three to four years to an authorized depth of 12 feet below mean lower low water to keep the channel open for vessels and prevent boats from running aground (Bach 2010).

Prior to 2012, the channel was last dredged in 2008. A Swinomish Channel sedimentation study commissioned by the Port of Skagit County determined that the channel would reach depths of minus 2 feet by 2015 in Padilla Bay and by 2019 in Skagit Bay (Coastal Geologic Services 2010a, 2010b). The Army Corps of Engineers received funding to dredge the Channel to 12 feet in 2012 and successfully completed the dredging.

2.7 Existing Land Use and Cover

Existing land use for a majority of the channel is mapped as agricultural in the northern and eastern areas and as urban commercial for the Swinomish Tribe in also in the northeastern end of the channel, and (Town of La Conner) in the south end (Ecology 2002). A small area

of the western shore is mapped as mixed forested. However, from a review of aerial photographs, the forested area is bisected with roads and cleared areas.

Water Quality

Swinomish Channel is listed on the 2008 Water Quality Assessment as a Category 5 – Polluted Waters/303d List impaired water body for tissue level exceedances for Benzo(a)anthracene and Chrysene. The area mapped as impaired is adjacent to the agricultural areas north of the Town of La Conner (Ecology 2009 and 2008). Shellfish in the Swinomish Channel were sampled for metals and organic compounds, and elevated levels of tributyltin and Polycyclic Aromatic Hydrocarbons (PAHs) were found (Johnson 2000). Potential sources of pollutants are runoff from adjacent agricultural areas as well as marinas and boat traffic.

The Town holds a National Pollutant Discharge Elimination System (NPDES) permit for their publicly owned treatment works (POTWs) (i.e., wastewater treatment plant) which discharges to the Swinomish channel at the Morris Street end, after harmful organisms and other contaminants have been removed from the wastewater.

Non-Native Invaders

Smooth cordgrass (*Spartina alterniflora*) was introduced to north Puget Sound in the 1940s and again in the 1960s to control eroding shorelines and to serve as cattle forage (Riggs 1992, Dept. Agriculture 2000). Removal efforts have occurred throughout the watershed including approximately 2.75 acres of the Swinomish Channel in 2000 (Dept. of Agriculture 2000). However continued monitoring and effort is needed to control the spread of smooth cordgrass (Smith et al. 2009).

See Appendix B, Sections 4.0 and 5.0, for detailed discussions of physical and biological features and processes within the Swinomish Channel.

2.8 Physical and Biological Features in the Vicinity of the Swinomish Channel

Climate

The climate in the vicinity of the Town of La Conner is generally mild with approximately 33 inches of annual rainfall and average monthly temperatures ranging from 40 degrees Fahrenheit (°F) in January to 63 °F in August with the frost free season beginning in late April and the first frost occurring around mid to late October (NOAA 2002).

Geology

The project area is located within the northern portion of the Puget Lowland Physiographic Province. The Puget Lowland physiographic province consists of a broad, low lying region of subdued topography situated between the Cascade Range to the east and the Olympic Mountains to the west.

Geology in the project vicinity is mapped on the 7.5 minute Utsalady Quadrangle (Dragovich et al 2004) and the 7.5 minute La Conner Quadrangle (Dragovich et al 2000).

The surficial geologic units within the project vicinity consist of near-shore deposits, Skagit River alluvium, beach deposits, marsh deposits, Vashon age glacial till, Vashon age advance glacial outwash, Glaciomarine drift, sedimentary conglomerate bedrock, and Metasedimentary bedrock.

Nearshore deposits (Qn) are Holocene in age and include estuarine or tidal flat deposits composed of fine sand silt and clay and locally includes flood deposits marsh or peat deposits. Beach deposits (Qb) are Holocene in age and characterized as loose poorly graded sand and gravel along shorelines typically well rounded, locally include shell fragments. Marsh deposits (Qm) are Holocene in age and characterized as soft to stiff gray silt and silty clay, commonly with lenses and layers of peat, muck and other organic material. Locally includes up to 5-inch thick layers of white to cream colored volcanic ash. Poorly graded sand and gravel observed along shorelines are typically well rounded and locally include shell fragments.

Skagit River Alluvial deposits (Qas) within the project area are Holocene in age and generally consist of stratified poorly graded fluvial deposits of sand, with silt and clay and contain lesser sandy gravel, cobbles and/or gravel.

Glacial till (Qgt) deposits mapped in the project vicinity are Pleistocene in age and consists of dense to very dense, non-sorted mixture of clay, silt, sand, gravel, cobbles and boulders. The upper 2 to 5 feet is often weathered, and the consistency can range from medium dense to dense. The till was deposited and consolidated by several thousand feet of ice.

Advance outwash (Qga) deposits mapped in the project vicinity are Pleistocene in age and generally consist of dense to very dense, stratified, clean to silty sand with variable quantities of gravel and occasional layers or lenses of clay and silt. The Vashon advance outwash was deposited by meltwater streams flowing from the advancing Vashon lobe of the Fraser glaciation. The advance outwash subsequently was overridden consolidated by several thousand feet of ice. Typically, the advance outwash is highly permeable and susceptible to erosion.

Glaciomarine drift deposits (Qgdmec) mapped in the project vicinity are Pleistocene in age and characterized as a silt and clay-rich unit with few or no dropstones. Glaciomarine drift is light yellow-brown and blocky and stiff when dry and dark brown to grayish blue and soft when moist or wet. It locally has vertical jointing or desiccation cracks.

Conglomerate bedrock (Ecb) mapped in the project vicinity is Oligocene to Eocene in age and characterized as yellowish brown, subangular to subrounded, moderately spherical to elongate, pebble and cobble conglomerate; typically massive to locally very thickly bedded. The unit contains lesser interbeds of brownish gray or yellowish brown pebbly sandstone to sandstone, reddish gray siltstone, and minor diamictite and coal; reddish brown to yellowish brown color due to iron oxide staining.

Metasedimentary rocks (KJmsg) mapped in the project vicinity are Cretaceous to Jurassic in age and characterized as non-foliated to foliated or cleaved metamorphosed sandstone with lesser greywacke, siltstone or argillite, conglomerate, minor chert, and rare marble pods and very poorly sorted conglomerate/breccia.

Fish and Wildlife Habitats

Marine Beaches and Tidal Areas

Approximately 72 percent of intertidal habitat within the Skagit delta has been lost and dikes have isolated much of the historic delta habitat (Smith et al. 2009, Ecology 2011b). Further impacts that have resulted in loss of beach and tidal areas include ditching, channelization and filling (Smith et al. 2009). The loss of estuarine habitat has been extensive throughout the Skagit, Samish and Padilla shorelines, mostly due to diking, which has isolated former estuarine habitat (Smith et al. 2009). Further losses have occurred as the isolated habitat is ditched, drained, or filled to convert estuarine habitat into agricultural land.

The Swinomish Channel is a manmade channel and therefore has been greatly impacted by shoreline modifications. More than 30 percent of the segments along the channel have an extensive level of modifications, with most comprised of riprap followed by landfill (dikes) and bulkhead impacts (Smith et al. 2009). The Swinomish Channel also has large numbers of overwater structures, including two road crossings (three bridges), a railroad trestle, boat ramps, marinas, piers, and slops (Smith et al. 2009).

Eelgrass and Kelp Beds

Due to site and topography conditions Padilla Bay has one of Washington's largest area of eelgrass (*Zostera marina*), estimated to be approximately 8,000 acres in size (Ecology's Padilla Bay website). Padilla Bay eelgrass beds may have increased in area due to the diversion of freshwater (Skagit River) away from the bay, as eelgrass prefers saltier water (Smith et al. 2009). Eelgrass meadows are important because they provide food and shelter for a variety of species including: Dungeness crab, juvenile salmonids and hundreds of thousands of waterfowl and marine birds (Padilla Bay NERR 2008). Within Swinomish Channel, patchy eelgrass beds have been documented, particularly along the west bank (Smith et al. 2009). The historic extent of eelgrass within the Swinomish Channel is not known but dredging activities, and the presence of numerous overwater structures have likely impacted historic eelgrass beds in this area.

Wetlands

A significant loss of both estuarine and freshwater wetland habitat has occurred in the lower Skagit basin (including Skagit and Padilla Bays). Diking, draining, and filling have obliterated nearly all of the salt marsh that was once associated with Padilla and Skagit Bays. Only a small fraction of salt marsh, riverine and tidal wetlands remain. An estimated 454 wetlands have been identified in the Padilla Bay watershed, but most of these no longer have contact with streams that either provide or directly connect to salmonid habitat, and of those on Port of Skagit County property most are small at less than 1-acre (Smith et al. 2009). Currently, wetlands comprise 5 percent of the Padilla Bay/Bay View watershed, but hydric soils, potential for historic wetland areas, account for 64 percent of the watershed (Smith et al. 2009). The dredging of the Swinomish Channel through what was once a series of wetland habitat that consisted of salt marshes and shallow tidal sloughs has significantly altered wetland habitat.

Fish and Wildlife Species

Table 4-1 presents United States Fish and Wildlife Services (USFWS) and National Marine Fisheries Services (NMFS) Marine and Aquatic Listed Species in Skagit County.

Table 4-1. USFWS AND NMFS Marine and Aquatic Listed Species in Skagit County

Species	Status
Marbled murrelet (*Brachyramphus marmoratus*)	Threatened
Bull Trout (*Salvelinus confluentus*)	Threatened
Chinook Salmon (*Oncorhynchus tshawytscha*)	Threatened
Steelhead (*O. mykiss*)	Threatened
Southern Resident killer whale (*Orcinus orca*)	Endangered
Humpback whale (*Megaptera novaeangliae*)	Endangered
Steller sea lion (*Eumetopias jubatus*)	Threatened
Bocaccio (*Sebastes paucispinis*)	Endangered
Canary rockfish (*Sebastes pinniger*)	Threatened
Yelloweye rockfish (*Sebastes ruberrimus*)	Threatened

Marine Mammals

Adjacent to the Swinomish Channel in Skagit and Padilla Bays observed marine mammals include the harbor seal (*Phoca vitulina*) and the river otter (*Lutra canadnsis*) (Padilla Bay NERR 2008, Jeffries, 2000). Harbor seals use isolated sand and mud flats along tidal channels as haul-out sites for resting, grooming and sunning (Jeffries 2000). In deeper water, killer whales (*Orcinus orca*) have been observed regularly, and harbor porpoise (*Phocoena phocoena*) and Dall's porpoise (P*hocoenoides dalli*) are occasionally found in the deeper waters as well (Padilla Bay NERR 2008). It is assumed these mammal species are outside the waters of the Swinomish Channel (Padilla Bay NERR, 2008). Although, there are no harbor seal haul out sites located within the channel, haul out sites are located to the north (Padilla Bay) and south (Skagit Bay) (Jeffries 2000) and it is assumed that harbor seals may use the Swinomish channel.

Seabirds and Waterfowl

Padilla Bay

Waterfowl have been and continue to be an important component of the Padilla Bay food web (Bulthuis 2003). It is estimated that Padilla Bay contains an average of 50,000 ducks of 26 species during the winter (Padilla Bay NERR 2008). Widgeon, pintail, mallard, green-winged teal, and scoters are particularly abundant during autumn and

spring migrations, as well as a large number that over winter in the bay. The herbivorous brant (*Branta bernicla*) feed directly on the eelgrasses, with some evidence that most of one race, the High Arctic Brant, over winter in Padilla Bay rather than in Mexico as do most other brant (Bulthuis 2003 and Padilla Bay NERR 2008).

In addition to the waterfowl, two great blue heron (*Ardea herodias*) rookeries have been identified on the shores of Padilla Bay and it is estimated that more than 240 species of birds can be found at Padilla Bay (Padilla Bay NERR 2008).

Swinomish Channel

Due to the location of the Swinomish Channel, between Padilla Bay and Skagit Bay, many species of birds likely use the channel as a migration and resting area. The channel itself does not provide high quality habitat due to boat traffic, lack of food and development along the shores. However Padilla Bay is known to be an important area for seabirds and other waterfowl.

Shorebirds

Common shorebirds found in the vicinity of the Swinomish Channel include greater yellowlegs (*Tringa melanoleuca*), black-bellied plover (*Pluvialis squatarola*), dunlin (*Calidris alpine*), and western sandpiper (*Calidris mauri*).

Forage Fish

Pacific herring (*Clupea pallasi*) are a common forage fish using Padilla and Skagit Bay near-shore areas. They typically use eelgrass as a spawning substrate although this has not been observed. Surf smelt (*Hypomesus pretiosus*) and sand lance (*Ammodytes hexapterus*) also use near-shore areas of both bays for spawning. Forage fish species occupy marine and estuarine near-shore habitat and because of their role of critical prey species, including salmonids, recent attention has been paid to their conservation and protection (Penttila 2007). There are data gaps and it is not known to the extent of which forage fish may utilize Swinomish Channel (Smith et al. 2009).

Salmonids

Padilla Bay is an important migration route for juvenile Chinook, coho, pink and chum salmon (Padilla Bay NERR 2008). Skagit Bay and the Skagit River are highly productive salmonid system producing the most salmonids and salmonid stocks in Puget Sound including all five species of Pacific salmon (Chinook, chum, coho, pink, sockeye), in addition to cutthroat, steelhead and bull trout (PWA and Skagit Systems Cooperative 2004). Migrating juvenile salmon spend varying lengths of time in estuaries and eelgrass beds before moving to the North Pacific. In addition, once juvenile salmon migrate out of rivers and into estuaries, they spend time in brackish water searching out areas of appropriate salinity as they adapt to the marine environment. They use the near-shore and shallow areas to obtain food before they venture to deeper water. While there is no spawning habitat within Swinomish Channel, adult and juvenile salmonids migrate and rear throughout Puget Sound and the Strait of Georgia, which are adjacent to the Swinomish Channel (WDFW 2003).

Before construction of the McGlinn Island Causeway and Jetty, mixing of marine water from Padilla and Skagit Bays with freshwater from the North Fork Skagit River likely

created a salinity gradient in the Swinomish Channel that allowed juvenile salmon opportunity to seek out appropriate habitat while transitioning from freshwater to saltwater physiology. With construction of the McGlinn Island jetty freshwater from the Skagit River was prevented from flowing north up the Swinomish Channel so that a sharp salinity contrast has been created between the Swinomish channel and the Skagit River approximately 3000 feet south of the southern La Conner Town limits at the north end of McGlinn Island.

For migrating juvenile salmon, this salinity contrast acts as a physiological barrier, especially for Chinook salmon that are more physiologically sensitive (Hinton et al 2008, Yates 2001). Fish catch data indicate that abundance of juvenile salmonids is very low in the Swinomish Channel relative to other areas in the Skagit River delta (Yates 2001). Juvenile Chinook catch data show a steady decline from the southern end of the Swinomish Channel to zero on a northward gradient (Hinton et al 2008, Yates 2001).

Marine Invertebrates

Mussels (*Mytilus trossulus)*, oysters (e.g., Pacific oyster introduced species (*Crassostrea gigas*) and Olympia oyster – native species (*Ostrea conchaphila*)) and barnacles (*Belanus glandulus*) are common invertebrates found on hard surfaces in marine intertidal/sub-tidal areas in this part of Puget Sound. Other marine invertebrates found abundantly in mud and sand habitats of Padilla and Skagit Bays include but are not limited to: polychaete worms such as the lugworm (*Abarenicola sp*.) and Capitella, clams include the bent-nose clam (*Macoma nasuta*), the mud clam (*Mya species*) and Transenella species. Many other organisms, shrimp and crab being the most common, live on the surface probing the sediment for food or discarded material (Bulthuis 2003 and Padilla Bay NERR 2008).

Ecosystem Processes

Near-shore Marine Ecosystem Processes

The purpose of this section is to characterize near-shore marine ecosystem process that are likely to influence shoreline function within the limits of the Town's shoreline jurisdiction and to provide a framework for further analysis of impairments to these processes and possible management solutions, including restoration opportunities. To accomplish this goal, information in this section is presented primarily within a tabular format as suggested in Chapter 7 of Ecology's Shoreline Master Program (SMP) Handbook (Ecology, 2010). Organization of ecosystem processes and shoreline functions within the following tabular format generally follows guidance provided in Stanley et al. (2005) and WAC 173.26.201.

According to Ecology (2010), ecosystem processes are "dynamic physical and chemical interactions that form and maintain natural landscapes." Ecosystem processes include the movement of water, sediment, nutrients, pathogens, toxins, and organic/woody debris.

Shoreline functions, on the other hand, are the ecological services provided by the physical, chemical and biological ecosystem processes. Specific ecological functions are lumped into three general categories of functions including Water Quality, Water Quantity, and Habitat.

In the following table, each ecosystem process likely to influence shoreline function within the limits of the Town's shoreline jurisdiction is identified, as well as the specific physical structure(s) and ecological function(s) influenced by the process. Physical structures are the physical location within the landscape where these processes and functions take place and/or interact with the environment. Potential threats to these functions that may result from anthropogenic landscape alteration are also included.

Table 5-1. Nearshore Marine Ecosystem Processes and Functions

Ecosystem Process	Physical Structure(s)	Ecological Function(s)	Potential Threats
Movement of Water: • Surface water runoff • Tidal fluctuations • Currents • River flow • Precipitation • Groundwater exchange • Evaporation/ Transpiration	Swinomish channel Marine riparian Intertidal zone Subtidal zone • Slough • Wetlands* • Skagit estuary* • Padilla Bay* • Adjacent uplands	Water Quantity: • Input, retention and release of water to aquatic locations through time Water Quality: • Appropriate salinity in estuarine and brackish areas Habitat: • Habitat for aquatic species (fish, seabirds/waterfowl, marine mammals, invertebrates, submergent/emergent plants) • Habitat for aquatic prey and forage species (fish, invertebrates, plants)	• Shoreline armoring • Floodplain development • Impervious surfaces • Climate change/sea level rise • Construction of jetties and/or causeways
Movement of Sediment, Nutrients, Pathogens and Toxins: • Surface water runoff • Marine riparian vegetation • Coastal erosion • Alluvial deposition • Currents/drift cells • Beach erosion/accretion	• Marine riparian areas • Banks of the • Swinomish channel • Skagit estuary* • Padilla Bay* • Adjacent uplands	Water Quality: • Removal of excess nutrients, sediments, pathogens and toxins Habitat: • Feeder bluffs as sediment source • Marine habitats receive contributions of organic material and insects from marine riparian vegetation • Redistribution of sediments and formation of beaches • Appropriate substrates for forage fish spawning habitat • Appropriate substrates for benthic invertebrate habitat	• Dredging and filling • Agricultural runoff • Marinas and vessel traffic • Shoreline development & impervious surfaces • Shoreline armoring • Construction of jetties and/or causeways
Movement of Woody Debris: • Marine riparian vegetation • River flow • Currents/drift cells	• Marine riparian areas • Banks of the Swinomish channel • Skagit river and estuary* • Adjacent uplands	Water Quality: • Organic nutrient inputs into marine environments Habitat: • Creating and maintaining aquatic habitat for a variety of species • Natural buffering of effects from wave action on shoreline	• Removal of marine riparian vegetation • Shoreline development & overwater structures • Construction of jetties and/or causeways

Alterations to Near-shore Processes

The preceding section outlines ecosystem processes, shoreline structures and functions, and potential activities that may threaten the integrity of these functions through anthropogenic alteration. The following list of past, current and a potential future alteration to near-shore processes that may affect shoreline functions within the Town is based on the information presented above:

- Shoreline armoring
- Shoreline development, including new impervious surfaces and overwater structures
- Floodplain development
- Dredging and filling
- Levies, jetties and causeways
- Agricultural runoff
- Marinas and vessel traffic
- Climate change/sea level rise

The extent that these alterations have already affected or have the potential to affect shoreline ecological function within the Town's jurisdiction are discussed in the following sections.

Shoreline Armoring

Shorelines in La Conner have already been armored with riprap and wooden bulkheads, resulting in a modification of more than 80 percent of the total shoreline across the Town's jurisdiction, with extensive reaches of 100 percent modification (DNR 2000a, USACE 1996). Shoreline armoring can have negative effects on hydrologic and other ecological processes by limiting groundwater exchange with the marine environment, altering movement patterns of water associated with tidal currents, and altering transport of sediment, nutrients, and large woody debris (Shipman et al. 2010). These alterations ultimately affect the distribution of beaches and other important habitat structures and can indirectly affect water quality. There is currently a very limited distribution of natural sandy beaches within the Town, with most shoreline areas consisting of steep man-made banks instead (DNR 2000a).

Shoreline Development

Shoreline development refers to the collective alteration of the shoreline environment through construction of structures at or near the land water interface. This includes development activities that displace marine riparian vegetation communities, increase impervious surfaces and/or contribute to new overwater or in-water structures. Most of the shoreline within the Town has experienced a high level of historical and on-going development (DNR 2000a and 2000b, Doyle 2011, GeoEngineers 2011, Town of La Conner 2005b, 2007a, 2009b, 2010c, 2011a). Shoreline development can negatively affect ecological functions as a result of an increase in impervious surfaces, which increases surface water runoff including pollutants that may be transported in this runoff, limiting groundwater exchange, and altering drift processes that can influence the distribution of sediment, nutrients, pathogens, toxins and woody debris and therefore may affect water quality and habitat functions.

Floodplain Development

Floodplain development has the potential to alter movement of water, which can directly affect water quantity and indirectly affect water quality. Sixty-eight percent of the Town is mapped within the 100-year floodplain, but the accuracy of this mapping is currently undergoing review and on-going discussion with FEMA (GeoEngineers 2011, Town of La Conner 2009a, FEMA 2009, 2010). Consequently, all development within the town has the potential to impact shoreline ecological functions by affecting the retention and release of water during times of high river flow and precipitation (water quantity) and through absorption, uptake and removal of pollutants (water quality) that naturally occurs in undeveloped floodplains.

Dredging and Filling

The Swinomish Channel itself is a man-made cut that has been maintained through dredging activities every three to four years since it was originally completed in 1937 (Bach 2010, Grossman et al. 2007, Hood 2004). The Channel was last dredged in 2008 and the Town has expressed strong support to the USACE for ongoing dredging (Bach 2010, Town of La Conner 2010c, 2010c, 2010e), which has important economic benefits to the Town (BST Associates 2010). The effects of dredging on the natural environment are evident in the limited and patchy distribution of aquatic vegetation within the channel (DNR 2000b) as well as dominance of artificial, mixed course and mixed fine substrates in intertidal areas within the channel (DNR 1998a, 1998b). Dredging activities have the potential to artificially redistribute sediments, nutrients, pathogens and toxins, which can affect water quality and habitat conditions. In 2012, the Army Corps of Engineers receive Congressional funding to dredge the channel to a 12-foot depth.

Jetties and Causeways

The following history of construction activities associated with jetty and causeway development to maintain the Swinomish Channel is summarized from Grossman et al. (2007). A causeway was constructed between the southern end of La Conner and McGlinn Island to the south during the 1930s to protect channel navigation from flooding impacts and to block sediment input into the channel from the Skagit River. Shortly thereafter, in 1938, a jetty was built from McGlinn Island out to Goat Island and beyond to further restrict sediment input from the river into the channel.

Alteration of alluvial deposition, currents and drift patterns associated with these jetty/causeway features has altered movement of water, sediment and nutrients and has reduced connectivity between habitats. Alteration of mixing processes has impacted suitable habitat for salmon fry through impacts to salinity in the estuarine environment. As a result of salinity barriers, salmon fry leaving the Skagit River may be discouraged from accessing and using available habitat further north within the Swinomish Channel and beyond into Padilla Bay (Hinton et al 2008). This occurs in spite of the fish passage structure present in the jetty. The net drift pattern within the Swinomish Channel is from south to north. However, alteration of drift patterns resulting from jetty/causeway construction may further limit salmon and, more likely, forage fish spawning habitat within the channel due to the restriction of sediment drift into the channel and deposition that would otherwise form sandy beaches.

Agricultural Runoff

Most of the land area to the north and east of the Town is dominated by agricultural use (Ecology,2002). There is a drainage slough, located just south of Dunlap Way and North Basin Street and just north of the South Basin marina area, flowing through the Town from the east and discharging into the Swinomish Channel. This slough drains agricultural areas to the east and may be a significant source of nutrient and pollutant inputs into the channel. These inputs likely have an adverse effect on water quality. There are known elevated levels of tributyltin and various polycyclic aromatic hydrocarbons (PAHs) in the Swinomish Channel and/or organisms inhabiting the channel (Ecology 2008, Johnson 2000). These compounds, which are known to be toxic to a variety of organisms, likely, originate from adjacent agricultural activity and/or as a result of marinas and vessel traffic (see below).

Marinas and Vessel Traffic

There are two marinas within the Town (the North and South Basins), as well as numerous docks and boat moorage structures lining the Swinomish Channel. There is also extensive boot moorage at Shelter Bay to the southwest from Town. It is clear that vessel traffic and other marine boating activity dominate the shoreline and channel through town. These activities contribute generally to shoreline modifications and contribute to degradation of water quality (see above) and habitat as a result of vessel noise and pollutants.

Climate Change/Sea Level Rise

The principal effect of climate change on shoreline environments is anticipated to result from sea level rise (SITC 2010 and 2009, Skagit County 2010 and 2008, and Town of La Conner 2010a). Other effects, such as a general increase in local average high temperatures and/or changes in precipitation patterns are either too poorly understood at this point or are unlikely to have significant effects on shoreline environments at a scale and within a timeframe that can be estimated with any degree of certainty. Sea level rise may play a role in ongoing development of shorelines as existing structures may need to be modified and/or new structures constructed to meet current uses in light of a changing environment. Storm surge events are currently increasing. The intensity and frequency of storm events are likely under the current climate change modeling.

Additionally, change in average tidal elevations over time will affect both the spatial and temporal distribution of water in vertical and lateral planes at the land-water interface. This may have dramatic effects on the distribution of appropriate fish, wildlife and plant habitats, particularly in the current intertidal/littoral and supratidal/supralittoral zones. These effects could compound throughout trophic hierarchies. Areas most at risk from sea level rise include sensitive shoreline areas currently experiencing tidal inundation that could become permanently inundated as well as those areas in or above the spray zone that may at a future point experience regular tidal inundation(SITC 2010 and 2009, Skagit County 2010 and 2008).

Conditions by Reach

This section describes features and processes within each of the three reaches identified within the Town of La Conner's Shoreline Jurisdiction (Figure 2). Appendix B presents shoreline photographs.

Reach 1 – Marine Harbors, Industrial and Commercial, North of Downtown

Shoreline Reach 1 (Reach 1) is the northern most segment of the Town extending from the northern Town limits, at North Pearle Jensen Way, south for approximately 3,000 feet (0.6 miles) along the Swinomish Channel to South Basin Street. There is approximately 6000 feet of shoreline along this reach associated with the La Conner Marina's North and South Basins (owned and operated by the Port of Skagit) and the Drainage Slough outlet immediately south of Dunlap Street that drains adjacent farm fields.

Three shoreline environmental designations exist within this reach including Urban Industrial, Urban Commercial (Environment A) and Public Use (Figure 3, Town of La Conner Shorelines Map). There are no public shoreline access points along this reach. The Drainage Slough is listed as Public Use, however the slopes of the slough are steep and there are no docks or beaches along the Drainage Slough.

The direction of net shoreline drift is from south to north along all shoreline reaches; however tidal currents go both directions in the Swinomish channel. Sediments released from the Skagit River and the Drainage Slough are swept north, deposited in the navigation channel or deposited on the sandy beaches on the western shore on the Swinomish Reservation.

Along the Swinomish Channel in this reach, the upper shoreline is steep and armored with riprap from approximately the OHWM down to approximately the Mean Lower Low Water (MLLW). Below MLLW the shoreline is generally more gradually sloped and consists of soft sediments, gravel and smaller barnacle-encrusted rock (6" minus). The shorelines in the north and south basin marinas have more gradual slopes than those along the Swinomish Channel and they are composed of soft sediments. Apart from the areas immediately adjacent to the channel the shorelines are not armored with riprap.

The Port of Skagit implemented an eelgrass habitat mitigation project along the shoreline immediately north of the north basin along the Swinomish Channel. This area is identified as eelgrass habitat by the DNR Shoreline Inventory (DNR 2000a) and as green algae and salt marsh habitat by the Skagit County Intertidal Habitat Inventory (DNR 1998a). In addition, the DNR Shoreline Inventory identified eelgrass habitats within the Drainage Slough and immediately north and south of the Drainage Slough along the Swinomish Channel (DNR 2000a). These areas have not been surveyed since 2000.

The Skagit County Intertidal Habitat Inventory identified areas of salt marsh habitat in the following locations: patches along the north and south shores of the north basin marina; patches along of the north shore of the Drainage Slough, a small patch along the shoreline between the north basin marina and the Drainage Slough and along the east and south shores of the South Basin Marina (DNR 1998a). In addition, a small patch of shoreline between the North Basin Marina and the Drainage Slough was identified as supporting green algae and mixed algae were identified immediately south of the Drainage Slough (DNR 1998a).

Marine riparian vegetation in the form of a thin line of landscaped trees is present along the eastern and southern banks of the north basin marina and along the eastern bank of the south basin marina. Other marine riparian vegetation consists of various grasses and herbaceous species. At lower tidal elevations (+5 to 7 feet) the rock or rip rap is covered in rockweed (*Fucus* sp.). Above this are American glasswort (*Salicornia virginica*), sea plantain (*Plantago maritima* ssp *juncoides*), Puget Sound gumweed (*Grindelia integrifolia*), and red goosefoot (*Chenopodium rubrum*). At the upper shoreline adjacent to the road there are grasses and weeds present.

No forage fish habitats have been documented along this shoreline reach (WDFW 2011). Listed salmonid species may use this reach of the Swinomish Channel, however due to salinity barriers, salmon fry leaving the Skagit River may be discouraged from accessing and using available habitat further north within the Swinomish Channel and beyond into Padilla Bay (Grossman et al. 2007).

Shoreline structures along Reach 1 consist of docks, piers and marina slips. Along the Swinomish shoreline there are 6 structures that consist of piers that connect to floating docks. The floating docks are located approximately 50-110 feet from the OHWM and are oriented parallel to the shoreline. The La Conner Marina has 366 covered moorage slips, 131 open moorage slips and 2,400 lineal feet of dock space for overnight moorage.

Recommendations

Biological and physical features and processes are highly altered within Reach 1. Armored or altered banks, over-water structures, and a fully developed marine riparian area (all owned by Port of Skagit) are all key features of this reach. Along this reach, sediments are not forming sandy beaches, drainage from upland areas does not create dendritic channels and pocket estuaries, and marine riparian vegetation is not providing shade and a source of organic debris to the marine environment. This reach of the Town of La Conner is operated and managed as a commercial/industrial waterway and a marina and thus opportunities for restoration or conservation are limited. Opportunities for restoration include removal of old derelict isolated creosote piles and improvements as over-water structures are maintained. This could include replacement of creosote piles with concrete or steel piles, adding transparency on decking, and decreasing lighting impacts to the marine and shoreline environment.

Reach 2 – Downtown La Conner South to Sherman Boat Launch

Shoreline Reach 2 (Reach 2) is the central segment of the Town extending from South Basin Street, immediately south of the Port of Skagit marina properties, south to the Sherman Avenue boat launch (Figure 2). Reach 2 extends for approximately 3,300 feet (0.6 miles) along the Swinomish Channel.

Five shoreline environmental designations exist within this reach including Urban Commercial (Environments A and B), Historic Commercial, Residential and Public Use (Figure 3). The Historic Commercial environment is within Town of La Conner Historic District "…whose significance is related to the preserved nature of the commercial buildings primarily along the waterfront that reflect the development of this town as a 19th century center of commerce, government, transportation, agriculture and fishing" (Town of La Conner 2011b). See Section 7.0 for more discussion of the Town of La Conner Historic District. There are seven public shoreline access points along this reach including public floats at the Benton Street, Washington Street and Morris Street ends, a public boat launch at the Sherman Avenue end, and shoreline access at the Commercial and Jordan Street ends (Figure 3). Land use within Reach 2 is primarily commercial with water-enjoyment uses. The Upper Skagit Indian Tribe owns a parcel of land just north of Sherman Avenue where they dock their fishing fleet, a water-dependent use. The Upper Skagit Indian Tribe hopes to use the property for fish processing in the future, another water-dependent use.

The direction of net shoreline drift is from south to north along all shoreline reaches; however tidal currents go both directions in the Swinomish channel. Sediments released from

the Skagit River and swept north through the Swinomish Channel are deposited in the navigation channel or on the sandy beaches on the western shore on the Swinomish Reservation. These sediments accumulate at a rate of 2 feet per year at the southern end of the Swinomish Channel and 1 foot per year at the northern end of the Swinomish Channel (Coastal Geologic Services 2010a, 2010b).

Along the Swinomish Channel in this reach, the shoreline is armored with riprap from as high as 15 feet above MLLW to 15 feet below MLLW (USACE 1996). During the late summer and fall of 1993, the United States Army Corps of Engineers (USACE) installed approximately 1500 feet of bank protect along the eastern shore of the Swinomish Channel from the end of Commercial Street to the end of Center Street, excluding the area under Dunlap Dock at the end of Commercial Street. The materials used consisted of 12 inch minus graded riprap, 11/4 inch minus crushed rock and pea gravel. North of Morris Street, where resource agencies wanted to preserve fine grained mud substrate for habitat purposes, an L-shaped wood pile bulkhead, approximately 150 feet long, was constructed instead of an armored bank.

Since its installation, the bulkhead has been partially covered by a wood pile boardwalk constructed by the owner. To address fish habitat concerns, patches of flat benched areas were created along the shoreline at elevations between Mean Higher Water (MHW) and MLLW. These shallow benches provide a safe migratory path for migrating juvenile salmonids as the shallow waters are ideal for avoiding predation from below and also create habitat for prey items for young fish (e.g., copepods and amphipods).

The DNR Shoreline Inventory does not identify seagrass, kelp, sargassum or dunegrass occurring along Reach 2, however it does identify the entire reach as having patchy salt marsh vegetation, except for the last 150 feet, immediately north of the Sherman Avenue boat launch (DNR 2000a). The Skagit County Intertidal Habitat Inventory identified areas of salt marsh habitat at the end of Morris Street, areas of mixed algae south of Caledonia Street and between State and Morris Street, and areas of green algae between Morris and Washington Streets and between Douglas and Caledonia Streets (DNR 1998a). WDFW priority habitats and species maps identify turf algae occurring between State and Washington Streets and between Douglas and Sherman Avenue (WDFW 2011). “Turf Algae” refers to *Vegetated Marine/Estuarine* habitats consisting of non-emergent green, red, and/or brown algae plants growing on solid substrates (rocks, shell, hardpan) (WDFW 1999). Turf algae is not a priority habitat, but appears on PHS maps because they provide for comparatively high fish and wildlife density, high fish and wildlife species diversity, and important fish and wildlife seasonal ranges (WDFW 2008, 1999). During a kayak survey in February 2011, patches of turf algae were observed growing on rocks and other hard surfaces throughout Reach 2 (GeoEngineers 2011b).

Marine riparian vegetation is sparse along Reach 2. An area on the shoreward side of the La Conner Channel Lodge, between State Street and Center Street, (approximately 25 by 200 feet) was developed as a mitigation site. At the south end of the property a 30-foot tall conifer tree marks the location of a permit-mandated public access stairway to the shoreline. The area above the OHWM has been planted with shrubs and the shoreline below the OHWM consists of barnacle encrusted riprap and large rock (with some turf algae) with patches of muddy fine grained substrate. There are patches of shoreline along Reach 2 where over-water structures are not present and thin patches of upland are undeveloped. The upland portions of these areas make up thin vegetated marine riparian zones consisting of grasses and weeds. Below the OHWM

along these reaches rock or rip rap is covered in rockweed at lower tidal elevations (+5 to 7 feet). Above this are American glasswort, sea plantain, Puget Sound gumweed, and red goosefoot.

No forage fish habitats have been documented along this shoreline reach (WDFW 2011). Listed salmonid species may use this reach of the Swinomish Channel, however because of salinity barriers, salmon fry leaving the Skagit River may be discouraged from accessing and using available habitat further north within the Swinomish Channel and beyond into Padilla Bay (Grossman et al. 2007).

Shoreline structures along Reach 2 consist of 15 piers with associated floating docks. The floating docks are located approximately 30-130 feet from the OHWM and are oriented parallel to the shoreline. Approximately a third of Reach 2 has over-water structures right at the shoreline edge, usually consisting of buildings constructed on pilings.

Recommendations

Biological and physical features and processes are highly altered within Reach 2. Armored or altered banks, over-water structures, and a fully developed marine riparian area are all key features of this reach. Along this reach, sediments are not forming sandy beaches, drainage from upland areas does not create dendritic channels and pocket estuaries, and marine riparian vegetation is not providing shade and a source of organic debris to the marine environment. This reach of the Town of La Conner is operated and managed as a commercial/industrial waterway and thus opportunities for restoration or conservation are limited. Opportunities for restoration include removal of old derelict isolated creosote piles and improvements as over-water structures are maintained. This could include replacement of creosote piles with concrete or steel piles, adding transparency on decking, and decreasing lighting impacts to the marine and shoreline environment. Some specific locations have been identified for future nearshore and upland habitat restoration and enhanced public access including the Jordan Street end. Section 10 presents a summary of recommendations.

Reach 3 – Pioneer Point to South of Sherman Boat Launch

Shoreline Reach 3 (Reach 3) is the southern segment of the Town extending from the Sherman Avenue boat launch south to the southern Town limits (Figure 2). Reach 3 extends for approximately 1,200 feet (0.23 miles) along the Swinomish Channel.

Two shoreline environmental designations exist within this reach including Industrial and Public Use (Figure 3). The Sherman Avenue boat launch serves as a public access point to the shoreline. The area south of Sherman Avenue and east of Conner Way is also an access point for the public, not for direct physical shoreline access but for view enjoyment. Land use within Reach 3 is currently commercial (Pioneer Point Marina) with both water-enjoyment and water-dependent uses.

The direction of net shoreline drift is from south to north along all shoreline reaches; however tidal currents go both directions in the Swinomish channel. Sediments released from the Skagit River and swept north through the Swinomish Channel are deposited in the navigation channel or on the sandy beaches on the western shore on the Swinomish Reservation. These sediments accumulate at a rate of 2 feet per year at the southern end of the Swinomish Channel and 1 foot per year at the northern end of the Swinomish Channel (Coastal Geologic Services 2010a, 2010b). Within Reach 3 sediments are deposited primarily in the middle of the channel at the bend in the channel just southwest of the Rainbow Bridge and on the western

shore on the Swinomish reservation. With the orientation of the Pioneer Point Marina dock, debris drifting up the Swinomish Channel builds up between the dock and the shoreline.

Along the Swinomish Channel in this reach, the shoreline is armored with riprap from near the OHWM down to approximately 3 feet above MLLW. Below the riprap the shoreline slopes gradually and the substrate consists of fine muddy sediments with scattered rock. These gradually sloping areas, with a mixture of fine sediments and rock substrate have the potential to be serving as fish benches. These shallow benches can provide a safe migratory path for migrating juvenile salmonids as the shallow waters are idea for avoiding predation from below and also create habitat for prey items for young fish (e.g., copepods and amphipods).

The DNR Shoreline Inventory does not identify any near-shore vegetation occurring along Reach 3 (DNR 2000a). The Skagit County Intertidal Habitat Inventory and WDFW priority habitats and species maps identified a patch of mixed algae/turf algae at the south end of the reach immediately south of the Pioneer Point Marina Buildings, another patch at the north end immediately south of the Sherman Avenue boat launch, and two patches of green algae/turf algae between the Rainbow Bridge and the Pioneer Point Marina (DNR 1998a, WDFW 2011). During a kayak survey in February 2011, small patches of turf algae were observed growing on rocks and other hard surfaces throughout Reach 3 (GeoEngineers 2011b).

Marine riparian vegetation at the shoreline edge is sparse along Reach 3. There is a small patch of trees (approximately 5 trees) southwest of the Rainbow Bridge. On the southeast side of Connor Way the hillside is forested, however this patch of forest does not provide shade or water quality improvement functions for the Swinomish Channel. Other marine riparian vegetation on the immediate shoreline edge consists of a thin strip of grasses and weeds. Below the OHWM along this reach rock or rip rap is covered in rockweed at lower tidal elevations (+5 to 7 feet). Above this are American glasswort, sea plantain, Puget Sound gumweed, and red goosefoot.

No forage fish habitats have been documented along Reach 3 (WDFW 2011). Listed salmonid species may use this reach of the Swinomish Channel, however because of salinity barriers, salmon fry leaving the Skagit River may be discouraged from accessing and using available habitat further north within the Swinomish Channel and beyond into Padilla Bay (Grossman et al. 2007).

Shoreline structures along Reach 3 consist of 1 pier/platform with an associated floating dock. The floating dock is located approximately 120 feet from the OHWM and oriented parallel to the shoreline. Approximately one half of Reach 3 has over-water structures.

Some buildings and pier/dock structures associated with the Pioneer Point Marina have been demolished in the past two years (Figure 2). The Pioneer Point Marina owner, who leases the land from the Town, was planning to rebuild immediately but replacement structures have yet to be built.

Recommendations

Biological and physical features and processes are less altered within Reach 3 compared to the other Reaches. Altered natural features of Reach 3 include armored banks, over-water structures, and a developed marine riparian area however the forested hill south of the Rainbow Bridge and the presence of fish benches immediately south of the Sherman Avenue boat launch provide valuable habitat for fish and wildlife. Due to bank armoring and past human cut and fill

actions along this reach, sediments are not forming sandy beaches, drainage from upland areas is not creating dendritic channels or pocket estuaries, and marine riparian vegetation is not providing shade and a source of organic debris to the marine environment. This reach of the Town is operated and managed as a commercial waterway (marina), however there are some opportunities for restoration/conservation. Opportunities for restoration cited in Appendix B include the same creosote pile replacements and maintenance upgrades listed in Sections 6.1 and 6.2. In addition, the fish benches south of the Sherman Avenue boat launch could be enhanced to provide more habitat for migrating fish, and marine riparian vegetation in the form of shade producing trees and shrubs could be planted along this portion of Conner Way. Section 9 presents a summary of recommendations.

LAND USE WITHIN SHORELINE PLANNING AREA

Historic Land Use

Prior to the arrival of settlers in the mid-1850s, the area around the site of present day La Conner was inhabited the southern Northwest Coast Salish peoples. Several villages were known to be located on the west side of the Slough (ERCI 2011). La Conner was established by settlers as a trading post in 1867, and became the first county seat for Skagit County in 1883. While it was the largest community in the county, Mount Vernon was designated the county seat in 1884. La Conner's location on the Swinomish Slough made it an important hub of shipping and transport, supporting the numerous agricultural activities in the area. The slough was navigable at high tide to shallow draft steamers, and provided a safer route for vessels to travel between Whatcom County to the north and Seattle to the south.

The Corps of Engineers began diking and dredging the Swinomish Slough in 1892 in order to provide a waterway between Skagit and Padilla Bays that would accommodate commercial and recreational vessels without having to depend on tides for access. The dredging project was completed in 1935. To this day the Swinomish channel provides a generally quieter route for vessels traveling to or from the San Juan Islands and regions north to Everett, Seattle and regions south. The presence of the channel has led to the development of a marine-based infrastructure including marinas, docks for transient moorage, marine repair, fish processing and other businesses.

In the late 1800's and early 1900's, La Conner flourished as a town due to its location, which provided means of transport for agricultural products from the fertile Skagit Valley and supplies to support these activities. The development of railroads and highways eventually led to a decrease in the local importance of the Town as Mount Vernon and Burlington gained population and prominence in the county.

Current Land Use

Today, La Conner continues to support marine uses, including marinas, commercial and recreational boating, fishing vessels, and public enjoyment of water views from retail businesses and restaurants. Tourism is an important contributor to the Town economy, with average daily visitation estimated at 1,400 people. The latter is very important to supporting tourism in the Town. Most of the Town's tourist area is located in La Conner Historic District 45DT12, which is bound by the Swinomish Channel to the west, Commercial Street on the South, Whatcom Street on the east and Morris Street on the north. The Historic District is

characterized by many preserved buildings that reflect the commercial, transportation and agricultural roots of the Town (ERCI 2011).

La Conner shoreline zoning designations are listed and mapped on Figure 3. Public open space and access to the waterfront is provided at several street ends along First Street. In addition, several restaurants and businesses and a hotel along First Street have shoreline decks and/or views of the channel that are open to the public. There is an existing boardwalk along the channel on private land with public easements that is privately maintained. Section 6.0 above provides detailed description of the shoreline uses and structures located along the channel reaches.

Public access and public lands are present throughout the shoreline jurisdiction, and are described in Table 7.1 below.

Table 7.1. Current and Proposed Public Shoreline Parks Access Points

Park	Features	Proposed Future Improvements
Sherman Street End	Public boat launch, trailer parking	
Caledonia Street End	Undeveloped, DNR waterfront lease	
Commercial Street End	Undeveloped. View of Rainbow Bridge	Boardwalk connection to Street-end parks
Calhoun Street End	Public Moorage, Dirty Biter Waterfront Park	Boardwalk connection to Street-end parks
Benton Street End	Public moorage, waterfront viewing	Boardwalk connection to Street-end parks
Washington Ave End	Public moorage, information kiosk, waterfront viewing	Boardwalk connection to Street-end parks
Gilkey Square/Morris Street End	Waterfront viewing, open space	Boardwalk connection to Street-end parks
Kirsch Building	Overwater platform adjacent to Jordan Street End	Develop a facility and use plan for the Kirsch building for waterfront boardwalk connection and boating (2012)
Jordan Street End	Undeveloped waterfront lot	Develop a usage plan for the site as a recreation facility, picnic, parking and water access (2012).
1St Street ROW	Between Commercial and Caledonia, undeveloped being used for parking	
Conner Way	Open space waterfront beneath Rainbow Bridge	
Waterfront Boardwalk		Engineering and planning for connecting the street-end parks and Pioneer Park with a waterfront boardwalk (2012)

Source: Town of La Conner Six-Year Capital Facilities Plan 2011-2016 (Town of La Conner 2010b)

Transportation

Major roads and transportation facilities in the La Conner shoreline jurisdiction include First Street through the Town, Conner Way adjacent to the Swinomish Channel to the south, and marine traffic in the Swinomish Channel itself. Morris Street is the main arterial into town, and connects to First Street, which is the primary destination for most tourists visiting La Conner's

shops, businesses and restaurants. The street network in the Town is comprised of arterial street, collector streets and local access streets.

Wastewater and Stormwater Utilities

La Conner owns, operates, and maintains a domestic wastewater collection and treatment system, and most of the Town has sanitary sewer service. The Wastewater Treatment Plant is located east of La Conner, on the south side of Chilberg Road and discharges into Sullivan Slough.

Most of La Conner is at sea level and has for many years experienced localized flooding during modest storm events. The flooding is due to the town's geography, its proximity to the Swinomish Channel, its high water table and the configuration of the existing stormwater system (Town of La Conner 2011 Capital Facilities Plan). Currently stormwater from the Morris Street area in the shoreline jurisdiction is collected and routed to the water treatment facility on Chilberg Road. The treatment facility consists of a settling pond and infiltration pond.

NATURAL RESOURCE LANDS AND CRITICAL AREAS WITHIN SHORELINE PLANNING AREA

In Puget Sound, the Growth Management Act (GMA) requires local governments to designate natural resource lands and critical areas (RCW 36.70A.170), and to adopt regulations to conserve natural resources areas and protect critical areas (RCW 36.70A.060). The Town has employed provisions of the State Environmental Policy Act (SEPA) and *Title 15, Division III - Critical Areas and Natural Resource Lands Protection* (LCMC 15.60 to 15.70) to protect natural resource lands and critical areas during development review processes.

The GMA defines three types of non-critical area natural resource lands, as follows (RCW 36.70A.170):

1) Agricultural lands that are not already characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products;
2) Forest lands that are not already characterized by urban growth and that have long-term significance for the commercial production of timber;
3) Mineral resource lands that are not already characterized by urban growth and that have long-term significance for the extraction of minerals; and

The Town of La Conner does not contain agriculture, forest or mineral resource lands; however there are adjacent agricultural lands, defined as "All lands inside town boundaries that are within 25 feet of agricultural resource lands." (LCMC 15.65.020(3)). "The environmentally sensitive area overlay district is a mechanism by which the town of La Conner recognizes the existence of natural conditions which affect the use and development of property. The regulations are to protect environmentally sensitive areas…(and) to prevent encroachment on any adjacent agricultural lands of long-term significance." (LCMC 15.65.010)

The GMA (RCW 36.70A.030(5)) and the La Conner Uniform Development Code (LCMC 15.65.020) define five types of Critical Areas, as follows:

(1) Wetlands,

(2) Critical Aquifer Recharge Areas (CARAs) defined as areas with a critical recharging effect on aquifers used for potable water),

(3) Fish and wildlife habitat conservation areas,

(4) Frequently flooded areas, and

(5) Geologically hazardous areas.

?Wetlands

Two freshwater Palustrine emergent semi-permanently flooded wetlands (PEMC) have been identified by the National Wetlands Inventory (NWI) in the southeast corner of the Town (Figure 4) (USFWS 1998). These wetlands are outside of the shoreline management area.

NWI identifies the north and south basins of the La Conner Marina as estuarine, sub-tidal, unconsolidated bottom, excavated wetlands (E1UBLx) (USFWS 1998) (Figure 4).

Critical Aquifer Recharge Areas

No CARAs have been identified within the Town.

Fish and Wildlife Habitat Conservation Areas

WDFW provides guidelines for designating Fish and Wildlife Habitat Conservation Areas as follows:

- Habitat associated with endangered, threatened, and sensitive species
- Habitats and species of local importance
- Commercial and recreational shellfish areas
- Kelp and eelgrass beds; herring and smelt spawning areas
- Ponds, waters of the state, and those planted with game fish
- Naturally occurring ponds smaller than 20 acres and their submerged aquatic beds
- Natural area preserves and resource conservation areas
- Land essential for preserving habitat connections

Within Reach 1, the Port of Skagit implemented an eelgrass habitat mitigation project along the shoreline immediately north of the north basin along the Swinomish Channel. This area is identified as eelgrass habitat by the DNR Shoreline Inventory (DNR 2000a) and as green algae and salt marsh habitat by the Skagit County Intertidal Habitat Inventory (DNR 1998a).

As stated in Section 6, no forage fish habitats have been documented along the La Conner shoreline (WDFW 2011). Listed salmonid species may use the La Conner shoreline, however because of salinity barriers, salmon fry leaving the Skagit River may be discouraged from accessing and using available habitat within the Swinomish Channel (Grossman et al. 2007). The presence of fish benches at various locations along the Town's shoreline provide potential valuable habitat for fish and other marine biota.

There are no recorded priority species or habitats within the La Conner Town Limits (WDFW 2011).

Frequently Flooded Areas

The Town of La Conner is within the Skagit River 100-year floodplain, however no parts of the Town experience flooding from the Skagit River (FEMA 2010, 2009). There are three relatively low elevation areas within the Town that do experience localized tidal storm surges, including the Sherman Avenue boat launch, and Caledonia and Washington Street ends. The Town currently deploys sandbags and containment materials at these locations from January to April, the period when these winter storm surges occur (Town of La Conner 2003b).

FEMA is currently developing a coastal risk assessment for shorelines, in an attempt to assess and inventory risks associated with sea level rise and tidal/storm surges (FEMA 2011).

Geologically Hazardous Areas

There are regulated slopes within Reach 2 in downtown La Conner and within Reach 3 adjacent to the Rainbow Bridge (Figure 4) in Pioneer Park.

La Conner is located within the Lahar zone for Mount Baker (Dragovich et al 2000). Low elevation/flat parts of the Town are situated on top of Holocene nearshore deposits composed of fine salt, silt and clay (Dragovich et al 2000). In addition, these loose and soft nearshore deposit soils are often saturated because within the Town groundwater levels are directly related to tidal elevations, making them an area of liquefaction risk.

2.9 Conclusions and Recommendations

2.9.1 Future Development Potential and Impacts

The Town's shoreline management area is already heavily developed as a commercial/industrial waterfront. Some buildings, piers and docks associated with the Pioneer Point Marina were demolished in the last two years and there is future potential for proposals to redevelop the marina in those locations (Figure 2). There is a current proposal for expansion of the Town's waterfront boardwalk from Commercial Street to Jordan Street (La Conner 2011a). The Upper Skagit Indian Tribe recently conducted improvements on their pier and floating docks at the La Conner Pier facility just north of the Sherman Avenue boat launch. The Tribe hopes to expand operations at that location to a full fish processing facility. Potential negative impacts to the environment from the above projects may include an increase in over-water structures (or replacement of previously demolished structures) and increased boat traffic (affecting noise and water quality).

2.9.2 Opportunities for Restoration of Impaired Processes/Habitats

The following table presents threats or impact caused by physical structures or actions and lists potential remedies for these issues.

Table 9-1. Shoreline Zone Habitats and Ecosystem Processes with Potential for Restoration

Physical Structure or Action Causing Threat/ Impact	Ecological Process/ Function Interrupted	Potential Threats	Potential Remedy
Shoreline Armoring	Currents reduced hydraulic complexity Natural bank erosion and sloughing (sediment source) Sediment accretion (deposition) along the shoreline	Loss of fast and slow moving micro-habitats that support a more diverse array of marine biota Loss of soft sediment shallows with a potential for eelgrass colonization Loss of beaches and pocket estuaries	Not feasible to remove armoring with structures located immediately adjacent to the shoreline Implement softened bank treatments in areas where structures are not at immediate risk (e.g., immediately south of Sherman Avenue boat launch) Create fish benches below armoring and above MLLW
Creosote Piles or Structures	Reduces surface area of benthic nearshore marine habitat	Water quality and sediment contamination	Remove old structures that are no longer serving a purpose Replace structures made of creosote with concrete or steel as maintenance occurs

Physical Structure or Action Causing Threat/ Impact	Ecological Process/ Function Interrupted	Potential Threats	Potential Remedy
Over-water structures	Reduces sunlight and potential photosynthesis (base of food chain)	Shading	Make all new overwater components at least 50% grated, with at least 60% functional open space for the grating
	Physical interruption of currents, sediment transport and fish migration	Benthic habitat impacts from piles	Use fewer piles (steel or concrete) or cantilever out from existing structures
		Light impacts (at night)	Reduce light impacts by using LED lights for ankle or waist height lighting, fully shielding overhead lights with shades that avoid illumination of the surrounding environment, and focus night lighting on the dock surfaces only, not on the water.
Channel Dredging	Deeper channel (12 feet) has impact on currents, shoreline sediment transport and fish migration.	Deeper water harbors fish predators – risk to young migrating fish	Create fish benches below armoring and above MLLW

Physical Structure or Action Causing Threat/	Ecological Process/ Function Interrupted	Potential Threats	Potential Remedy
Removal of marine riparian vegetation	Loss of over-hanging vegetation and recruitment of large woody debris (LWD) Loss of shading	Loss of habitat from roots, branches, and shade regimes. Loss of small organic material and LWD inputs Increased temperatures and lower dissolved oxygen levels	Plant shrubs and trees where possible along shoreline

2.9.3 Opportunities for Increased Recreation/Public Access

As mentioned in Section 6, the Town has at least 9 existing public access points, both for direct access to the shoreline (beach access) or water (public float), and for public viewing of the shoreline (access to areas immediately adjacent to the shoreline with a view). Public access points with potential for future improvement include the Jordan Street end and along the northwest side of Connor Way (under the Rainbow Bridge).

Chapter 3 – Shoreline Vision, Goals and Policies

3.1 Shoreline Vision
3.2 General Goals and Policies for Master Program Elements
3.3 Shoreline Goals and Policies by Element

3.1 Vision

The Town's Vision for its shoreline is a working waterfront, historic district, cultural and recreational asset that assures no net loss of the existing ecosystem functions, makes the most of limited restoration opportunities, improves physical and visual public access, and increases public understanding of the relationship of the Town's shoreline to the larger ecosystem of Skagit and Padilla Bays and the Puget Sound.

The Town of La Conner's history, economic livelihood, and sense of place are defined by its position on the eastern shoreline of the Swinomish Channel. Although once a part of a system of tidal sloughs, salt marshes and mudflats, since 1937 the Swinomish Channel has been a navigable, man-made, inland passage connecting Padilla Bay to the north with Skagit Bay to the south. The U.S. Army Corps of Engineers periodically dredges the channel to maintain navigability for fishing boats, tugs, recreational watercraft and shallow-draught freight vessels to access Puget Sound.

Ongoing dredging, historic shoreline armoring, over-water structures and the scouring action of tidal currents and storm surges are major factors shaping the ecosystem that exists along the Town's shoreline. These factors, together with the lack of freshwater inlets or beach accretion, means that the Town's shoreline does not provide spawning habitat for salmon, steelhead, herring, smelt or other fish. Portions of the Channel do however provide a migratory corridor and rearing habitat for these fish species as well as a migratory corridor and foraging habitat for harbor seal, river otter, bald eagle, heron, and various waterfowl. It is these shoreline ecological processes and functions, however limited, which must be protected.

3.2 General Goals and Policies for Master Program Elements

A. Goals

1. Protect shoreline natural resources by ensuring that future use and development of the shoreline will not result in a net loss of shoreline ecological processes and functions.
2. Undertake restoration opportunities to improve shoreline ecological functions and ecosystem-wide processes where feasible.
3. Promote physical and visual public access to the greatest extent feasible and provide opportunities for interpretation and understanding of the natural character and ecosystem values of shorelines of the state.

4. Encourage shoreline uses in descending order of preference as follows:

    a. Water-dependent uses;

    b. Water-related uses; and

    c. Water-enjoyment uses.

5. Ensure that proposed shoreline uses do not infringe upon the rights and reasonable expectations of adjacent property owners.

6. Ensure consistency between the Shoreline Master Program and the Town of La Conner Comprehensive Plan pursuant to RCW 36.70A.480.

B. Policies

1. Encourage restoration of shoreline areas that have been degraded or diminished in ecological values and functions as a result of past development activities, or catastrophic events.

2. Plan for and implement the acquisition of land for permanent fee-simple public access to the shoreline and where feasible and appropriate acquire public access easements as a condition of development of shoreline properties.

3. Priority should be given to "water-dependent," "water-related," and "water-enjoyment" uses. Uses that derive no benefit from a water location (e.g., non-water-oriented uses) should be discouraged, unless there are overriding public interests consistent with the Policies of this program and the Shoreline Management Act.

4. Encourage the redevelopment and renewal of urban shoreline areas in order to make maximum use of the available shoreline resource and opportunities for restoration and incremental improvements to water quality.

5. The construction of over water structures in any shoreline environment should result in no net increase in the amount of shade that falls on the surface area of the Swinomish Channel.

6. Encourage multiple and joint uses of sites and structures where compatible with water-oriented uses, for maximum utilization of the existing developed shoreline.

7. Dredging and filling activities should be conducted with minimum impact on marine habitat in the Swinomish Channel and authorized by appropriate agencies.

8. Uses in the aquatic environment should not block navigation channels or restrict access to sections of the shoreline.

9. Actively promote aesthetic considerations by means such as sign control regulations, appropriate development siting, screening and architectural standards.
10. Engage in on-going cooperative planning between the Town, the Port of Skagit County, the Swinomish Tribe, Skagit County, state and federal agencies to protect and enhance the shoreline of the Swinomish Channel.
11. Encourage public input into the decision-making process for shoreline use.

3.3 Shoreline Goals and Policies by Element

3.3.1. Economic Development Element

A. Goals

1. Protect and encourage those economic activities which will be an asset to the Town's livelihood and which result in the least possible adverse effect on the quality of the shoreline and surrounding environment.
2. Promote healthy, orderly economic growth that takes advantage of the Town's unique history and shoreline setting.

B. Policies

1. Encourage new economic development to locate in areas already developed with similar uses that are consistent with this master program.
2. Any economic activity within the Town's shoreline management area should be constructed and operated to avoid and/or minimize harm to the quality of the environment of the site, the Swinomish Channel or adjacent shorelands.
3. Developments that convey the current small town feeling by their activity, scale and design should be encouraged.
4. The natural and cultural attributes that have made the Town economically stable should be protected.
5. Before new commercial/industrial development is permitted within the shoreline, proponents should demonstrate that upland areas are not feasible for the intended economic activity.

3.3.2 Public Access Element

A. Goals

1. Provide, protect and enhance a public access system that is physical and visual, utilizing, but not limited to, lands that increase the amount and diversity of public access to the state's shorelines and adjacent areas, and is consistent with the character of the natural shoreline, private rights and public safety.
2. Increase the public's ability to view, reach, touch and enjoy the water's edge.

B. Policies

1. Connect waterfront access points with one another where feasible through the development and implementation of a plan to provide a waterfront "boardwalk" from North First Street to Pioneer Park.

2. Develop and implement a comprehensive public access plan that incorporates public access into new shoreline development and unifies individual public access elements into an organized system which could provide a unique physical and visual access to the waterfront, benefit navigation in the channel, provide wave protection to existing structures, and enhance fire protection.

3. Public access should be considered in the review of all private and public developments (including land division) with the exception of the following:
   a. Existing dwelling units.
   b. Where deemed inappropriate due to health, safety and environmental concerns.
   c. In the Residential Environment which lies east of 3rd Street.

4. Public access should be provided as close as possible to the water's edge without adversely affecting a sensitive environment and should be safely accessible to physically disabled persons.
5. Public access afforded by shoreline street ends, public utilities and rights-of-way should be preserved, maintained and enhanced.
6. Public access should be designed to provide for public safety and to minimize potential impacts to private property and individual privacy.
7. There should be a physical separation or other means of clearly delineating public and private space in order to avoid unnecessary user conflict.

3.3.3 Recreational Element

A. Goals

1. Increase substantial recreational opportunities for the public in the shoreline area.
2. Coordinate with the Town's public works department and the Skagit County Department of Parks and Recreation and the Washington State Parks and Recreation Commission to optimize opportunities for water-oriented recreation.

3. Integrate recreational elements into public access and conservation planning.
4. Consider both active and passive recreational needs of a wide range of users when planning for safe recreational areas.

B. Policies

1. The location and design of shoreline recreational developments should relate to local population characteristics, density and special activity demands.
2. Acquisition priorities should consider these needs, demands, and special opportunities as well as public transit access and access for the physically impaired.
3. Shoreline areas with a potential for providing recreation or public access opportunities should be identified for this use and, if possible, acquired by state and local governments or leased at a fair market value and incorporated into the public park or open space system.
4. The linkage of shoreline parks, recreation areas and public access points as linear systems, such as pedestrian walkways or easements should be encouraged.

5. Recreational developments should be located, designed and operated to be compatible with and minimize adverse impacts on shoreline ecological functions, environmental quality and valuable natural features as well as on adjacent and surrounding land and water uses.
6. Pathways along the shoreline should be located, designed and maintained to protect bank stability.
7. Insure that recreation developments and plans recognize the primacy of preserving natural character, resources and ecological functions of the shoreline.
8. Develop Conner Way waterfront area with camping, picnic and kayak launching facilities.

3.3.4 Circulation Element

A. Goals

1. Balance essential circulation needs with protection of the shoreline.
2. Promote provisions for various modes of travel with some freedom of choice and multiple use corridors where compatible.
3. Protect, manage and enhance those characteristics of shoreline roadway corridors that are unique or have historic significance, or great aesthetic quality, for the benefit and enjoyment of the public.

B. Policies

1. Provide safe, reasonable and adequate circulation systems to shorelines where routes will have the least possible adverse effect on unique or fragile shoreline features and existing ecological systems, while contributing to the functional and visual enhancement of the shoreline.
2. Trucks and heavy equipment should be routed around shoreline areas to the maximum extent possible.
3. New development within the shoreline jurisdiction should be required to contribute to multimodal transportation, such as pedestrian boardwalks, trails, and bicycle lanes.
4. Trail and bicycle paths should be encouraged along shorelines where they are compatible with the natural character, resources and ecology of the shoreline.

3.3.5 Shoreline Use Element

3.3.5.1 Residential Use

A. Goals

1. Strive to preserve, improve and enhance the existing housing stock, including historic structures and sites within the Historic District.
2. Achieve consistency with the historic preservation provisions of the LCMC which limit the location and extent of residential uses.

B. Policies

1. Residential development should be permitted only where there are adequate provisions for utilities, drainage, and transportation access and circulation.
2. The overall density of development, lot coverage and height of structures should be appropriate to the physical capabilities of the site and as set forth in the Uniform Development Code.
3. Liveaboard vessels should be encouraged to moor in marinas with adequate water and sanitary facilities to accommodate them.
4. Preference should be given to joint-use community piers and docks.

3.3.5.2. Commercial Use

A. Goals

1. Promote a stable and diversified economy offering a wide variety of services and employment opportunities to the citizens of La Conner.
2. Encourage economic development that conserves natural resources and open space, protects environmental quality, and enhances the community's quality of life.
3. Support La Conner as a visitor destination by preserving and enhancing the unique qualities of our community.

B. Policies

1. New commercial development located in shoreline areas should be limited to those with water-oriented uses and activities as defined herein.
2. Commercial development in shoreline areas should be encouraged in descending order of preference as follows:
   a. Water-dependent uses;
   b. Water-related uses; and
   c. Water-enjoyment uses.
   d. Non-water-oriented development that is not accessory to a water-oriented use may be allowed only as a conditional use.
3. Commercial development should be prohibited over water unless the use is water-dependent.

4. Encourage new commercial development along the shoreline to locate in those areas with existing consistent commercial uses.
5. Encourage commercial development to utilize existing transportation corridors and minimize the number of access/egress points which should be designed to minimize potential conflicts.
6. Commercial development within the shoreline area overlapping with the Commercial Transitional Zone must jointly comply with this shoreline master program and the provisions of Chapter 15.36 LCMC.

3.3.5.3 Industrial Use

A. Goals

1. All shoreline environments in which it is possible to locate industrial/office uses/activities should be restricted to water-oriented industrial/office uses (such as industrial facilities for processing, manufacturing, storage of finished and semi-finished products, wholesale/retail outlets or showrooms, warehousing and offices) and to public access.
2. Industrial uses and redevelopment encouraged to locate where environmental cleanup and restoration can be accomplished.

B. Policies

1. Industrial uses may incorporate wholesale/retail outlets or showrooms for sales of products manufactured, assembled, or produced on and warehoused on the premises provided that they occupy no more than 49 percent of the gross floor area of the industrial space.
2. Industrial or office use which is neither water-dependent nor water-related may be authorized when such use incorporates features in the site design that assure it will comply with the definition of water-enjoyment use by providing an opportunity for a substantial number of people to enjoy the shorelines of the Town.
3. Joint use of piers, cargo handling, storage, parking and other accessory facilities among private or public entities should be strongly encouraged in waterfront industrial areas.

3.3.5.4 Public Use

A. Goals

Ensure optimum utilization of existing public property and rights of way for public uses or purposes.

B. Policies

1. Shorelines owned or leased by the Town should be limited to water-dependent uses or public recreational uses, otherwise such shorelines should remain protected open space.
2. The use of shoreline street ends and publicly owned lands for public access and development of recreational opportunities should be encouraged.

3.3.6 Conservation Element

A. Goals

1. Conserve renewable resources of the shoreline.
2. Reclaim and restore degraded areas while maintaining appropriate use of the shoreline.

B. Policies

1. Maintain natural aquatic flora and fauna of the shoreline and prevent infestation of non-native invasive plants harmful to the waterway.
2. Protect the shoreline and its waters from degradation due to contaminants such as petroleum products, chemicals, heavy metals, solid or human waste, or soil sediments from erosion.

3.3.7 Historic, Cultural, Scientific and Educational Element

A. Goals

1. Identify, protect, preserve and restore important archaeological, historical, and cultural sites located in the shoreline management area of the Town for educational, scientific, and enjoyment of the general public.
2. Preserve and protect identified historic sites and structures, especially those on the National or State Historic Register.

B. Policies

1. Promote the vitality of the historic preservation district by encouraging full, active use of land and structures, including multiple or spatially overlapping uses where compatible.
2. Encourage educational projects and programs that foster a greater appreciation of the importance of shoreline management, maritime activities, maritime history and environmental conservation.
3. Areas and facilities determined to be of historic, cultural and educational value by the State Office of Archeology and Historic Preservation should be made accessible to the public.
4. Support the Swinomish Tribal Community in the recovery and disposition of any indigenous artifacts associated with the Tribe that may be identified as a result of development within the Town.
5. Protect scientific and educational purposes sites containing artifacts, by observing state law regarding notification of appropriate authorities, including the Swinomish Tribal Community.

3.3.8 View Protection Element

A. Goals

1. Protect and develop view corridors to waterways, farmlands, and scenery of the community as public land locations permit. Note: from Parks Plan Goal 3.

2. Protect the visual character of the Town's shoreline and promote opportunities to see the shoreline from multiple vantage points, both public and private.

B. Policies

1. The configuration and location of building mass in new developments on or near the shoreline should protect and enhance the public's visual access to the water.
2. Maintain existing view corridors in public rights of way and street ends to and from the Swinomish Channel and adjacent shoreland features.
3. Public views from the shoreline upland areas should be enhanced and preserved.

Chapter 4 – Restoration Planning: Assessment and Opportunities

4.1 Introduction
4.2 Restoration Planning
4.3 Goals and Policies
4.4 Plans and Programs
4.5 Restoration Opportunities
4.6 Funding
4.7 Implementation and Monitoring

4.1 Introduction

The SMA (RCW 90.58) requires a balance of potentially conflicting goals with respect to how the state's shorelines should be used, developed and managed. For example, the need to provide places for water-dependent intensive uses such as ports, marinas, and recreation must be balanced with environmental protection of the shorelines as a natural resource.

Traditionally, enhancement or other improvements to shoreline ecological functions have either been voluntary or in the form of mitigation for impacts resulting from development. The current guidelines for updating local SMPs address this deficiency by requiring local SMPs to develop goals, policies, and actions to proactively pursue and promote restoration of the shoreline environment. The governing principles of the guidelines (WAC 173-26-186) state:

> *Through numerous references to and emphasis on the maintenance, protection, restoration, and preservation of "fragile" shoreline "natural resources," "public health," "the land and its vegetation and wildlife," "the waters and their aquatic life," "ecology," and "environment," the Act makes protection of the shoreline environment an essential statewide policy goal consistent with the other policy goals of the Act* (WAC 173-26-186(8)); and
>
> *For counties and cities containing any shorelines with impaired ecological functions, master programs shall include goals and policies that provide for restoration of such impaired ecological functions* (WAC 173-26-186(8)(c)).

The guidelines to prepare or amend SMPs further states:

> *The goal of this effort is master programs which include planning elements that, when implemented, serve to improve the overall condition of habitat and resources within the shoreline area of each city and county*. (WAC 173-26-201(c))

The guidelines define "restoration" or "ecological restoration" as "…the reestablishment or upgrading of impaired ecological shoreline processes or functions…Restoration does not imply a requirement for returning the shoreline area to aboriginal or pre-European settlement conditions" (WAC 173-26-020(27)).

In terms of shoreline management planning under the current guidelines, "restoration" is focused on areas where shoreline ecological functions have been degraded from past development activities. In this context, restoration is narrowly defined but can be broadly implemented through a combination of programmatic measures (e.g., surface water management; water quality improvement; public education) and site-specific projects (e.g., restoration of subestuaries/ stream mouth deltas). The guidelines state that:

> …*master program provisions shall identify existing policies and programs that contribute to planned restoration goals and identify any additional policies and programs that local government will implement to achieve its goals. These master program elements regarding restoration should make real and meaningful use of established or funded non-regulatory policies and programs that contribute to restoration of ecological functions, and should appropriately consider the direct or indirect effects of other regulatory or non-regulatory programs under other local, state, and federal laws, as well as any restoration effects that may flow indirectly from shoreline development regulations and mitigation standards* (WAC 173-26-186(8)(c)).

It is important to note that the guidelines do not state that local programs should or could require individual permittees to restore past damages to an ecosystem as a condition of a permit for new development (Ecology, 2004). However, the Town does have the opportunity to add conditions to Shoreline Substantial Development, Conditional Use, and Variance permits to assure consistency with the SMA and local SMP regulations and policies. Likewise, the Department of Ecology may place conditions on Shoreline Conditional Use and Variance permits consistent with the Town's SMP and the SMA. In cases where shoreline development will have unavoidable impacts requiring mitigation, the mitigation design could be informed by and coordinated with the overall SMP restoration planning objectives.

4.2 Restoration Planning

This Restoration Plan builds on the Town of La Conner Shoreline Inventory, and the Shoreline Inventory and Characterization (Town of La Conner 2011a and 2011b) which provided a comprehensive inventory and analysis of conditions within the Town's Shoreline Environment. The comments received from stakeholders and input of the Technical Advisory Committee (Planning Commission) that reviewed this Restoration Plan have been added or addressed. The intent of this Restoration Plan is to provide local project proponents (development or restoration projects) with the guidance necessary to plan and execute a restoration project that meets No Net Loss requirements, improve shoreline ecological functions, and be consistent with community and stakeholder restoration goals.

The information presented in this Restoration Plan will be used as a basis for subsequent tasks associated with the SMP update process, including revisiting the Cumulative Impacts Analysis and the No Net Loss Report.

4.3 Goals and Policies

Goals

1. Improve ecological shoreline functions in key areas where beneficial restoration can be achieved without infringing upon existing water-dependent or water-related uses.
2. Prioritize degraded areas and impaired ecological functions for restoration;
3. Improve degraded areas, impaired ecological functions, and sites with potential for ecological restoration;

Policies

1. Provide local project proponents (development or restoration projects) with the guidance necessary to plan and execute a restoration project that meets No Net Loss requirements, improve shoreline ecological functions, and be consistent with community and stakeholder restoration goals.
2. Identify existing and ongoing projects and programs that are currently being implemented, or are reasonably assured of being implemented (based on an evaluation of funding likely in the foreseeable future), which are designed to contribute to local restoration goals;
3. Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies including identifying prospective funding sources for those projects and programs;
4. Establish timelines and benchmarks for implementing restoration programs and achieving local restoration goals; and
5. Provide mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review their effectiveness in meeting the overall restoration goals.

4.4 Plans and Programs

The Town has several local plans that are maintained and updated annually or periodically. Additionally, Town staff updates programmatic elements that provide technical data to update various plans. The Capital Improvements Program (CIP) and the Transportation Improvements Program (TIP) provide information annually to update the Capital Facilities Plan. The primary planning documents for the Town of La Conner are:

- *Comprehensive Plan* – This is a Growth Management Act product that sets the overarching goals and policies that govern land use code development and enforcement.
- *Capital Facilities Plan* – This is a companion plan to the Comprehensive Plan that establishes infrastructure needs to serve the population and land uses

described in the Comprehensive Plan. It also the framework funding and estimated costs for proposed capital projects.

- *Parks Plan* – This plan outlines recreational needs and facilities for the Town and provides goals and policies to guide future facilities development.
- *Stormwater Management Plan* – In compliance with the Department of Ecology's Stormwater Management Technical Manual, this plan provides inventory and proposed projects that collect, treat and dispose of the Town's stormwater.
- *Water System Plan* – The Town is a water service provider for the western region of Skagit County adjacent to the Swinomish Channel. This plan outlines service demands and capacity.
- *Port of Skagit County Maintenance Plan* – This plan provides and inventory and maintenance schedule for the Port's stormwater system.

Each of these plans provides essential guidance to staff, elected officials and volunteers to provide and maintain essential services for the Town. Virtually all of these plans have a connection or interaction with the shoreline environments. Many of the goals and policies in the SMP are derived from these plans for consistency.

4.5 Restoration Opportunities

Within the Town, due to the built out nature of developments within the shoreline, there are limited areas available for restoration. The Town has identified five sites with degraded conditions that abut the Swinomish Channel where future restoration/mitigation could occur. These sites include four street-end public access points within Reach 2 and the Conner Way Waterfront Park under the Rainbow Bridge within Reach 3.

The most significant opportunity for restoration of shoreline is along the waterfront adjacent to Conner Way in the vicinity of the Maple Ave/Pioneer Parkway bridge ("Rainbow Bridge"), between the Sherman Street public boat launch and the Pioneer Point Marina. This area is currently vacant and generally possesses degraded conditions. A portion of the area was formerly occupied by the Olympic Seafood plant, and is now planned to become the Conner Way Waterfront Park. This park will have a water-enjoyment and public access component, as it will be designed for public use. Ecological restoration that will occur as part of development of the park will primarily involve establishing native marine riparian vegetation west of Conner Way and potentially incorporating LWD into the shoreline. For future mitigation opportunities ecological restoration could include establishing additional native riparian vegetation within the buffer, adding additional LWD, developing salt marsh areas in the upper beach and eelgrass in the lower beach, removing derelict manmade structures and debris, and improving substrate conditions by removing debris and angular rock and replacing with gravel or sand/silt.

The Table 4-1 in Appendix C presents a summary of degraded areas with potential for restoration.

4.6 Funding

Funding for the restoration activities is derived from a mixture of public and private sources for development projects. Much of the funding for Town facilities within the shoreline comes from the general fund and grants such as those from the Recreation and Conservation Office (RCO).

Transportation projects receive grant funding from the Transportation Improvement Board. Stormwater and Water Utility projects are also funded through loans from the Public Works Trust Fund. Appendix C Tables 4-1 & 4-2 show various agency and funding source involvement.

4.7 Implementation and Monitoring

Purpose and Need

The intent of this Restoration Plan is to provide local project proponents (development or restoration projects) with the guidance necessary to plan and execute a restoration project that meets No Net Loss requirements, improve shoreline ecological functions, and be consistent with community and stakeholder restoration goals.

Fundamental assumptions and concepts

The Town's shoreline environments are dominated by commercial land use in the historic downtown core (most of Reach 2) with some residential and public use areas. To the south of downtown (southern end of Reach 2 and Reach 3), land use is primarily urban commercial/industrial and to the north of downtown (Reach 1) is a mix of urban commercial and urban industrial. Within the Town, due to the built out nature of developments within the shoreline, there are limited areas available for restoration. The Town has identified five sites with degraded conditions that abut the Swinomish Channel where future restoration/mitigation could occur. These sites include four street-end public access points within Reach 2 and the Conner Way Waterfront Park under the Rainbow Bridge within Reach 3.

Restoration Principles and Implementation

Previous sections above discuss the Street End and Conner Way Waterfront Parks as sites for both short-term and long term restoration efforts. The Town has developed an implementation strategy and schedule for the short-term aspects of these projects to ensure effective and timely implementation. Development of the public access, furnishing (e.g., benches and picnic tables), and landscaping/riparian enhancement components of these projects will be completed by 2015 (short-term). Implementation and funding strategies for these projects are presented in the Parks Plan and Capital Facilities Plan (Town of La Conner 2013a and 2013b).

Mitigation projects will occur at these sites over both the short-term and long-term as mitigation needs arise for project impacts on riparian or in-water environments within the Town.

Future restoration projects at these sites that are not part of existing planned developments or are not satisfying future mitigation needs will occur over the long-term as the Town and project partners (e.g., non-profits, agencies or tribes) work together to

achieve the common goals of water quality improvement and near-shore habitat enhancement and restoration.

Monitoring Principles

Three types of monitoring are defined: implementation, effectiveness, and validation. Monitoring should be driven by specific questions, goals, and objectives and should be used as the basis for determining if restoration goals are being met. Monitoring should be long-term, interdisciplinary, and interagency. Another component of monitoring is information management; data should be well documented and available to others.

Chapter 5 – Shoreline Environment Designations

5.1 Introduction
5.2 Historic Commercial Environment
5.3 Commercial Environment
5.4 Industrial Environment
5.5 Residential Environment
5.6 Public Use Environment
5.7 Aquatic Environment

5.1 Introduction

In order to plan and effectively manage shoreline resources and to provide a uniform basis for applying policies and use regulations within distinctively different shoreline areas, a system of categorizing shoreline areas is required by the SMA. Shoreline environment designations are based on shoreline ecological functions, existing development patterns, potential for restoration, and community aspirations. La Conner's marine shoreline is divided into six shoreline environments: "historic commercial," "commercial," "industrial," "residential," "public use" and "aquatic" environments as depicted on Shoreline Master Program Map (Appendix A).

Uses are encouraged in each environment that enhance the character of that environment.

Development and performance standards regulate use activities in accordance with the purpose and management policies expressed for each shoreline environment. Additionally, in accordance with Ecology guidelines (WAC 173-26-211(3)), the shoreline environment designations and their respective management policies and regulations should be consistent or compatible with the Town of La Conner's Comprehensive Plan. The shoreline environment designations established by the Town of La Conner SMP are consistent and compatible with land use designations adjacent to the Town's marine shoreline, and the conservation and environmental protection policies contained in the comprehensive plan.

Each shoreline environment designation type includes:

1. A purpose that clarifies the meaning and intent of the designation;
2. Designation criteria for determining the appropriate application of the environment designation to the shoreline; and
3. A general description of the location where the environment designation is applied. The purpose and general management policies of each designation have been used to inform the regulations that determine allowed and prohibited shoreline modifications and uses within each environment designation; and
2. General management policies designed to regulate uses and development consistent with the character of the environment.

5.2 Historic Commercial Environment (HCE)

5.2.1 Purpose

The purpose of this environment is to ensure optimum utilization of and preservation of historic significance along the Town's marine waterfront, allowing as much public access as practicable in conjunction with a variety of water-enjoyment uses, and ensuring redevelopment is accomplished in such a way as to minimize any adverse impact on the both aquatic resources and historic environments

5.2.2 Designation Criteria

The historic commercial environment is defined by the commercially zoned properties upland of the OHWM within the National Historic District of La Conner in the shoreline boundary. It is also an area of high-intensity land use including public, commercial, and residential use.

5.2.3 Location

The historic commercial environment extends from approximately 80 feet south of Commercial Street on the south to a point 100 feet north of the north side of Morris Street between the OHWM of the Swinomish Channel on the west and a point 200 feet landward of the OHWM less the designated public use environment.

5.2.4 Management Guidelines

1. Identify, preserve, protect, and restore the Town's historic buildings and sites having historic, cultural, educational or scientific values.
2. Conserve and protect the natural resources of the Town's marine shoreline including its water quality, existing vegetation, habitat, and ecological functions.

5.3 Commercial Environment (CE)

5.3.1 Purpose

The purpose of this environment is to ensure optimum utilization of existing urban commercial portions of the Town's marine shoreline outside the National Historic District for a variety of uses, with priority given to water-dependent, water-related, and water-enjoyment uses.

5.3.2 Designation Criteria

The commercial environment is designated for shoreland properties that are both commercially zoned and developed upland of the OHWM outside the National Historic District of La Conner.

5.3.3 Location

The commercial environment is that shoreline area extending on the south from Sherman Avenue north to approximately 80 feet south of the south side of Commercial Street, and on the east at a point 200 feet landward of the OHWM and at the west at the OHWM of the Swinomish Channel. On the north, the area 200 feet from the OHWM of the Swinomish Channel from an east-west line 100

feet north of the north side of Morris Street along First Street, South Basin Street and the east side of North Third Street to the north side of South Pearle Jensen Way, less the area of the drainage ditch designated public use environment.

5.3.4 Management Guidelines

1. Provide for economically productive uses that are water-dependent, water-related, or that provide an opportunity for a substantial number of people to enjoy physical and visual access to the Town's marine shoreline.
2. Ensure that the reasonable use of property and existing commercial uses can be reasonably accommodated without excessive impacts on the ecological functions and values of the Town's marine shoreline.

5.4 Industrial Environment (IE)

5.4.1 Purpose

The purpose of this environment is to ensure optimum utilization of existing urban industrial shorelines for a variety of uses, with priority given to water-dependent, water-related, and water-enjoyment uses.

5.4.2 Designation Criteria

The industrial area is an area of high-intensity light industrial land use, including port and water-oriented activities

5.4.3 Location

In south La Conner, the industrial environment is that shoreline area bounded on the west by the OHWM of the channel, on the south by the Town's southern boundary, on the north by the south side of Sherman Avenue and on the east to a point 200 feet landward of the OHWM of the Swinomish Channel . In the north end of town, from the north side of South Pearle Jensen Way north to the northernmost town boundary, and between the OHWM of the Swinomish Channel (including the OHWM of the north and south basins of the Port of Skagit County) on the west and a a line 200 feet landward.

5.4.4 Management Guidelines

1. Provide for the reasonable accommodation of fishing and boating related industrial activities focused in areas that are removed from the retail, residential, and historic portions of the Town's shorelands.
2. Assure that development, redevelopment and operations of uses in the industrial environment employ best practices to avoid or mitigate any adverse impacts on the ecological functions and values of the Town's marine shoreline.

5.5 Residential Environment (RE)

5.5.1 Purpose

The purpose of this environment is to preserve residential use as the primary use in the limited portion of the Town's residential neighborhoods which fall within 200 feeet of the OHWM of the Swinomish Channel but which have no functional relationship to the marine Shoreline.

5.5.2 Designation Criteria

The designated residential environment is limited to small portions of the Town's predominant residential lot pattern that falls within 200 feet of the OHWM of the Swinomish Channel.

5.5.3 Location

The residential environment extends 200 feet landward of the OHWM of the Swinomish Channel on the east side of Third Street, consisting of a portion of Parcel # 74222 starting from the Drainage Ditch south 130 feet; and again on the east side of North Third Street extending south from the Public Use Environment approximately 450 feet, consisting of portions of Parcel #s 74221, 74220, 74192 and 126948.

5.5.4 Management Guidelines

1. Discourage residential development as a primary use inside the 200-foot shoreline jurisdiction in all environments except the Residential Environment.
2. Residential development should be permitted only where there are adequate provisions for utilities, drainage, and transportation access and circulation.
3. Liveaboard vessels should be encouraged to moor in marinas with adequate water and sanitary facilities to accommodate them.
4. Preference should be given to joint-use community piers and docks.

5.6 Public Use Environment (PUE)

5.6.1 Purpose

The purpose of the Public Use Environment is to ensure optimum utilization of existing public use areas for existing or planned public purposes.

5.6.2 Designation Criteria

Lands designated for the public use environment include publicly owned lands that are presently used or planned for public purposes, including Pioneer Park, street ends such as Gilkey Square, the Sherman Boat Launch, and the portion of the playfields at the junior high school which fall within 200 feet of the OHWM of the Swinomish Channel

5.6.3 Location

The **public use environment** includes the open drainage ditch south of North Basin Street and Dunlap Street. Also the area from the OHWM west of North Third Street 200 feet east of North Third Street containing portions of Parcel #'s 74223, 74224,

74217, and 74219. Also included is property 200 feet landward of the OHWM of the Swinomish Channel from the intersection of north side of Sherman Avenue and the east side of Conner Way (i.e., Pioneer Park, and also Totem Park). Also include Jordan Street end, Calhoun Street end, Washington Avenue end, Morris Street end (Gilkey Square), Caledonia Street end (Dirty Biter Park), Benton Street (Swinomish Park), Public Boat Launch on Sherman Street end, and the Post Office.

5.6.4 Management Guidelines

1. Public lands such as street ends, rights-of-way and utilities should provide visual access to the water and shoreline in accordance with RCW 35.79.035 and 36.87.130.
2. Public access provided by shoreline street ends, public utilities, and rights-of-way should not be diminished.
3. Shorelines owned or leased by the Town of La Conner should be limited to water-dependent uses or public recreational uses, otherwise such shorelines should remain protected open space.
4. Public access afforded by shoreline street ends, public utilities and rights-of-way should be preserved, maintained and enhanced.

5.7 Aquatic Environment (AE)

5.7.1 Purpose

The purpose of this environment is to ensure protection of marine resources while allowing as much water-dependent use as possible and keep a clear navigation channel.

5.7.2 Designation Criteria

All lands which are water ward of the OHWM of the Town's marine shoreline are designated as Aquatic Environment. Uses and activities that depend on contiguous access from the shoreline, such as marinas, docks, outfalls, floats, and ramps are prevalent in this area.

5.7.3 Location

The aquatic environment includes all submerged lands water ward of the OHWM along the shoreline of the Town of La Conner to the middle of the channel excluding the Drainage Ditch south of Dunlap Street and North Third Street.

5.7.4 Management Guidelines

1. Priority should be given to "water-dependent," "water-related," and "water-enjoyment" uses in the Aquatic Environment.
2. The construction of over water structures in any shoreline environment should mitigate any net increase in the cumulative amount of shade that falls on the surface area of the Swinomish Channel.
3. Dredging and filling activities should be conducted with minimum impact on marine habitat in the Swinomish Channel and as authorized by appropriate agencies.

4. Uses in the aquatic environment should not block navigation channels or restrict access to sections of the marine shoreline.
5. For improvement of existing and new over-water structures that will create shade, the Town's shade analysis should be conducted and if the project will result in a net increase of shade, the proponent should provide mitigation in the form of reducing shade elsewhere in the Swinomish Channel or enhancing or restoring ecological functions in other ways.
6. Multiple uses of over-water facilities are encouraged.
7. Uses which adversely impact ecological functions of critical saltwater habitat shall be limited except where necessary to fulfill other SMA objectives and then only when impacts are appropriately mitigated.
8. New over-water structures shall be:
    a. Allowed only for water-dependent uses, public access, or ecological restoration.
    b. Limited to the minimum necessary to support the intended use.
9. Location and design of all developments and uses are required to:
    a. Minimize interference with surface navigation, to consider impacts to public views, and to allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration.
    b. Prevent water quality degradation and alteration of natural hydrographic conditions.

Chapter 6 – Shoreline Development Policies, Use Standards and Regulations

6.1 General Regulations
6.2 Building and Site Standards
6.3 Shoreline Uses
6.4 Shoreline Modifications

6.1 General regulations

1. Within the Town, all work 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 Natural Resources, Washington Department of Fish and Wildlife, or Washington Department of Ecology.
2. Documentation verifying necessary state and federal agency approvals must be submitted to the Town prior to issuance of a building permit, including any shoreline exemption if applicable. All activities within shorelines jurisdiction must comply with all other applicable laws and regulations.
3. Pursuant to Chapter 173-26 WAC, uses and shoreline modifications along the Town's shoreline shall be designed, located, sized, constructed, and/or maintained to achieve no net loss of shoreline ecological processes and functions.
4. The development policies, standards and use regulations in this chapter constitute the criteria upon which evaluations of, approvals, denials or conditioning of proposed shoreline developments shall be based. Use regulations are to be used in conjunction with the policies for SMP elements and the applicable Shoreline Environment designation.
5. Priority shall be given to "water-dependent," "water-related," and "water-enjoyment" uses over other uses. Uses that derive no benefit from a water location (e.g., non-water-oriented uses) should be discouraged, unless there are overriding public interests consistent with the policies of this program and the Shoreline Management Act that are served by accommodating such uses.

6.2 Building and site design standards

1. Water-enjoyment and non-water-oriented uses shall contain the following design features to provide for the ability for the public to enjoy the physical and aesthetic qualities of the shoreline:
   a. Buildings shall be designed with windows that orient to the shoreline.
   b. Buildings shall be designed to incorporate outdoor areas such as decks, patios, or viewing platforms that orient toward the shoreline.
   c. Buildings shall be designed with entrances along the waterfront façade and with connections between the building and required shoreline public access facilities.
   d. Service areas shall be located away from the shoreline.

e. Site planning shall include public access and public use areas along waterfront public access facilities.

2. Adjustment of setbacks may be allowed upon obtaining a variance permit that can provide relief from the dimensional requirements of this program. A variance may only be granted when all of the criteria listed at WAC 173-27-170 are met. A variance is intended to allow only a minimum degree of variation from setback or other standards, just enough to afford relief and to allow a reasonable use of a property. Based upon the shoreline inventory and characterization, minimum necessary standards must assure no net loss of shoreline ecological functions. Variances may not be used to vary use.
3. In addition to the dimensional standards in the La Conner Municipal Code, Title 15, the dimensional standards in Table 6-1 apply within the Shoreline Environments.

Table 6-1 Shoreline Building Height

Note: the method of measuring building height is set forth in LCMC.

Height standards	**(AE) Aquatic**	**(PUE) Public Use**	**(RE) Residential**	**(HCE) Historic Commercial**	**(CE) Commercial**	**(IE) Industrial**
Max Building Height	**30 feet**	**30 feet**	**30 feet**	**30 feet**	**30 feet**	**40 feet**

6.2.1 Vegetation Conservation Buffers

1. Within shorelands, native shoreline vegetation that has not been otherwise disturbed by legal means shall be preserved to the maximum extent feasible. These areas shall constitute vegetation conservation buffers and be designated and preserved consistent with safe construction practices, and other provisions of this chapter.
2. The following minimum standards for shoreline and critical area vegetation conservation shall apply:
   a. In the event buffers for more than one designated critical area are applicable, the most protective standards for vegetation conservation shall apply;
   b. No more than 15 percent of the area with native shoreline vegetation shall be cleared within the vegetation conservation area;
   c. All native trees in the vegetation conservation buffers over 20 inches in diameter at breast height shall be retained. Trees determined by the Town to be hazardous or diseased may be removed. Replacement of non-native vegetation with native species shall be done in a manner that will not leave soil bare or vulnerable to erosion.
   d. The Shoreline Administrator may allow removal of vegetation exceeding that described above where an applicant agrees to replacement plantings that are demonstrated to provide greater benefit to shoreline ecological functions than

would be provided by strict application of this section, based upon the findings from the 2012 Shoreline Inventory and Characterization.

6.2.2 Environmental Impact Avoidance and Mitigation

1. All shoreline development and uses shall occur in a manner that results in no net loss of shoreline ecological functions, through the location and design of all allowed development uses. In cases where impacts to shoreline ecological functions from allowed development and uses are unavoidable, those impacts shall be mitigated, according to the provisions of this section, to ensure no net loss of shoreline ecological functions.
2. In order to assure that development activities meet the no-net-loss standard by avoiding, minimizing, and mitigate for adverse impacts, an applicant for any development activity shall be required to complete a mitigation analysis, utilizing the following sequencing guidelines:
   a. Avoiding the impact altogether by not taking a certain action or parts of an action;
   b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation using appropriate technology or by taking affirmative steps to avoid or reduce impacts;
   c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
   d. Reducing or eliminating the impact over time by preservation and maintenance operations;
   e. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and
   f. Monitoring the impact and compensation projects and taking appropriate corrective measures.
3. To the extent the State Environmental Policy Act of 1971 (SEPA), Chapter 43.21C RCW, is applicable, the analysis of environmental impacts from proposed shoreline uses or developments shall be conducted consistent with the rules implementing SEPA (WAC 197-11).
4. Required mitigation shall not be in excess of that necessary to assure that proposed uses or development will result in no net loss of shoreline ecological functions.
5. All shoreline uses and activities shall be located, designed, constructed and managed to avoid or minimize adverse affects on the following natural features:
   (a) Fish, shellfish and wildlife habitats, migratory routes and spawning areas;
   (b) Kelp beds, eelgrass beds, herring spawning areas and smelt spawning areas;
   (c) Accretion shore forms;
   (d) Natural scenic vistas or features; and
   (e) Unstable bluffs.
6. When a development site encompasses environmentally sensitive areas designated pursuant to LCMC 15.65, these features should be left intact and maintained as open

space or buffers. All development should be set back from these areas to prevent hazardous conditions and property damage, as well as to protect valuable shoreline ecological functions.

7. Land clearing, grading, filling and alteration of natural drainage features and landforms shall be limited to the minimum necessary for development. Surface drainage systems or substantial earth modifications involving greater than 500 cubic yards of material shall be professionally designed to prevent maintenance problems or adverse impacts on shoreline features.
8. All development activities shall be located and designed to minimize or prevent the need for shoreline defense and stabilization measures and flood protection works such as bulkheads, other bank stabilization, landfills, levees, dikes, groins, jetties or substantial site regrades.
9. Herbicides and pesticides shall not be applied or allowed to directly enter water bodies unless approved for such use by appropriate agencies (State Department of Agriculture or Ecology, U.S. Department of Agriculture, Environmental Protection Agency).

6.2.3 Critical Areas Development and Performance Standards

1. The Town of La Conner Critical Areas Regulations, LCMC 15.65 adopted on January 24, 2006, through Ordinance 968, shall apply to the use, alteration, or development where critical areas are located within the shoreline jurisdiction.
2. The provisions of LCMC 15.65 set forth below are adopted as development regulations of this Shoreline Master Program and are enforceable under the authority of Chapter 90.58 RCW independent from the authority of Chapter 36.70A RCW.
3. Applicability. This code applies to activities on all lands which have been identified and classified as critical areas pursuant to the comprehensive plan and designated on the Environmentally Sensitive Areas Map as follows:
   a. Nontidal Wetlands. Known nontidal wetlands are designated on the Environmentally Sensitive Areas Map adopted by the Town of La Conner on October 25, 2005. Provisions of this chapter apply to all nontidal wetlands, which have been determined by a wetland delineation and rated per current Department of Ecology guidelines regardless of map designation.
   ~~b.~~ Geologically Hazardous Areas. All lands where slopes that average 15 percent or greater over a vertical interval of 10 feet and unstable slopes.
   c. Fish, shellfish and wildlife habitats, migratory routes and spawning areas;
   d. Kelp beds, eelgrass beds, herring spawning areas and smelt spawning areas;
4. Prohibited activities. All activities that are not permitted as a right or by permit shall be prohibited. All projects shall be fully bonded against any claim of damage against adjacent properties, including the Town, prior to any wetland or slope work being undertaken if bonding is a condition of the permit.
5. Geologically hazardous areas.
   a. Development shall be prohibited, restricted, or otherwise controlled in areas designated or adjacent to "known or potential risk." The applicant shall provide evidence that the proposal would be structurally safe and out of the potential

danger of any other surrounding development which may pose such risk to public health and safety in the designated hazardous area. The minimum requirement shall be a report submitted by a licensed engineer of the Town's choice. The applicant shall submit any other information deemed necessary to allow the planning director, with the aid of the director of public works and director of wastewater management, to make an informed recommendation to the hearing examiner as to whether the proposed project should be granted.

b. The planning director may require a buffer from the top or toe of a slope based on (a) geological and hydrological site constraints, and (b) the impacts of proposed construction methods on the stability of the slope, increased erosion potential, and disruption of existing topography and vegetation. No removal of native vegetation or wildlife habitat shall be permitted within the protected slope and buffer without prior approval of the planning director and approved replacement vegetation.
c. Disturbed areas due to development activities shall be revegetated to promote drainage control and prevent erosion after construction. In cases where erosion potential is severe, the planning director may require a revegetation. Revegetation shall consist of trees, shrubs, and ground cover suitable for the location and which does not require permanent irrigation systems for long-term survival.
d. When development is proposed on known and potential slide areas or slopes 40 percent or greater, the planning director may restrict development coverage and construction activity areas to the most level, environmentally suitable and naturally stable portion of the site. Grading shall be strictly limited to areas as determined by the planning director. The planning director may consult with other engineering consultants, the cost of which shall be borne by the applicant.
e. All drainage associated with the development shall be connected to Town approved drainage control systems. The on-site drainage system shall be designed for a 25-year storm occurrence (2.7 inches in 24 hours).
f. The planning director may require additional construction practices and methods including, but not limited to, best management practices and limitations on construction equipment permitted on the site to protect critical areas on-site, on adjacent sites, and within the drainage basin.

6. Adjacent Agricultural Lands
   All activities or uses adjacent to lands classified as agricultural lands of long-term significance shall be regulated in accordance with this code.

6.2.4 Water quality

A. Policies

1. The Town should require reasonable setbacks, buffers or storage basins to achieve the objective of lessening negative impacts on water quality.
2. All measures for controlling erosion or floodwaters should be located, designed, constructed and maintained so that net off-site impacts related to water do not degrade the existing water quality.

3. All measures for treatment of surface water runoff for the purpose of maintaining and/or enhancing water quality should be conducted onsite before it impacts waters off-site.
4. Dredging and filling activities should be conducted to minimize the effect on water quality through the addition of suspended solids, leaching of contaminants, or disturbance of habitats and should be consistent with appropriate agency requirements (e.g., the State Department of Fish and Wildlife, U.S. Army Corps of Engineers).

B. Regulations

1. All shoreline development shall comply with the applicable requirements of the stormwater management sections of the Uniform Development Code, including applicable requirements outlined in the most recently adopted Department of Ecology's Stormwater Management Manual for Western Washington.
2. All shoreline development, both during and after construction, shall minimize any increase in surface runoff through control, treatment and release of surface water runoff so that the receiving water quality and shore properties and features are not adversely affected.
3. The use of time-release fertilizer and herbicide shall be preferred over liquid or concentrate application for lawns or landscaped areas grown within the shoreline jurisdiction.
4. Solid and liquid wastes and untreated effluents shall not be allowed to enter any bodies of water or to be discharged onto the land.
5. The release of oil, chemicals, heavy metals or hazardous materials onto or into the water is prohibited. Equipment for the transportation, storage, handling or application of such materials shall be maintained in a safe and leak proof condition. If there is evidence of leakage, further use of such equipment shall be suspended until the deficiency has been satisfactorily corrected.
6. The location, design, construction and management of all shoreline uses and activities shall protect the quality and quantity of surface and ground water adjacent to the site and shall adhere to the guidelines, policies, standards and regulations of applicable water quality management programs and regulatory agencies.
7. All shoreline uses and activities shall utilize effective measures to minimize any increase in surface runoff and to control, treat and release surface water runoff so that receiving water quality and shore properties and features are not adversely affected. Such measures may include but are not limited to dikes, catch basins or settling ponds, installation and required maintenance of oil/water separators, grassy swales, interceptor drains and landscaped buffers.
8. All shoreline uses and activities shall utilize effective measures to minimize any increase in surface runoff and to control, treat and release surface water runoff so that receiving water quality and shore properties and features are not adversely affected. Such measures may include but are not limited to dikes, catch basins or settling ponds, installation and required maintenance of oil/water separators, grassy swales, interceptor drains and landscaped buffers.
9. All shoreline developments and uses shall utilize effective erosion control methods during both project construction and operation.

6.2.5 Clearing and grading

A. Policies

1. Clearing and grading should be limited to the minimum necessary to accommodate shoreline development.
2. All clearing and grading activities should be designed and conducted to minimize the degradation of water quality, sedimentation, and impacts to wildlife habitat.
3. Cleared and disturbed sites remaining after completion of construction should be promptly replanted with native vegetation or other approved species.
4. All clearing and grading activities should be designed with the objective of maintaining natural diversity in vegetation species, age, and cover density.
5. A clearing and grading plan that addresses vegetation removal, replanting, irrigation, erosion and sedimentation control, and other methods of riparian corridor protection should be required.

B. Regulations

1. All clearing and grading activities shall be limited to the minimum necessary for the intended development, including residential development.
2. Clearing and grading activities may only be permitted landward of required setbacks when associated with a permitted shoreline development; provided, that upon completion of construction remaining cleared areas shall be replanted with native vegetation or other approved species. Replanted areas shall be maintained such that within three years' time the vegetation is fully reestablished. In addition, upon completion of construction remaining cleared areas shall be stabilized and seeded for erosion control purposes as outlined in the most recently adopted Washington Department of Ecology Stormwater Management Manual for Western Washington.
3. Normal nondestructive pruning and trimming of vegetation for maintenance purposes shall not be subject to these clearing and grading regulations. In addition, clearing invasive non-native shoreline vegetation or plants listed on the State Noxious Weed List is permitted in shoreline locations if native vegetation is promptly reestablished in the disturbed area.

6.2.6 Historic and Cultural

A. Policies

1. Promote the vitality of the historic preservation district by encouraging full, active use of land and structures, including multiple or spatially overlapping uses where compatible.
2. Encourage educational projects and programs that foster a greater appreciation of the importance of shoreline management, maritime activities, maritime history and environmental conservation.

B. Regulations

1. All shoreline permits shall contain provisions that require developers to immediately stop work and notify the Town if any phenomena of possible archaeological interest

are uncovered during excavations. In such cases, the developer shall provide for a site inspection and evaluation by a professional archaeologist to ensure that all possible valuable archaeological data is properly salvaged.

2. Permits issued in areas with known potential to contain archaeological artifacts and data shall include a requirement that the developer provide for a site inspection and evaluation by an archaeologist. The developer shall provide resultant findings to the Town which shall, in conjunction with affected parties, review the project for probable adverse impacts before any work on the site begins. Significant archaeological data or artifacts shall be recovered before work resumes or begins on a project.
3. Significant archaeological and historic resources shall be permanently preserved for scientific study, education and public observation. When the Town determines that a site has significant archaeological, natural scientific or historical value, a substantial development permit shall not be issued which would pose a threat to the site. The Town and the state may require that development be postponed for a reasonable period of time in such areas to allow investigations of public acquisition potential and/or retrieval and preservation of significant artifacts.
4. In the event that unforeseen factors constituting an emergency as defined in RCW 90.58.030 necessitate rapid action to retrieve or preserve artifacts or data identified above, the project may be exempted from the permit requirement of these regulations. The Town shall notify appropriate agencies, such as the Swinomish Tribe, the State Department of Ecology, the State Attorney General's Office and the State Department of Archeology and Historic Preservation of such a waiver in a timely manner.
5. Archaeological sites located both in and outside the shoreline jurisdiction are subject to Chapter 27.44 RCW (Indian Graves and Records) and Chapter 27.53 RCW Archaeological Sites and Records) and shall comply with Chapter 25-48 WAC as well as the provisions of this master program.
6. Archaeological excavations may be permitted subject to the provisions of this program.
7. Identified historical or archaeological resources shall be considered in park, open space, public access, and site planning with access to such areas designed and managed so as to give maximum protection to the resource and surrounding environment.

6.1.8 Public Access

A. Policies

1. Consider appropriate and reasonable provisions for public access during the review process of all shoreline substantial development and conditional use permits.
2. Consider the importance of site design and clear signage in providing security and privacy when private spaces are in close proximity to public access.

B. Regulations

1. Where these regulations require that public access be provided, the requirement shall be construed to be limited to the extent of the lawful and constitutional authority of

the Town to require public access, or to require the easement, fee ownership or interest requested.

2. Reasonable and appropriate public access requirements shall be attached to any substantial development or conditional use permit that authorizes a use or activity that:
   a. Will block or discourage use of an existing public access way.
   b. Will interfere with a public use of waters or lands subject to the public trust doctrine.
   c. Proposes to allow uses or activities that are not consistent with the policies of this program concerning preference for water-oriented uses, unless such uses are included in a development that qualifies as a water-enjoyment use by providing an opportunity for a significant number of people to enjoy the shorelines of the Town.
   d. Will increase demand for public access to the shorelines of the Town.
   e. The impact, required public access conditions, and how the conditions address the impact shall be kept in the applicable shoreline permit file.
3. Public access need not be provided where the applicant can demonstrate one or more of the following conditions:
   a. Unavoidable health or safety hazards to the public exist which cannot be prevented by any practical means;
   b. Inherent security requirements of the use cannot be satisfied through the application of alternative design features or other solutions;
   c. The cost of providing the access, easement or an alternative amenity is unreasonably disproportionate to the long-term cost of the proposed development;
   d. Unacceptable environmental harm will result from the public access which cannot be mitigated; or
   e. Significant undue and unavoidable conflict between any access provisions and the proposed use and/or adjacent uses would occur and cannot be mitigated. Provided that the applicant has first demonstrated and the Town has determined in its findings that all reasonable alternatives have been exhausted, including but not limited to:
      (i) Regulating access by such means as maintaining a gate and/or limiting hours of use;
      (ii) Designing separation of uses and activities (e.g., fences, landscaping, etc.); and
      (iii) Developing provisions for access at a site geographically separated from the proposal such as a street end, vista or trail system.
4. Development uses and activities shall be designed and operated to avoid blocking, reducing, or adversely interfering with the public's physical and visual access to the water and shorelines where required.
5. Public access provided by shoreline street ends, public utilities and rights-of-way shall not be diminished.
6. Public access sites shall be connected directly to the nearest public street and shall include provisions for barrier-free access where feasible.

7. Required public access sites shall be fully developed and available for public use at the time of occupancy of the use or activity.
8. Public access easements and permit conditions shall be recorded on the deed of title and/or on the face of a plat or short plat as a condition running contemporaneous with the authorized land use, at a minimum. Said recording with the county auditor's office shall occur at the time of permit approval.
9. Width of public access easements shall be five feet or greater, unless the Town's hearing examiner determines that undue hardship would result. In such cases, easement width may be reduced only to the minimum extent necessary to relieve the hardship.
10. The standard state approved logo or other approved signs that indicate the public's right of access and hours of access shall be constructed, installed and maintained by the applicant in conspicuous locations at public access sites. Signs may control or restrict public access as a condition of permit approval.
11. Future actions by the applicant successors in interest or other parties shall not diminish the usefulness or value of the public access provided.
12. Any new development or redevelopment of properties adjacent to the shoreline shall comply with the policies and performance standards of this shoreline master program and the guidance in the Washington State Department of Ecology Shorelines and Coastal Zone Management Program Shoreline Public Access Handbook. It shall also be consistent with the Town's parks plan relating to visual and pedestrian access along the Channel. In furtherance of these policies, public access along the Channel shall be accomplished by enhancing and improving existing public areas or establishing new areas to create a series of public access viewpoints and pathways.

6.2.8 View protection

A. Policies

1. Map local and territorial views that provide orientation, convey the Town's regional context, and contribute to the Town's "sense of place."
2. Identify key vantage points, corridors and outlooks for protection and possible interpretation.
3. Recognize the open space value and potential benefits of views of the Swinomish Channel across surface parking areas.

B. Regulations

1. Shoreline uses and activities shall be designed and operated to provide visual access to the water and shorelines.
2. Public lands such as street ends, rights-of-way and utilities shall provide visual access to the water and shoreline in accordance with RCW 35.79.035 and 36.87.130.
3. Development on or over the water shall be constructed as far landward as possible to avoid interference with views from surrounding properties to the shoreline and adjoining waters.

4. Development on the water shall be constructed with non-reflective surface treatments to minimize glare (flat or matte finish) that are compatible in terms of color and texture with the surrounding area.
5. Visual access shall be maintained, enhanced and preserved on shoreline street ends, public utilities and rights-of-way and within the following identified "view corridors": Sherman Street end, Caledonia Street end, Commercial Street end, Calhoun Street end, Benton Street end, Washington Street end, Morris Street end, Jordan Street end, between First and Second Streets – the stairway at Benton Street, and Calhoun Street end on the south side of the Civic Garden Club.

6.3 Shoreline Uses

6.3.1 Shoreline Priority Uses. Priority shall be given to "water-dependent," "water-related," and "water-enjoyment" uses over other uses. Uses that derive no benefit from a water location (e.g., non-water-oriented uses) should be discouraged, unless there are overriding public interests consistent with the policies of this program and the Shoreline Management Act that are served by accommodating such uses.

6.3.2 Permitted Uses in Shoreline Environments. Table 6-2 lists SMP permitted uses within each shoreline environment designation. In the case of inconsistencies between the table and the policies included in Chapters 3 and 5 and the regulations in this chapter shall govern.

Table 6-2 Permitted Use Table
SHORELINE ENVIRONMENTS

SHORELINE USE	(AE) Aquatic	(PUE) Public Use	(RE) Residential	(HCE) Historic Commercial	(CE) Commercial	(IE) Industrial
Agriculture	X	X	X	X	X	X
Boating Facility						
Public Marina	P	CU	X	P	P	P
Private Marina	P	CU	X	P	P	P
Commercial:						
Water-dependent	CU	X	X	P	P	P
Water-related	CU	X	X	P	P	P
Water-enjoyment	CU	X	X	P	P	P
Non-water-oriented	X	X	X	P*	P*	CU*
Industrial	X	X	X	X	CU	P
Parking						
Accessory to use	X	P	P	P	P	P
Primary parking	X	X	X	X	CU	CU
Recreation:						
Water-dependent	P	P	CU	P	P	P
Water-enjoyment	P	P	CU	P	P	P
Non-water-oriented	X	X	X	CU	CU	CU
Signs						

On-site business	P	P	CU	P	P	P
Informational signs	P	P	P	P	P	P
Residential						
Single-family	X	X	P	CU	CU	X
Multi-family	X	X	P	CU	CU	X
Liveaboards	CU	X	X	X	X	X
Solid Waste Disposal	X	X	X	X	X	X
Utilities (Accessory)	CU	P	P	P	P	P
Transportation						
Accessory to a permitted use	CU	P	P	P	P	P
As a primary use	CU	CU	CU	CU	CU	CU

P= Permitted use subject to the policies and regulations of this SMP
CU = Conditional Use subject to the policies and regulations of this SMP
X = Prohibited; the use is not eligible for a variance or a conditional use permit
*** = non water-oriented uses are permitted within a mixed use building or complex.**

Non-water-dependent commercial uses over water are prohibited except in existing structures, and where necessary to support water-dependent uses.

6.3.3 Residential development

A. Policies

1. Residential development should be permitted only where there are adequate provisions for utilities, drainage, and transportation access and circulation.
2. The overall density of development, lot coverage and height of structures should be appropriate to the physical capabilities of the site and as set forth in Chapter 15 of LCMC.

B. Regulations

1. No residential lots or sites shall be created for which shoreline protection structures, such as bulkheads will be required. Development on existing lots shall be sited so that no shoreline protection structures will be required.
2. All residential structures, accessory uses and facilities shall be arranged and designed so as to reasonably preserve views and vistas to and from shorelines and water bodies and be compatible with the aesthetic character of the area.
3. Storm drainage and treatment facilities shall be required by the Town for proposals involving any dwelling. Drainage facilities shall be separate from sewage disposal transport facilities and include provisions to prevent uncontrolled and untreated direct entry of surface water runoff into receiving waters.
4. Prior to issuance of a building permit, short plat or shoreline development approval, the developer shall submit adequate plans for preservation of shore vegetation and for erosion control during and after construction that would result in permanent shoreline stabilization. Such plans shall be a part of the shoreline permit.

5. Prior to issuance of a building permit, short plat or shoreline development approval, the developer shall submit adequate plans to provide for community and/or public access in conformance to local public access plans.
6. The shoreline setback for new multifamily residential development shall be a minimum of 25 feet landward of the OHWM.
7. Public access easements shall be a minimum of 12 feet in width and shall be in compliance with public access requirements and standards contained in LCMC.
8. Accessory uses that are not appurtenances shall be reasonable in size and purpose, and be compatible with on-site and adjacent structures, uses and natural features.
9. Liveaboard vessels may be moored in the Town waterfront subject to rent/lease agreements with owners/lessees of adjacent property and consistent with all applicable local and state regulations, including health regulations pertaining to water supply and sewage disposal and the Department of Natural Resource's lease requirements. When connection to existing sewage disposal facilities is not practicable, the routine use of off-site pump-out facilities shall be required and subject to written verification. Under no circumstances shall sewage effluent from such uses be discharged into the waters of the Swinomish Channel.
10. New residential development is prohibited in the industrial environment.
11. Floating homes and houseboats are prohibited.

6.3.4 Commercial uses and activities

A. Policies

1. Commercial development in shoreline areas should be encouraged in descending order of preference as follows:
   a. Water-dependent uses;
   b. Water-related uses; and
   c. Water-enjoyment uses.
   d. Non-water-oriented development that is not accessory to a water-oriented use should be allowed only as a conditional use.
2. Commercial development should be prohibited over water unless the use is water-dependent.
3. Encourage new commercial development along the shoreline to locate in those areas with existing consistent commercial uses.
4. Encourage commercial development to utilize existing transportation corridors and minimize the number of access/egress points which should be designed to minimize potential conflicts.

B. Regulations

The following provisions shall apply to commercial uses (those uses which are involved in wholesale, retail, service, and/or business trade). They shall not apply to residential, boating facility or other uses existing or allowed in commercial areas.

1. The Town shall require and utilize the following information in its review of commercial development proposals:

a. Nature of the commercial activity (e.g. water-dependent, water-related, water-enjoyment, non-water-oriented) including a breakdown of specific components;
b. Need for shoreline location;
c. Special considerations for enhancing the relationship of the activity to the shoreline;
d. Provisions for public visual and physical access to the shoreline; and
e. Provisions to ensure that the development will not cause adverse negative environmental impacts.

2. Commercial developments that are water-oriented may be permitted provided the development meets all the criteria of this shoreline master program and related zoning ordinances. Non-water-dependent commercial developments may be allowed by conditional use permit where it can be demonstrated that:
   a. A water-oriented use is not reasonably expected to locate on the proposed site.
   b. The proposed use does not usurp or displace land currently occupied by a water-oriented use and will not interfere with adjacent water-oriented uses.
   c. The proposed use will be of appreciable public benefit by increasing public use, enjoyment or access to the shoreline.
   d. Commercial development within the shoreline jurisdiction but not adjacent to the waterfront shall provide for water-enjoyment uses and satisfy public access policies by employing design elements such as walkways parallel to sidewalks, landscaping and benches.
   e. Commercial development on the landward side of First Street, or on land which does not abut the water, which is not water-dependent or water-related shall be subject to the following requirements:
      (i) On-site parking shall not be located waterward of buildings, and adequate street access shall be provided.
      (ii) A landscaping plan shall be submitted with shoreline permit applications.
3. Commercial development shall be designed and maintained in a neat, orderly and environmentally compatible manner, consistent with the character and features of the surrounding area. Setbacks, height restrictions, landscaping, screening, parking, and applicable sections of the Uniform Development Code shall apply.
4. Public sidewalks and adjoining private areas open to the public should be designed to create a physically and visually continuous pedestrian route along the First Street shoreline.
5. Light industrial uses shall be allowed if approved under the provisions of LCMC 15.36.030, Transitional Commercial Zone conditional uses.

6.3.5 Industrial uses and activities

A. Policies

1. Industrial and related office use which is neither water-dependent nor water-related should be authorized only when such use incorporates features in the site design that assure it will comply with the definition of water-enjoyment use by providing an opportunity for a substantial number of people to enjoy the shorelines of the Town.

2. Joint use of piers, cargo handling, storage, parking and other accessory facilities among private or public entities should be strongly encouraged in waterfront industrial areas.
3. Diversity of uses shall be encouraged in the industrial area except for residential.
4. Uses and activities located in the industrial area shall contribute to the economic diversity and social health of the community and in a broader local economy.

B. Regulations

1. Industrial uses may incorporate wholesale/retail outlets or showrooms for sales of products manufactured, assembled, or produced on and warehoused on the premises provided that they occupy no more than 49 percent of the gross floor area of the industrial space.
2. Accessory industrial development that does not require a shoreline location shall be located upland of the water-dependent portions of the development where feasible.
3. New/existing public access shall be required/maintained where safe and practical in accordance with LCMC 10.10.210 et seq.
4. Existing industrial development on shorelines that is neither water-dependent nor water-related may be permitted as a conditional use provided that: (a) it is part of a mixed use building or complex and (b) it expands inland from existing structures. Waterward expansion of existing non-water-oriented industry is prohibited.
5. The developer must comply with all state laws which apply to environmental impacts.
6. Water-dependent industry shall be located and designed to minimize the need for initial and/or continual dredging, filling, spoil disposal and other harbor and channel maintenance activities.
7. Piers, moorages, slips, floats and launching facilities may be permitted accessory to industrial development, provided:
    a. The facility will serve an existing or approved water-dependent or water-related use; and
    b. The facility does not constitute a hazard to navigation.
8. The developer must provide a plan for storage and disposal of industrial waste. The Town may require a performance bond in an amount that reflects a reasonable estimate of the anticipated cleanup effort.
9. At new or expanded port and/or industrial developments, the best available facilities practices and procedures shall be employed for the safe handling of fuels and toxic or hazardous materials to prevent them from entering the water and optimum means shall be employed for prompt and effective cleanup of those spills that do occur.
10. Port authorities and industries are encouraged to recycle dredged material when feasible in areas suitable for disposal of such materials for agricultural, forestry storage-stockpiling or beautification purposes, with the intent of restoring natural vegetation or transfer for agricultural, forestry or landscaping purposes. Such materials may be spread on existing resource lands or may be used to create new agricultural resource land only if dredge spoils are not contaminated with heavy metals or other toxins and such use complies with local, state and federal requirements.
11. All new or expanded upland industrial development shall be set back and buffered from adjacent shoreline properties that are used for non-industrial purposes. Buffers

shall be of adequate width, height, and plant and soil composition to protect shorelines and such other properties from visual or noise intrusion, minimize erosion and protect water quality. New or expanded industrial development shall be set back and buffered from the shoreline per Town ordinances, except those water-dependent portions of the development that require direct access to the water or shoreline and any adverse impacts are minimized.

12. Display and other exterior lighting shall be designed, shielded, and operated to minimize glare, avoid illuminating nearby properties and prevent hazards for public traffic.
13. Stormwater best management practices as adopted by the Town shall be followed.
14. Ship and boat building and repair yards shall employ best management practices (BMPs) found in the Washington Department of Ecology Stormwater Management Manual for Western Washington as adopted by the Town.
15. Unless such a requirement would interfere with operations or create hazards to life or property public access to the shoreline shall be a required permit condition of all industrial development.

6.3.6 Recreation Facilities

A. Policies

1. Insure that recreation developments and plans recognize the primacy of preserving natural character, resources and ecological functions of the shoreline.
2. Recreational developments should be located, designed and operated to be compatible with and minimize adverse impacts on shoreline ecological functions, environmental quality and valuable natural features as well as on adjacent and surrounding land and water uses.

B. Regulations

1. The Town shall consult with state and county health agencies regarding regulations which apply to recreation facilities within the shorelines of the Town.
2. Substantial accessory use facilities, such as restrooms, commercial services, access roads and parking areas shall be setback from the OHWM, to the extent feasible, unless it can be shown that such facilities are dependent upon a location next to the OHWM. These areas may be linked to the shoreline by walkways.
3. In approving shoreline commercial and public recreational developments, the Town shall ensure that the development will maintain, enhance or restore desirable shoreline features including unique and fragile areas, scenic views and aesthetic values. Project dimensions, location, intensity of use, parking, setbacks, screening, landscaping, and other requirements as outlined in the Uniform Development Code shall be met.
4. No recreational buildings or structures shall be built over water, except water-dependent and/or public access structures such as piers, docks, bridges, or viewing platforms may be permitted. Commercial recreation, water-oriented structures may be allowed over water in existing structures or in limited instances where they are auxiliary to a water-dependent use.

5. Recreational developments shall make adequate provisions, where feasible, for:
    a. Vehicular and pedestrian access;
    b. Proper water, solid waste, and sewage disposal methods;
    c. Security and fire protection;
    d. The prevention of overflow and trespass onto adjacent properties, including but not limited to landscaping, fencing and posting of property; and
    e. Buffering of such development from adjacent private property.

6.3.7 Transportation Facilities

A. Policies

1. Promote provisions for various modes of travel with some freedom of choice and multiple use corridors where compatible.
2. Provide safe, reasonable and adequate circulation systems to shorelines where routes will have the least possible adverse effect on unique or fragile shoreline features and existing ecological systems, while contributing to the functional and visual enhancement of the shoreline.

B. Regulations

1. Transportation facilities and services shall utilize existing transportation corridors whenever possible, provided that facility additions and modifications will not adversely impact shoreline resources and are otherwise consistent with this program.
2. Joint use of transportation corridors within shoreline jurisdiction for roads, utilities, and non-motorized forms of transportation shall be required.
3. The following regulation applies to shoreline street and road ends: RCW 37.79.035 and 35.87.130 prohibits the Town from vacating any Town street or road which abuts a body of salt or fresh water unless the street or road is not currently used or suitable for boat moorage or launching site or for a park, viewpoint, recreation, education or other public purposes.
4. New transportation facilities shall be located and designed to prevent or minimize the need for shoreline protective measures such as riprap or other bank stabilization, landfill, bulkheads, groins, jetties or substantial site grading.
5. Shoreline transportation facilities shall be sited and designed to avoid steep or unstable areas and fit the existing topography in order to minimize cuts and fills. If cuts and fills are necessary they shall be designed at the normal angle of repose or less.
6. Cut, fill and sidecast slopes shall be protected from erosion by mulching, seeding, compacting, rip-rapping, benching or other suitable means.
7. All transportation facilities shall be designed, constructed and maintained to contain and control all debris, overburden, runoff, erosion and sediment generated from the affected areas.
8. All new roads shall be adequately set back from water bodies and shall provide buffer areas of compatible, self-sustaining vegetation where feasible.

6.3.8 Parking Facilities

A. Policies

1. Provide parking should be allowed as an accessory use to a permitted shoreline use only where it will have the least possible adverse affect on natural shoreline resources.
2. Surface parking in excess of required minimums may be appropriate if the location and configuration results in useable open space and view corridors to the Swinomish Channel.
3. Off-street parking facilities sufficient for the proposed activity should be required. In those cases where parking is not available, such as South First Street, alternate parking areas should be encouraged in upland areas.
4. Cooperative use of parking facilities should be encouraged, such as between businesses whose peak hours do not coincide.

B. Regulations

1. Parking within the shoreline jurisdiction shall directly serve a permitted or conditional shoreline use.
2. Parking facilities shall be designed and landscaped to minimize adverse impacts upon adjacent shoreline and abutting properties.
3. Parking facilities serving new development on the shoreline shall not be located waterward from the principal building being served, except when the parking facility is within or beneath the structure and adequately screened, or in cases when an alternate orientation would have less adverse impact on the shoreline.
4. Parking facilities for shoreline activities shall provide safe and convenient identified pedestrian circulation within the parking area and to the shorelines.
5. Parking facilities shall provide adequate facilities to control surface water runoff to avoid contaminating water bodies using the best available technologies and maintenance programs to assure proper functioning of such facilities over time.
6. Parking facilities shall be located and designed to minimize adverse impacts including those related to stormwater run-off, water quality, visual qualities, public access, and vegetation and habitat maintenance.

6.3.9 Utilities

Accessory utilities are small distribution systems connected directly to the uses along the shoreline, for example, power, telephone, cable, stormwater drainage, water and sewer lines. Accessory utilities do not include primary utilities that produce, transmit, carry, store, process or dispose of electric power, gas, water, sewage, communications, and similar services. "Primary utilities" refers to such activities as solid waste handling facility, sewage treatment plants and, power generating (except generators that are needed for emergency purposes) or transfer facilities or high-tension utility lines.

A. Policies

1. Primary utilities should be discouraged from locating along the Swinomish Channel and its marine shoreline.
2. Utilities needed to serve shoreline uses should be properly installed and maintained to protect the marine shoreline from contamination and degradation.
3. Utility production and processing facilities and transmission facilities are required to be located outside of SMA jurisdiction, unless no other feasible option exists.

B. Regulations

1. Along marine shorelines, utility transmission lines, pipelines and cable shall be placed underground unless demonstrated to be infeasible. Further, such lines shall utilize existing rights-of-way, corridors and/or bridge crossings whenever possible and provide for compatible multiple uses.
2. Primary utilities are prohibited along the Town's marine shoreline provided that outfalls requiring shoreline location may be allowed as conditional uses.

6.3.10 Boating Facilities

A. Policies

1. Encourage joint or cooperative use of boating facilities, including marinas, wet and dry moorages, boat launch ramps, floats, and related accessory uses to avoid cumulative adverse effects on the waterway, such as overcrowding and pollution.
2. Provide quality docks, floats, and boat launches for public use.
3. Encourage safe access to boating facilities.
4. Ensure boating facilities do not pose a hazard to navigation.
5. Require best management practices to control runoff and prevent pollution into the channel that may affect fisheries resources and adversely impact the waterway.
6. Boating facilities should be located, designed and operated to minimize adverse effects upon and provide maximum feasible protection and enhancement of all forms of aquatic, littoral or terrestrial life including animals, fish, shellfish, birds and plants, their habitats and their migratory routes.
7. The use of marinas, docks or floats for other than water-dependent, water-related or emergency uses should be discouraged.
8. The use of boat launching ramps and dry storage of recreational boats or other new technologies should be encouraged as favorable alternatives to sheltered, year-round wet moorage of watercraft.
9. Boating facilities should be located and designed so their structures and operations will not unreasonably impair shoreline views.
10. New marina facilities should be designed to accommodate public access and enjoyment of the shoreline including provisions for walkways, view points, restroom facilities and other recreational uses according to the scale of the facility.

11. Foreshore marinas, wherever possible, should use open-type construction (floating breakwater and/or open pile work) to prevent degradation of fish and/or shellfish resources and habitat.
12. Installation and maintenance of sewage disposal (pump out) facilities should be required and available in convenient locations to all users of marina facilities.
13. Oil collection sites should be available in convenient locations to all users of marina facilities.

B. Regulations - *General*

1. Boating facility development and/or renovations shall comply with all applicable local, state, and federal agency policies and regulations.
2. The Town shall require and utilize the following information in its review of marina proposals or any overwater structure:
    a. Existing natural shoreline and backshore features and uses, bathymetric contours (one-foot increments);
    b. Geohydraulic processes and flushing characteristics, volume, rates, and frequencies;
    c. Biological resources and habitats for areas waterward of the OHWM.
    d. Area of surface waters appropriated, and leased areas;
    e. Site orientation; exposure to wind, waves, flooding or tidal/storm surges; type and extent of shore defense works or shoreline stabilization and flood protection necessary;
    f. Impact upon existing and created demand for shoreline and water uses including public access and recreation and views;
    g. The regional need for additional facilities; and
    h. Facility design, including sewage disposal, water quality controls, provisions for the prevention and control of fuel spillage and a landscaping plan.
    i. An analysis of the shade impact of any new overwater structures. If the results of the shade analysis show that the project will cause in a net increase in shade, the proposal shall also contain a mitigation plan.
3. Accessory uses at marinas or public launch ramps shall be limited to those necessary for marina operations or which provide physical or visual shoreline access to substantial numbers of the general public. Accessory uses shall be consistent in scale and intensity with the marina and/or launch ramp and surrounding uses.
4. Shoreline permits for marinas shall be conditioned to require boater education addressing boater impacts on water quality and other shoreline resources as well as boater safety.
5. Storm drainage and treatment facilities shall be required. Drainage facilities shall be separate from sewage disposal transport facilities and include provisions to prevent uncontrolled and untreated direct entry of surface water runoff into receiving waters.

B.1 Boating facilities – Location

1. Deteriorated urban waterfront areas in need of restoration and where channel depths are such that commercial activity is no longer feasible shall be given priority consideration for potential marina sites.
2. Marinas and public launch ramps shall locate on stable shorelines where water depths are adequate to eliminate or minimize the need for offshore or foreshore channel construction dredging, maintenance dredging, spoil disposal, filling, or other harbor and channel maintenance activities.
3. When new sites are considered, sufficient evidence must be presented to show that existing marinas are inadequate and cannot be expanded to meet regional demand.
4. When located in designated Port of Skagit County marine port areas, marinas shall not extend waterward of the outer harbor line.
5. Boating facilities shall be sited to prevent any adverse impacts on existing aquatic resources and environments. Criteria to be considered for facility siting should include, but not be limited to, size and depth of the water body, tidal flushing action in the project area, critical areas in the project area, size of the facility and projected intensity of use, fuel handling, pump-out or sewer hookups, expected changes in adjacent land uses that could result in additional water quality impacts.

B.2 Boating facilities – Design/ renovation/expansion

1. Marina design shall provide thorough flushing of all enclosed water areas and shall not restrict the movement of aquatic life requiring shallow water.
2. Marina design shall minimize interference with geo-hydraulic processes and disruption of existing shore forms and navigation.
3. Boating facilities shall be designed so their structures, other features and operations will be aesthetically compatible with or will enhance existing shoreline features and uses. Boating facilities shall mitigate for adverse development impacts on site and to adjacent properties.
4. Marina design shall incorporate maximum public access and water-oriented uses.
5. Location of fueling stations on docks, floats and/or shore shall be considered on an individual basis and recommendations will be made as to their location by the appropriate regulatory agencies.
6. Approval of general construction methods and timing, etc., must be obtained from the appropriate state or federal regulatory agency.
7. All signs shall comply with local, state, and federal policies and regulations for signs. Signs incorporating pump-out logos shall be provided identifying the location of waste disposal facilities, if available.
8. Public access, both visual and physical, shall be an integral part of all marina development and design commensurate with the particular proposal and must include the following:

a. Marinas and public launch ramps shall be designed so that existing or potential public access along beaches is not unnecessarily blocked nor made dangerous and public use of waters below the OHWM is not unduly impaired.
b. Covered moorage in marinas shall not be constructed where visual access from public access and/or significant numbers of residences is blocked.

B.3 Boating facilities – Construction and materials

1. Dredging in channel waters for boating facilities shall be limited to the minimum necessary for new entrance channels to reach basins dredged out of dry land areas; for deepening water as necessary in existing and proposed berthing areas; and for maintenance dredging.
2. Landfill in water bodies or wetlands to create usable land space for accessory marina uses is prohibited.
3. Shoreline embankments of all boating facilities shall be stabilized both landward and waterward of the OHWM both during and after construction.

B.4 Boating facilities – Parking and storage

1. Overwater and primary parking facilities are prohibited in the shoreline jurisdiction.
2. Short-term loading areas may be located at ramps or near berthing areas. Long-term parking, paved storage and dry moorage areas shall be located away from berthing areas and at a minimum of 50 feet from the OHWM.
3. To the maximum extent possible, marinas and accessory uses shall share parking facilities, with marina usage given preference.
4. The parking requirements for boat moorage, slip, or storage (public, private or pleasure) is one-half space per slip, excluding transient moorage.

B. 5 Boating facilities – Circulation

1. Marinas and launch ramps shall be located where access streets are adequate to handle the traffic load generated by the facility and shall be designed to minimize other circulation and access conflicts.
2. Collector roads between marinas and arterial routes shall have all-weather surfacing, and meet standards for width, safety, alignment, sign distance, grade and intersection controls.
3. Ingress-egress, as well as the use and enjoyment of the water on adjoining property, shall not be unduly restricted or impaired.

B.6 Boating facilities – Utilities

1. Where moorage is offered in new, expanded or renovated existing marinas, pump-out, holding and/or treatment facilities shall be provided for sewage contained on boats and/or vessels. Such facilities shall be located so as to be conveniently available to all boats. The responsibility for the adequate collection and dumping

of marina originating sewage, solid waste and petroleum waste is that of the marina operator.

2. All marinas shall provide restrooms. They shall be kept clean and be located within 200 feet from a dock or pier; there shall be one toilet and hand washing facility for each sex per 50 moorage sites; signs shall be posted so that the restrooms are easily identifiable to the public.
3. All pipes, plumbing, wires and cables at a marina site shall be placed at or below ground and dock levels where feasible.

B.7 Boating facilities – Management and Operations

1. Marinas shall have adequate facilities and establish posted operational procedures for fuel handling and storage in order to prevent and minimize accidental spillage and for the containment, recovery and mitigation of spilled petroleum, sewage, and toxic products.
2. Marina operators shall post the following signs where they are readily visible to all marina users:
   a. Regulations pertaining to handling and disposal of waste, sewage and toxic materials;
   b. Regulations prohibiting the use of marine toilets while moored unless these toilets are self-contained or have an approved treatment device; and
   c. Regulations prohibiting the disposal of fish and shellfish cleaning wastes, scrap fish, viscera or unused bait in or near the marina waters.
3. Garbage or litter receptacles shall be provided and maintained by the marina operator at several locations convenient to users in sufficient numbers to properly store all solid waste generated on site. This should include separate receptacles for waste oil and other potentially hazardous or toxic waste.
4. The dock facilities shall be equipped with adequate lifesaving equipment such as life rings, hooks and ropes.
5. At least 10 percent of total slips shall be provided for “transient moorage” (less than two-week stay) when the marina is owned, operated, or franchised by a governmental agency.
6. The discharge of sewage and/or toxic material from boats and/or shore installations shall be prohibited. Toxic material, herein defined as any material damaging marine life, includes but is not limited to paints, varnishes, non-biodegradable detergents, and petroleum.
7. No commercial and/or shellfish processing discharge or discarding of unused bait, scrap fish, or viscera will be permitted within any marina.
8. Washington State Water Quality Standards (WAC 173-201A) shall be strictly adhered to at all times.
9. Owners and operators of marinas shall make all reasonable efforts to protect marine life and habitat during construction and/or operation of any marina.

B.8 Boating facilities – Covered moorage

1. Marina developers shall provide a detailed plan for covered moorage development before permits are granted. Such a plan must indicate:
   a. Covered moorage location, size and general design;

b. Impact on shoreline views in the marina and from adjacent private and public properties; and
c. That the structures will be built to conform to the Town building code, withstand stresses from storms and weather or damage by fire, and that exterior wall and roof coverings shall be of noncombustible or fire-retardant treated material and so certified or labeled.

2. The maximum height for covered moorage is 25 feet above the extreme high tide level.

6.4 Shoreline Modification

6.4.1 Shoreline protection structures

A. Policies

1. Natural solutions such as protective berms, beach enhancement or vegetative stabilization are strongly preferred over structural defense works or materials such as steel, wood, or concrete, because the former have less adverse and cumulative impacts on shore features and habitats.
2. The use of armored structural revetments (riprap) and bulkheads should be limited to situations where it can be demonstrated that nonstructural solutions, such as bioengineering, setbacks and buffers or any combination thereof, will not provide sufficient shoreline stabilization.
3. Shoreline protection structures should be located, designed, and constructed primarily to prevent damage to existing development. New development requiring bulkheads and/or similar protection should be discouraged.
4. Affected property owners and public agencies should be encouraged to coordinate bulkhead or riprap development for an entire drift sector or homogeneous reach in order to avoid exacerbating erosion on adjacent properties.
5. Bulkheads/revetments should not be approved as a solution to geophysical problems such as mass slope failure, sloughing, landslides, etc., caused by factors other than bank erosion.
6. Shoreline protection structures should be designed, improved and maintained to provide public access whenever possible.
7. The construction and maintenance of shoreline protection structures should avoid loss or reduction of shoreline environmental resource values. If a loss or reduction cannot be avoided, mitigation should be provided.

B. Regulations

1. Applicability. Uses and activities related to shoreline protection structures which are identified as separate use activities in this program, such as flood control management, residential development, commercial development and industry, are subject to the regulations for those uses in addition to the standards for bulkheads and revetments (riprap) established in this section.

2. Exemptions. The Shoreline Management Act only exempts the construction of a normal protective bulkhead common to an existing single-family residence from the substantial development permit requirement. However, these structures are required to comply with all the policies, prohibitions and development standards of this master program and of this section. To qualify for the exemption from the shoreline substantial development permit requirement, and to assure that such bulkheads will be consistent with this program, a statement of exemption shall be obtained from the Town before commencing construction of any bulkhead. WAC-173-27-040(2) (c) states that "A normal protective bulkhead is not exempt if it is constructed for the purpose of creating dry land."
3. Bulkheads shall be permitted only where local physical conditions such as foundation bearing material, surface and subsurface drainage are suitable for such alterations.
4. On all shorelines, bulkheads shall be located generally parallel to the natural shoreline. In addition:
5. For sloping or bluff shores, bulkheads shall be placed as far landward as is feasible;
6. On bank shorelines where no other bulkheads are adjacent, the construction of a bulkhead shall be as close to the bank as possible;
7. Bulkheads may tie in flush with existing bulkheads on adjoining properties.
8. Replacement bulkheads/revetments may be located immediately in front of and abutting (sharing a common surface) an existing bulkhead/revetment on the same property provided that replacement bulkheads/revetments shall not be authorized abutting an abandoned or neglected bulkhead/revetment or a bulkhead/revetment in serious disrepair.
9. When an existing bulkhead is being repaired by construction of a vertical wall fronting an existing wall, it shall be constructed no further waterward of the existing bulkhead than is necessary for construction of new footings.
10. When a bulkhead has deteriorated such that an OHWM has been established by the presence and action of water landward of the bulkhead then the replacement bulkhead must be located at or near the actual OHWM. A bulkhead may be replaced at the prior OHWM if the relocation of the revetment would jeopardize the integrity of existing structures above or landward of the revetment.
11. Bulkheads/revetments shall be sited and designed consistent with appropriate engineering principles.
12. When a bulkhead/revetment is required at a public access site, provision for safe access to the water shall be incorporated into bulkhead/revetment design.
13. Bulkheads/revetments shall be designed for the minimum dimensions necessary to adequately protect the development.
14. Stairs or other permitted structures may be built into a bulkhead/revetment but shall not extend waterward of it.
15. Bulkheads shall be designed to permit the passage of surface or groundwater without causing ponding or saturation of retained soil/materials.
16. Fill behind bulkheads/revetments shall be limited to an average of one cubic yard per running foot of wall. Any filling in excess of this amount shall be considered

landfill and shall be subject to the provisions for landfill and the requirement for obtaining a shoreline substantial development permit.

17. Bulkhead/revetment design shall include and provide improved access to public shorelines whenever possible and appropriate.
18. When permitted, the siting and design of revetments shall be performed using appropriate engineering principles, including guidelines of the U.S. Natural Resources Conservation Service and the U.S. Army Corps of Engineers.
19. If an armored revetment is employed, the following design criteria shall be met:
    a. The size and quantity of the material shall be limited to only that necessary to withstand the estimated energy intensity of the hydraulic system.
    b. Filter cloth must be used to aid drainage and help prevent settling.
    c. The toe reinforcement or protection must be adequate to prevent a collapse of the system from channel scouring or wave action for the anticipated life of the project.
    d. The bulkhead/revetment area shall be restored as nearly as possible to pre-project condition including replanting with native species and maintenance until the newly planted vegetation is established.

6.4.2 Shoreline Modifications Table

Specific modification of Shoreline environments are permitted, prohibited, or allowed with a conditional use permit as shown in Table 6-3.

Table 6-3 Shoreline Modification Table

SHORELINE ENVIRONMENTS

SHORELINE MODIFICATIONS	(AE) Aquatic	(PUE) Public Use	(RE) Residential	(HCE) Historic Commercial	(CE) Commercial	(IE) Industrial
Shoreline Stabilization						
Beach restoration or enhancement	P	P	NA	P	P	P
Revetments	CU	CU	NA	CU	CU	P
Bulkheads	P	P	NA	P	P	P
Jetties and Groins	X	X	NA	X	X	X
Breakwater	X**	X	NA	X	X	CU
Dredging	CU	X	NA	X	X	X
Hazardous Waste Cleanup	P	P	NA*	P	P	P
Fill	CU	CU	NA*	CU	CU	CU
Piers and Docks	P	CU	NA	CU	CU	CU
Land Clearing and Grading	X	P	NA*	P	P	P

**Allowed through a conditional use permit when upland environment is designated Industrial.

P= Permitted modification subject to the policies and regulations of this SMP
CU = Modification requiring a Conditional Use permit subject to the policies and regulations of this SMP
X = Prohibited; the modification is not eligible for a variance or a conditional use permit
*The Residential Environment drains away from the Swinomish Channel.

6.4.3 Shoreline Structures Regulations

1. Bulkheads and revetments may be allowed only when evidence is presented which conclusively demonstrates that one of the following conditions exists:

a. Serious wave erosion threatens an established use or existing building(s) on upland property;
b. Bulkheads/revetments are necessary to the operation and location of water-dependent and water-related activities consistent with this master program; provided, that all alternatives have proven infeasible (i.e., use relocation, use design, nonstructural shore stabilization options) and that such bulkheads meet other policies and regulations of this chapter; or
c. Use of natural materials and processes and nonstructural solutions to bank stabilization are unworkable in protecting existing development.

2. Shoreline protection structure design and development shall conform to all other applicable state and federal agency policies and regulations including the State Department of Fish and Wildlife criteria governing the design of bulkheads and revetments.
3. Natural materials and processes such as protective berms, stone containment barriers, beach replenishment, segmented sills, coir fiber logs, drift logs, brush and/or vegetative stabilization shall be utilized to the maximum extent possible.
4. Shoreline protection structure proposals must ensure passage of surface and/or groundwater.
5. Gabions (wire mesh filled with concrete or rocks) shall not be used in bulkhead construction where alternatives more consistent with this program are feasible, because of their limited durability and the potential hazard to shore users and the shoreline environment.
6. Shoreline protection structures must be in support of an allowable shoreline use that is in conformance with the provisions of this master program unless it can be demonstrated that such structures are necessary and in the public interest for the maintenance of shoreline environmental resources.
7. Shoreline protection structures are prohibited for any purpose if they will cause significant adverse erosion or beach starvation.
8. Riprap material shall consist of clean, quarried rock, free of loose dirt and any pollutants, and shall be of sufficient size and weight to prevent movement by wave or current action. Tires, automobile bodies, scrap metal, paper products, and scrap concrete and other inappropriate solid waste materials, shall not be used for riprap.
9. Where on-site environmental conditions allow, vegetation shall be integrated into the riprap design to reduce erosion, provide cover, shade and habitat and improve the natural appearance of the shoreline.
10. All forms of shoreline protection structures shall be constructed and maintained in a manner that does not reduce water quality and/or fisheries habitat.
11. Dredging and filling activities shall be conducted with minimum impact on marine habitat in the Swinomish Channel and during those times authorized by appropriate agencies.
12. Uses in the aquatic environment shall not block navigation channels or restrict access to sections of the shoreline.

6.4.4 Flood control management

A. Policies

1. Flood management planning should be undertaken to protect wildlife, human life, health and property from damage due to flooding.
2. in a coordinated manner among affected property owners and public agencies and should consider the entire floodplain system. Off-site erosion, accretion or flood damage that might occur as a result of stabilization or protection structures or activities should be considered.
3. Flood hazard management planning should fully consider nonstructural approaches to minimizing flood damage.

B. Regulations

1. Town shall require and utilize the following information during its review of shoreline flood management projects and programs:
   a. Existing shoreline stabilization and flood protection works within the area;
   b. Physical, geological, and hydrological soil characteristics of the area;
   c. Biological resources and predicted impact to fish, vegetation and animal habitat associated with shoreline ecological systems;
   d. Predicted impact upon area shore and hydraulic processes, adjacent properties and shoreline and water uses;
   e. Analysis of alternative flood protection measures both structural and nonstructural.
2. The Town shall require professional design of flood protection works where such projects may cause interference with normal channel geohydraulic processes, leading to erosion of other upstream and downstream shoreline properties, or adverse effects to shoreline resources and uses.
3. Diking, floodwalls and similar structures may be permitted subject to applicable agency standards.
4. Flood protection measures shall be planned and constructed based on a state-approved flood control management plan and in accordance with the National Flood Insurance Program.
5. Development and redevelopment within the shoreline jurisdiction shall comply with the applicable requirements of the Town's stormwater management program.

Chapter 7 Administrative Procedures

7.1 Introduction
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7.1 Introduction

1. An administrative system is hereby established to assign responsibilities for implementing the Town of La Conner Shoreline Master Program (SMP) and shoreline permit review, to prescribe an orderly process by which to review proposals and permit applications, to ensure that the Town's duties under Chapter 90.58 RCW are met, and to ensure that all persons affected by this SMP are treated in a fair and equitable manner.

7.2 General Compliance

1. Unless specifically exempted by statute, all proposed uses and development occurring within shoreline jurisdiction must conform to chapter 90.58 RCW, the Shoreline Management Act and this shoreline master program (SMP) whether or not a permit is required.

2. This SMP shall ensure permit procedures and enforcement are conducted in a manner consistent with relevant constitutional limitations on regulation of private property.

3. The Town shall not issue any permit for development within shoreline jurisdiction until approval has been granted pursuant to this adopted SMP.

4. A development or use that does not comply with the bulk, dimensional and/or performance standards of this SMP shall require a shoreline variance even if the development or use does not require a substantial development permit.

5. Issuance of a shoreline substantial development permit, shoreline variance or shoreline conditional use permit does not constitute approval pursuant to any other federal, state or Town laws or regulations.

6. All shoreline permits or statements of exemption issued for development or use within shoreline jurisdiction shall include written findings prepared by the Shoreline

Administrator, documenting compliance with bulk and dimensional policies and regulations of this SMP. The Shoreline Administrator may attach conditions to the approval as necessary to assure consistency with the RCW 90.58 and this SMP.

7. The Planning Department will catalogue and monitor shoreline development for periodic analysis of "no net loss" policy per the methodology used in 2013 Cumulative Impact Report.

7.3 Applicability

1. Maps indicating the extent of shoreline jurisdiction and shoreline designations are guidance only. They are to be used in conjunction with field investigations and on-site surveys to accurately establish the location and extent of shoreline jurisdiction when a project is proposed. All areas meeting the definition of a shoreline of the state or a shoreline of statewide significance, whether mapped or not, are subject to the provisions of this SMP.

2. Shoreline development occurring in or over navigable waters may require a shoreline permit in addition to other approvals required from state and federal agencies.

3. The policies and provisions of Chapter 90.58 RCW and this SMP shall be applied to federal lands and agencies as provided by the Coastal Zone Management Act (Title 16 United States Code §1451 et seq.) and Washington Administrative Code (WAC) 173-27-060(1) and (3).

7.4 Administrative Authority and Responsibility

1. The Planning Director of the Town of La Conner is designated as the Shoreline Administrator and shall be responsible for the administration, interpretation and enforcement of the provisions of this SMP as designated.

2. The Shoreline Administrator shall have the authority to act upon the following matters:
   a. Interpretation, enforcement, and administration of the Town's SMP as prescribed in this title;
   b. Applications for Shoreline Management Substantial Development Permits as prescribed in this title;
   c. Modifications or revisions to any of the above approvals.

3. The Town Hearing Examiner is responsible for reviewing the following permits at an open record public hearing:
   a. Shoreline Conditional Use Permits;
   b. Permits involving greater than 1,000 square feet of new overwater structure;
   c. Shoreline variance requests.

4. The Planning Commission is vested with authority to review and make recommendations on any proposed amendments or revisions to this SMP for consideration by the Town Council.

5. The Town Council is vested with authority to:
   a. Review any proposed revisions or amendments to this SMP in accordance with the requirements of Chapter 90.58 RCW.
   b. Act upon any recommendations of the Shoreline Administrator and Planning Commission for amendments to or revisions of this SMP. The Town Council shall enter findings and conclusions setting forth the factors it considered in reaching its decision. To become effective, any amendments to the program must be reviewed and approved by the Washington State Department of Ecology (Ecology), pursuant to RCW 90.58.190 and Chapter 173-26 WAC.

7.5 Processing of Permits

1. The Town's shoreline administrative procedures shall be consistent with all provisions, criteria, application requirements, and local or state review procedures set forth in WAC 173-27, Shoreline Management Permit and Enforcement Procedures. In the event of any inconsistencies between this SMP and WAC 173-27, the WAC shall govern.

2. Permits processed under this SMP shall be administered according to the standards and criteria in RCW 90.58 and WAC 173-27.

3. When a Substantial Development Permit and either Conditional Use or Variance Permit are required for a development, the submittal of the permits shall be made concurrently.

4. The Shoreline Administrator shall assign a file number and date received to the application and plans submittal and payment of fees. A fee set by the Town Council shall be payable to the Town Clerk at the time of application. There is no fee for maintenance and repair of existing structures.

5. Shoreline variances shall be processed in the same manner as variance from the Town's zoning code and shall be subject to all applicable provisions of LCMC 15.125.

6. The effective date of the Town's decision shall be the date of filing with the Department of Ecology as defined in RCW 90.58.140.

7. Figure 7-1 provides an overview of the Town's Shoreline Permit Process.

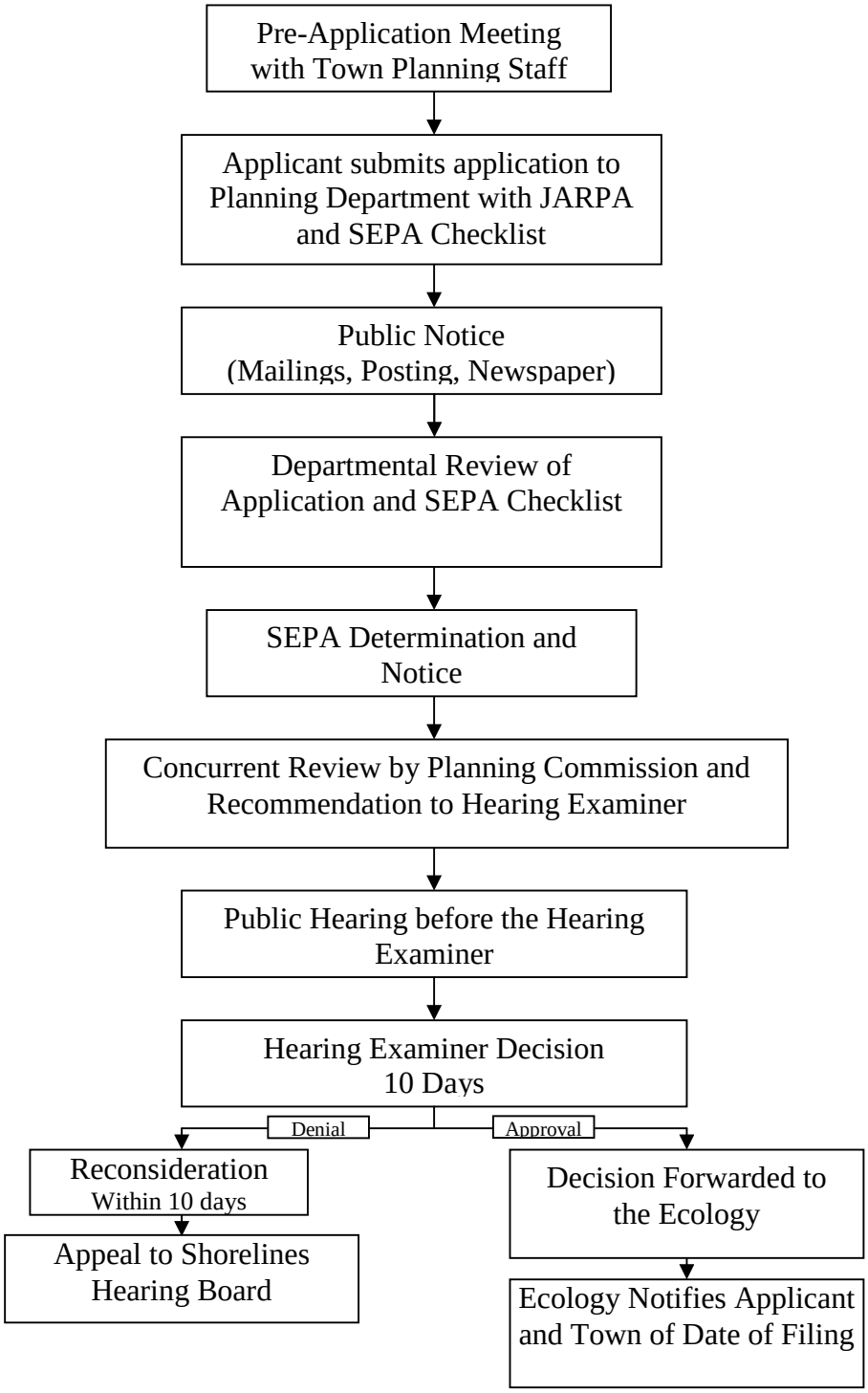

Figure 7-1 Shoreline Permit Process Flow Chart
(Substantial Development, Conditional Use or Variance Permits)

7.6 Enforcement, Violations and Penalties

1. The Shoreline Administrator is authorized to enforce the provisions of this SMP, the ordinances and resolutions codified in it, and any rules and regulations promulgated there under pursuant to the enforcement and penalty provisions of WAC 173-27-270, 280, and 290.

2. The Town and Ecology may issue regulatory orders to enforce the SMA, consistent with RCW 90.58.210 thru 230 and WAC 173-27-270 & 280. The regulatory order may notify the violator to: (1) stop the project; (2) obtain the required shoreline permit(s); (3) pay a penalty; (4) mitigate the impact of the action or project; (5) remove the project and restore the site to its prior condition; and/or (6) rescind the existing shoreline permit(s). Shoreline Management Act enforcement regulations are codified at Chapter 173-27 WAC.

7.7 Shoreline Permits and Exemptions

7.7.1 Shoreline Substantial Development Permit Required

1. Substantial development, as defined by this SMP and RCW 90.58.030, shall not be undertaken by any person on the shorelines of the state without first obtaining a substantial development permit from the Shoreline Administrator. A shoreline substantial development permit shall be required for all proposed use and development of shorelines unless the use or development is specifically identified as exempt from a substantial development permit, in which case a letter of exemption is required.

2. The Shoreline Administrator is authorized to grant a shoreline substantial development permit when all of the criteria enumerated in WAC 173-27-150 are met.

3. All new over-water developments and uses that exceed 1000 square feet, including those allowed as a substantial development, shall require a public hearing and be reviewed and approved by the Town Hearing Examiner consistent with LCMC 15.12.

7.7.2 Exemptions from a Substantial Development Permit

1. Uses and developments that are not considered substantial developments pursuant to RCW 90.58.030(3)(e), WAC 173-27-040 (List of Exemptions), and SMP Section 7.7.3 shall not require a substantial development permit but shall conform to the policies and regulations of this SMP.

2. If any part of a proposed development is not eligible for exemption as defined in RCW 90.58.030(3)(e), WAC 173-27-040 and SMP Section 7.7.3, then a substantial development permit is required for the entire proposed development project.

3. Exemptions shall be construed narrowly. Only those developments that meet precise

terms of one or more of the listed exemptions may be granted exemptions from the substantial development permit process.

4. The burden of proof that a development or use is exempt is on the applicant or proponent of the development action.

5. All exempt actions are subject to review for consistency with the goals, policies and regulations of the Shoreline Management Act, this SMP and other applicable City regulations. Development shall not commence until the Shoreline Administrator issues a written letter of exemption and shall be carried out in compliance with any conditions accompanying the exemption letter.

6. Whenever an exempt development is subject to the U.S. Army Corps of Engineers Section 10 Permit or a Section 404 Permit, the Shoreline Administrator shall prepare a letter addressed to the applicant and the Washington State Department of Ecology, exempting the development from the substantial development permit requirements of the Shoreline Management Act.

7.7.3 Exemptions Listed

The following activities shall be considered exempt from the requirement to obtain a shoreline substantial development permit but shall obtain a statement of exemption, as provided for in Section 7.7.2.

1. Any development of which the total cost or fair market value, whichever is higher, does not exceedthe value as defined in RCW 90.58.030(2)(c) , if such development does not materially interfere with the normal public use of the water or shorelines of the state. For purposes of determining whether or not a permit is required, the total cost or fair market value shall be based on the value of development that is occurring on shorelines of the state as defined in RCW 90.58.030(2)(c). The total cost or fair market value of the development shall include the fair market value of any donated, contributed or found labor, equipment, or materials.

2. Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. "Normal maintenance" includes those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition. "Normal repair" means to restore a development to a state comparable to its original condition, including but not limited to its size, shape, configuration, location and external appearance, within a reasonable period after decay or partial destruction, except where repair causes substantial adverse effects to shoreline resource or environment.

3. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development and the replacement structure or development is comparable to the original structure or development including but not limited to its size, shape, configuration, location

and external appearance and the replacement does not cause substantial adverse effects to shoreline resources or environment.

4. Emergency construction necessary to protect property from damage by the elements. An "emergency" is an unanticipated and imminent threat to public health, safety, or the environment which requires immediate action within a time too short to allow full compliance with this chapter. Emergency construction does not include development of new permanent protective structures where none previously existed.

5. Where new protective structures are deemed by the Town Administrator to be the appropriate means to address an emergency situation, upon abatement of the emergency situation the new structure shall be removed or any permit which would have been required, absent an emergency, pursuant to chapter 90.58 RCW, these regulations, or this SMP, shall be obtained. All emergency construction shall be consistent with the policies of chapter 90.58 RCW and this SMP. As a general matter, flooding or other seasonal events that can be anticipated and may occur but that are not imminent are not an emergency;

6. Construction or modification of navigational aids such as channel markers and anchor buoys;

7. Any project with a certification from the governor pursuant to chapter 80.50 RCW (certification from EFSEC);

8. The process of removing or controlling aquatic noxious weeds, as defined in RCW 17.26.020, through the use of an herbicide or other treatment methods applicable to weed control that are recommended by a final environmental impact statement published by the department of agriculture or the department of ecology jointly with other state agencies under chapter 43.21C RCW.

9. Watershed restoration projects which are defined in Chapter 8 and specifically identified in Chapter 4 of this SMP. The Town shall review the projects for consistency with this SMP in an expeditious manner and shall issue its decision along with any conditions within forty-five days of receiving all materials necessary to review the request for exemption from the applicant. No fee may be charged for accepting and processing requests for exemption for watershed restoration projects as used in this section.
10. A public or private project that is designed to improve fish or wildlife habitat or fish passage, when all of the following apply:
    a. The project has been approved in writing by the Washington State Department of Fish and Wildlife (WDFW);
    b. The project has received hydraulic project approval by WDFW pursuant to chapter 77.55 RCW;
    c. The Shoreline Administrator has determined that the project is substantially consistent with the SMP.

11. Hazardous substance remedial actions. The procedural requirements of chapter 90.58 RCW shall not apply to a project for which a consent decree, order or agreed order has been issued pursuant to chapter 70.105D RCW or to Ecology when it conducts a remedial action under chapter 70.105D RCW. Ecology shall, in consultant with the Town, assure that such projects comply with the substantive requirements of chapter 90.58 RCW, chapter 173-26 WAC and this SMP.

7.7.4 Shoreline Variance

1. The purpose of a variance is to grant relief to specific bulk or dimensional requirements set forth in this SMP where there are extraordinary or unique circumstances relating to the property such that the strict implementation of this SMP would impose unnecessary hardships on the applicant/proponent or thwart the policies set forth in RCW 90.58.020 and this SMP.

2. Shoreline variance permits should be granted in circumstances where denial of the permit would result in a thwarting of the policy enumerated in the SMA (RCW 90.58.020). In all instances extraordinary circumstances shall be shown and the public interest shall suffer no substantial detrimental effect.

3. Variance permits for development and/or uses that will be located landward of the ordinary high water mark (OHWM), as defined in RCW 90.58.030(2)(b), and/or landward of any wetland as defined in RCW 90.58.030(2)(h), may be authorized provided the applicant can demonstrate all of the following:
   a. That the strict application of the bulk, dimensional or performance standards set forth in this SMP precludes, or significantly interferes with, reasonable use of the property;
   b. That the hardship described in (a) of this subsection is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features.
   c. That the hardship is not the result of the applicant's own actions;
   d. That the design of the project is compatible with other authorized uses within the area and with uses planned for the area under the Town's Comprehensive Plan and this SMP and will not cause adverse impacts to the shoreline environment;
   e. That the variance will not constitute a grant of special privilege not enjoyed by the other properties in the area;
   f. That the variance requested is the minimum necessary to afford relief; and
   g. That the public interest will suffer no substantial detrimental effect.

4. Variance permits for development and/or uses that will be located waterward of the ordinary high water mark (OHWM), as defined in RCW 90.58.030 (2)(b), or within any wetland as defined in RCW 90.58.030 (2)(h), may be authorized provided the applicant can demonstrate all of the following:

   (a) That the strict application of the bulk, dimensional or performance standards set forth in the applicable master program precludes all reasonable use of the property

(b) That the proposal is consistent with the criteria established under subsection (2)(b) through (f) of this section; and

(c) That the public rights of navigation and use of the shorelines will not be adversely affected.

5. In the granting of all variance permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example if variances were granted to other developments and/or uses in the area where similar circumstances exist the total of the variances shall also remain consistent with the policies of RCW 90.58.020 and shall not cause substantial adverse effects to the shoreline environment.

6. Variances from the use regulations of this SMP are prohibited.

7.7.5 Shoreline Conditional Use Permit

1. The purpose of the conditional use permit is to provide greater flexibility in varying the application of the use regulations of this SMP in a manner that will be consistent with the policies of RCW 90.58, particularly where denial of the application would thwart the policies of the Shoreline Management Act.

2. When a conditional use is requested, the Shoreline Administrator or Hearing Examiner as designated shall be the final approval authority for the Town. However, shoreline conditional uses must have approval from the state. The Department of Ecology shall be the final approval authority under the authority of WAC 173-27-200.

3. Conditional use permits shall be authorized only when they are consistent with all of the following criteria:
   a. The proposed use is consistent with the policies of RCW 90.58.020, WAC 173-27-160 and all provisions of this SMP;
   b. The use will not interfere with normal public use of public shorelines;
   c. That the proposed use of the site and design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and this SMP;
   d. That the proposed use will cause no significant adverse effects to the shoreline environment in which it is located;
   e. The public interest will suffer no substantial detrimental effect.

4. In the granting of all conditional use permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if conditional use permits were granted for other developments in the area where similar circumstances exist, the total of the conditional uses shall also remain consistent with the policies of RCW 90.58.020 and shall not produce substantial adverse effects to

the shoreline environment.

5. Other uses not specifically set forth in the SMP may be authorized through a conditional use permit if the applicant can demonstrate that other uses are consistent with the purpose of the shoreline environmental designation and compatible with existing shoreline improvements or that extraordinary circumstances preclude reasonable use of the property; however, uses specifically prohibited by this SMP shall not be authorized.

6. The Town is authorized to impose conditions and standards to enable a proposed shoreline conditional use to satisfy the conditional use criteria.

7.7.6 Permit Time Requirements

1. The following time limits shall apply to all substantial development, conditional use or variance permits along with others listed in WAC 173-27-170:
   a. Construction shall be commenced or, where no construction is involved, the use or activity shall be commenced within two years of the effective date of the shoreline permit.
   b. Within one (1) year of the Town's approval of the local permit, the permit holder shall provide to the Town evidence that he/she has made substantial progress on the permit, including documentation of the application for any additional state or federal permits required prior to the commencement of construction. Failure to do so may result in a waiver of the ability to request the one-year extension noted in subparagraph c below.
   c. The Town may for good cause, with prior notice to parties of record and the Department of Ecology, extend the two-year time period for up to one year. An extension may be considered based on the inability of the permit holder to expeditiously obtain other government permits that are required prior to the commencement of construction.
   d. To qualify for a one-year extension the permit holder must provide the Town with documentation from the appropriate state and/or federal agency indicating that a complete application has been made and that no further action is required from the permit applicant for the state or federal agency to continue its processing of the permit application.
   e. Authorization to conduct development activities shall terminate five years after the effective date of the shoreline permit; provided, that the town may authorize a single extension for a period not to exceed one year based on reasonable factors, if a request for extension has been filed before the expiration date and notice of the proposed extension is given to parties of record and the Department of Ecology.

2. The effective date of a shoreline permit shall be the date of the last action required on the shoreline permit and all other government permits and approvals that authorize the development to proceed, including all administrative and legal actions on any

such permit or approval.

3. It is the responsibility of the applicant to inform the Town of the pendency of permit applications filed with agencies other than the Town and of any related administrative and legal actions on any permit or approval. If no notice of the pendency of other permits or approvals is given to the Town prior to the date established by the shoreline permit or the provisions of this section, the expiration of a permit shall be based on the date of the shoreline permit.

4. When permit approval is based on conditions, such conditions shall be satisfied prior to occupancy or use of the structure or prior to commencement of a nonstructural activity; provided, that an alternative compliance limit may be specified in the permit.

5. Revisions to permits under WAC 173-27-100 may be authorized after the original permit authorization has expired under subsection (1) of this section; provided, that this procedure shall not be used to extend the original permit time requirements or to authorize substantial development after the time limits of the original permit.

6. The Town shall notify the Department of Ecology in writing of any change to the effective date of a permit, as authorized by this section, with an explanation of the basis for approval of the change. Any change to the time limits of a permit other than those authorized by this section shall require consideration of a new permit application.

7.7.7 Permit Revisions

1. A permit revision is required whenever the applicant proposes substantive changes to the design, terms or conditions of a project from that which is approved in the permit. A permit revision shall be consistent with provisions of WAC 173-27-100.

2. Changes are substantive if they materially alter the project in a manner that relates to its conformance to the terms and conditions of the permit, this SMP and the policies and provisions of chapter 90.58 RCW. Changes that are not substantive in effect do not require approval of a revision.

7.7.8 SEPA Review

1. At the time of the submittal of any application for a Substantial Development Permit, Conditional Use Permit or Variance Permit, the applicant shall also submit an environmental checklist pursuant to the requirements of Chapter 43.21C RCW. The Shoreline Administrator, acting as the Towns' SEPA Responsible Official, may require additional information to assist in reaching a threshold determination, and may require said information to be prepared at the applicant's expense.

2. The Shoreline Administrator, as the Town's SEPA Responsible Official, shall make a threshold determination, prepare, and publish notice of said determination in

accordance with the SEPA goals, policies and regulations as set forth in Chapter 197-11 WAC, the SEPA Rules.

3. A proposal which is SEPA exempt may still require a shoreline permit under this SMP.

7.7.9 Technical Review Shoreline Administrator

1. For all submitted applications for Shoreline Substantial Development Permits, the Shoreline Administrator shall make a decision on the permit application based on the information provided in the application.

2. Upon a finding of compliance with the criteria listed in this SMP, the Shoreline Administrator shall issue the permit, or issue the permit with conditions. Should the Shoreline Administrator find that any application does not substantially comply with the criteria, he/she may deny such application or attach any terms or condition that are deemed suitable and reasonable given the purpose and objectives of this SMP.

7.7.10 Appeals

The appeals of any final permit decision are governed by the procedures established in RCW 90.58.180, RCW 90.58.140(6), and WAC 461-08, the rules and procedures of the Shorelines Hearing Board. All appeals to any final permit decision must be made to the Shoreline Hearing Board within twenty-one (21) days after the date of filing of the permit or l to revisions of the permit consistent with WAC 173-27-100(8).

7.8 Washington State Department of Ecology Review

1. Ecology shall be notified within eight (8) days of any Shoreline Substantial Development, Conditional Use, Variance or rescission or revision permit decisions made by the Shoreline Administrator. The notification shall occur after all local administrative appeals related to the permit have concluded or the opportunity to initiate such appeals has lapsed. The Shoreline Administrator shall file the following with the Department of Ecology and Attorney General:
   a. A copy of the complete application per WAC 173-27-180;
   b. Findings and conclusions that establish the basis for the decision including but not limited to identification of shoreline environment designation, applicable Master Program policies and regulations and the consistency of the project with appropriate review criteria for the type of permit(s);
   c. The final decision of the Town;
   d. The permit data sheet per WAC 173-27-190;
   e. Affidavit of public notice; and
   f. Where applicable, the Shoreline Administrator shall also file the applicable documents required by the State Environmental Policy Act (RCW 43.21C).

2. After Town approval of a conditional use or variance permit, the Town shall submit

the permit to the State Department of Ecology for the department's approval, approval with conditions, or denial. The department shall render and transmit to the Town and the applicant its final decision approving, approving with conditions, or disapproving the permit within thirty days of the date of submittal by the Town pursuant to WAC 173-27-110.

3. The department shall review the complete file submitted by the Town on conditional use and variance permits and any other information submitted or available that is relevant to the application. The department shall base its determination to approve, approve with conditions or deny a conditional use permit or variance on consistency with the policy and provisions of the act, the criteria listed in the SMP and, as provided in WAC 173-27-210, the criteria in WAC 173-27-160 and 173-27-170.

4. The Town shall provide timely notification of the department's final decision to those interested persons having requested notification from the Town pursuant to WAC 173-27-130.

5. When the project has been modified in the course of the local review process, plans or text shall be provided to Ecology that clearly indicates the final approved plan.

6. If Ecology determines that the submittal does not contain all of the documents and information required by this section, Ecology shall identify the deficiencies and notify the Town and the applicant in writing. Ecology will not take action on Conditional Use or Variance Permit submittals until the material requested in writing has been submitted to them.

7. Ecology shall base its determination to approve, approve with conditions or deny a Conditional Use Permit or Variance Permit on consistency with the policy and provisions of the SMA and the criteria listed in this SMP.

7.9 Minimum Permit Application Submittal Requirements

1. Pursuant to WAC 173-27-180, all applications for a shoreline substantial development permit, conditional use, or variance shall provide, at a minimum, the following information: The name, address and phone number of the applicant. The applicant should be the owner of the property or the primary proponent of the project and not the representative of the owner or primary proponent.

2. The name, physical address, email address, and phone number of the applicant's representative if other than the applicant.

3. The name, physical address, email address, and phone number of the property owner, if other than the applicant.

4. Location of the property. This shall, at a minimum, include the property address and identification of the section, township and range to the nearest quarter, quarter section

or latitude and longitude to the nearest minute. All applications for projects located in open water areas away from land shall provide a longitude and latitude location.

5. A general description of the proposed project that includes the proposed use or uses and the activities necessary to accomplish the project.

6. A general description of the property as it now exists including its physical characteristics and improvements and structures.

7. A general description of the vicinity of the proposed project including identification of the adjacent uses, structures and improvements, intensity of development and physical characteristics.

8. A site development plan consisting of maps and elevation drawings, drawn to an appropriate scale to depict clearly all required information, photographs and text which shall include:
   a. The boundary of the parcel(s) of land upon which the development is proposed.
   b. The ordinary high water mark of the Swinomish Channel.
   c. Existing and proposed land contours. The contours shall be at intervals sufficient to accurately determine the existing character of the property and the extent of proposed change to the land that is necessary for the development. Areas within the boundary that will not be altered by the development may be indicated as such and contours approximated for that area.
   d. A general indication of the character of vegetation found on the site.
   e. The dimensions and locations of all existing and proposed structures and improvements including but not limited to; buildings, paved or graveled areas, roads, utilities, septic tanks and drainfields, material stockpiles or surcharge, and stormwater management facilities.
   f. Where applicable, a landscaping plan for the project.
   g. Where applicable, plans for development of areas on or off the site as mitigation for impacts associated with the proposed project shall be included and contain information consistent with the requirements of this section.
   h. Quantity, source and composition of any fill material that is placed on the site whether temporary or permanent.
   i. Quantity, composition and destination of any excavated or dredged material.
   j. A vicinity map showing the relationship of the property and proposed development or use to roads, utilities, existing developments and uses on adjacent properties.
   k. Where applicable, a depiction of the impacts to views from all publicly owned property and rights of way.
   l. On all variance applications the plans shall clearly indicate where development could occur without approval of a variance, the physical features and circumstances on the property that provide a basis for the request, and the location of adjacent structures and uses.

9. The Shoreline Administrator may accept a JARPA in lieu of these submittal

requirements where applicable.

7.10 Non-conforming Uses, Structures and Lots

A. Existing Uses and Developments

1. Existing uses, structures and lots legally established prior to the effective date of this SMP are allowed to continue. Where lawful uses, structures and lots exist that could not be established under the terms of this SMP, such uses, structures and lots are deemed nonconforming and are subject to the provisions of this section.

2. A use which is listed as a conditional use but which existed prior to adoption of the master program or any relevant amendment and for which a conditional use permit has not been obtained shall be considered a nonconforming use. A use which is listed as a conditional use but which existed prior to the applicability of the master program to the site and for which a conditional use permit has not been obtained shall be considered a nonconforming use.

3. A structure for which a variance has been issued shall be considered a legal nonconforming structure and the requirements of this section shall apply as they apply to preexisting nonconformities.

B. Nonconforming Uses

1. Additional development of any property on which a nonconforming use exists shall require that all new uses conform to this SMP and the Act.

2. Change of ownership, tenancy, or management of a nonconforming use shall not affect its nonconforming status, provided that the use does not change or intensify.

3. If a nonconforming use is converted to a conforming use, the nonconforming use may not be resumed.

4. When the operation of a nonconforming use is vacated or abandoned for a period of twelve (12) consecutive months, the nonconforming use rights shall be deemed extinguished and the future use of such property shall be in accordance with the permitted and conditional use regulations of this SMP.

5. If a conforming building housing a nonconforming use is damaged by fire, flood, explosion, or other natural disaster, such use may be resumed at the time the building is repaired; provided, such restoration shall be undertaken within six (6) months following said damage. Upon a showing of hardship or conditions causing delay, which are beyond the control of the applicant, the Shoreline Administrator may grant an extension of time for up to six additional months.

C. Nonconforming Structures

1. A nonconforming building or structure may be maintained, repaired, altered or enlarged provided:
   a. Improvements do not extend or expand the nonconformity of such building or structure;
   b. Improvements are consistent with the provisions of this SMP; or
   c. Alterations are necessary to meet city, state, or federal requirements.

2. If a nonconforming structure is intentionally modified and the cost of the proposed development exceeds fifty (50) percent of the fair market value of the replacement cost of the original structure, it shall be required to meet all applicable standards in this SMP.

3. A nonconforming structure may be restored, if damaged by fire, flood, explosion or similar natural hazard, in the same location and dimensions as existed before the damage occurred if restoration begins within six months of the date the damage occurred. Upon a showing of hardship or conditions causing delay, which are beyond the control of the applicant, the Shoreline Administrator may grant an extension of time for up to six additional months.

D. Nonconforming Lots

Legally established, nonconforming, undeveloped lots located landward of the ordinary high water mark are buildable, provided that all new structures or additions to structures on any nonconforming lot must meet all setback, height and other construction requirements of this SMP and the Act.

Chapter 8 - Definitions

The definitions used in Chapters 90.58 RCW, 173-26 WAC, and 173-27 WAC are also considered part of this shoreline master program.

A

Accessory Use	Any structure or use incidental and subordinate to a primary use or development
Accretion	The growth of a beach by the addition of material transported by wind and/or water
Act	Chapter 90.58 RCW, the Shoreline Management Act of 1971, as amended
Adjacent Lands	Lands adjacent to the shorelines of the state (outside of shoreline jurisdiction)
Appurtenance	Is a structure or development which is necessarily connected to the use and enjoyment of a single-family residence and is located landward of the ordinary high water mark and also of the perimeter of a wetland. Normal appurtenances include a garage, deck, driveway, utilities, fences, and grading which does not exceed 250 cubic yards and which does not involve placement of fill in any wetland or waterward of the ordinary high water mark.
Archaeological	Having to do with the scientific study of material remains of past human life and activities
Average grade level	The average of the natural or existing topography of the portion of the lot, parcel, or tract of real property which will be directly under the proposed building or structure before development. In the case of structures to be built over water, average grade level shall be the elevation of the ordinary high water mark. Calculation of the average grade level shall be made by averaging the ground elevations at the midpoint of all exterior walls of the proposed building or structure.

B

Backshore	Is the accretion or erosion zone, located landward of the line of ordinary high tide, which is normally wetted only by storm tides. It may take the form of a more or less narrow storm berm (ridge of wave-heaped sand and/or gravel) under a bluff or it may constitute a broader complex of berms, marshes, meadows, or dunes landward of the line of ordinary high tide. It is part of the littoral drift process along its seaward boundary.

Berm	Are a linear mound or series of mounds of sand and/or gravel generally paralleling the water at or landward of the line of ordinary high tide; also, a linear mound used to screen an adjacent activity, such as a parking lot, from transmitting excess noise and glare.
Best Management Practice (BMP)	Physical, structural, and/or managerial practices that, when used singly or in combination, prevent or reduce pollution of water, and/or have been approved by the Department of Ecology.
Biofiltration System	Is a stormwater or other drainage treatment system that utilizes as a primary feature the ability of plant life to screen out and metabolize sediment and pollutants. Typically, biofiltration systems are designed to include grassy swales, retention ponds, and other vegetative features
Biota	Refers to the animals and plants that live in a particular location or region
Boat Launch or Ramp	Graded slopes, slabs, pads, planks, or rails used for launching boats by means of a trailer, hand, or mechanical device
Boating Facilities	Is water-dependent facilities provided for boat moorage, launch, or service such as marinas, wet and dry moorage, boat launch ramps, floats and accessory uses.
Breakwater	An offshore structure aligned parallel to shore, sometimes shore-connected, that provides protection from waves.
Buffer Area	A parcel or strip of land that is designed and designated to permanently remain vegetated in an undisturbed and natural condition to protect an adjacent aquatic or wetland site from upland impacts, to provide habitat for wildlife, and to afford limited public access.
Bulkhead	A solid or open pile wall erected generally parallel to and near the ordinary high water mark for the purpose of protecting adjacent uplands from waves or current action.

C

CFR	Code of Federal Regulations
Channel	Is an open conduit for water either naturally or artificially created, but does not include artificially created irrigation, return flow, or stockwater channels.
Clean Water Act	Is the primary federal law providing water pollution prevention and control; previously known as the Federal Water Pollution Control Act. (33 USC 1251 et seq.)

Clearing	Is the destruction or removal of vegetative ground cover, shrubs and trees including, but not limited to, root material removal and/or topsoil removal.
Commercial	Refers to activities and facilities conducted or constructed for profit and which serve the needs and convenience of residents and visitors. Commercial includes wholesale, retail, recreational, service and business trades.
Community Structure	Is a building, dock, or other structure which is intended for the common use of the residents of a particular subdivision or community. It is not intended to serve as a public facility
Conditional Use	Is a use, development, or substantial development which is classified as a conditional use or is not classified within the master program.
Covered Moorage	Is boat moorage, with or without walls, that has a roof to protect a vessel.

D

Development	Is a use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to the Shoreline Management Act at any stage of water level.
Dock	Is a structure designed to float upon the water which abuts the shoreline and is used as a landing or moorage place for commercial, industrial, and recreational purposes.
Dredge Material/Spoil	Is the material removed by dredging.
Dredging	Is the excavation or displacement of the bottom or shoreline material of a water body.

E

Emergency	Is an unanticipated and imminent threat to public health, safety, or the environment which requires immediate action within a time too short to allow full compliance with the master program. Emergency construction is construed narrowly as that which is necessary to protect property from the elements.

Enhancement	Is an alteration of an existing wetland or habitat to improve or increase its characteristics and processes without degrading other existing environmental functions. Enhancements are to be distinguished from wetland/habitat creation or restoration projects.

Environmentally Sensitive Areas	Are those areas with especially fragile biophysical characteristics and/or with significant environmental resources as identified in a scientifically documented inventory accomplished as part of a SEPA/NEPA process or other recognized assessment. Environmentally sensitive areas may or can include but are not limited to unstable bluffs, wildlife habitat areas, fish breeding, rearing or feeding areas, wetlands, estuaries, and dunes.
Erosion	Is the wearing away of land by the action of natural forces.
Exempt Development	Are developments set forth in WAC 173-27-040 and RCW 90.58.030 (3)(e), 90.58.140(9), 90.58.147, 90.58.355, and 90.58.515 which are not required to obtain a substantial development permit but which must otherwise comply with applicable provisions of the Shoreline Management Act and this shoreline master program.
Exemption	Is an authorization from the Town which establishes that an activity is exempt from substantial development permit requirements under WAC 173-27-040, but subject to regulations of the Shoreline Management Act and the La Conner Shoreline Master Program.
Extreme Low Tide	Is the lowest line on the land reached by a receding tide.

F

Fair Market Value	Refers to the open market bid price, excluding sales tax, for conducting the work, using equipment and facilities, and purchase of goods, services and materials necessary to accomplish the development. This would normally equate to the cost of hiring a contractor to undertake the development from start to finish, including the cost of labor, materials, equipment and facility usage, transportation and contractor overhead and profit. The fair market value of the development shall include the fair market value of any donated, contributed or found labor, equipment or materials. (Note: In the Town of La Conner the fair market value or cost does not include applicable state sales tax.).
Fill	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.
Float	Is a floating platform structure(s), anchored or held by pilings.
Floating Home	Refers to a structure designed and operated substantially as a permanently based overwater residence. Floating homes are not

	vessels and lack adequate self-propulsion and steering equipment to operate as a vessel. They are typically served by permanent utilities and semi-permanent anchorage/moorage facilities.
Floodplain	Is defined by the Federal Emergency Management Agency for the Town of La Conner with the Flood Insurance Study (FIS) and defines the relatively flat area or lowlands adjoining the channel of a river, stream, watercourse, or other similar body of water, which has been or may be covered with floodwater during a 1% flood condition or more commonly referred to as the 100-year floodplain.
Foreshore	Is, in general terms, the beach between mean higher high water and mean lower low water.

G

Gabions	Are structures composed of masses of rocks, rubble or masonry held tightly together usually by wire mesh so as to form blocks or walls. Sometimes used on heavy erosion areas to retard wave action or as foundations for breakwaters or jetties.
Grading	Is the physical manipulation of the earth's surface and/or drainage pattern in preparation for an intended use or activity.
Groin	(Also referred to as a "spur dike" or "rock weir") Is a barrier-type structure extending from the backshore or stream bank into a water body for the purpose of the protection of a shoreline and adjacent upland by influencing the movement of water and/or deposition of materials.

H

Habitat	A place or type of site where a plant or animal naturally or normally lives and grows
Harbor line (inner and outer)	Are the lines set by the Washington State Department of Natural Resources delineating their harbor management areas.
Height	Is the distance measured from the average grade level, before development, to the highest point of a structure; provided, that television antennas, chimneys, and similar appurtenances shall not be used in calculating height, except where such appurtenances obstruct the view of the shoreline of a substantial number of residences on areas adjoining such shorelines; provided further, that temporary construction equipment is excluded in this calculation.
Houseboats	Are licensed and designed for use as a mobile residential structure with detachable utilities or facilities, anchoring and the presence of

	adequate self-propulsion and steering equipment to operate as a vessel.
I	
Industrial	Refers to light to medium manufacturing, fabrication, research, wholesale trade and distribution businesses, and their associated offices, which are largely devoid of nuisance and hazards, and which include processing and handling of products, the storage of finished or semi-finished goods.
Intertidal	The vertical zone between average high and average low tides. The intertidal zone of a stationary structure or bank is subject to alternate wetting and drying
L	
Littoral	Refers to living on, or occurring on, the shore.
Littoral Drift	Is the mud, sand, or gravel material moved parallel to the shoreline in the near shore zone by waves and currents.
Liveaboard Vessel	Is a vessel used as an over-water residence for a period exceeding sixty days in any one calendar year.
M	
Marina	means a boat basin offering dockage and other services for small marine craft which may consist of a system of piers, buoys, or floats to provide moorage for 10 or more boats.
Marine Shoreline	The portion of the Town of La Conner that abuts the OHWM of the Swinomish Channel.
Mitigation	means the process of avoiding, reducing, or compensating for the environmental impact(s) of a proposal.
Multifamily Dwelling	Is a building containing two or more dwelling units, including but not limited to duplexes, apartments, and condominiums.
N	
NEPA	The National Environmental Policy Act.
Nonconforming Development	Is defined as a shoreline use or structure which was lawfully constructed or established prior to the effective date of the

	applicable SMA/SMP provision, and which no longer conforms to the applicable shoreline provisions.
Non-water Oriented Use	Is any use which does not meet the definition of water-dependent, water-related or water-enjoyment.
Normal Maintenance	Includes Normal Maintenance or Repair and those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition.
Normal Repair	Is to restore a development to a state comparable to its original condition within a reasonable period after decay or partial destruction except where repair involves total replacement which is not common practice or causes substantial adverse effects to the shoreline resource or environment.
Normal Protective Bulkhead	Refers to a bulkhead, common to single-family residences, constructed at or near the ordinary high water mark to protect an existing single-family residence, and which sole purpose is for protecting land from erosion, not for the purpose of creating new land.

O

Office	Is an office space and required parking, etc., including high-tech or e-commerce research and development and professional offices.
Ordinary High Water Mark (OHWM)	Is the mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting uplands, in respect to vegetation as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the Department of Ecology; provided, that in any area where the ordinary high water mark cannot be found, the ordinary high water mark adjoining salt water shall be the line of mean higher high tide.

P

Pier	Is a structure built on a fixed platform above the water which abuts the shoreline and is used as a landing or moorage place for commercial, industrial and recreational purposes.

Primary Use	Refers to the use(s), permitted or conditional, for which a lot, development or structure, or the major portion thereof (more than 50 percent), is designed or actually employed. The primary use(s) will be calculated based on the building square footage by use of a development.
R	
RCW	Revised Code of Washington.
Recreational Development	Commercial and public facilities designed and used to provide recreational opportunities to the public.
Residential Development	Development which is primarily devoted to or designed for use as a dwelling(s), including single-family residences, multifamily development, and the creation of new residential lots through land division.
Restoration	In the context of "ecological restoration," the reestablishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including, but not limited to, re-vegetation, removal of intrusive shoreline structures and removal or treatment of toxic materials. Restoration does not imply a requirement for returning the shoreline area to aboriginal or pre-European settlement conditions.
Riparian	Is of, on, or pertaining to the banks of a river.
Riprap	Refers to a layer, facing, or protective mound of stones placed to prevent erosion, scour, or sloughing of a structure or embankment; also, the stone so used.
Runoff	Is water that is not absorbed into the soil but rather flows along the ground surface following the topography.
S	
Secondary Use Multifamily Residential	Is a multifamily residential use that is subordinate (49 percent or less of all uses) to the primary use(s) of the property, such as commercial. "Secondary use – multifamily residential" will be calculated based on the Uniform Development Code residential conditional use definition, LCMC 15.35.030.
Secondary Use - Residential	Refers to a residential use that is subordinate (49 percent or less of all uses) to the primary use(s) of the property, such as commercial. "Secondary use – residential" will be calculated based on the

	Uniform Development Code residential conditional use definition, LCMC 15.35.030.
SEPA	State Environmental Policy Act. SEPA requires state agencies, local governments, and other lead agencies to consider environmental factors when making most types of permit decisions, especially for development proposals of a significant scale.
Shorelands or Shoreland Areas	Are those upland lands extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark.
Shoreline Environment Designation	Are the categories of shorelines established by the Town to provide a uniform basis for applying policies and use regulations within distinctively different shoreline areas. La Conner's shorelines are designated in the following environments: residential, commercial, historic commercial, industrial, public and aquatic.
Shoreline Jurisdiction	Is the term describing all of the geographic areas covered by the SMA, related rules and the applicable master program; also, such areas within the Town's authority under the SMA.
Shorelines	Are all of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them, except shorelines of statewide significance.
Shorelines Hearings Board (SHB)	Refers to the a six-member quasi-judicial body, created by the SMA, which hears appeals by any aggrieved party on the issuance of a shoreline permit and appeals by local government on Ecology approval of master programs, rules, regulations, guidelines or designations under the SMA.
Shorelines of Statewide Significance	In La Conner, that area in the Swinomish Channel, between the Burlington Northern Railway trestle to the north and a line running east/west and connecting Navigation Light No. 13 with the northeastern most point of the jetty as it abuts McGlinn Island, lying waterward of the extreme low tide is considered to be a

	shoreline of statewide significance. The adjacent tidelands landward of the Channel's extreme low tide line and upland areas within the Town's shoreline jurisdiction are not shorelines of statewide significance.
Shorelines of the State	Is the total of all shorelines and shorelines of statewide significance within the state.
Sign	Is a board or other display containing words and/or symbols used to identify or advertise a place of business or to convey information. Excluded from this definition are signs required by law and the flags of national and state governments.
Single-Family Residence (SFR)	Refers to a detached dwelling designed for and occupied by one family including those structures and developments within a contiguous ownership which are a normal appurtenance.
Site Area	Includes all improved DNR-leased lands, fee lands, and improved public areas within the shoreline jurisdiction.
SMA	Shoreline Management Act of 1971, Chapter 90.58 RCW, as amended
Structure	Refers to a permanent or temporary edifice or building, or any piece of work artificially built or composed of parts joined together in some definite manner, whether installed on, above or below the surface of the ground or water, except for vessels.
Substantial Development	Is any development of which the total cost or fair market value exceeds the value established in RCW 90.58.030 under the definition of substantial development (excluding sales tax), or any development which materially interferes with the normal public use of the water or shorelines of the state; except as specifically exempted pursuant to RCW 90.58.030(3)(e) and WAC 173-27-040 (See LCMC 10.10.____ et seq.) Note: The minimum development value changes over time. Refer to the current WAC 173-27-040.
Substantial Development Permit	Is authorization for any substantial development or revision to a substantial development granted by the Town under the provisions of the shoreline master program and Chapter 90.58 RCW.
U	
Upland	Refers to the dry land area above and landward of the Ordinary High Water Mark.

Utilities (Primary)	A utility facility that performs primary functions (such as generation, treatment).
Utilities (Accessory)	Activities related to the functions or service to shoreline properties (such as transmission line, pipelines, pump stations).

V

Variance	Is a means to grant relief from the specific bulk, dimensional or performance standards specified in the master program. It is not a means to vary a use of a shoreline.
Vessel	Refers to ships, boats, barges, or any other floating crafts which are designed and used for navigation and do not interfere with the normal public use of the water.

W

WAC	Washington Administrative Code
Water-Dependent Use	A use that requires direct access to the water to accomplish its primary function. It is a use, or a portion of a use, which cannot exist in a location that is not adjacent to the water and which is dependent on the water by reason of the intrinsic nature of the operation. Example: marina, ferry terminal, boat launch.
Water-Enjoyment Use	A use that does not require direct access to the water, but is enhanced by a waterfront location. This includes uses that facilitate public access to the shoreline as a primary characteristic of the use; or uses that provide for recreational use or aesthetic enjoyment of the shoreline for a substantial number of people. The use must be open to the general public and the shoreline-oriented space within the project must be devoted to the specific aspects of the use that fosters shoreline enjoyment. Example: restaurant, parks.
Water-Related Use	A use that does not require direct access to the water, but provides goods or services associated with water dependent uses. A use or portion of a use which is not intrinsically dependent on a waterfront location but whose economic viability is dependent upon a waterfront location. Example: boat repair, kayak rentals.
Watershed Restoration Plan	A plan, developed or sponsored by the Department of Fish and Wildlife, the Department of Ecology, the Department of Natural Resources, the Department of Transportation, a federally recognized Indian tribe acting within and pursuant to its authority,

	a city, a county, or a conservation district that provides a general program and implementation measures or actions for the preservation, restoration, re-creation, or enhancement of the natural resources, character, and ecology of a stream, stream segment, drainage area, or watershed for which agency and public review has been conducted pursuant to Chapter 43.21C RCW, the State Environmental Policy Act.
Watershed Restoration Project	A public or private project authorized by the sponsor of a watershed restoration plan that implements the plan or a part of the plan and consists of one or more of the following activities: (1) a project that involves less than 10 miles of stream reach in which less than 25 cubic yards of sand, gravel or soil is removed, imported, disturbed or discharged, and in which no existing vegetation is removed except as minimally necessary to facilitate additional plantings; (2) a project for the restoration of an eroded or unstable stream bank that employs the principles of bioengineering, including limited use of rock as a stabilization only at the toe of the bank, and with primary emphasis on using native vegetation to control the erosive forces of flowing water, or (3) a project primarily designed to improve fish and wildlife habitat, remove or reduce impediments to migration of fish or enhance he fishery resource available for use by all citizens of the state; provided, that any structure other than a bridge or culvert or instream habitat enhancement structure associated with the project, is less than 200 square feet in floor area and is located above the ordinary high water mark of the stream.
Wetlands	Refers to areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including but not limited to irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands.
Z	
Zoning	To designate by ordinance, including maps, areas of land reserved and regulated for specific land uses.

Town of LaConner

Shoreline Designation Map

Legend

- Harbor Lines - Revised 1986 and 1993
- Inner and Outer Harbor Lines 2002
- Ordinary High Water Mark (OHWM)
- 200 Foot Landward Shoreline Designation
- LaConner Town Limits
- Aquatic Area Designation of the S.M.P.
- Wetlands (Palustrine, Emergent, Per NWI)
- Regulated Slope Area
- Flood Plain
- 5 Foot Contour
- 1 Foot Contour
- Spot Elevations

Shoreline Management Program

- Residential Environment (RE)
- Commercial Invironment (CE)
- Industrial Environment (IE)
- Public Use Environment (PUE)
- Historic Commercial Environment (HCE)
- Aquatic Environment (AE)

N
W E
S

Contour Interval: 1 foot
Vertical Datum: NGVD 29

0 150 300
Feet

Map Print Date: May 1, 2014

Data and Source Information:

Image Date 2013.

Town Limits*, Wetlands, Regulated Slope Area, OHWM, 200 Foot Landward Shoreline Designation, and Flood Plain data obtained from Town of LaConner Critical Areas Map by Sturdy Engineering Corporation. Flood Plain denotes Incorporated areas only.
* Town Limits were modified to follow OHWM and to include basins

Topographic data(Contours and Spot Elevations) were obtained from CAD drawing files generated by Walker and Associates, Inc.

Harobor Lines data obtained from 1993 Supplemental Map of LaConner Harbor map created by Department of Natural Resources.

All data was adjusted to fit 2004 Imagery and NAD 1983 State Plane Coordinates. Topographic data, in particular, was georectified using 2004 Imagery. While great care was taken to maintain accuracy, these data products are a "best fit" representation of their true location on the ground.

Shoreline Inventory and Characterization Report

Shoreline Master Program Update
La Conner, Washington

Ecology Grant #G1100003

Deliverable for Task 2.3

Due to Ecology: October 31, 2011

Prepared for:

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Appendix A. Town of La Conner Shoreline Inventory
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1.0 INTRODUCTION

1.1. Purpose

The Town of La Conner (Town) is in the process of conducting a comprehensive Shoreline Master Program (SMP) update. This process is partially funded by a grant administered through the Washington State Department of Ecology (Ecology) (SMA Grant No. G1100003). Substitute Senate Bill (SSB) 6012, an Act passed in 2003 relating to shoreline management and amending RCW 90.58.060, 90.58.080, and 90.58.250, requires cities and counties to update their SMPs consistent with the state Shoreline Management Act (SMA), Revised Code of Washington (RCW) 90.58 and its implementing guidelines, Washington Administrative Code (WAC) 173-26.

This document presents results of the Town of La Conner Shoreline Inventory and Characterization. According to Ecology, the purpose of the Shoreline Inventory and Characterization is to develop an understanding of the relationship between shoreline processes and functions and the built environment. Together, the combined Inventory and Characterization (Ecology 2010a):

- Identify ecosystem wide processes and shoreline functions.
- Set a baseline for evaluating cumulative impacts of the draft SMP and determining no net loss of shoreline ecological functions.
- Identify potential sites for protection, restoration and public access.
- Guide development of the shoreline management strategy that will lead to policies, regulations and environment designations that achieve no net loss of shoreline ecological functions.

1.2. Regulatory Overview

Washington's 1971 SMA was created in response to a growing concern among Washington residents that irrevocable damage was being done to Washington's shorelines through unplanned and unbridled use.

The SMA policy goals harbor potential for conflict as set forth in WAC 173-26-176(2):

"The act recognizes that the shorelines and the waters they encompass are "among the most valuable and fragile" of the state's natural resources. They are valuable for economically productive industrial and commercial uses, recreation, navigation, residential amenity, scientific research and education. They are fragile because they depend upon balanced physical, biological, and chemical systems that may be adversely altered by natural forces (earthquakes, volcanic eruptions, landslides, storms, droughts, floods) and human conduct (industrial, commercial, residential, recreation, navigational)."

The SMA is intended to provide a balance between shoreline development and conservation or enhancement of shoreline ecological functions and values by encouraging water-dependent, water-related, and water-enjoyment uses within shoreline jurisdiction.

The legislative findings and policy goals of the SMA are as follows (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."*
>
> *"It is the policy of the state to provide for the management of the shorelines by planning for and fostering all reasonable and appropriate uses."*
>
> *"Uses shall be preferred which are. . .unique to or dependent upon use of the state's shoreline."*
>
> *"Alterations of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for single-family residences and their appurtenant structures, ports, shoreline recreational uses including but not limited to parks, marinas, piers, and other improvements facilitating public access to shorelines of the state, industrial and commercial developments which are particularly dependent on their location on or use of the shorelines of the state and other development that will provide an opportunity for substantial numbers of the people to enjoy the shorelines of the state."*

RCW 90.58.090 authorizes and directs the Department of Ecology (Ecology) to adopt:

> "*…guidelines consistent with RCW 90.58.020, containing the elements specified in RCW 90.58.100" for development of local master programs for regulation of the uses of "shorelines" and "shorelines of statewide significance.*"

RCW 90.58.200 authorizes the department and local governments "*to adopt such rules as are necessary and appropriate to carry out the provisions of*" the Shoreline Management Act.

Local governments are assigned the primary responsibility for administering a regulatory program consistent with the policies and provisions of the SMA through local shoreline master programs (SMPs). The SMP guidelines (WAC 173-26), established by the Department of Ecology (Ecology), offer goals and policies (see above) to guide local jurisdictions in developing use regulations and development standards within the shoreline. Local governments are allowed substantial discretion to adopt SMPs that reflect local circumstances, and regulatory/non-regulatory programs.

The SMA thus provides the policy goals and a set of guidelines (WAC 173-26) to assist local jurisdictions in developing, adopting and amending local Shoreline Master Programs (SMPs), to provide 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*" (RCW 90.58.020).

1.3. Shoreline Jurisdiction and Definitions

The Town of La Conner shoreline jurisdiction extends from the center line of the Swinomish Channel to a line that is 200 feet landward from the Ordinary High Water Mark (OHWM) of the Swinomish Channel (Town of La Conner 2003a). The Town has seven shoreline environmental designations including Urban Commercial (Environments A and B), Urban Industrial, Historic Commercial, Aquatic, Residential and Public Use (Figure 3 – Town of La Conner Shorelines Map). "Residential" is not a current established

environmental designation, however it has been recognized as a pre-existing use and will be established as an environmental designation during the update of the Shoreline Master Program.

The Department of Natural Resources (DNR) and the Town of La Conner are in discussion about the location of the official Town limits along the shoreline of the Swinomish Channel, relative to the OHWM and harbor lines. Future maps of the Town will reflect any changes in the Town limits that occur as a result of these discussions.

1.4. Relationship to Other Plans and Programs

WAC 173-26-010 and RCW 90.58.080 direct local governments to develop and administer local shoreline master programs (SMPs) for regulation of uses on shorelines of the state. WAC 173-26-010 directs local governments to develop SMPs that are integrated with other local government systems for administration and enforcement of land use regulations.

1.4.1. *Town Plans and Programs*

Regulation of development near the Swinomish Channel and management of shoreline resources is conducted under various regulatory plans and programs that have been established by the Planning Department. Some of these plans have been developed pursuant to the Washington State Growth Management Act (GMA) and Shoreline Management Act (SMA), while others have been independently established by the Town's Planning Department to meet the unique vision of the Town. Town planning documents that affect activities and development within the shoreline zone include, but may not be limited to: current Shoreline Management Program, Comprehensive Plan, Parks and Recreation Plan, Parking Plan, Capital Facilities Plan, Climate Change Action Plan, Floodplain Management Program, Critical Areas Ordinance , and various other Chapters within the LMC that establish development standards and zoning.

The Comprehensive Plan is the unifying document that outlines how the Town will direct development and retain certain desirable qualities. The Comprehensive Plan provides guidance regarding general land use and development patterns with regard to the following primary elements: economic, land use, housing, transportation, utilities, capital facilities and essential facilities. The scope of jurisdiction subject to guidance contained in the Comprehensive Plan includes the entire town, both within and beyond the extent of shoreline jurisdiction.

Other planning documents developed by the Town, including the Shoreline Management Program, should be developed to be consistent with the Comprehensive Plan to achieve a consistent use policy. The update to the Shoreline Management Program therefore should also strive to be consistent with the other planning documents listed above. A complete reference list of Town Plans & Programs is provided in the Shoreline Inventory prepared during this update process and summarized below in Section 2.2.

1.4.2. *Regional, State and Federal Programs*

Shoreline planning must also take into consideration other regional, state and federal programs and/or laws that may influence development of shorelines within the local jurisdiction. As discussed in the preceding section, several local plans and programs have been mandated at the state level under the

authority of the state GMA and SMA. In addition to these programs, several other state, regional and federal programs and regulations are also relevant to the shoreline planning process. These include but are not necessarily limited to: Washington's Hydraulic Code (see RCW 77.55 and WAC 220-110), SEPA rules (see RCW 43.21C and WAC 197-11), and Aquatic Land Management (see RCW 79.105 and WAC 332-30) at the state level; National Flood Insurance Program, Clean Water Act, Endangered Species Act and Magnuson-Stevens Fisheries Management Act at the federal level; and various plans and programs developed at the regional or county level, a comprehensive list of which is included in the Shoreline Inventory document previously prepared as part of the update process and summarized below in Section 2.2.

2.0 METHODS

2.1. Shoreline Inventory

The Town of La Conner submitted a Shoreline Inventory to Ecology on August 31, 2011. Features identified in the Shoreline Inventory included:

- Shorelines of the State,
- General location of channel/floodplain features,
- Critical Areas,
- Shoreline and adjacent land use patterns/density and transportation and utility facilities,
- Degraded areas and sites with potential for ecological restoration,
- Areas of special interest,
- Existing and potential shoreline public access sites,
- Historical aerial photographs documenting past conditions to assist in preparing an analysis of cumulative impacts of development,
- Archaeological and historic resources in shoreline jurisdiction, and
- Policies and regulations in shoreland and adjacent areas that affect shorelines.

Issues identified in the Shoreline Inventory that will be characterized in this report include:

- Climate Change
- Flooding
- Eroding shorelines
- Sedimentation within Swinomish Channel

Appendix A contains the Shoreline Inventory including the list of references.

2.2. Characterizing Ecosystem-wide Processes and Shoreline Functions

Ecosystem-wide characterization of processes and functions within the Town's shoreline environment includes a coarse-scale analysis of the broader area that influences the shoreline jurisdiction. Shoreline functions within the limits of jurisdiction of the Town do not exist in isolation and are dependent on, and

result from, ecosystem-wide processes that operate on scales not necessarily limited to the Town boundary. According to Ecology:

> *Ecosystem-wide processes refer to dynamic physical and chemical interactions that form and maintain natural landscapes, including the movement of water, sediment, nutrients, pathogens, toxins and wood as they enter into, pass through, and eventually leave, the watershed.*

These processes occur over larger landscapes that include both the shoreline and watershed features draining to the shoreline and are influenced by precipitation, geology, topography, soils, land cover and land use.

The first step needed to characterize ecosystem-wide processes and shoreline functions is to identify the contributing watersheds that may influence and interact with the shoreline environment within the Town (Section 3.0). Ecology WRIA maps and USGS topography maps were used for this purpose in addition to a shallow groundwater study of the Skagit River Delta (Ecology 2009 and 2002, Savoca et al 2009). The second step is to identify and analyze the ecosystem-wide processes within contributing watersheds that may influence shoreline functions within the Town's jurisdiction. Guidance from Ecology identifies methods by which the influence of each ecosystem process on ecological functional groups is identified and described based on specific structures (natural resources) and biological/ecological functions. The goal is to identify those ecosystem-wide processes that may influence shoreline functions at the site scale that will be considered at a detailed level in the reach assessment (see Section 2.4). This information is used to establish an environmental baseline at both the watershed and reach scales during the shoreline planning process and to help identify appropriate uses, modifications and/or restoration that should be recommended.

Inventory data sources used to identify ecosystem-wide processes, shoreline structures, and functions are provided in Section 10 – References and in Appendix A (Shoreline Inventory). Results of the ecosystem-wide analysis are presented in Section 3.

2.3. Inventory and Characterization Approach for Shoreline Reaches

To facilitate shoreline planning at the scale needed to make specific recommendations within the Town's jurisdiction, the shoreline environment has been divided into three "reaches". Reaches are specific segments of the shoreline that will be the basis for in-depth discussion of shoreline functions. Reaches in the Town were identified using guidance from Ecology with consideration for the physical and biological changes, relative intensity and type of development along the shoreline, and adjacent land use. These patterns were identified using available resources including shoreline oblique photos obtained from Ecology (Ecology 1994; Figure 2), a reconnaissance-level site visit, planning documents prepared by the Town's Planning Department and others, and discussion with local planners and experts.

Baseline conditions within each reach were assessed using methods developed by Ecology. Natural resources and ecological/biological functions within each reach were evaluated in the context of the

ecosystem-wide processes that have been identified for the Town's location (see Section 3.4). The functional integrity and/or relative levels of impairment of the shoreline environment were then described on a reach-by-reach basis and specific management recommendations were made as warranted.

Inventory and characterization of each of the three reaches identified using these methods are presented in Section 5.

3.0 ECOSYSTEM-WIDE PROFILE

The purpose of this section is to present the results of an ecosystem-wide characterization of processes and functions that affect the Town's shoreline environment at a coarse scale. To understand the processes that influence and interact with shoreline functions at the reach scale, it is important to first examine the Town's location relative to other geographical and physical features at a broader watershed scale. The information presented includes areas that extend beyond the jurisdiction of the Town's shoreline environment within the Swinomish Channel to include baseline environmental data for the Lower Skagit/Samish (WRIA 3) and Puget Sound (HUC 17110019) watersheds. Specifically, the geographic scope of this section includes the following areas: the Swinomish Channel in its entirety; the Skagit and Samish Rivers, as well as associated deltas, floodplains and tributaries; Padilla and Skagit Bays; and portions of Puget Sound within Skagit County.

3.1. Watershed Overview (WRIA 3 – Lower Skagit/Samish)

The Town of La Conner lies within the Lower Skagit/Samish Watershed (WRIA 3) in northwestern Washington. WRIA 3 contains the entirety of the Samish River basin, including Friday Creek which is the outlet to Lake Samish, and the lower reaches of the Skagit River, which includes approximately eleven major tributaries and the north and south forks of the Skagit River which together with Skagit Bay bound Fir Island. La Conner lies between the Samish River and the North Fork of the Skagit River along the eastern banks of the Swinomish Channel, an 11-mile man-made channel connecting Padilla and Skagit Bays (Figure 1 – Vicinity Map).

3.2. Padilla Bay

Padilla Bay is an estuary (eight miles long and three miles wide) at the northern edge of the Skagit River delta. Since 1980, Padilla Bay has been part of the National Estuarine Research Reserve System, a program that protects more than 1.3 million acres of nearshore coastal and estuarine areas across 22 states and Puerto Rico for purposes of long-term research, environmental monitoring, education and stewardship (Ecology 2011a, NOAA 2000).

Padilla Bay was originally formed by sediments from the Skagit River. In the last 5,000 years, only floodwaters from Skagit River have flowed to Padilla Bay and since the late 1800s, the construction of dikes has artificially reduced input from the Skagit River. A number of sloughs deliver freshwater to the bay (e.g., Joe Leary Slough and Indian Slough), and some of these sloughs are experiencing water quality

problems such as low dissolved oxygen, high levels of fecal coliform, high temperatures, and low and high pH excursions (Ecology 2008 and 2010b, Smith et al. 2009).

Currently, Padilla Bay is a shallow bay with exposed mudflats on out-going tides. Intertidal flats cover approximately 75 percent of the surface area of the bay with the other 25 percent consisting of a system of dendritic channels that distribute and drain the semi diurnal tides (Bulthuis 2003). Hat Island, on the western edge of Padilla Bay straddles the contrasting topography with eelgrass covered intertidal flats on one side and deep waters on the other side.

3.2.1. *Existing Land Use and Cover*

Agriculture surrounds the bay to the south, east and west with a few small areas of forested areas that are bisected by single family residences, roads and agricultural uses. Habitat conditions within and adjacent to Padilla Bay mostly include non forested habitat with less than 5 percent forested area surrounding the bay (Smith et al. 2009). A coarse estimation of shoreline modifications indicated that approximately 95 percent of Padilla Bay has extensive modifications that are comprised mostly of dikes and riprap (DNR 1998a).

3.2.2. *Water Quality*

The shallow nature of Padilla Bay results in naturally warm temperatures in the summer. Warm water temperatures, as high as 23 degrees Celsius, have been documented in Padilla Bay (Bulthuis 1993). Low dissolved oxygen levels have also been recorded with 4 percent of the samples below 6mg/L in August and 6 percent below the standard in September of 1985 to 1986 (Bulthuis 1993). Because the warm water temperatures appear to be natural and low dissolved oxygen levels are few, water quality in Padilla Bay is tentatively rated “good” in the salmonid limiting factors report for the watershed (Smith et al. 2009).

Several sloughs input freshwater to Padilla Bay: Joe Leary, No Name, Big Indian, Little Indian, and Telegraph Sloughs. These sloughs have been severely impacted both in terms of access conditions (loss of habitat) and quality of habitat. Most lack shrub or tree cover and most have been ditched. These water quality problems contribute to increased turbidity, nutrients and fecal coliform levels in Padilla Bay (NOAA 2000). The sources of the water quality problems in the Padilla Bay sloughs appear to be from a combination of agricultural, urban, and industrial sources. Based on a review of aerial photographs, nearly all the riparian and marine riparian areas within the Padilla Bay area have been converted to a non-forest land use, which is unable to provide functions such as shade, bank stabilization and organic inputs.

3.2.3. *Non-Native Invaders*

Control, monitoring and research on non-native species has been part of the protection plan for Padilla Bay for long term research and education (Padilla Bay NERR 2008). One of the controversial non-native species has been smooth cordgrass (*Spartina alterniflora*) which was introduced to Padilla Bay in the 1940s as an intentional planting by the Dike Island Gun Club (Riggs 1992). Padilla Bay began a control

program that has eliminated most of the smooth cordgrass from the bay. However seedlings appear each year from infestations in surrounding bays and require annual monitoring and control.

Another non-native plant, Japanese eelgrass (*Zostera japonica*), has become well established in the bay and has received a certain level of protection from Washington State agencies (Bulthuis 2003). Padilla Bay is the location of one of the early introductions of Japanese eelgrass and recent mapping projects indicate that it is spreading into areas that had been covered by the native species of eelgrass (Padilla Bay NERR 2008). Little research has been done regarding the interaction of the two species.

A non-native species that has been moving north up the west coast is the European Green Crab, (*Carcinus maenus*) (Yamada and Randall 2006, Bulthuis 2003). Padilla Bay has joined several other National Estuarine Research Reserves, including South Slough in Oregon and Elkhorn Slough in California in a pilot invasive crab monitoring project (Bulthuis 2003). Replicate trays with appropriate habitat for crabs are set out and collected every three months, and sizes and numbers of native and non-native crabs determined. The project is still in progress, but the European Green Crab has not reached Padilla Bay yet although it has been found in Oregon and California (Yamada and Randall 2006, Bulthuis 2003).

3.3. The Skagit River & Skagit Bay

The Skagit River is the largest Puget Sound river system and enters Puget Sound near Whidbey and Camano Islands. The Skagit River produces the most salmonids and salmonid stocks in Puget Sound including all five species of Pacific salmon (e.g., Chinook (*Oncorhynchus tshawytscha*), chum (*O. keta*), coho (*O. kisutch*), pink (*O. gorbuscha*), and sockeye (*O. nerka*) salmon) as well as other salmonids and char such as cutthroat (*O. clarkii*), steelhead (*O. mykiss*), and bull trout (PWA and Skagit Systems Cooperative 2004). The Skagit River discharges approximately 39% of total sediment and 20% of freshwater input into Puget Sound (Downing 1983). Skagit Bay is located at the southern edge of the Skagit River delta and is a ten mile long by four mile wide shallow estuary, with most depths ranging 0 to -5 feet below Mean Sea Level (MSL). The main stem of the Skagit River splits at Fir Island (river mile 9.5) into the North and South Forks of the Skagit River before entering Skagit Bay. Construction of dikes around the perimeter of Fir Island has altered wildlife habitat and disconnected pathways of freshwater and sediment delivery to Skagit Bay mudflats and intertidal areas.

3.3.1. *Existing Land Use and Cover*

Agriculture is the dominant land use surrounding Skagit Bay along with some single unit residential areas on Whidbey and Camano Islands to the west and a Washington Department of Fish and Wildlife (WDFW) wildlife refuge at the mouth of the South Fork of the Skagit (Ecology 2002). Commercial and recreational shellfish harvests are also conducted in Skagit Bay. Agricultural areas are primarily drained by slough and ditches with tide gates and pump stations to prevent flooding from high tides and high surface water flow. Based on a review of aerial photographs, the majority of marine riparian areas adjacent to Skagit Bay have been converted to non-forested cover, with associated decreases in functions such as shade, bank stabilization and organic inputs.

3.3.2. *Water Quality*

Water quality within the lower Skagit River and Skagit Bay has been degraded by development, agriculture and wastewater impacts. Elevated levels of nutrients and chronic levels of lead and copper have been documented in the lower main stem Skagit River. Most of the lower Skagit tributaries have very warm water temperatures in the summer months in addition to elevated nutrients, low dissolved oxygen levels, and increased turbidity. Skagit Bay and several freshwater tributaries exceed Washington State's surface water quality criteria for dissolved oxygen and fecal coliform and are listed on the 2008 303 (d) impaired waterbody list (Ecology 2008).

3.3.3. *Non-Native Invaders*

Smooth cordgrass (*Spartina alterniflora*) was introduced to north Puget Sound in the 1940s and again in the 1960s to control eroding shorelines and to serve as cattle forage (Riggs 1992; Dept. Agriculture 2000). Removal efforts have occurred throughout Skagit Bay with particular focus on a large colony at the southern end of Skagit Bay (Dept. of Agriculture 2000). However continued monitoring and effort is needed to control the spread of smooth cordgrass (Smith et al. 2009).

3.4. The Swinomish Channel

The Swinomish Channel is a navigable man-made cut through what was once a complex of mud flats, salt marshes and shallow tidal sloughs referred to as the "Swinomish Slough" (Hood 2004). A proposed U.S. Army Corps of Engineers (Corps) dredging and diking project, to make the Swinomish Slough into an inland passage, was approved by Congress in 1892. The project was completed in 1937. The 11-mile-long channel connecting Padilla Bay on the north with Skagit Bay on the south provides an alternate route to Rosario Strait for fishing boats, tugs, recreational craft, and shallow-draught freight vessels heading north from Saratoga Passage or south from Bellingham Bay or Padilla Bay. The new channel separated the area now known as Fidalgo Island from the mainland. Historically, funded through the Corps' annual budget, the channel has been dredged every three to four years to an authorized depth of 12 feet below mean lower low water to keep the channel open for vessels and prevent boats from running aground (Bach 2010).

The channel was last dredged in 2008. A Swinomish Channel sedimentation study commissioned by the Port of Skagit County determined that the channel would reach depths of minus 2 feet by 2015 in Padilla Bay and by 2019 in Skagit Bay (Coastal Geologic Services 2010a, 2010b).

3.4.1. *Existing Land Use and Cover*

Existing land use for a majority of the channel is mapped as agricultural in the northern and eastern areas and as urban commercial (Town of La Conner) in the south end (Ecology 2002). A small area of the western shore is mapped as mixed forested. However from a review of aerial photographs the forested area is bisected with roads and cleared areas.

3.4.2. *Water Quality*

Swinomish Channel is listed on the 2008 Water Quality Assessment as a Category 5 – Polluted Waters/303d List impaired waterbody for tissue level exceedances for Benzo(a)anthracene and

Chrysene. The area mapped as impaired is adjacent to the agricultural areas north of the Town of La Conner (Ecology 2009 and 2008). Shellfish in the Swinomish Channel were sampled for metals and organic compounds, and elevated levels of tributyltin and Polycyclic Aromatic Hydrocarbons (PAHs) were found (Johnson 2000). Potential sources of pollutants are runoff from adjacent agricultural areas as well as marinas and boat traffic.

The Town holds a National Pollutant Discharge Elimination System (NPDES) permit for their publicly owned treatment works (POTWs) (i.e., wastewater treatment plant) which discharges to the Swinomish channel at the Morse Street end, after harmful organisms and other contaminants have been removed from the wastewater.

3.4.3. *Non-Native Invaders*

Smooth cordgrass (*Spartina alterniflora*) was introduced to north Puget Sound in the 1940s and again in the 1960s to control eroding shorelines and to serve as cattle forage (Riggs 1992, Dept. Agriculture 2000). Removal efforts have occurred throughout the watershed including approximately 2.75 acres of the Swinomish Channel in 2000 (Dept. of Agriculture 2000). However continued monitoring and effort is needed to control the spread of smooth cordgrass (Smith et al. 2009).

See Sections 4.0 and 5.0 for detailed discussions of physical and biological features and processes within the Swinomish Channel.

4.0 PHYSICAL AND BIOLOGICAL FEATURES IN THE VICINITY OF THE SWINOMISH CHANNEL

4.1. Climate

The climate in the vicinity of the Town of La Conner is generally mild with approximately 33 inches of annual rainfall and average monthly temperatures ranging from 40 degrees Fahrenheit (°F) in January to 63 °F in August with the frost-free season beginning in late-April and the first frost occurring around mid to late October (NOAA 2002).

4.2. Geology

The project area is located within the northern portion of the Puget Lowland Physiographic Province. The Puget Lowland physiographic province consists of a broad, low-lying region of subdued topography situated between the Cascade Range to the east and the Olympic Mountains to the west.

Geology in the project vicinity is mapped on the 7.5 minute Utsalady Quadrangle (Dragovich et al 2004) and the 7.5 minute La Conner Quadrangle (Dragovich et al 2000).

The surficial geologic units within the project vicinity consist of nearshore deposits, Skagit River alluvium, beach deposits, marsh deposits, Vashon age glacial till, Vashon age advance glacial outwash, Glaciomarine drift, sedimentary conglomerate bedrock, and Metasedimentary bedrock.

Nearshore deposits (Qn) are Holocene in age and include estuarine or tidal flat deposits composed of fine sand silt and clay and locally includes flood deposits marsh or peat deposits. Beach deposits (Qb)

are Holocene in age and characterized as loose poorly graded sand and gravel along shorelines typically well rounded, locally include shell fragments. Marsh deposits (Qm) are Holocene in age and characterized as soft to stiff gray silt and silty clay, commonly with lenses and layers of peat, muck and other organic material. Locally includes up to 5 inch thick layers of white to cream colored volcanic ash. Poorly graded sand and gravel observed along shorelines are typically well rounded and locally include shell fragments.

Skagit River Alluvial deposits (Qas) within the project area are Holocene in age and generally consist of stratified poorly graded fluvial deposits of sand, with silt and clay and contains lesser sandy gravel, cobbles and/or gravel.

Glacial till (Qgt) deposits mapped in the project vicinity are Pleistocene in age and consists of dense to very dense, non-sorted mixture of clay, silt, sand, gravel, cobbles and boulders. The upper 2 to 5 feet is often weathered, and the consistency can range from medium dense to dense. The till was deposited and consolidated by several thousand feet of ice.

Advance outwash (Qga) deposits mapped in the project vicinity are Pleistocene in age and generally consist of dense to very dense, stratified, clean to silty sand with variable quantities of gravel and occasional layers or lenses of clay and silt. The Vashon advance outwash was deposited by meltwater streams flowing from the advancing Vashon lobe of the Fraser glaciation. The advance outwash subsequently was overridden consolidated by several thousand feet of ice. Typically, the advance outwash is highly permeable and susceptible to erosion.

Glaciomarine drift deposits (Qgdmec) mapped in the project vicinity are Pleistocene in age and characterized as a silt- and clay-rich unit with few or no dropstones. Glaciomarine drift is light yellow-brown and blocky and stiff when dry and dark brown to grayish blue and soft when moist or wet. It locally has vertical jointing or desiccation cracks.

Conglomerate bedrock (Ecb) mapped in the project vicinity is Oligocene to Eocene in age and characterized as yellowish brown, subangular to subrounded, moderately spherical to elongate, pebble and cobble conglomerate; typically massive to locally very thickly bedded. The unit contains lesser interbeds of brownish gray or yellowish brown pebbly sandstone to sandstone, reddish gray siltstone, and minor diamictite and coal; reddish brown to yellowish brown color due to iron oxide staining.

Metasedimentary rocks (KJmsg) mapped in the project vicinity are Cretaceous to Jurassic in age and characterized as nonfoliated to foliated or cleaved metamorphosed sandstone with lesser greywacke, siltstone or argillite, conglomerate, minor chert, and rare marble pods and very poorly sorted conglomerate/breccia.

4.3. Fish and Wildlife Habitats

4.3.1. *Marine Beaches and Tidal Areas*

Approximately 72 percent of intertidal habitat within the Skagit delta has been lost and dikes have isolated much of the historic delta habitat (Smith et al. 2009, Ecology 2011b). Further impacts that have

resulted in loss of beach and tidal areas include ditching, channelization and filling (Smith et al. 2009). The loss of estuarine habitat has been extensive throughout the Skagit, Samish and Padilla shorelines, mostly due to diking, which has isolated former estuarine habitat (Smith et al. 2009). Further losses have occurred as the isolated habitat is ditched, drained, or filled to convert estuarine habitat into agricultural land.

The Swinomish Channel is a manmade channel and therefore has been greatly impacted by shoreline modifications. More than 30 percent of the segments along the channel have an extensive level of modifications, with most comprised of riprap followed by landfill (dikes) and bulkhead impacts (Smith et al. 2009). The Swinomish Channel also has large numbers of overwater structures, including two road crossings, boat ramps, marinas, piers, and slops (Smith et al. 2009).

4.3.2. *Eelgrass and Kelp Beds*

Due to site and topography conditions Padilla Bay has one of Washington's largest area of eelgrass (*Zostera marina*), estimated to be approximately 8,000 acres in size (Ecology's Padilla Bay website). Padilla Bay eelgrass beds may have increased in area due to the diversion of freshwater (Skagit River) away from the bay, as eelgrass prefers saltier water (Smith et al. 2009). Eelgrass meadows are important because they provide food and shelter for a variety of species including: Dungeness crab, juvenile salmonids and hundreds of thousands of waterfowl and marine birds (Padilla Bay NERR 2008). Within Swinomish Channel, patchy eelgrass beds have been documented, particularly along the west bank (Smith et al. 2009). The historic extent of eelgrass within the Swinomish Channel is not known but dredging activities, and the presence of numerous overwater structures have likely impacted historic eelgrass beds in this area.

4.3.3. *Wetlands*

A significant loss of both estuarine and freshwater wetland habitat has occurred in the lower Skagit basin (including Skagit and Padilla Bays). Diking, draining, and filling have obliterated nearly all of the salt marsh that was once associated with Padilla and Skagit Bays. Only a small fraction of salt marsh, riverine and tidal wetlands remain. An estimated 454 wetlands have been identified in the Padilla Bay watershed, but most of these no longer have contact with streams that either provide or directly connect to salmonid habitat, and of those on Port of Skagit County property most are small at less than 1-acre (Smith et al. 2009). Currently, wetlands comprise 5 percent of the Padilla Bay/Bay View watershed, but hydric soils, potential for historic wetland areas, account for 64 percent of the watershed (Smith et al. 2009). The dredging of the Swinomish Channel through what was once a series of wetland habitat that consisted of salt marshes and shallow tidal sloughs has significantly altered wetland habitat.

4.4. Fish and Wildlife Species

Table 4-1 presents United States Fish and Wildlife Services (USFWS) and National Marine Fisheries Services (NMFS) Marine and Aquatic Listed Species in Skagit County.

TABLE 4-1. USFWS AND NMFS MARINE AND AQUATIC LISTED SPECIES IN SKAGIT COUNTY

Species	Status
Marbled murrelet (*Brachyramphus marmoratus*)	Threatened
Bull Trout (*Salvelinus confluentus*)	Threatened
Chinook Salmon (*Oncorhynchus tshawytscha*)	Threatened
Steelhead (*O. mykiss*)	Threatened
Southern Resident killer whale (*Orcinus orca*)	Endangered
Humpback whale (*Megaptera novaeangliae*)	Endangered
Steller sea lion (*Eumetopias jubatus*)	Threatened
Bocaccio (*Sebastes paucispinis*)	Endangered
Canary rockfish (*Sebastes pinniger*)	Threatened
Yelloweye rockfish (*Sebastes ruberrimus*)	Threatened

4.4.1. *Marine Mammals*

Adjacent to the Swinomish Channel in Skagit and Padilla Bays observed marine mammals include the harbor seal (*Phoca vitulina*) and the river otter (*Lutra canadnsis*) (Padilla Bay NERR 2008, Jeffries, 2000). Harbor seals use isolated sand and mud flats along tidal channels as haul-out sites for resting, grooming and sunning (Jeffries 2000). In deeper water, killer whales (*Orcinus orca*) have been observed regularly, and harbor porpoise (*Phocoena phocoena*) and Dall's porpoise (P*hocoenoides dalli*) are occasionally found in the deeper waters as well (Padilla Bay NERR 2008). It is assumed these mammal species are outside the waters of the Swinomish Channel (Padilla Bay NERR, 2008). Although, there are no harbor seal haul out sites located within the channel, haul out sites are located to the north (Padilla Bay) and south (Skagit Bay) (Jeffries 2000) and it is assumed that harbor seals may use the Swinomish channel.

4.4.2. *Seabirds and Waterfowl*

4.4.2.1. PADILLA BAY

Waterfowl have been and continue to be an important component of the Padilla Bay food web (Bulthuis 2003). It is estimated that Padilla Bay contains an average of 50,000 ducks of 26 species during the winter (Padilla Bay NERR 2008). Widgeon, pintail, mallard, green-winged teal, and scoters are particularly abundant during autumn and spring migrations, as well as a large number that over winter in the bay. The herbivorous brant (*Branta bernicla*) feed directly on the eelgrasses, with some evidence that most of one race, the High Arctic Brant, over winter in Padilla Bay rather than in Mexico as do most other brant (Bulthuis 2003 and Padilla Bay NERR 2008).

In addition to the waterfowl, two great blue heron (*Ardea herodias*) rookeries have been identified on the shores of Padilla Bay and it is estimated that more than 240 species of birds can be found at Padilla Bay (Padilla Bay NERR 2008).

4.4.2.2. SWINOMISH CHANNEL

Due to the location of the Swinomish Channel, between Padilla Bay and Skagit Bay, many species of birds likely use the channel as a migration and resting area. The channel itself does not provide high quality habitat due to boat traffic, lack of food and development along the shores. However Padilla Bay is known to be an important area for seabirds and other waterfowl.

4.4.3. *Shorebirds*

Common shorebirds found in the vicinity of the Swinomish Channel include greater yellowlegs (*Tringa melanoleuca*), black-bellied plover (*Pluvialis squatarola*), dunlin (*Calidris alpine*), and western sandpiper (*Calidris mauri*).

4.4.4. *Forage Fish*

Pacific herring (*Clupea pallasi*) are a common forage fish using Padilla and Skagit Bay nearshore areas. They typically use eelgrass as a spawning substrate although this has not been observed. Surf smelt (*Hypomesus pretiosus*) and sand lance (*Ammodytes hexapterus*) also use nearshore areas of both bays for spawning. Forage fish species occupy marine and estuarine nearshore habitat and because of their role of critical prey species, including salmonids, recent attention has been paid to their conservation and protection (Penttila 2007). There are data gaps and it is not known to the extent of which forage fish may utilize Swinomish Channel (Smith et al. 2009).

4.4.5. *Salmonids*

Padilla Bay is an important migration route for juvenile Chinook, coho, pink and chum salmon (Padilla Bay NERR 2008). Skagit Bay and the Skagit River are highly productive salmonid system producing the most salmonids and salmonid stocks in Puget Sound including all five species of Pacific salmon (Chinook, chum, coho, pink, sockeye), in addition to cutthroat, steelhead and bull trout (PWA and Skagit Systems Cooperative 2004). Migrating juvenile salmon spend varying lengths of time in estuaries and eelgrass beds before moving to the North Pacific. In addition, once juvenile salmon migrate out of rivers and into estuaries, they spend time in brackish water searching out areas of appropriate salinity as they adapt to the marine environment. They use the nearshore and shallow areas to obtain food before they venture to deeper water. While there is no spawning habitat within Swinomish Channel, adult and juvenile salmonids migrate and rear throughout Puget Sound and the Strait of Georgia which are adjacent to the Swinomish Channel (WDFW 2003).

Before construction of the McGlinn Island Causeway and Jetty, mixing of marine water from Padilla and Skagit Bays with freshwater from the North Fork Skagit River likely created a salinity gradient in the Swinomish Channel that allowed juvenile salmon opportunity to seek out appropriate habitat while transitioning from freshwater to saltwater physiology. With construction of the McGlinn Island jetty freshwater from the Skagit River was prevented from flowing north up the Swinomish Channel so that a sharp salinity contrast has been created between the Swinomish channel and the Skagit River

approximately 3000 feet south of the southern La Conner Town limits at the north end of McGlinn Island. For migrating juvenile salmon, this salinity contrast acts as a physiological barrier, especially for Chinook salmon that are more physiologically sensitive (Hinton et al 2008, Yates 2001). Fish catch data indicate that abundance of juvenile salmonids is very low in the Swinomish Channel relative to other areas in the Skagit River delta (Yates 2001). Juvenile Chinook catch data show a steady decline from the southern end of the Swinomish Channel to zero on a northward gradient (Hinton et al 2008, Yates 2001).

4.4.6. *Marine Invertebrates*

Mussels (*Mytilus trossulus)*, oysters (e.g., Pacific oyster - introduced species (*Crassostrea gigas*) and Olympia oyster – native species (*Ostrea conchaphila*)) and barnacles (*Belanus glandulus*) are common invertebrates found on hard surfaces in marine intertidal/subtidal areas in this part of Puget Sound. Other marine invertebrates found abundantly in mud and sand habitats of Padilla and Skagit Bays include but are not limited to: polychaete worms such as the lugworm (*Abarenicola sp*.) and Capitella, clams include the bent-nose clam (*Macoma nasuta*), the mud clam (*Mya species*) and Transenella species. Many other organisms, shrimp and crab being the most common, live on the surface probing the sediment for food or discarded material (Bulthuis 2003 and Padilla Bay NERR 2008).

5.0 ECOSYSTEM PROCESSES

5.1. Nearshore Marine Ecosystem Processes

The purpose of this section is to characterize nearshore marine ecosystem process that are likely to influence shoreline function within the limits of the Town's shoreline jurisdiction and to provide a framework for further analysis of impairments to these processes and possible management solutions, including restoration opportunities. To accomplish this goal, information in this section is presented primarily within a tabular format as suggested in Chapter 7 of Ecology's Shoreline Master Program (SMP) Handbook (Ecology, 2010). Organization of ecosystem processes and shoreline functions within the following tabular format generally follows guidance provided in Stanley et al. (2005) and WAC 173-26-201.

According to Ecology (2010), ecosystem processes are "dynamic physical and chemical interactions that form and maintain natural landscapes." Ecosystem processes include the movement of water, sediment, nutrients, pathogens, toxins, and organic/woody debris.

Shoreline functions, on the other hand, are the ecological services provided by the physical, chemical and biological ecosystem processes. Specific ecological functions are lumped into three general categories of functions including Water Quality, Water Quantity, and Habitat.

In the following table, each ecosystem process likely to influence shoreline function within the limits of the Town's shoreline jurisdiction is identified, as well as the specific physical structure(s) and ecological function(s) influenced by the process. Physical structures are the physical location within the landscape where these processes and functions take place and/or interact with the environment. Potential threats to these functions that may result from anthropogenic landscape alteration are also included.

TABLE 5-1. NEARSHORE MARINE ECOSYSTEM PROCESSES AND FUNCTIONS

Ecosystem Process	Physical Structure(s)	Ecological Function(s)	Potential Threats

Movement of Water:
• Surface water runoff
• Tidal fluctuations
• Currents
• River flow
• Precipitation
• Groundwater exchange
• Evaporation/ transpiration
	• Swinomish channel
	  o Marine riparian
	  o Intertidal zone
	  o Subtidal zone
	• Slough
	• Wetlands*
	• Skagit estuary*
	• Padilla Bay*
	• Adjacent uplands
		Water Quantity:
		• Input, retention and release of water to aquatic locations through time
		Water Quality:
		• Appropriate salinity in estuarine and brackish areas
		Habitat:
		• Habitat for aquatic species (fish, seabirds/waterfowl, marine mammals, invertebrates, submergent/emergent plants)
		• Habitat for aquatic prey and forage species (fish, invertebrates, plants)
			• Shoreline armoring
			• Floodplain development
			• Impervious surfaces
			• Climate change/sea level rise
			• Construction of jetties and/or causeways

Movement of Sediment, Nutrients, Pathogens and Toxins: • Surface water runoff • Marine riparian vegetation • Coastal erosion • Alluvial deposition • Currents/drift cells • Beach erosion/accretion	• Marine riparian areas • Banks of the Swinomish channel • Skagit estuary* • Padilla Bay* • Adjacent uplands	Water Quality: • Removal of excess nutrients, sediments, pathogens and toxins Habitat: • Feeder bluffs as sediment source • Marine habitats receive contributions of organic material and insects from marine riparian vegetation • Redistribution of sediments and formation of beaches • Appropriate substrates for forage fish spawning habitat • Appropriate substrates for benthic invertebrate habitat	• Dredging and filling • Agricultural runoff • Marinas and vessel traffic • Shoreline development & impervious surfaces • Shoreline armoring • Construction of jetties and/or causeways
Movement of Woody Debris: • Marine riparian vegetation • River flow • Currents/drift cells	• Marine riparian areas • Banks of the Swinomish channel • Skagit river and estuary* • Adjacent uplands	Water Quality: • Organic nutrient inputs into marine environments Habitat: • Creating and maintaining aquatic habitat for a variety of species • Natural buffering of effects from wave action on shoreline	• Removal of marine riparian vegetation • Shoreline development & overwater structures • Construction of jetties and/or causeways

5.2. Alterations to Nearshore Processes

The preceding section outlines ecosystem processes, shoreline structures and functions, and potential activities that may threaten the integrity of these functions through anthropogenic alteration. The following list of past, current and potential future alterations to nearshore processes that may affect shoreline functions within the Town is based on the information presented above:

- Shoreline armoring
- Shoreline development, including new impervious surfaces and overwater structures
- Floodplain development
- Dredging and filling
- Levies, jetties and causeways
- Agricultural runoff
- Marinas and vessel traffic
- Climate change/sea level rise

The extent that these alterations have already affected or have the potential to affect shoreline ecological function within the Town's jurisdiction are discussed in the following sections.

5.2.1. *Shoreline Armoring*

Shorelines in La Conner have already been armored with riprap and wooden bulkheads, resulting in a modification of more than 80 percent of the total shoreline across the Town's jurisdiction, with extensive reaches of 100 percent modification (DNR 2000a, USACE 1996). Shoreline armoring can have negative effects on hydrologic and other ecological processes by limiting groundwater exchange with the marine environment, altering movement patterns of water associated with tidal currents, and altering transport of sediment, nutrients, and large woody debris (Shipman et al. 2010). These alterations ultimately affect the distribution of beaches and other important habitat structures and can indirectly affect water quality. There is currently a very limited distribution of natural sandy beaches within the Town, with most shoreline areas consisting of steep man-made banks instead (DNR 2000a).

5.2.2. *Shoreline Development*

Shoreline development refers to the collective alteration of the shoreline environment through construction of structures at or near the land-water interface. This includes development activities that displace marine riparian vegetation communities, increase impervious surfaces and/or contribute to new overwater or in-water structures. Most of the shoreline within the Town has experienced a high level of historical and on-going development (DNR 2000a and 2000b, Doyle 2011, GeoEngineers 2011, Town of La Conner 2005b, 2007a, 2009b, 2010c, 2011a). Shoreline development can negatively affect ecological functions as a result of an increase in impervious surfaces, which increases surface water runoff including pollutants that may be transported in this runoff, limiting groundwater exchange, and altering drift processes that can influence the distribution of sediment, nutrients, pathogens, toxins and woody debris and therefore may affect water quality and habitat functions.

5.2.3. *Floodplain Development*

Floodplain development has the potential to alter movement of water, which can directly affect water quantity and indirectly affect water quality. Sixty-eight percent of the Town is mapped within the 100-year floodplain, but the accuracy of this mapping is currently undergoing review and on-going discussion with FEMA (GeoEngineers 2011, Town of La Conner 2009a, FEMA 2009, 2010). Consequently, all development within the town has the potential to impact shoreline ecological functions by affecting the

retention and release of water during times of high river flow and precipitation (water quantity) and through absorption, uptake and removal of pollutants (water quality) that naturally occurs in undeveloped floodplains.

5.2.4. *Dredging and Filling*

The Swinomish Channel itself is a man-made cut that has been maintained through dredging activities every three to four years since it was originally completed in 1937 (Bach 2010, Grossman et al. 2007, Hood 2004). The Channel was last dredged in 2008 and the Town has expressed strong support to the USACE for ongoing dredging (Bach 2010, Town of La Conner 2010c, 2010c, 2010e), which has important economic benefits to the Town (BST Associates 2010). The effects of dredging on the natural environment are evident in the limited and patchy distribution of aquatic vegetation within the channel (DNR 2000b) as well as dominance of artificial, mixed course and mixed fine substrates in intertidal areas within the channel (DNR 1998a, 1998b). Dredging activities have the potential to artificially redistribute sediments, nutrients, pathogens and toxins, which can affect water quality and habitat conditions.

5.2.5. *Jetties and Causeways*

The following history of construction activities associated with jetty and causeway development to maintain the Swinomish Channel is summarized from Grossman et al. (2007). A causeway was constructed between the southern end of La Conner and McGlinn Island to the south during the 1930s to protect channel navigation from flooding impacts and to block sediment input into the channel from the Skagit River. Shortly thereafter, in 1938, a jetty was built from McGlinn Island out to Goat Island and beyond to further restrict sediment input from the river into the channel.

Alteration of alluvial deposition, currents and drift patterns associated with these jetty/causeway features has altered movement of water, sediment and nutrients and has reduced connectivity between habitats. Alteration of mixing processes has impacted suitable habitat for salmon fry through impacts to salinity in the estuarine environment. As a result of salinity barriers, salmon fry leaving the Skagit River may be discouraged from accessing and using available habitat further north within the Swinomish Channel and beyond into Padilla Bay (Hinton et al 2008). This occurs in spite of the fish passage structure present in the jetty. The net drift pattern within the Swinomish Channel is from south to north. However, alteration of drift patterns resulting from jetty/causeway construction may further limit salmon and, more likely, forage fish spawning habitat within the channel due to the restriction of sediment drift into the channel and deposition that would otherwise form sandy beaches.

5.2.6. *Agricultural Runoff*

Most of the land area to the north and east of the Town is dominated by agricultural use (Ecology, 2002). There is a drainage slough, located just south of Dunlap Way and North Basin Street and just north of the South Basin marina area, flowing through the Town from the east and discharging into the Swinomish Channel. This slough drains agricultural areas to the east and may be a significant source of nutrient and pollutant inputs into the channel. These inputs likely have an adverse effect on water quality. There are known elevated levels of tributyltin and various polycyclic aromatic hydrocarbons

(PAHs) in the Swinomish Channel and/or organisms inhabiting the channel (Ecology 2008, Johnson 2000). These compounds, which are known to be toxic to a variety of organisms, likely, originate from adjacent agricultural activity and/or as a result of marinas and vessel traffic (see below).

5.2.7. *Marinas and Vessel Traffic*

There are two marinas within the Town (the North and South Basins), as well as numerous docks and boat moorage structures lining the Swinomish Channel. There is also extensive boot moorage at Shelter Bay to the southwest from Town. It is clear that vessel traffic and other marine boating activity dominates the shoreline and channel through town. These activities contribute generally to shoreline modifications and contribute to degradation of water quality (see above) and habitat as a result of vessel noise and pollutants.

5.2.8. *Climate Change/Sea Level Rise*

The principal effect of climate change on shoreline environments is anticipated to result from sea level rise (SITC 2010 and 2009, Skagit County 2010 and 2008, Town of La Conner 2010a). Other effects, such as a general increase in local average high temperatures and/or changes in precipitation patterns are either too poorly understood at this point or are unlikely to have significant effects on shoreline environments at a scale and within a timeframe that can be estimated with any degree of certainty. Sea level rise may play a role in ongoing development of shorelines as existing structures may need to be modified and/or new structures constructed to meet current uses in light of a changing environment. Additionally, change in average tidal elevations over time will affect both the spatial and temporal distribution of water in vertical and lateral planes at the land-water interface. This may have dramatic effects on the distribution of appropriate fish, wildlife and plant habitats, particularly in the current intertidal/littoral and supratidal/supralittoral zones. These effects could compound throughout trophic hierarchies. Areas most at risk from sea level rise include sensitive shoreline areas currently experiencing tidal inundation that could become permanently inundated as well as those areas in or above the spray zone that may at a future point experience regular tidal inundation(SITC 2010 and 2009, Skagit County 2010 and 2008).

6.0 CONDITIONS BY REACH

This section decribes features and processes within each of the three reaches identified within the Town of La Conner's Shoreline Jurisdiction (Figure 2). Appendix B presents shoreline photographs.

6.1. Reach 1 – Marine Harbors, Industrial and Commercial, North of Downtown

Shoreline Reach 1 (Reach 1) is the northern most segment of the Town extending from the northern Town limits, at North Pearle Jensen Way, south for approximately 3,000 feet (0.6 miles) along the Swinomish Channel to South Basin Street. There is approximately 6000 feet of shoreline along this reach associated with the La Conner Marina's North and South Basins (owned and operated by the Port of Skagit) and the Drainage Slough outlet immediately south of Dunlap Street that drains adjacent farm fields.

Three shoreline environmental designations exist within this reach including Urban Industrial, Urban Commercial (Environment A) and Public Use (Figure 3, Town of La Conner - Shorelines Map). There are no public shoreline access points along this reach. The Drainage Slough is listed as Public Use, however the slopes of the slough are steep and there are no docks or beaches along the Drainage Slough.

The direction of net shoreline drift is from south to north along all shoreline reaches, however tidal currents go both directions in the Swinomish channel. Sediments released from the Skagit River and the Drainage Slough are swept north, deposited in the navigation channel or deposited on the sandy beaches on the western shore on the Swinomish Reservation.

Along the Swinomish Channel in this reach, the upper shoreline is steep and armored with riprap from approximately the OHWM down to approximately the Mean Lower Low Water (MLLW). Below MLLW the shoreline is generally more gradually sloped and consists of soft sediments, gravel and smaller barnacle-encrusted rock (6" minus). The shorelines in the north and south basin marinas have more gradual slopes than those along the Swinomish Channel and they are composed of soft sediments. Apart from the areas immediately adjacent to the channel the shorelines are not armored with riprap.

The Port of Skagit implemented an eelgrass habitat mitigation project along the shoreline immediately north of the north basin along the Swinomish Channel. This area is identified as eelgrass habitat by the DNR Shoreline Inventory (DNR 2000a) and as green algae and salt marsh habitat by the Skagit County Intertidal Habitat Inventory (DNR 1998a). In addition, the DNR Shoreline Inventory identified eelgrass habitats within the Drainage Slough and immediately north and south of the Drainage Slough along the Swinomish Channel (DNR 2000a). These areas have not been surveyed since 2000. The Skagit County Intertidal Habitat Inventory identified areas of salt marsh habitat in the following locations: patches along the north and south shores of the north basin marina; patches along of the north shore of the Drainage Slough, a small patch along the shoreline between the north basin marina and the Drainage Slough and along the east and south shores of the South Basin Marina (DNR 1998a). In addition, a small patch of shoreline between the North Basin Marina and the Drainage Slough was identified as supporting green algae and mixed algae were identified immediately south of the Drainage Slough (DNR 1998a).

Marine riparian vegetation in the form of a thin line of landscaped trees is present along the eastern and southern banks of the north basin marina and along the eastern bank of the south basin marina. Other marine riparian vegetation consists of various grasses and herbaceous species. At lower tidal elevations (+5 to 7 feet) the rock or rip rap is covered in rockweed (*Fucus* sp.). Above this are American glasswort (*Salicornia virginica*), sea plantain (*Plantago maritima* ssp *juncoides*), Puget Sound gumweed (*Grindelia integrifolia*), and red goosefoot (*Chenopodium rubrum*). At the upper shoreline adjacent to the road there are grasses and weeds present.

No forage fish habitats have been documented along this shoreline reach (WDFW 2011). Listed salmonid species may use this reach of the Swinomish Channel, however due to salinity barriers, salmon fry leaving the Skagit River may be discouraged from accessing and using available habitat further north within the Swinomish Channel and beyond into Padilla Bay (Grossman et al. 2007).

Shoreline structures along Reach 1 consist of docks, piers and marina slips. Along the Swinomish shoreline there are 6 structures that consist of piers that connect to floating docks. The floating docks are located approximately 50-110 feet from the OHWM and are oriented parallel to the shoreline. The La Conner Marina has 366 covered moorage slips, 131 open moorage slips and 2,400 lineal feet of dock space for overnight moorage (La Conner Marina - http://www.portofskagit.com/la-conner-marina/).

6.1.1. *Recommendations*

Biological and physical features and processes are highly altered within Reach 1. Armored or altered banks, over-water structures, and a fully developed marine riparian area (all owned by Port of Skagit) are all key features of this reach. Along this reach, sediments are not forming sandy beaches, drainage from upland areas does not create dendritic channels and pocket estuaries, and marine riparian vegetation is not providing shade and a source of organic debris to the marine environment. This reach of the Town of La Conner is operated and managed as a commercial/industrial waterway and a marina and thus opportunities for restoration or conservation are limited. Opportunities for restoration include removal of old derelict isolated creosote piles and improvements as over-water structures are maintained. This could include replacement of creosote piles with concrete or steel piles, adding transparency on decking, and decreasing lighting impacts to the marine and shoreline environment.

6.2. Reach 2 – Downtown La Conner - South to Sherman Boat Launch

Shoreline Reach 2 (Reach 2) is the central segment of the Town extending from South Basin Street, immediately south of the Port of Skagit marina properties, south to the Sherman Avenue boat launch (Figure 2). Reach 2 extends for approximately 3,300 feet (0.6 miles) along the Swinomish Channel.

Five shoreline environmental designations exist within this reach including Urban Commercial (Environments A and B), Historic Commercial, Residential and Public Use (Figure 3). The Historic Commercial environment is within Town of La Conner Historic District "…whose significance is related to the preserved nature of the commercial buildings primarily along the waterfront that reflect the development of this town as a 19th century center of commerce, government, transportation, agriculture and fishing"(Town of La Conner 2011b). See Section 7.0 for more discussion of the Town of La Conner Historic District. There are seven public shoreline access points along this reach including public floats at the Benton Street, Washington Street and Morris Street ends, a public boat launch at the Sherman Avenue end, and shoreline access at the Commercial and Jordan Street ends (Figure 3). Land use within Reach 2 is primarily commercial with water-enjoyment uses. The Upper Skagit Indian Tribe owns a parcel of land just north of Sherman Avenue where they dock their fishing fleet, a water-dependent use. The Upper Skagit Indian Tribe hopes to use the property for fish processing in the future, another water-dependent use.

The direction of net shoreline drift is from south to north along all shoreline reaches, however tidal currents go both directions in the Swinomish channel. Sediments released from the Skagit River and swept north through the Swinomish Channel are deposited in the navigation channel or on the sandy beaches on the western shore on the Swinomish Reservation. These sediments accumulate at a rate of

2 feet per year at the southern end of the Swinomish Channel and 1 foot per year at the northern end of the Swinomish Channel (Coastal Geologic Services 2010a, 2010b).

Along the Swinomish Channel in this reach, the shoreline is armored with riprap from as high as 15 feet above MLLW to 15 feet below MLLW (USACE 1996). During the late summer and fall of 1993, the United States Army Corps of Engineers (USACE) installed approximately 1500 feet of bank protect along the eastern shore of the Swinomish Channel from the end of Commercial Street to the end of Center Street, excluding the area under Dunlap Dock at the end of Commercial Street. The materials used consisted of 12-inch minus graded riprap, 1-1/4-inch minus crushed rock and pea gravel. North of Morris Street, where resource agencies wanted to preserve fine grained mud substrate for habitat purposes, an L-shaped wood pile bulkhead, approximately 150 feet long, was constructed instead of an armored bank. Since its installation, the bulkhead has been partially covered by a wood pile boardwalk constructed by the owner. To address fish habitat concerns, patches of flat benched areas were created along the shoreline at elevations between Mean Higher Water (MHW) and MLLW. These shallow benches provide a safe migratory path for migrating juvenile salmonids as the shallow waters are ideal for avoiding predation from below and also create habitat for prey items for young fish (e.g., copepods and amphipods).

The DNR Shoreline Inventory does not identify seagrass, kelp, sargassum or dunegrass occurring along Reach 2, however it does identify the entire reach as having patchy salt marsh vegetation, except for the last 150 feet, immediately north of the Sherman Avenue boat launch (DNR 2000a). The Skagit County Intertidal Habitat Inventory identified areas of salt marsh habitat at the end of Morris Street, areas of mixed algae south of Caledonia Street and between State and Morris Street, and areas of green algae between Morris and Washington Streets and between Douglas and Caledonia Streets (DNR 1998a). WDFW priority habitats and species maps identify turf algae occurring between State and Washington Streets and between Douglas and Sherman Avenue (WDFW 2011). “Turf Algae” refers to *Vegetated Marine/Estuarine* habitats consisting of non-emergent green, red, and/or brown algae plants growing on solid substrates (rocks, shell, hardpan) (WDFW 1999). Turf algae is not a priority habitat, but appears on PHS maps because they provide for comparatively high fish and wildlife density, high fish and wildlife species diversity, and important fish and wildlife seasonal ranges (WDFW 2008, 1999). During a kayak survey in February 2011, patches of turf algae were observed growing on rocks and other hard surfaces throughout Reach 2 (GeoEngineers 2011b).

Marine riparian vegetation is sparse along Reach 2. An area on the shoreward side of the La Conner Channel Lodge, between State Street and Center Street, (approximately 25 by 200 feet) was developed as a mitigation site. At the south end of the property a 30-foot tall conifer tree marks the location of a permit-mandated public access stairway to the shoreline. The area above the OHWM has been planted with shrubs and the shoreline below the OHWM consists of barnacle encrusted riprap and large rock (with some turf algae) with patches of muddy fine grained substrate. There are patches of shoreline along Reach 2 where over-water structures are not present and thin patches of upland are undeveloped. The upland portions of these areas make up thin vegetated marine riparian zones consisting of grasses and weeds. Below the OHWM along these reaches rock or rip rap is covered in rockweed at lower tidal

elevations (+5 to 7 feet). Above this are American glasswort, sea plantain, Puget Sound gumweed, and red goosefoot.

No forage fish habitats have been documented along this shoreline reach (WDFW 2011). Listed salmonid species may use this reach of the Swinomish Channel, however because of salinity barriers, salmon fry leaving the Skagit River may be discouraged from accessing and using available habitat further north within the Swinomish Channel and beyond into Padilla Bay (Grossman et al. 2007).

Shoreline structures along Reach 2 consist of 15 piers with associated floating docks. The floating docks are located approximately 30-130 feet from the OHWM and are oriented parallel to the shoreline. Approximately a third of Reach 2 has over-water structures right at the shoreline edge, usually consisting of buildings constructed on pilings.

6.2.1. *Recommendations*

Biological and physical features and processes are highly altered within Reach 2. Armored or altered banks, over-water structures, and a fully developed marine riparian area are all key features of this reach. Along this reach, sediments are not forming sandy beaches, drainage from upland areas does not create dendritic channels and pocket estuaries, and marine riparian vegetation is not providing shade and a source of organic debris to the marine environment. This reach of the Town of La Conner is operated and managed as a commercial/industrial waterway and thus opportunities for restoration or conservation are limited. Opportunities for restoration include removal of old derelict isolated creosote piles and improvements as over-water structures are maintained. This could include replacement of creosote piles with concrete or steel piles, adding transparency on decking, and decreasing lighting impacts to the marine and shoreline environment. Some specific locations have been identified for future nearshore and upland habitat restoration and enhanced public access including the Jordan Street end. Section 10 presents a summary of recommendations.

6.3. Reach 3 – Pioneer Point – South of Sherman Boat Launch

Shoreline Reach 3 (Reach 3) is the southern segment of the Town extending from the Sherman Avenue boat launch south to the southern Town limits (Figure 2). Reach 3 extends for approximately 1,200 feet (0.23 miles) along the Swinomish Channel.

Two shoreline environmental designations exist within this reach including Urban Industrial and Public Use (Figure 3). The Sherman Avenue boat launch serves as a public access point to the shoreline. The area south of Sherman Avenue and east of Conner Way is also an access point for the public, not for direct physical shoreline access but for view enjoyment. Land use within Reach 3 is currently commercial (Pioneer Point Marina) with both water-enjoyment and water-dependent uses.

The direction of net shoreline drift is from south to north along all shoreline reaches, however tidal currents go both directions in the Swinomish channel. Sediments released from the Skagit River and swept north through the Swinomish Channel are deposited in the navigation channel or on the sandy beaches on the western shore on the Swinomish Reservation. These sediments accumulate at a rate of 2 feet per year at the southern end of the Swinomish Channel and 1 foot per year at the northern end of

the Swinomish Channel (Coastal Geologic Services 2010a, 2010b). Within Reach 3 sediments are deposited primarily in the middle of the channel at the bend in the channel just southwest of the Rainbow Bridge and on the western shore on the Swinomish reservation. With the orientation of the Pioneer Point Marina dock, debris drifting up the Swinomish Channel builds up between the dock and the shoreline.

Along the Swinomish Channel in this reach, the shoreline is armored with riprap from near the OHWM down to approximately 3 feet above MLLW. Below the riprap the shoreline slopes gradually and the substrate consists of fine muddy sediments with scattered rock. These gradually sloping areas, with a mixture of fine sediments and rock substrate have the potential to be serving as fish benches. These shallow benches can provide a safe migratory path for migrating juvenile salmonids as the shallow waters are idea for avoiding predation from below and also create habitat for prey items for young fish (e.g., copepods and amphipods).

The DNR Shoreline Inventory does not identify any nearshore vegetation occurring along Reach 3 (DNR 2000a). The Skagit County Intertidal Habitat Inventory and WDFW priority habitats and species maps identified a patch of mixed algae/turf algae at the south end of the reach immediately south of the Pioneer Point Marina Buildings, another patch at the north end immediately south of the Sherman Avenue boat launch, and two patches of green algae/turf algae between the Rainbow Bridge and the Pioneer Point Marina (DNR 1998a, WDFW 2011). During a kayak survey in February 2011, small patches of turf algae were observed growing on rocks and other hard surfaces throughout Reach 3 (GeoEngineers 2011b).

Marine riparian vegetation at the shoreline edge is sparse along Reach 3. There is a small patch of trees (approximately 5 trees) southwest of the Rainbow Bridge. On the southeast side of Connor Way the hillside is forested, however this patch of forest does not provide shade or water quality improvement functions for the Swinomish Channel. Other marine riparian vegetation on the immediate shoreline edge consists of a thin strip of grasses and weeds. Below the OHWM along this reach rock or rip rap is covered in rockweed at lower tidal elevations (+5 to 7 feet). Above this are American glasswort, sea plantain, Puget Sound gumweed, and red goosefoot.

No forage fish habitats have been documented along Reach 3 (WDFW 2011). Listed salmonid species may use this reach of the Swinomish Channel, however because of salinity barriers, salmon fry leaving the Skagit River may be discouraged from accessing and using available habitat further north within the Swinomish Channel and beyond into Padilla Bay (Grossman et al. 2007).

Shoreline structures along Reach 3 consist of 1 pier/platform with an associated floating dock. The floating dock is located approximately 120 feet from the OHWM and oriented parallel to the shoreline. Approximately one half of Reach 3 has over-water structures.

Some buildings and pier/dock structures associated with the Pioneer Point Marina have been demolished in the past two years (Figure 2). The Pioneer Point Marina owner, who leases the land from the Town, was planning to rebuild immediately but replacement structures have yet to be built.

6.3.1. *Recommendations*

Biological and physical features and processes are less altered within Reach 3 compared to the other Reaches. Altered natural features of Reach 3 include armored banks, over-water structures, and a developed marine riparian area however the forested hill south of the Rainbow Bridge and the presence of fish benches immediately south of the Sherman Avenue boat launch provide valuable habitat for fish and wildlife. Due to bank armoring and past human cut and fill actions along this reach, sediments are not forming sandy beaches, drainage from upland areas is not creating dendritic channels or pocket estuaries, and marine riparian vegetation is not providing shade and a source of organic debris to the marine environment. This reach of the Town is operated and managed as a commercial waterway (marina), however there are some opportunities for restoration/conservation. Opportunities for restoration include the same creosote pile replacements and maintenance upgrades listed in Sections 6.1 and 6.2. In addition, the fish benches south of the Sherman Avenue boat launch could be enhanced to provide more habitat for migrating fish, and marine riparian vegetation in the form of shade producing trees and shrubs could be planted along this portion of Conner Way. Section 9presents a summary of recommendations.

7.0 LAND USE WITHIN SHORELINE PLANNING AREA

7.1. Historic Land Use

Prior to the arrival of settlers in the mid-1850s, the area around the site of present day La Conner was inhabited the southern Northwest Coast Salish peoples. Several villages were known to be located on the west side of the Slough (ERCI 2011). La Conner was established by settlers as a trading post in 1867, and became the first county seat for Skagit County in 1883. While it was the largest community in the county, Mount Vernon was designated the county seat in 1884. La Conner's location on the Swinomish Slough made it an important hub of shipping and transport, supporting the numerous agricultural activities in the area. The slough was navigable at high tide to shallow draft steamers, and provided a safer route for vessels to travel between Whatcom County to the north and Seattle to the south.

The Corps of Engineers began diking and dredging the Swinomish Slough in 1892 in order to provide a waterway between Skagit and Padilla Bays that would accommodate commercial and recreational vessels without having to depend on tides for access. The dredging project was completed in 1935. To this day the Swinomish channel provides a generally quieter route for vessels traveling to or from the San Juan Islands and regions north to Everett, Seattle and regions south. The presence of the channel has led to the development of a marine-based infrastructure including marinas, docks for transient moorage, marine repair, fish processing and other businesses.

In the late 1800's and early 1900's, La Conner flourished as a town due to its location, which provided means of transport for agricultural products from the fertile Skagit Valley and supplies to support these activities. The development of railroads and highways eventually led to a decrease in the local importance of the Town as Mount Vernon and Burlington gained population and prominence in the county.

7.2. Current Land Use

Today, La Conner continues to support marine uses, including marinas, commercial and recreational boating, fishing vessels, and public enjoyment of water views from retail businesses and restaurants. Tourism is an important contributor to the Town economy, with average daily visitation estimated at 1,400 people. The latter is very important to supporting tourism in the Town. Most of the Town is located in La Conner Historic District 45DT12, which is bound by the Swinomish Channel to the west, Commercial Street on the South, Whatcom Street on the east and Morris Street on the north. The Historic District is characterized by many preserved buildings that reflect the commercial, transportation and agricultural roots of the Town (ERCI 2011).

La Conner shoreline zoning designations are listed and mapped on Figure 3. Public open space and access to the waterfront is provided at several street ends along First Street. In addition, several restaurants and businesses and a hotel along First Street have shoreline decks and/or views of the channel that are open to the public. There is an existing boardwalk along the channel on private land with public easements that is privately maintained. Section 6.0 above provides detailed description of the shoreline uses and structures located along the channel reaches.

Public access and public lands are present throughout the shoreline jurisdiction, and are described in Table 7.1 below.

TABLE 7.1. CURRENT AND PROPOSED PUBLIC SHORELINE PARKS ACCESS POINTS.

Park	Features	Proposed Future Improvements
Sherman Street End	Public boat launch, trailer parking	
Caledonia Street End	Undeveloped, DNR waterfront lease	
Commercial Street End	Undeveloped. View of Rainbow Bridge	
Calhoun Street End	Public Moorage, Dirty Biter Waterfront Park	
Benton Street End	Public moorage, waterfront viewing	
Washington Ave End	Public moorage, information kiosk, waterfront viewing	
Gilkey Square/Morris Street End	Waterfront viewing, open space	
Kirsch Building	Overwater platform adjacent to Jordan Street End	Develop a facility and use plan for the Kirsch building for waterfront boardwalk connection and boating (2012)
Jordan Street End	Undeveloped waterfront lot	Develop a usage plan for the site as a recreation facility, picnic, parking and water access (2012).
1st Street ROW	Between Commercial and Caledonia, undeveloped being used for parking	
Conner Way	Open space waterfront beneath Rainbow Bridge	
Waterfront Boardwalk		Engineering and planning for connecting the street-end parks and Pioneer Park with a waterfront boardwalk (2012)

Source: Town of La Conner Six-Year Capital Facilities Plan 2011-2016 (Town of La Conner 2010b)

7.3. Transportation

Major roads and transportation facilities in the La Conner shoreline jurisdiction include First Street through the Town, Conner Way adjacent to the Swinomish Channel to the south, and marine traffic in the Swinomish Channel itself. Morris Street is the main arterial into town, and connects to First Street, which is the primary destination for most tourists visiting La Conner's shops, businesses and restaurants. The street network in the Town is comprised of arterial street, collector streets and local access streets.

7.4. Wastewater and Stormwater Utilities

La Conner owns, operates, and maintains a domestic wastewater collection and treatment system, and most of the Town has sanitary sewer service. The Wastewater Treatment Plant is located east of La Conner, on the south side of Chilberg Road and discharges into Sullivan Slough.

Most of La Conner is at sea level and has for many years experienced localized flooding during modest storm events. The flooding is due to the town's geography, its proximity to the Swinomish Channel, its high water table and the configuration of the existing stormwater system (Town of La Conner 2011 Capital Facilities Plan). Currently stormwater from the Morris Street area in the shoreline jurisdiction is collected and routed to the water treatment facility on Chilberg Road. The treatment facility consists of a settling pond and infiltration pond.

8.0 NATURAL RESOURCE LANDS AND CRITICAL AREAS WITHIN SHORELINE PLANNING AREA

In Puget Sound, the Growth Management Act (GMA) requires local governments to inventory, designate (RCW 36.70A.170), and protect natural resource lands and critical areas. The Town has employed provisions of the State Environmental Policy Act (SEPA) and *Title 15, Division III - Critical Areas and Natural Resource Lands Protection* (LMC 15.60 to 15.70) to protect natural resource lands and critical areas during development review processes.

The GMA defines three types of non-critical area natural resource lands, as follows (RCW 36.70A.170):

1) Agricultural lands that are not already characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products;
2) Forest lands that are not already characterized by urban growth and that have long-term significance for the commercial production of timber;
3) Mineral resource lands that are not already characterized by urban growth and that have long-term significance for the extraction of minerals; and

The Town of La Conner does not contain agriculture, forest or mineral resource lands, however there are adjacent agricultural lands, defined as "All lands inside town boundaries that are within 25 feet of agricultural resource lands." (LMC 15.65.020(3)). "The environmentally sensitive area overlay district is a mechanism by which the town of La Conner recognizes the existence of natural conditions which affect the use and development of property. The regulations are to protect environmentally sensitive areas…

(and) to prevent encroachment on any adjacent agricultural lands of long-term significance." (LMC 15.65.010)

The GMA (RCW 36.70A.030) and the La Conner Uniform Development Code (LMC 15.65.020) define five types of Critical Areas, as follows:

- Wetlands,
- Critical Aquifer Recharge Areas (CARAs) defined as areas with a critical recharging effect on aquifers used for potable water),
- Fish and wildlife habitat conservation areas,
- Frequently flooded areas, and
- Geologically hazardous areas.

8.1. Wetlands

Two freshwater Palustrine emergent semi-permanently flooded wetlands (PEMC) have been identified by the National Wetlands Inventory (NWI) in the southeast corner of the Town (Figure 4) (USFWS 1998). These wetlands are outside of the shoreline management area.

NWI identifies the north and south basins of the La Conner Marina as estuarine, subtidal, unconsolidated bottom, excavated wetlands (E1UBLx) (USFWS 1998) (Figure 4).

8.2. Critical Aquifer Recharge Areas

No CARAs have been identified within the Town.

8.3. Fish and Wildlife Habitat Conservation Areas

WDFW provides guidelines for designating Fish and Wildlife Habitat Conservation Areas as follows:

- Habitat associated with endangered, threatened, and sensitive species
- Habitats and species of local importance
- Commercial and recreational shellfish areas
- Kelp and eelgrass beds; herring and smelt spawning areas
- Ponds, waters of the state, and those planted with game fish
- Naturally occurring ponds smaller than 20 acres and their submerged aquatic beds
- Natural area preserves and resource conservation areas
- Land essential for preserving habitat connections

Within Reach 1, the Port of Skagit implemented an eelgrass habitat mitigation project along the shoreline immediately north of the north basin along the Swinomish Channel. This area is identified as eelgrass habitat by the DNR Shoreline Inventory (DNR 2000a) and as green algae and salt marsh habitat by the Skagit County Intertidal Habitat Inventory (DNR 1998a).

As stated in Section 6, no forage fish habitats have been documented along the La Conner shoreline (WDFW 2011). Listed salmonid species may use the La Conner shoreline, however because of salinity

barriers, salmon fry leaving the Skagit River may be discouraged from accessing and using available habitat within the Swinomish Channel (Grossman et al. 2007). The presence of fish benches at various locations along the Town's shoreline provide potential valuable habitat for fish and other marine biota.

There are no recorded priority species or habitats within the La Conner Town Limits (WDFW 2011).

8.4. Frequently Flooded Areas

The Town of La Conner is within the Skagit River 100-year floodplain, however no parts of the Town experience flooding from the Skagit River (FEMA 2010, 2009). There are three relatively low elevation areas within the Town that do experience localized tidal storm surges, including the Sherman Avenue boat launch, and Calhoun and Washington Street ends. The Town currently deploys sandbags and containment materials at these locations from January to April, the period when these winter storm surges occur (Town of La Conner 2003b).

FEMA is currently developing a coastal risk assessment for shorelines, in an attempt to assess and inventory risks associated with sea level rise and tidal/storm surges (FEMA 2011).

8.5. Geologically Hazardous Areas

There are regulated slopes within Reach 2 in downtown La Conner and within Reach 3 adjacent to the Rainbow Bridge (Figure 4) in Pioneer Park.

La Conner is located within the Lahar zone for Mount Baker (Dragovich et al 2000). Low elevation/flat parts of the Town are situated on top of Holocene nearshore deposits composed of fine salt, silt and clay (Dragovich et al 2000). In addition, these loose and soft nearshore deposit soils are often saturated because within the Town groundwater levels are directly related to tidal elevations, making them an area of liquefaction risk.

9.0 CONCLUSIONS AND RECOMMENDATIONS

9.1. Future Development Potential and Impacts

The Town's shoreline management area is already heavily developed as a commercial/industrial waterfront. Some buildings, piers and docks associated with the Pioneer Point Marina were demolished in the last two years and there is future potential for proposals to redevelop the marina in those locations (Figure 2). There is a current proposal for expansion of the Town's waterfront boardwalk from Commercial Street to Jordan Street (La Conner 2011a). The Upper Skagit Indian Tribe recently conducted improvements on their pier and floating docks at the La Conner Pier facility just north of the Sherman Avenue boat launch. The Tribe hopes to expand operations at that location to a full fish processing facility. Potential negative impacts to the environment from the above projects may include an increase in over-water structures (or replacement of previously demolished structures) and increased boat traffic (affecting noise and water quality).

9.2. Opportunities for Restoration of Impaired Processes/Habitats

Table 9-1 presents threats or impact caused by physical structures or actions and lists potential remedies for these issues.

TABLE 9-1. SHORELINE ZONE HABITATS AND ECOSYSTEM PROCESSES WITH POTENTIAL FOR RESTORATION

Physical Structure or Action Causing Threat/ Impact	Ecological Process/ Function Interrupted	Potential Threats	Potential Remedy
Shoreline Armoring	Currents - reduced hydraulic complexity Natural bank erosion and sloughing (sediment source) Sediment accretion (deposition) along the shoreline	Loss of fast and slow moving micro-habitats that support a more diverse array of marine biota Loss of soft sediment shallows with a potential for eelgrass colonization Loss of beaches and pocket estuaries	Not feasible to remove armoring with structures located immediately adjacent to the shoreline Implement softened bank treatments in areas where structures are not at immediate risk (e.g., immediately south of Sherman Avenue boat launch) Create fish benches below armoring and above MLLW
Creosote Piles or Structures	Reduces surface area of benthic nearshore marine habitat	Water quality and sediment contamination	Remove old structures that are no longer serving a purpose Replace structures made of creosote with concrete or steel as maintenance occurs
Over-water structures	Reduces sunlight and potential photosynthesis (base of food chain) Physical interruption of currents, sediment transport and fish migration	Shading Benthic habitat impacts from piles Light impacts (at night)	Make all new overwater components at least 50% grated, with at least 60% functional open space for the grating Use fewer piles (steel or concrete) or cantilever out from existing structures Reduce light impacts by using LED lights for ankle or waist height lighting, fully shielding overhead lights with shades that avoid illumination of the surrounding environment, and focus night lighting on the dock surfaces only, not on the water.
Channel Dredging	Deeper channel (12 feet) has impact on currents, shoreline sediment transport and fish migration.	Deeper water harbors fish predators – risk to young migrating fish	Create fish benches below armoring and above MLLW

Physical Structure or Action Causing Threat/ Impact	Ecological Process/ Function Interrupted	Potential Threats	Potential Remedy
Removal of marine riparian vegetation	Loss of over-hanging vegetation and recruitment of large woody debris (LWD) Loss of shading	Loss of habitat from roots, branches , and shade regimes. Loss of small organic material and LWD inputs Increased temperatures and lower dissolved oxygen levels	Plant shrubs and trees where possible along shoreline

9.3. Opportunities for Increased Recreation/Public Access

As mentioned in Section 6, the Town has at least 9 existing public access points, both for direct access to the shoreline (beach access) or water (public float), and for public viewing of the shoreline (access to areas immediately adjacent to the shoreline with a view). Public access points with potential for future improvement include the Jordan Street end and along the northwest side of Connor Way (under the Rainbow Bridge).

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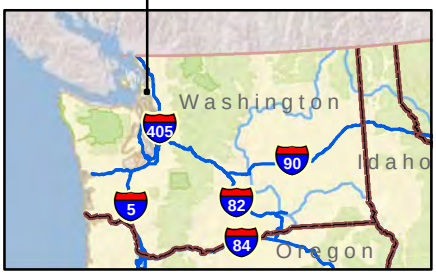

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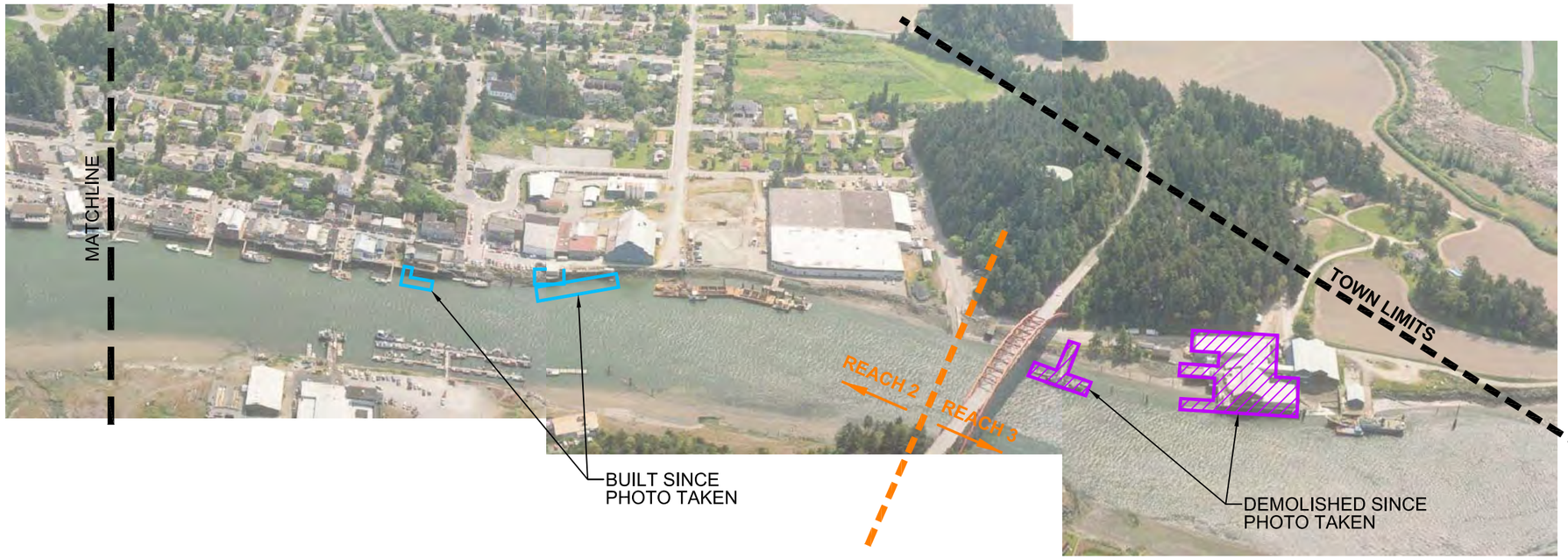
Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.

Data Sources: ESRI Data & Maps, Street Maps 2008

Transverse Mercator, Zone 10 N North, North American Datum 1983
North arrow oriented to grid north

LA CONNER	**Vicinity Map**	**Figure 1**
	Town of La Conner Shoreline Inventory and Characterization Report La Conner, Washington	



NOT TO SCALE

Shoreline Oblique Photos

Town of La Conner
Shoreline Master Program Update

GeoEngineers

Figure 2

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Drawing created from sketch provided by GeoEngineers' personnel.

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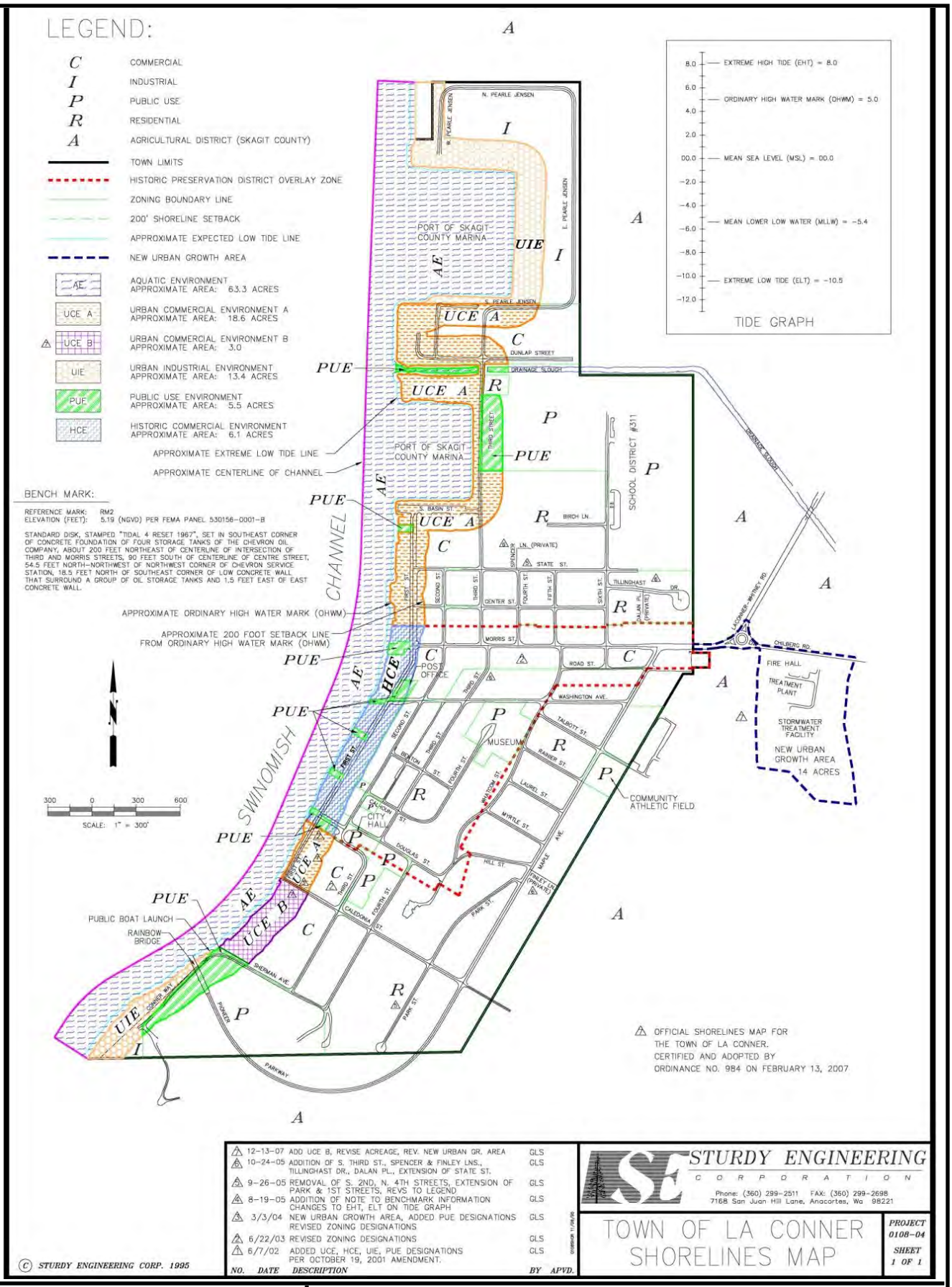

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Figure 3 –Shorelines Map

Town of La Conner – Shoreline Inventory and Characterization Report

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Shoreline Designations and Critical Areas Map

Shoreline Master Plan Update
La Conner, WA

Figure 4

Appendix A - Town of La Conner Shoreline Inventory

TOWN OF LA CONNER
SHORELINE MASTER PROGRAM UPDATE

SHORELINE INVENTORY

Ecology Grant #G1100003

Deliverable for Task 2.1

Due to Ecology: August 31, 2011

Prepared for:

Town of La Conner
P.O. Box 400
La Conner, Washington 98257

Attention: John Doyle

Prepared by:

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SHORELINE INVENTORY: FEATURES, ISSUES AND SOURCES OF INFORMATION

TABLE 1. FEATURES OF THE SHORELINE IN THE INVENTORY TO BE ANALYZED AND CHARACTERIZED

Features to Identify	Components	Name/Location	Source
Shorelines of the State	Puget Sound Marine Waters	Swinomish Channel RCW 90.58.030(2)(f)(iii) Areas of Puget Sound and adjacent salt waters lying seaward from the line of extreme low tide are Shorelines of Statewide Significance.	• Town of La Conner 2009b - Harbor and Shore Lines Map • Town of La Conner 2007a - Shorelines Map • Town of La Conner 2003a - Shoreline Management Master Program • DNR 2008 - FPARS • RCW 90.58.030
General location of channel/floodplain features:	Channel Migration Zones	Not Applicable (NA)	• United States Army Corps of Engineers (USACE) 1996 - La Conner, Washington Bank Erosion Control Project - Operation and Maintenance Manual
	Floodplain	100-Year Floodplain (Note: Town of La Conner and FEMA are in discussion about this topic at this time).	• Town of La Conner 2009a -Critical Areas and Floodplain Map • Town of La Conner 2005a -Critical Areas Map • FEMA 2009 & 2010 – FIRM and Flood Insurance Study
	Floodway	NA	• FEMA 2009 & 2010 – FIRM and Flood Insurance Study
Critical Areas	Wetlands (Non-tidal Only)	Two small wetlands in the SE corner of the town (Non-tidal).	• USFWS 1987 - NWI • Town of La Conner 2010a - Critical Areas and Topography Map • Town of La Conner 2009a -Critical Areas and Floodplain Map • Town of La Conner 2005a -Critical Areas Map
	Aquifer Recharge Areas	In 2009, the United States Geological Survey (USGS) did a study of groundwater movement in the Skagit River Delta Area.	• Savoca et al 2009. Shallow Groundwater Movement in the Skagit River Delta Area, Skagit County.
	Fish and Wildlife Conservation Areas	e.g., marine/estuarine migration zone, marine fish habitat	• DNR 2008 – FPARS • WDFW 2003 – SalmonScape • Grossman et al 2007 - Juvenile Chinook salmon habitat availability in the Swinomish Channel • DNR 2000 - Washington State ShoreZone Inventory
	Geologically Hazardous Areas	Regulated Slopes	• Town of La Conner 2009a -Critical Areas and Floodplain Map • Town of La Conner 2005a -Critical Areas Map
	Frequently Flooded Areas	No Frequently Flooded Areas. 100-Year Floodplain (Note: Town of La Conner and FEMA are in discussion about this topic at this time).	• Town of La Conner 2009a -Critical Areas and Floodplain Map • Town of La Conner 2005a -Critical Areas Map • FEMA 2009 & 2010 – FIRM and Flood Insurance Study

Features to Identify	Components	Name/Location	Source
Shoreline and adjacent land use patterns/density and transportation and utility facilities, including:	Extent of Existing Structures	Dense shoreline development of commercial, recreational and industrial properties.	• Town of La Conner 2011a – Final Waterfront Boardwalk Planned Action EIS • Town of La Conner 2005b - Comprehensive Plan • Ecology 2011b - Washington Coastal Atlas • DNR 2000 - Washington State ShoreZone Inventory • Town of La Conner 2006 -Parks Plan
	Impervious Surfaces	Town maintains an impervious surface inventory and calculation.	Town of LaConner 2010 - Annual Impervious Surface Reports from 2003 to 2010
	Vegetation and shoreline modifications within shoreline jurisdiction	Armored embankment with some areas of green algae (*Fucus* sp.). Above the OHWM there are mostly narrow strips of grasses and herbaceous vegetation. In the vicinity of Maple and Sherman St, there are forested areas within 200 feet of the Swinomish Channel.	• United States Army Corps of Engineers (USACE) 1996 - La Conner, Washington Bank Erosion Control Project - Operation and Maintenance Manual • Town of La Conner 2011a – Final Waterfront Boardwalk Planned Action EIS • DNR 2000 - Washington State ShoreZone Inventory • Ecology 2011b - Washington Coastal Atlas • Town of La Conner 2006 -Parks Plan
	Platted lots including undeveloped lots (except those not developable under local subdivision ordinance).	No undeveloped shoreline properties.	• Skagit County 2011 - Skagit County iMap Interactive Map • Town of La Conner 2005c - Parcel ID and Situs Address Map
Degraded areas and sites with potential for ecological restoration	Areas already restored/mitigated	• End of Morris Street • Port established an eelgrass mitigation site adjacent to the North Basin.	• Doyle 2011 - Fire Boat Survey • USACE 1996 - La Conner, Washington Bank Erosion Control Project - Operation and Maintenance Manual
	Degraded areas or undeveloped areas with potential for restoration	• Area south of Town boat launch (Town boat launch is at the end of Sherman Ave) • End of Jordan St - Kirsch property – demolished super structure – kept decking • South of Basin St and N of State St • Removal of old creosote piles as development occurs – dolphins etc Replace existing dock surfaces with transparency decking as they are maintained/upgraded	• GeoEngineers 2011 - Shoreline Kayak Survey • Doyle 2011 - Fire Boat Survey

Features to Identify	Components	Name/Location	Source
Areas of special interest	Priority habitats	• Priority fish species in the Swinomish Channel • No terrestrial Priority Habitats or Species within the Town of La Conner Town limits • Priority habitat - Skagit River Delta Wetlands - within the UGA south of Chilberg Rd (Stormwater treatment facility) • Eelgrass beds in the Swinomish Channel identified by the DNR State ShoreZone Inventory would be considered "Puget Sound Nearshore" priority habitats	• WDFW 2009 - Priority Habitats and Species Map and Polygon Cross Reference Report • DNR 2000 - Washington State ShoreZone Inventory • Ecology 2011b - Washington Coastal Atlas • Swinomish Tribe – maps of historic shellfish and fishing areas. • Skagit Systems Cooperative studies on the jetty salinity - channel
	Rapidly developing waterfronts	Not Applicable – majority of shoreline already developed Redevelopment of selected areas as economic conditions allow. • Moore-Clark • Upper Skagit Properties	
	Previously identified toxic or hazardous material clean-up sites	FS ID = 79838784, ZIMMERMANS SHELL, LA CONNER, Rank of 3, Status = Cleanup Started, RU = NW	• Ecology 2011a - Facility/Site Database • Phase 1 ESAs have been conducted at La Conner dock and Moore-Clark property
	Eroding shorelines	Existing armoring occurs from the downtown core north of Morris. • Bank is starting to erode at the Moore-Clark property • General erosion along town shorelines upstream and downstream of the USACE armoring that will require maintenance from time to time.	• USACE 1996 - La Conner, Washington Bank Erosion Control Project - Operation and Maintenance Manual • Shipman et al 2010 - Puget Sound Shorelines and the Impacts of Armoring— Proceedings of a State of the Science Workshop, May 2009 • Ecology 2011b - Washington Coastal Atlas
	Areas of sedimentation	General sedimentation issues within the Swinomish Channel	• Coastal Geologic Services, Inc. 2010a - Swinomish Channel Sedimentation Study • Coastal Geologic Services, Inc. 2010b. Deception Pass to Skagit River Delta Geomorphic Assessment & Drift Cell Restoration Prioritization • BST Associates 2010 - Swinomish Channel Dredging Economic Impact Assessment • Ecology 2011b - Washington Coastal Atlas
Existing and potential shoreline public access sites, including:	City-owned Land	The Town of La Conner provides for seven access points to the Swinomish Channel – Note: Drainage Slough area is not a public access area	• Town of La Conner 2009c - Zoning and Historical District Map (green shaded areas adjacent to the channel with associated docks provide public access) • Town of La Conner 2007b - Comprehensive Plan Map (Areas designated for Public Use adjacent to the channel with associated docks provide public access)

Features to Identify	Components	Name/Location	Source
continued – Existing and potential shoreline public access sites, including:	Public rights-of-way	Existing boardwalk is on private land with public easements. Existing boardwalk is privately maintained. Future proposed boardwalk to be located largely on public lands (DNR) with some portions on private decks.	• Town of La Conner 2011a – Final Waterfront Boardwalk Planned Action EIS
	Utility corridors	Calhoun Street End – Swinomish wastewater forced main Morris Street End – Cascade Natural Gas utility crossing Rainbow Bridge - County right-of-way • Shelter Bay water supply crossing • Electric and cable utility aerial crossing	• Town of La Conner 2005b - Comprehensive Plan. Chapter 8 – Utilities Element
Historical aerial photographs documenting past conditions to assist in preparing an analysis of cumulative impacts of development.	Existing Reports, State and Federal aerial photographs, and historical archives		• Town of La Conner 2011b – Archeological Investigation Report • Town of La Conner 2011a – Final Waterfront Boardwalk Planned Action EIS • Washington Department of Ecology and USACE historical aerial photograph records. • Skagit County Historic Museum archives
Archaeological and historic resources in shoreline jurisdiction.	Archeological Investigation Report written for the Waterfront Boardwalk Project Town adopted Archeological Protocols for Public Works and Town project activities	Area of focus was between Morris Street and Benton Street end parks Town wide	• Town of La Conner 2011b – Archeological Investigation Report • Town of La Conner 2011a – Final Waterfront Boardwalk Planned Action EIS • Washington Department of Ecology and USACE historical aerial photograph records. • Skagit County Historic Museum archives • Town of La Conner 2011b – Archeological Investigation Report Town of La Conner 2007c - Archaeological Site Discovery Protocol
Policies and regulations (La Conner Municipal Code (LMC)) in shoreland and adjacent areas that affect shorelines.	Shoreline Master Program / Regulations		Title 10 LMC 10.05 Port Facilities LMC 10.10 Shoreline Management
	Surface water management		LMC 15.100 Storm Water Management • Town of La Conner 2007 - Stormwater Comprehensive Plan • Town of La Conner 2005b - Comprehensive Plan
	Wastewater Management		• Town of La Conner 2005b - Comprehensive Plan. Utilities Element
	Land use plans		• Town of La Conner 2010c - Six-Year Capital Facilities Plan • Town of La Conner 2006 -Parks Plan • Town of La Conner 2005b - Comprehensive Plan

Features to Identify	Components	Name/Location	Source
continued – Policies and regulations (La Conner Municipal Code (LMC)) in shoreland and adjacent areas that affect shorelines.	Historic Preservation		• LMC 15.50 Historic Preservation District – State and National Historic Register • Town of La Conner 2007c - Archaeological Site Discovery Protocol
	Critical Areas Ordinance		LMC 15.65 Environmentally Sensitive and Critical Area Lands
	Flood Ordinance		LMC 15.70 Floodplain Management

TABLE 2. SHORELINE ISSUES TO BE ANALYZED AND CHARACTERIZED

Issue	Description of Source	Sources
Climate Change	The Town recently joined other local and worldwide governments in making a commitment to reduce greenhouse gas emissions, through adoption of a Greenhouse Gas Inventory & Proposed Climate Action Plan.	Town of La Conner 2010b - Greenhouse Gas Inventory and Climate Action Plan
	The Town was a participant, along with the community of Shelter Bay, the University of Washington Climate Impacts Group, and Skagit County, in the Swinomish Indian Tribal Community's (SITC) study of a wide range of potential climate change impacts to the Swinomish reservation, including sea level rise and impacts to upland communities and forest lands. Through their Climate Change Initiative program, the SITC have also produced a Climate Adaptation Action Plan for the Swinomish Reservation and surrounding areas. Town (with SITC) is taking the next step to move towards mitigation planning.	• Swinomish Indian Tribal Community (SITC) 2010 - Swinomish Climate Change Initiative: Climate Adaptation Action Plan • SITC 2009 - Swinomish Climate Change Initiative: Impact Assessment Technical Report
	Quote from the Skagit County Climate Action Plan: "Along with the Town of La Conner, the community of Shelter Bay, and the University of Washington Climate Impacts Group, Skagit County is participating in the Swinomish Indian Tribal Community's study of a wide range of potential climate change impacts to the Swinomish reservation, including sea level rise and impacts to upland communities and forestlands. The project will ultimately produce an action plan with recommendations for adaptation measures. The County plans to use the lessons learned through this project to advance its own adaptation planning."	Skagit County 2010 – Climate Action Plan
Flooding	On Thursday, July 1st, 2010 the Department of Homeland Security's Federal Emergency Management Agency (FEMA) issued the revised Digital Flood Insurance Rate Map (DFIRM) and Flood Insurance Study (FIS) report for La Conner. FEMA originally released the maps and report on December 15, 2009, but withdrew them due to errors.	• FEMA 2010 – FIRM, Flood Insurance Rate Map • FEMA 2009 - Flood Insurance Study, Skagit County • Town of La Conner 2009a -Critical Areas and Floodplain Map Town of La Conner 2005a -Critical Areas Map • Town of La Conner 2003b - Flood Emergency Response Plan • Skagit County 2008 - Skagit County Natural Hazards Mitigation Plan

Issue	Description of Source	Sources
Eroding shorelines	Existing armoring occurs from the downtown corps north of Morris. • Bank is starting to erode at the Moore-Clark property • General erosion along town shorelines upstream and downstream of the USACE armoring that will require maintenance from time to time. • Protecting existing structure residences, public areas, will be an important element to consider.	• USACE 1996 - La Conner, Washington Bank Erosion Control Project - Operation and Maintenance Manual • Shipman et al 2010 - Puget Sound Shorelines and the Impacts of Armoring— Proceedings of a State of the Science Workshop, May 2009 • Ecology 2011b - Washington Coastal Atlas
Sedimentation within Swinomish Channel	Navigational commence in the Swinomish Channel is being challenged by sedimentation rates and a lack of dredging. Boats that 60 ft and longer cannot fuel up in the channel.	• Coastal Geologic Services, Inc. 2010a - Swinomish Channel Sedimentation Study • Coastal Geologic Services, Inc. 2010b. Deception Pass to Skagit River Delta Geomorphic Assessment & Drift Cell Restoration Prioritization • BST Associates 2010 - Swinomish Channel Dredging Economic Impact Assessment • Ecology 2011b - Washington Coastal Atlas

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Appendix B – Shoreline Photographs

Photograph 1
Reach 1 - Shoreline north of La Conner Marina's north basin, in vicinity of eelgrass mitigation area

Photograph 2
Reach 1 - Shoreline along eastern side of La Conner Marina's north basin

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Photograph 3
Reach 1 - Shoreline along south side of La Conner Marina's north basin, near the mouth of the basin next to the Swinomish Channel

Photograph 4
Reach 1 – Drainage Slough, looking east from mouth at Swinomish Channel

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Photograph 5
Reach 1 - La Conner Marina's south basin, looking southeast from the Swinomish Channel

Photograph 6
Reach 2 – Jordan Street end, looking southeast

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Photograph 7
Reach 2 – Channel Lodge (between State St and Center St)

Photograph 8
Reach 2 – Channel Lodge public access at Center Street end

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Photograph 9
Reach 2 – Residential above Commercial (just north of Morse Street)

Photograph 10
Reach 2 – Washington Street "Fish Bridge" public float

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Photograph 11
Reach 2 – Shoreline between Benton Street and Calhoun Street

Photograph 12
Reach 2 – Public moorage/access, Calhoun Street

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Photograph 13
Reach 2 – Shoreline at Commercial Street, Calico Cupboard

Photograph 14
Reach 2 – Shoreline at Commercial Street, Maple Hall

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Photograph 15
Reach 2 – Private Pier, south of Commercial Street

Photograph 16
Reach 2 – La Conner Pier, South of Caledonia Street

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Photograph 17
Reach 2 – South of La Conner Pier, looking towards Sherman Avenue boat launch

Photograph 18
Reach 3 – Upper shoreline and uplands south of Sherman Avenue boat launch

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Photograph 19
Reach 3 – Shoreline south of the Sherman Avenue boat launch

Photograph 20
Reach 3 – Pioneer Point Marina, looking southwest from marina

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Restoration Plan

Shoreline Master Program Update
La Conner, Washington

Ecology Grant #G1100003

Deliverable for Task 4.1

Due to Ecology: February 28, 2013

Prepared for:

Town of La Conner
P.O. Box 400
La Conner, Washington 98257

Attention: John Doyle

Prepared by:

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Figure 3. Town of La Conner – Harbor and Shoreline Designations with Critical Areas and Topography

1. INTRODUCTION

The Town of La Conner (Town) is in the process of conducting a comprehensive Shoreline Master Program (SMP) update. This process is partially funded by a grant administered through the Washington State Department of Ecology (Ecology) (SMA Grant No. G1100003). Substitute Senate Bill (SSB) 6012, an Act passed in 2003 relating to shoreline management and amending RCW 90.58.060, 90.58.080, and 90.58.250, requires cities and counties to update their SMPs consistent with the state Shoreline Management Act (SMA), Revised Code of Washington (RCW) 90.58 and its implementing guidelines, Washington Administrative Code (WAC) 173-26.

1.1. Regulatory Overview of the SMA

Washington's 1971 SMA was created in response to a growing concern among Washington residents that irrevocable damage was being done to Washington's shorelines through unplanned and unbridled use.

The SMA policy goals harbor potential for conflict as set forth in WAC 173-26-176(2):

> *The act recognizes that the shorelines and the waters they encompass are "among the most valuable and fragile" of the state's natural resources. They are valuable for economically productive industrial and commercial uses, recreation, navigation, residential amenity, scientific research and education. They are fragile because they depend upon balanced physical, biological, and chemical systems that may be adversely altered by natural forces (earthquakes, volcanic eruptions, landslides, storms, droughts, floods) and human conduct (industrial, commercial, residential, recreation, navigational).*

The SMA is intended to provide a balance between shoreline development and conservation or enhancement of shoreline ecological functions and values by encouraging water-dependent, water-related, and water-enjoyment uses within shoreline jurisdiction.

The legislative findings and policy goals of the SMA (RCW 90.58.020) are:

> *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.*
>
> *It is the policy of the state to provide for the management of the shorelines by planning for and fostering all reasonable and appropriate uses.*
>
> *Uses shall be preferred which are……unique to or dependent upon use of the state's shoreline.*
>
> *Alterations of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for single-family residences and their appurtenant structures, ports, shoreline recreational uses including but not limited to parks, marinas, piers, and other improvements facilitating public access to shorelines of the state, industrial and commercial developments which are particularly dependent on their location on or use of the*

shorelines of the state and other development that will provide an opportunity for substantial numbers of the people to enjoy the shorelines of the state.

RCW 90.58.090 authorizes and directs Ecology to adopt:

> *…guidelines consistent with RCW 90.58.020, containing the elements specified in RCW 90.58.100" for development of local master programs for regulation of the uses of "shorelines" and "shorelines of statewide significance."*

RCW 90.58.200 authorizes the department and local governments "to adopt such rules as are necessary and appropriate to carry out the provisions of" the Shoreline Management Act.

Local governments are assigned the primary responsibility for administering a regulatory program consistent with the policies and provisions of the SMA through local SMPs. The SMP guidelines (WAC 173-26), established by Ecology, offer goals and policies (see above) to guide local jurisdictions in developing use regulations and development standards within the shoreline. Local governments are allowed substantial discretion to adopt SMPs that reflect local circumstances, and regulatory/non-regulatory programs.

The SMA thus provides the policy goals and a set of guidelines (WAC 173-26) to assist local jurisdictions in developing, adopting and amending local SMPs, to provide 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.* (RCW 90.58.020)

1.2. Purpose and Goals of the Restoration Plan

Consistent with principle WAC 173-26-186 (8)(c), master programs shall include goals, policies and actions for restoration of impaired shoreline ecological functions:

> For counties and cities containing any shorelines with impaired ecological functions, master programs shall include goals and policies that provide for restoration of such impaired ecological functions. These master program provisions shall identify existing policies and programs that contribute to planned restoration goals and identify any additional policies and programs that local government will implement to achieve its goals. These master program elements regarding restoration should make real and meaningful use of established or funded nonregulatory policies and programs that contribute to restoration of ecological functions, and should appropriately consider the direct or indirect effects of other regulatory or nonregulatory programs under other local, state, and federal laws, as well as any restoration effects that may flow indirectly from shoreline development regulations and mitigation standards.

Ecology states that approaches to restoration and restoration planning will vary between jurisdictions depending on: the size of the jurisdiction; the extent and condition of shorelines in the jurisdiction; the availability of grants, volunteer programs or other tools for restoration; and the nature of the ecological functions to be addressed by restoration planning.

Ecology's SMP Guidelines (WAC 173-26-020) specifically define "restoration" as follows:

"Restore," "restoration" or "ecological restoration" means the reestablishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including, but not limited to, revegetation, removal of intrusive shoreline structures and removal or treatment of toxic materials. Restoration does not imply a requirement for returning the shoreline area to aboriginal or pre-European settlement conditions.

The Restoration Plan is required by Ecology during Phase 4 of the SMP update process, identified as Task 4.1. The purpose of the Restoration Plan is to provide a framework for the identification, planning and implementation of restoration and enhancement projects within the Town's shoreline jurisdiction, and to allow for the permitting of development while ensuring no net loss of ecological functions. This document presents the Town's Restoration Plan which:

- Establishes overall goals and priorities for restoration of degraded areas and impaired ecological functions;
- Identifies degraded areas, impaired ecological functions, and sites with potential for ecological restoration;
- Identifies existing and ongoing projects and programs that are currently being implemented, or are reasonably assured of being implemented (based on an evaluation of funding likely in the foreseeable future), which are designed to contribute to local restoration goals;
- Identifies additional projects and programs needed to achieve local restoration goals, and implementation strategies including identifying prospective funding sources for those projects and programs;
- Identifies timelines and benchmarks for implementing restoration programs and achieving local restoration goals; and
- Provides for mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review their effectiveness in meeting the overall restoration goals.

This Restoration Plan builds on the Town of La Conner Shoreline Inventory, and the Shoreline Inventory and Characterization (Town of La Conner 2011a and 2011b) which provided a comprehensive inventory and analysis of conditions within the Town's Shoreline Environment. The comments received from stakeholders and input of the Technical Advisory Committee (Planning Commission) that reviewed this Restoration Plan have been added or addressed. The intent of this Restoration Plan is to provide local project proponents (development or restoration projects) with the guidance necessary to plan and execute a restoration project that meets No Net Loss requirements, improve shoreline ecological functions, and be consistent with community and stakeholder restoration goals.

The information presented in this Restoration Plan will be used as a basis for subsequent tasks associated with the SMP update process, including revisiting the Cumulative Impacts Analysis (Task 4.2) and the No Net Loss Report (Task 4.3).

1.3. No Net Loss of Ecological Functions

The SMP Guidelines establish the standard of "no net loss" of shoreline ecological functions as the means of implementing a broad policy framework for protecting the natural resources and ecology of the shoreline environment through SMPs. WAC 173-26-186(8) directs that SMPs "include policies and regulations designed to achieve no net loss of those ecological functions."

No net loss incorporates the following concepts outlined in the SMP Handbook (Ecology 2010):

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

The Town's Draft SMP, and this Restoration Plan address the SMP requirements to achieve no net loss by protecting and restoring the Town's marine shoreline, which includes designated Critical Habitat for Federally Threatened Puget Sound Chinook Salmon (*Oncorhynchus tshawytscha*) and Bull Trout (*Salvelinus confluentis*) within the entire marine Aquatic Environment. The difficulty for local governments is to allow new development to occur while maintaining the existing net quantity and quality of shoreline ecological functions. The goals and policies developed in the Town's draft SMP Ordinance attempt to address this apparent problem.

1.4. Town of La Conner History and Landscape Context

The Town of La Conner is located between the Samish River and the North Fork of the Skagit River along the eastern banks of the Swinomish Channel, an 11-mile man-made channel connecting Padilla and Skagit Bays (Figure 1 – Vicinity Map). The shoreline of the Town is noted for its scenic and historic beauty amid a highly developed commercial environment. In the past the Town was the terminus, supply point and harbor for steam ships and freighters and a port for agricultural commodities grown in the surrounding delta farmlands. The Town still serves as a safe harbor for commercial and recreational boats and is home to the Upper Skagit Tribe commercial fishing fleet. The Town is a center for tourism (e.g., Skagit Tulip Festival) and pleasure boating in Skagit County. The downtown core is a National Historic District with most of the historic buildings in the Town remaining unchanged. Many of the waterfront structures extend out on pilings over the Swinomish Channel, reflecting the Town's early and important water related industries.

The ecological value of the area has been altered from pre-settlement conditions through dredging, diking and urban development. Although the area will not be restored to conditions that were present before European settlement there are areas where limited restoration is feasible.

This Restoration Plan provides details of specific areas targeted for restoration and methods that can be employed to improve water quality, enhance fish and wildlife habitat, and improve ecological function, while enhancing the commercial, public use and aesthetic values that define the Town of Conner.

The following section (Section 2) summarizes the goals and policies established in the updated SMP Ordinance that pertain to restoration of degraded areas and impaired ecological functions, and protection of existing

habitat and ecological functions. Section 3 provides a summary of areas identified to be degraded or have impaired ecological functions, and sites with potential for ecological restoration. Section 4 discusses currently planned restoration projects, additional projects and programs needed to achieve restoration goals, potential funding sources, and timelines and benchmarks for implementing the restoration projects and achieving restoration goals. Section 5 provides an implementation and evaluation strategy to ensure that restoration projects and programs will be implemented and monitored effectively.

2. SMP RESTORATION GOALS AND POLICIES

A major goal of this restoration plan will be to improve ecological shoreline functions in key areas where beneficial restoration can be achieved without infringing upon existing water-dependent or water-related uses. This plan does not set out to return the shoreline to pre-development or pre-settlement conditions, but rather improve upon the current ecological baseline in a measurable and achievable way in order to compensate for projected future impacts from on-going development.

The Town of La Conner has six shoreline environmental designations including Residential, Commercial, Industrial, Public Use, Historic Commercial and Aquatic. Table 2-1 below presents the purpose of each designation.

TABLE 2-1. PURPOSE FOR TOWN OF LA CONNER SHORELINE ENVIRONMENTAL DESIGNATIONS

Environmental Designation	Purpose
Historic	Ensure optimum utilization of the shorelines in this area while preserving structures of historic significance along the waterfront, allow as much public access as practicable in conjunction with a variety of water-enjoyment uses, and ensure redevelopment is accomplished in such a way as to minimize any adverse impact on the aquatic and historic environment.
Commercial	Ensure optimum utilization of existing urban commercial shorelines for a variety of uses, with priority given to water-dependent, water-related, and water-enjoyment uses.
Industrial	Ensure optimum utilization of existing urban industrial shorelines for a variety of uses, with priority given to water-dependent, water-related, and water-enjoyment uses.
Residential	Preserve residential use as the primary use while preventing any adverse impacts to the shoreline environment, uses and function.
Public Use	Ensure optimum utilization of existing public uses for public purposes.
Aquatic	Ensure protection of marine resources while allowing as much water-dependent use as possible and keeping a clear navigation channel.

The Cumulative Impacts Analysis (Town of La Conner 2012, Table 3-1) presents a summary of shoreline environmental designations and their location, existing conditions and restricted uses. In addition the Cumulative Impacts Analysis (Town of La Conner 2012, Table 3-2) provides a summary of anticipated uses and activities within the shoreline (residential, commercial and industrial development; boating facilities; transportation; parking; public use, access and recreation; shoreline protection structures; flood control; clearing/grading; vegetation clearing; critical areas; and water quality) and highlights those policies and standards that contribute to protection of shoreline ecological functions.

3. DEGRADED FUNCTIONS/AREAS AND POTENTIAL RESTORATION SITES

In order to achieve the goals of no net loss and reestablishment or restoration of impaired ecological shoreline processes and/or functions, the Restoration Plan draws on much of the baseline shoreline ecological information previously presented in the Shoreline Inventory and Characterization Report (Town of La Conner 2011a). This includes an inventory of existing shoreline information, characterization of baseline shoreline ecological functions (including degraded areas with potential for restoration), and analyses of shoreline use and public access opportunities. The Restoration Plan also draws on information previously presented in the Cumulative Impacts Analysis Report (Town of La Conner 2012) which includes an analysis of potential impacts to shoreline functions from future development within the Town. The report also presents results of a side-scan sonar eelgrass and macroalgae survey performed within the Town limits.

3.1. Proposed Improvements as Part of Future Proposed Upgrades to Existing Shoreline Structures

Current state and federal statutes and guidelines direct project applicants looking to maintain or expand existing structures below the Ordinary High Water Mark (OHWM) (e.g., piles and decking of existing piers, floats and boardwalks) to replace creosote-treated and other treated wood products with non-toxic materials such as non-treated wood, aluminum, steel or concrete. In addition, these statutes and guidelines direct project applicants to incorporate transparency into decking for over-water structures (e.g., piers, floats and boardwalks) and to incorporate low-impact lighting over the water when maintenance or expansions are proposed.

The Town's SMP does explicitly require use of non-toxic materials, transparency in decking or low-impact lighting and so specific guidelines for materials used below the OHWM of the Swinomish Channel would fall under the jurisdiction of WDFW and the USACE. The Town of La Conner SMP directs project applicants to be aware of other permitting requirements (e.g., state and federal) for in-water actions. In addition, for improvement of existing and new over-water structures the SMP has a policy of no net increase in shading across the entire Town's shoreline.

In addition to guidelines that dictate standards for materials and design below the OHWM, the Washington Department of Fish and Wildlife (WDFW) mitigation policy (POL-M5002) and the United States Army Corps of Engineers (USACE)/Environmental Protection Agency (EPA) Mitigation Rule have issued regulations (73 FR 19594-19705) governing compensatory mitigation for authorized impacts to wetlands, streams, and other waters of the U.S. under the Hydraulic Code (WAC 220-110, for WDFW) and Section 404 of the Clean Water Act (for USACE and EPA).

The Town's SMP requires avoidance and mitigation sequencing for work near or within critical areas and habitats (e.g., eelgrass beds), however specific guidance for mitigation would fall under the jurisdiction of WDFW and the USACE.

3.2. Proposed Improvements Occurring Outside Shoreline Jurisdiction

Most of the shoreline management area within the Town has experienced a high level of historical development resulting in a prevalence of impervious surfaces (DNR 2000, Doyle 2011, Town of La Conner 2010a through c, 2011a and b). Shoreline development can negatively affect ecological functions as a result of

an increase in impervious surfaces, which increases surface water runoff including pollutants that may be transported in this runoff, limiting groundwater exchange, influencing the distribution of sediment, nutrients, pathogens, toxins, and woody debris.

Stormwater runoff from impervious surfaces throughout the Town has historically flowed untreated (sheet flow and piped) to the Swinomish Channel, with potential adverse effects to water quality in the Swinomish Channel shoreline environment. Improvements to the stormwater system have been implemented which collect and treat stormwater and release it to Sullivan Slough. Stormwater runoff from the northern portion of Town (north of Morris Street) is now pumped to settling ponds adjacent to the Town's Waste Water Treatment Plant for settling and infiltration. Infiltration from the ponds discharges as groundwater to Sullivan Slough. In addition, overflows from the stormwater system during sustained or heavy rains now discharge directly to Sullivan Slough. A new pipeline from the south portion of Town (south of Morris Street), which will carry stormwater to the infiltration ponds, has been installed, and will become serviceable in 2013-2014. Thus, by 2013-2014, the entire surface water collection system within the Town's right-of ways (north and south basins) will be directed to these ponds, where it will be treated to CWA standards. These improvements in stormwater handling and treatment will result in significantly reduced loadings of contaminants and nutrients to surface waters of the Swinomish Channel. Reductions in direct stormwater discharges to the Swinomish Channel will also lead to reduced contaminant loading to sediments, via settling of suspended sediments with adsorbed contaminants.

3.3. Shoreline Functional Indicators, Baseline Conditions and Existing Degraded Areas

Baseline conditions and existing shoreline ecological functions within the Town's shoreline management area (marine areas and shorelands) were described in the La Conner Shoreline Inventory and Characterization Report (Town of La Conner 2011a).

The Town's shoreline environments are dominated by commercial land use in the historic downtown core (most of Reach 2) with some residential and public use areas. To the south of downtown (southern end of Reach 2 and Reach 3), land use is primarily urban commercial/industrial and to the north of downtown (Reach 1) is a mix of urban commercial and urban industrial. This distribution of land use reflects the Town's maritime commercial history and the Town's vision to preserve its historical authenticity and status as a visitor destination (Town of La Conner, 2005).

Reach 1 is the northern most segment of the Town extending from the northern Town limits, at North Pearle Jensen Way, south for approximately 3,000 feet (0.6 miles) along the Swinomish Channel to South Basin Street (Figure 2 – Shoreline Oblique Photos). There is approximately 5000 feet of shoreline along this reach associated with the La Conner Marina's North and South Basins (owned and operated by the Port of Skagit) and the Drainage Ditch outlet immediately south of Dunlap Street that drains adjacent farm fields. Based on the updated shoreline environmental designations, five environmental designations exist within this reach including Industrial, Commercial, Aquatic, Residential and Public Use (Figure 3, Town of La Conner - Harbor and Shoreline Designations with Critical Areas and Topography).

Reach 2 is the central segment of the Town extending from South Basin Street, immediately south of the Port of Skagit marina properties, south to the Sherman Avenue boat launch (Figure 2). Reach 2 extends for approximately 3,300 feet (0.6 miles) along the Swinomish Channel. Based on the updated shoreline environmental designations, five shoreline environmental designations exist within this reach including

Commercial, Historic Commercial, Aquatic, Residential and Public Use (Figure 3).

Reach 3 is the southern segment of the Town extending from the Sherman Avenue boat launch south to the southern Town limits (Figure 2). Reach 3 extends for approximately 1,200 feet (0.23 miles) along the Swinomish Channel. Based on the updated shoreline environmental designations, three shoreline environmental designations exist within this reach including Industrial, Aquatic and Public Use (Figure 3).

Table 3-1 below presents a summary of shoreline functional indicators, baseline conditions, ecological functions, degraded areas, and potential/proposed restoration actions.

TABLE 3-1. SHORELINE FUNCTIONAL INDICATORS, BASELINE CONDITIONS, ECOLOGICAL FUNCTIONS, DEGRADED AREAS AND PROPOSED RESTORATION ACTIONS.

Shoreline Functional Indicators	Baseline Conditions	Ecological Functions Provided or Lost	Degraded Areas That Can Be Restored	Potential / Proposed Restoration Actions
Over-Water Structures: Piers, docks, gangways, piles, floats, boardwalks, buildings and other man-made over-water structures.	• Shoreline structures within the Town consist of over-water portions of buildings (including outdoor patio seating), docks, piers and marina slips. Within Reach 1 the La Conner Marina has 366 covered moorage slips, 131 open moorage slips and 2,400 lineal feet of dock space for overnight moorage. Within Reach 3, the Pioneer Point Marina has an approximately 450-foot long floating dock and a large over-water pier (95 feet by 65 feet). A small portion of the floating dock (e.g., 20 ft) is outside of the Town's Shoreline jurisdiction. • Based on an analysis of recent aerial photographs the following are total lengths of shoreline within each Reach that have no overwater structures within 100 feet waterward of the OHWM o Reach 1: 640 ft out of 5,000 ft (13%) o Reach 2: 735 ft out of 3,300 ft (22%) o Reach 3: 770 ft out of 1,200 ft (64%) • In 2009, demolition of the Olympic Seafood Company plant (immediately north of the Pioneer Point Marina, within Reach 3) resulted in removed of approximately 23,000 SF of overwater structures. o Prior to the removal of the Olympic Seafood plant Reach 3 had 330 ft (28%) of shoreline free of over-water structures.	**Impacts of Over-Water and In-Water Structures** • Produces shade which decreases primary productivity of aquatic plants and algae (food source and substrate/ habitat for marine life) • Salmon fry tend to avoid the dark areas under over-water structures, forcing them out into deeper water with predators • Creosote-treated wood (or other treatment product) leaches into sediments causing contamination with potential impacts to aquatic life **Potential Functions of Over-Water and In-Water Structures** • Structures such as piles and floats provide a substrate for encrusting macroalgae and invertebrates, and can serve as a substrate for herring spawn (Penttila 2007).	• The Town's shoreline historically and presently has a commercial environment, built up to and in parts, over, the Swinomish Channel. It is not the goal of the Town to reduce over-water structures over time but rather to reduce the environmental impacts of them by improving the materials used to build these structures and to incorporate transparency and low-impact lighting as improvements are proposed by project applicants. For improvement of existing and new over-water structures the Town's SMP has a policy of no net increase in shading across the entire Town's shoreline. • In 2009, at the former Olympic Seafood Company (immediately north of the Pioneer Point Marina), overwater structures (piers, ramps and float structures), upland buildings and marina facilities were demolished under a DNR grant for creosote piling removal (Figure 3). The total area of over-water structures removed was approximately 23,000 SF, just over half an acre. The Town plans to develop the site for Public Use (Conner Way Waterfront Park). Part of this planned development is the installation of an over-water pier for Public Access/Enjoyment.	As older overwater and in-water structures (e.g., piles and decking of existing piers, floats and boardwalks) are repaired and maintained, creosote-treated and other treated wood will be replaced with non-toxic materials such as non-treated wood, aluminum, steel or concrete. In addition, applicants will be required by state and federal entities to incorporate transparency into decking for over-water structures (e.g., piers, floats and boardwalks) and to incorporate low-impact lighting over the water.
Marine Riparian Vegetation	• Limited marine riparian vegetation. • Commercial development extends up to and often waterward of the OHWM. • Landscape trees at the south and north basins of the La Conner Marina. • Forested hill south of Sherman Ave within Shoreline zone, but does not abut marine riparian area.	• Removal of marine riparian vegetation can lead to increased erosion and sediments inputs, loss of organic inputs and habitat structure from dead plant parts and a general loss or elimination of the following shoreline ecological functions: • Slope stability (e.g., root structure, drainage control), food web, water quality (e.g., sediment trapping), habitat structure (e.g., logs, branches and leaves) and sediment metering and deposition (e.g., controls rates of erosion and volumes).	Street End Public Access Points and the undeveloped Public Use area under the Rainbow Bridge have very limited marine riparian vegetation. The five Public Use areas where Jordon, Morris, Washington, Benton and Calhoun Streets meet the Swinomish channel and the Public Use area under the Rainbow Bridge are shown on Figure 2.	• Conner Way Waterfront Park (new). Located immediately south of the Sherman Street boat launch across Conner Way from Pioneer Park. This park will have a water-enjoyment and public access component. Restoration will primarily involve establishing patches of native marine riparian vegetation (forested, shrub and herbs/emergent) within the shoreline buffer. • Several street end projects will be completed by the within existing public right-of-ways where the following streets end at the waterfront: Jordan, Washington, Benton, and Calhoun Streets. The goals of the projects will be two-fold: first, to improve access and enjoyment opportunities for the public at the shoreline interface, and second, to provide shoreline ecology functional lift through the establishment of native riparian vegetation.

Shoreline Functional Indicators	Baseline Conditions	Ecological Functions Provided or Lost	Degraded Areas That Can Be Restored	Potential / Proposed Restoration Actions
Shoreline Armoring /Revetments	• Shoreline armoring was installed along the Town's shoreline by the USACE in the 1990s. • Armoring remains prevalent throughout downtown area. • Armoring also exists to a large extent along the shoreline both north and south of downtown. • Very limited distribution of natural beaches.	WAC 173-26-231 (Shoreline modifications) lists the following impacts to shoreline ecological functions from Shoreline armoring: • Beach starvation. • Sediment impoundment/loss of sediment sources. • Ground water impacts/higher GW table on landward side can lead to higher beach pore pressure and accelerated erosion of sand. • Hydraulic impacts/Increased Reflectivity/Exacerbation of Erosion. • Elimination/Loss of shoreline vegetation/Habitat Degradation.	• Within Reach 1 the La Conner Marina maintains gradually sloped banks that are either unarmored or armored with quarry spalls and some riprap near MHHW. • Within Reach 2 the shoreline of the Town's downtown core is fully armored with riprap from as high as 15 feet above MLLW to 15 feet below MLLW. The Town is required by the USACE to maintain the revetment in a fully functioning state (USACE 1996). • Within the lower portions of Reach 2 the shoreline is armored with riprap from the OHWM down to approximately 3 feet above MLLW. • Within Reach 3 the shoreline is armored with riprap from near the OHWM down to approximately 3 feet above MLLW. Below the riprap the shoreline slopes gradually and the substrate consists of fine muddy sediments with scattered rock. These gradually sloping areas, with a mixture of fine sediments and rock substrate have the potential to be serving as fish benches.	• No armoring will be removed within the Town. • Within Reach 3, as the Conner Way Waterfront Park is developed existing shoreline armoring in this reach may be repaired and LWD incorporated into the revetment face.
Wetland Habitat	• No freshwater wetlands within the Town's shoreline zone (USFWS 1987). • Within Reaches 1 and 2 of the Town, limited salt marsh habitat at the tidal fringe was identified by the DNR Shoreline Inventory and the Skagit County Intertidal Habitat Inventory • Some limited eelgrass and macroalgae habitat has been identified within the Town (Appendix B).	• No freshwater wetlands – see "Fish and Wildlife Species/Habitat" for marine habitats and "Marine Riparian Vegetation" for riparian habitats	NA	NA
Fish and Wildlife Species/Habitat	• Within Reaches 1 and 2 of the Town of La Conner limited salt marsh habitat at the tidal fringe was identified by the DNR Shoreline Inventory and the Skagit County Intertidal Habitat Inventory • Some limited eelgrass and macroalgae habitat has been identified within the Town (Town of La Conner 2012). • Marine mammals are not anticipated to occur in the Channel. • Limited habitat for fish, seabirds, waterfowl and shorebirds. • Primarily used as a migratory corridor for a variety of fish species. • Shellfish and other invertebrates are present in limited abundance.	• Two eelgrass patches (including one mitigation site), scattered salt marsh vegetation, and patches of macroalgae (rockweed and Turkish towel) provide shelter, habitat and food for marine life. • Limited soft sediment areas provide habitat for burrowing marine life	Within Reach 3 areas of the shore below +3 ft (MLLW) consist of gradually sloping shoreline with fine muddy sediments and scattered rock.	Within Reach 3, as the Conner Way Waterfront Park is developed the shallow benches below the riprap can be improved to provide a safer migratory path for migrating juvenile salmonids and better habitat for prey items for young fish (e.g., copepods and amphipods). Types of improvements suitable for the site include: • Adding LWD (secured through partial burial) • Development of salt marsh areas higher up on the beach • Improving substrate conditions by removing debris and angular rock and replacing with gravel or sand/silt • This area could potentially serve as a future eelgrass mitigation site for any impacts to eelgrass within other sections of the shoreline Some of these improvements will occur as part of the Town's development of the site as a park and other improvements will occur as part of mitigation for project actions within the Town.
Flooding	• Most of the Town is within the 100-year floodplain of the Skagit River. • Flooding from the Skagit River has not occurred within the Town since the early 1900s. • Limited flooding from storm surges (within the Swinomish Channel) is controlled using sandbags and containment materials.	• Dikes protect the Town to the south and east.	NA	• No proposed restoration for flood control. • Surface waters within the Town drain to the Swinomish Channel and not to the Skagit River (Savoca et al, 2009)

Shoreline Functional Indicators	Baseline Conditions	Ecological Functions Provided or Lost	Degraded Areas That Can Be Restored	Potential / Proposed Restoration Actions
Impervious Surfaces	• The baseline level of impervious surface in the Town in 2002 was 51.4 acres and is now 54.64 acres. Town of La Conner added 140,568 SF (3.23 acres) of new impervious surfaces between 2002 and 2012. The percent of these impervious surfaces that occur within the shoreline management area is unknown. • Areas of non-impervious surfaces within the shoreline environment include: o Strips of landscaping around La Conner Marina basins o Areas of residential yards and school fields east of the south basin of La Conner Marina o Portions of street ends (public access)– patchy grass areas o Between State and South Basin Streets: Grass areas adjacent to the Swinomish Channel and landscaped strips with trees east of 1st Street o Between State and Centre Streets: Landscaped area adjacent to Swinomish Channel at La Conner Channel Lodge o Between Washington and Douglas Streets: portion of forested and grassy areas east of 1st Street o Immediately north of Sherman St (lawn and a few trees) o South of Sherman Street (Reach 3) ▪ East of Conner Way: Pioneer Park is a forested hill ▪ West of Conner Way: areas of grass and a few trees north of the Pioneer Point Marina	The construction of impervious surfaces result in removal of vegetation, disruption of surface water infiltration, increases in overland flow/surface water runoff, and impacts to water quality from increased transport of sediments and contamination from cars, man-made materials etc.	The Town does not have an overall goal of reducing impervious surfaces within the shoreline environment; however as the Conner Way waterfront park is developed, some of the areas formerly covered by buildings and gravel parking areas associated with the Olympic Seafood Plant will be converted to non-impervious park lands thereby reducing impervious surface areas in the shoreline from baseline conditions.	Conner Way Waterfront Park
Channel Conditions Sediment	• Man-made cut. • Regular dredging. • Limited aquatic vegetation. • Non-native sediment surface in many locations (e.g., quarry spalls/angular rock, imported gravel)	See "Fish and Wildlife Species/Habitat" for functions of existing marine habitats within the channel	• The Swinomish Channel has been dredged by the USACE every three to four years to an authorized depth of 12 feet below mean lower low water to keep the channel open for vessels and prevent boats from running aground (Bach 2010). • Dredging began again in September 2012 and continued until January 2013 removing over 220,000 cubic yards of material from the channel bottom (Port of Skagit 2013). • These dredging activities cause on-going disturbance of the channel bottom (both from direct removal of sediments and slumping of the side slopes) including potentially the limited areas of eelgrass habitats and shellfish beds. In addition, dredging activities cause temporary increases in turbidity.	See "Fish and Wildlife Species/Habitat" for proposed restoration of marine habitats
Water Quality	• The Swinomish Channel was listed on the 2008 Water Quality Assessment as a Category 5 – Polluted Waters/303d List impaired waterbody for tissue level exceedances for Benzo(a)anthracene and Chrysene (north of the Town of La Conner) (Ecology 2009 and 2008) and shellfish had elevated levels of tributyltin and Polycyclic Aromatic Hydrocarbons (PAHs) (Johnson 2000). • Altered salinity gradients from construction of the McGlinn Island Causeway and Jetty which prevents freshwater from the Skagit River from flowing north up the Swinomish Channel so that a sharp salinity contrast is created between the Swinomish Channel and the Skagit River approximately 3,000 feet south of the southern La Conner Town limits at the north end of McGlinn Island. • Stormwater discharge directly to Channel.	If marine waters of the Swinomish Channel meet water quality standards, the channel can provide habitat for marine life with sufficient oxygen and low risks of toxicity and eutrophication.	• The Town does not have jurisdiction over the McGlinn Island Causeway and Jetty or the areas to the north where tissue exceedances were observed. • Much of the surface runoff from impervious surfaces in the Town historically flowed untreated to the Swinomish Channel. Improvements to the stormwater system have been implemented which collect and treat stormwater and release it to Sullivan Slough. Stormwater runoff from the northern portion of Town (north of Morris Street) is pumped to settling ponds, adjacent to the Town's Waste Water Treatment Plant, for settling and infiltration.	Treatment of runoff from remaining impervious surfaces is planned as part of Town's stormwater sewer upgrades, which are ongoing. A new pipeline from the south portion of Town (south of Morris Street), which will carry stormwater to the infiltration ponds, has also been recently installed, and will become serviceable in 2013-2014. Thus, by 2013-2014, the entire surface water collection system within the Town's limits will be directed to these ponds, where it will be treated to CWA standards.

4. RESTORATION PROJECTS AND EXISTING PLANS AND PROGRAMS

This section discusses currently planned restoration projects, additional projects and programs needed to achieve restoration goals, potential funding sources, and timelines and benchmarks for implementing the restoration projects and achieving restoration goals.

4.1. Degraded Areas With Potential For Restoration

Within the Town, due to the built out nature of developments within the shoreline, there are limited areas available for restoration. The Town has identified five sites with degraded conditions that abut the Swinomish Channel where future restoration/mitigation could occur. These sites include four street-end public access points within Reach 2 and the Conner Way Waterfront Park under the Rainbow Bridge within Reach 3.

The most significant opportunity for restoration of shoreline is along the waterfront adjacent to Conner Way in the vicinity of the Maple Ave/Pioneer Parkway bridge ("Rainbow Bridge"), between the Sherman Street public boat launch and the Pioneer Point Marina. This area is currently vacant and generally possesses degraded conditions. A portion of the area was formerly occupied by the Olympic Seafood plant, and is now planned to become the Conner Way Waterfront Park. This park will have a water-enjoyment and public access component, as it will be designed for public use. Ecological restoration that will occur as part of development of the park will primarily involve establishing native marine riparian vegetation west of Conner Way and potentially incorporating LWD into the shoreline. For future mitigation opportunities ecological restoration could include establishing additional native riparian vegetation within the buffer, adding additional LWD, developing salt marsh areas in the upper beach and eelgrass in the lower beach, removing derelict manmade structures and debris, and improving substrate conditions by removing debris and angular rock and replacing with gravel or sand/silt.

The following table presents a summary of degraded areas with potential for restoration.

TABLE 4-1. SUMMARY OF DEGRADED AREAS WITH POTENTIAL FOR RESTORATION

Degraded Area	Degraded Areas To Be Restored/Enhanced	Funding Source(s)	Implementation Timeline
Conner Way Waterfront Park South of Sherman St Boat Launch west of Conner Way	**Restoration:** Development of the park will involve enhancing marine riparian and in-water habitats by: • Decommissioning some impervious surfaces (e.g., gravel parking areas and old building sites) to create parkland • Establishing native riparian and forested vegetation within the shoreline buffer • Adding LWD (secured through partial burial)	Recreation and Conservation Office (ROC) Grant Private Investment ($50,000)	Built by 2015
	Mitigation: Future enhancement actions performed as mitigation could include enhancing marine riparian and in-water habitats by: • Establishing additional native riparian and forested vegetation within the shoreline buffer • Adding additional LWD (partially buried) • Developing salt marsh areas in the upper beach • Removing derelict manmade structures and debris • Improving substrate conditions by removing debris and angular rock and replacing with gravel or sand/silt • Establishing new eelgrass beds	Future project proponents requiring riparian or in-water mitigation could use the Conner Way Waterfront Park site as a mitigation site. Funding for the enhancement/ restoration actions would come from the project proponents.	As future projects with impacts to riparian or in-water are proposed and permitted.
Washington Street End	Several street end projects will be completed by the Town. These projects will be completed within existing public right-of-ways where the following streets end at the waterfront: The goals of the projects will be two-fold: first, to improve access and enjoyment opportunities for the public at the shoreline interface, and second, to provide shoreline ecology functional lift through the establishment of native riparian vegetation. Because these street ends are relatively small and located within a heavily developed commercial environment, riparian vegetation in these areas will have limited function. An improvement project has already been completed at the Morris Street end as a part of the USACE bank armoring project and included creation of fish benches below the OHWM.	Town of La Conner (10%) Private sources /grants (90%)	The Benton and Washington Street end restoration/redevelopment projects are scheduled to be completed in 2013.
Benton Street End			
Calhoun Street End			Calhoun Street end is scheduled to be completed in 2014.
Jordan Street End		Town of La Conner ($50,000) Develop a usage plan for Jordan St End as a recreation facility, picnic, parking and water access.	Jordon Street end is scheduled to be completed in 2015 or later.

4.2. Existing Plans, Programs and Partners

4.2.1. Potential Partner Organizations / Agencies

Table 4-2 presents existing organizations and programs that could assist with future restoration efforts.

TABLE 4-2. POTENTIAL PARTNER ORGANIZATIONS AND THEIR ROLE IN RESTORATION

Organization/Program	Purpose and Goals	Potential Role in Town of La Conner Ecological Restoration
Washington State Department of Natural Resources (DNR) Aquatic Lands Restoration Funding Aquatic Resources Division http://www.dnr.wa.gov/ResearchScience/Topics/AquaticClean-UpRestoration/Pages/aqr_restoration_program.aspx	DNR funds and partners with entities to clean up the nearshore environment (e.g., removal of creosote piles, derelict vessels).	Provide funding, grant application support, permit review, design, project management and implementation for nearshore aquatic restoration projects.
Skagit Fisheries Enhancement Group (SFEG) http://www.skagitfisheries.org/	SFEG is a nonprofit organization formed in 1990 to engage communities in habitat restoration and watershed stewardship in order to enhance salmon populations. As a non-governmental organization, they have unique cooperative relationships with local landowners, conservation groups, government agencies and tribes. They provide educational programs and perform restoration work on streams, wetlands, estuaries and nearshore marine areas.	Provide public education and assist with design and implementation of restoration projects.
Skagit Watershed Council http://www.skagitwatershed.org/ Designated lead-entity for Water Resource Inventory Areas (WRIA) 3 and 4	The Skagit Watershed Council is a "big-tent" community-based partnership of organizations working together to protect and restore salmon habitat in the Skagit and Samish watersheds. As Lead Entity, based on input from the Technical Advisory Group (TAG) and Water Resources Advisory Committee (WRAC), the Council evaluates and prioritizes restoration project proposals in WRIAs 3 and 4. The WRAC and TAG create a prioritized list of projects for submittal to the Salmon Recovery Funding Board.	Provide public education and assist with design and implementation of restoration projects, including projects outside the Town's jurisdiction within Skagit County. As the lead-entity for WRIAs 3 and 4 they provide the mechanism for local organizations and agencies to obtain Salmon Recovery Funding (SRF) Board grants.
United States Environmental Protection Agency (EPA) Clean Water State Revolving Fund (SRF) http://water.epa.gov/grants_funding/cwsrf/cwsrf_index.cfm Water: Grants & Funding http://water.epa.gov/grants_funding/	The Clean Water State Revolving Fund (SRF) funds water quality protection projects. Through this program, EPA provides funds to states and tribes who then provide low-interest loans to municipalities, communities of all sizes, farmers, homeowners, small businesses, and nonprofit organizations for high-priority activities to improve water quality.	Fund projects that will improve water quality and renew wastewater infrastructure. The program funds water quality protection projects for wastewater treatment, nonpoint source pollution control, and watershed and estuary management.

Organization/Program	Purpose and Goals	Potential Role in Town of La Conner Ecological Restoration
Skagit County Marine Resources Committee http://www.skagitcounty.net/Common/Asp/Default.asp?d=PublicWorksMRC&c=General&p=smrcmain.htm	The purpose of the Skagit MRC is to discuss marine related issues and determine action items to enhance and protect local marine habitat. A key committee task is to involve and educate the public about these issues. Examples of local marine projects include select and study candidate marine protection areas for rocky reef bottomfish habitat, re-establish the native Olympia Oyster, remove the invasive saltwater weed (Spartina), inventory beaches for signs of forage fish habitat, remove derelict fishing gear, develop feasible nearshore restoration projects, enhance the Pacific Oyster.	Public education and project selection
Pioneer Point Marina	Owner of Pioneer Point Marina and adjacent upland property.	Future project proponent for marina improvements. Upgrades and maintenance will decrease the impact of over-water structures and may require mitigation.
Port of Skagit County	Owner of La Conner Marina (north and south basin) and adjacent upland property.	Future project proponent for marina improvements. Upgrades and maintenance will decrease the impact of over-water structures and may require mitigation.
Upper Skagit Indian Tribe (USIT)	Owner of La Conner Pier and associated fishing fleet.	Future project proponent for facility/pier improvements which may require mitigation.
Recreation and Conservation Office (RCO) Grants http://www.rco.wa.gov/grants/grants_available.shtml	Available Grants listed below:	See below:
Aquatic Lands Enhancement Account (ALEA)	Funding to buy, protect, and restore aquatic lands habitat and to provide public access to the waterfront.	Conner Way Water Park
Boating Facilities Program (BFP)	Funding to buy, develop, and renovate facilities for motorized boats.	Marina restoration/ improvements
Boating Infrastructure Grant Program (BIG)	Funding to develop and renovate boating facilities and for boater education.	Marina restoration/ improvements and boater education.
Land and Water Conservation Fund (LWCF)	Funding to buy or develop public outdoor recreation areas and facilities.	Purchase / develop public outdoor recreation areas/ parks.
Salmon Recovery	Funding to improve important habitat conditions or watershed processes to benefit salmon and bull trout.	Swinomish Channel Restoration Projects
Washington Wildlife and Recreation Program (WWRP)	Funding for local and state parks, trails, water access, state land conservation and restoration, farmland preservation, and habitat conservation.	Development and redevelopment of Conner Way Water Park and Street End Public Access areas.

4.2.2. Town of La Conner Stormwater Management Plan Update (2007)

The Town issued an update to its 1995 Stormwater Management Plan which outlined steps taken between 1995 and 2007 to reduce drainage problems and extend service throughout the Town.
Principal projects included:

- The Town created a functional Stormwater Utility and has been collecting connection and service charges in order to fund ongoing maintenance and the proposed Capital Improvement Project.
- The Town has adopted [La Conner Municipal Code 15.100.070] the Stormwater Management Manual for Western Washington [Dept. of Ecology] and has established an engineering review and approval procedure for all significant repairs and extensions of the drainage system.
- The Town has constructed a collection and transmission main, with a high capacity pump station, to serve the Morris Street Basin. This project was done in conjunction with a major rehabilitation of Morris Street and served to address many of the historic drainage problems in the area.
- The Town has constructed a water quality pond that has been sized to serve both the Morris and Caledonia basins.
- The Town has used both Public Works construction contracts and Public Works staff to construct several extensions and upsizing replacements to the stormwater system

There are four drainage areas/basins that are served within the Town: Caledonia, Morris Street, the La Conner Middle School, and the Port of Skagit County. The Caledonia basin serves the southern portion of the Town and currently discharges to the Swinomish Channel. As discussed in Section 3.2 recent improvements to the Morris Street basin (which serves the center portion of the Town) collect and discharge stormwater to the regional treatment pond at the Waste Water Treatment Plant and then to the Sullivan Slough. A new pipeline from the south portion of Town (Caledonia basin), which will carry stormwater to the regional infiltration pond, has been recently installed and will become serviceable in 2013-2014. By 2013-2014, the Caledonia and Morris Street basins will both be directed to the treatment ponds, where it will be treated to CWA standards. Within the Town's limits, the middle school operates a private system that discharges to the Drainage Ditch immediately south of Dunlap Street. The Port of Skagit County also operates a private system that serves the northern third of the Town's limits and discharges to the Drainage Ditch which drains to the Swinomish Channel.

4.2.2.1 NPDES STATUS

Currently, the Town is not one of the entities required to be permitted under NPDES Phase II regulations. The Town has taken pro-active steps to develop and manage a stormwater utility and has adopted and implements the requirements of the current Stormwater Management Manual for Western Washington.

4.2.2.2 STORMWATER UTILITY – NEEDS

Currently, the Town does not have an effective means of inspecting the private drainage systems due to a lack of information on the private systems. The Town had a goal to develop a comprehensive system map or listing of all significant storm drain facilities on private property. The information collected will be used to develop an inspection schedule. A mailer could be included with a regular billing to request the submission of drainage plans from those individuals with piping, treatment, and control structures that discharge off of their property. Property owners would be given 6 months to compile and submit the information.

4.2.3. Parks Plan

In 2013, the Town adopted the Parks and Recreation Plan as an element of grant funding requests to the Recreation and Conservation Office (RCO) (Town of La Conner 2013a). The Town will continue to update and improve the plan for waterfront and recreational development. Goals of the Parks Plan relevant to the SMP include:

- Designate, retain, maintain, and enhance publicly owned and leased lands and facilities for the purpose of parks and recreation for Town residents, service area residents (school district) and visitors to Town.
- Protect and develop view corridors to waterways, farmlands and scenery of the community as public land locations permit.
- Integrate wildlife and conservation elements in the parks planning (environmental conservation includes the planning, coordination, and preservation of unique wildlife habitat, ecological, wetland, and open space areas)

In addition, the Comprehensive Plan's vision of "open space and public access to the waterfront is a priority" further emphasizes the Town's commitment to waterfront public access and enhancement of aesthetic and wildlife habitat aspects of these public access areas.

The Street End Parks and Conner Way Waterfront Park are listed in the Parks Plan as current and future improvements occurring between 2013 and 2015.

The Parks plan contains an implementation strategy that includes involvement of and coordination with local stakeholders and a long range planning and prioritization process that includes being prepared to act quickly on opportunities (Town of La Conner 2013a).

The Town's Six-Year Capital Facilities Plan (Town of La Conner 2013b) lists prioritized park improvements with associated cost estimates, funding sources and implementation schedules.

4.2.4. Port of Skagit – Marina Maintenance Program

The Port of Skagit has a binding site plan for the La Conner Marina that outlines water and sewer utility easements, access corridors, stormwater and drainage plans. The Port also maintains a master plan to guide future developments of the marina. The Town of La Conner is working with the Port of Skagit as they plan improvements to their stormwater treatment facilities to reach compliance with 2012 stormwater standards.

4.3. Implementation Strategy and Schedule

4.3.1. Street End and Conner Way Waterfront Park Improvement Projects

Section 4.1 above discusses the Street End and Conner Way Waterfront Parks as sites for both short-term and long term restoration efforts. The Town has developed an implementation strategy and schedule for the short-term aspects of these projects to ensure effective and timely implementation. Development of the public access, furnishing (e.g., benches and picnic tables), and landscaping/riparian enhancement components of these projects will be completed by 2015 (short-term). Implementation and funding strategies for these projects are presented in the Parks Plan and Capital Facilities Plan (Town of La Conner 2013a and 2013b).

Mitigation projects will occur at these sites over both the short-term and long-term as mitigation needs arise

for project impacts on riparian or in-water environments within the Town.

Future restoration projects at these sites that are not part of existing planned developments or are not satisfying future mitigation needs will occur over the long-term as the Town and project partners (e.g., non-profits, agencies or tribes) work together to achieve the common goals of water quality improvement and near-shore habitat enhancement and restoration.

4.3.2. Surface Water/Stormwater Treatment Improvements

By 2013-2014, the entire surface water collection system within the Town's right-of-way areas (Caledonia and Morris Street basins) will be directed to the regional infiltration ponds, where surface water will be treated to CWA standards.

4.3.3. Improvements to Overwater and In-water Structures

As older overwater and in-water structures (e.g., piles and decking of existing piers, floats and boardwalks) are repaired and maintained federal and state agencies will require that creosote-treated and other treated wood be replaced with non-toxic materials such as non-treated wood, aluminum, steel or concrete. In addition, applicants will be required by state and federal entities to incorporate transparency into decking for over-water structures (e.g., piers, floats and boardwalks) and to incorporate low-impact lighting over the water when maintenance or expansions are proposed. These improvements will occur over the short-term and long-term and are part of existing regulatory programs and permit conditions.

Within the downtown core, the Town has an existing boardwalk along the channel mostly on private land with public easements. The Town has plans to expand the waterfront boardwalk to extend continuously from Commercial Street to Jordan Street. Phase 1 of this project (Benton to Morris St) has been permitted and will be constructed in the summer of 2013 (Town of La Conner 2011c). Through the use of grated (light penetrating) decking on new structures and replaced sections of existing boardwalk, the boardwalk project will result in no net increase in shade over the Swinomish Channel, which is in line with the Town's SMP policy of no net increase in shading across the entire Town's shoreline.

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