CITY OF SUMNER

Shoreline Master Program

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Participants in Shoreline Master Program Development Process 2002-2004

City of Sumner

Barbara Skinner - Mayor

City Council

Mike Connor
Steve Allsop
David Enslow
Mark Evers
Leroy Goff
Stuart Scheuerman
Ron Scholz

Planning Commission

Keith Livingston, Chair
Kandi Lovgren
Tom Myers, Vice Chair
Brent Nalder
Matthew Richardson
Terri Walker
Jeanne Walter

Staff

Andrew Neiditz, City Administrator
Patricia Bosmans, City Attorney
John Doan, Assistant City Administrator /Community Development and Parks
Ryan Windish, AICP, Senior Planner – Project Manager
Ron Buckholt, Associate Planner
Robert Holler, Assistant Planner
Sally Abrams, Administrative Assistant

Berryman & Henigar

Nancy Eklund, AICP, Senior Planner – Project Manager

Adolfson Associates

Dave Wortman, Environmental Services Program Manager
Benn Burke, Senior Fish Biologist
Diane Hennessey, Senior Biologist
Nancy Job, Biologist
Kent Hale, Planner

Washington Department of Ecology

Randy Davis, AICP – Shorelands Planner

And the many citizens of Sumner who provided their input to the process by attending Planning Commission and City Council meetings and providing their comments on the draft SMP.

Participants in Shoreline Master Program Development Process 2011-2014

City of Sumner

Dave Enslow, Mayor

City Council

Steve Allsop
Curt Brown
Nancy Dumas
Kathy Hayden
Cindi Hochstatter
Mike LeMaster
Earle Stuard

Planning Commission

Kathy Hayden, Chair
Cynthia Bush
Tom McDermott
Tom Powers
James Storey
Earle Stuard
Jon Swanson

Staff

Eric Mendenhall, Project Manager
Ryan Windish, AICP, Planning Manager

ESA

Teresa Vanderburg, Project Director
Reema Shakra, Project Manager

Washington Department of Ecology

Sarah Lukas – Shoreline Planner
Alex Callender – Wetland / Shoreland Specialist

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READER OVERVIEW

Origins of Shoreline Management in Washington State

The Shoreline Management Act (SMA) was proposed by the legislature in response to a citizen's initiative, and ratified by Washington voters in 1972. The SMA was intended to protect and restore the valuable natural resources that the state's shorelines represent. In addition, the SMA was developed to plan for and foster all "reasonable and appropriate uses" that are dependent upon a waterfront location, or which will offer opportunities for the public to enjoy the state shorelines. In 2003, the Washington State Legislature passed Substitute Senate Bill (SSB) 6012, which established timelines for all cities and counties to amend their local SMPs consistent with the Shoreline Management Act (SMA), Revised Code of Washington (RCW) 90.58 and its updated implementing guidelines, Washington Administrative Code (WAC) 173-26. The WAC 173-26 is commonly referred to as the 2003 shoreline guidelines.

The SMA applies to 39 counties and more than 200 cities that have "shorelines of the state" within their jurisdictional boundaries. In addition, shorelines exceeding a certain size are designated as shorelines of "statewide significance." Both the Puyallup and the White (Stuck) Rivers and Lake Tapps in Sumner are designated as shorelines of statewide significance.

Basic Provisions of the SMA

There are three basic goals of the Shoreline Management Act: 1) accommodate reasonable and appropriate shoreline use; 2) protect environmental resources; and 3) encourage public access.

Shoreline Use: The SMA establishes the concept of "preferred uses" of shoreline areas. "Preferred" uses include single family residences, ports, shoreline recreational uses, water dependent industrial and commercial developments and other developments that provide public access opportunities. Preferred uses on shorelines of statewide significance are defined in particular order of priority, as discussed in Chapter 3.

Environmental Protection: The SMA is intended to protect shoreline natural resources, including "the land and its vegetation and wildlife, and the water of the state and their aquatic life" against adverse impacts. All permitted uses are required to mitigate adverse environmental impacts to the maximum extent feasible and preserve the natural character and aesthetics of the shoreline.

Public Trust: Master programs must include a public access element making provisions for public access to publicly owned areas, and a recreational element for the preservation and enlargement of recreational opportunities. The SMA also implements the Public Trust Doctrine which states that the waters of the state are a public resource owned by and available to all citizens equally for the purposes of navigation, conducting commerce, fishing, recreation and similar uses, and that this trust is not invalidated by private ownership of the underlying land. The doctrine limits public and private use of bedlands and other shorelands to protect the public's right to use waters of the state. The Public Trust Doctrine does **not** allow the public to trespass over privately owned uplands to

access the state's bedlands. It does, however, protect public use of navigable water bodies below the ordinary high water mark.

The Shoreline Master Program

Local governments are required to prepare a program for managing shoreline development. This Shoreline Master Program (SMP) is the product of that effort in Sumner. The development of the City's SMP, and the specific goals, policies and regulations of that Master Program are contained in the following chapters.

Who is Affected by the Shoreline Master Program? The SMP regulates "development" in the "shoreline jurisdiction." Briefly stated, the "shoreline jurisdiction" is the area extending two hundred (200) feet landward from the edge of the Puyallup River, White (Stuck) River and Lake Tapps. "Development" is defined broadly and includes not only those activities that most people recognize as "development" (for example, improving a road surface, building a structure), but also those activities that citizens may do around their own home (for example, grading an area of riverfront to enhance their personal view of the river).

Not all development along the shoreline must have a permit; however, **ALL** development must comply with the policies and regulations established by the state Shoreline Management Act as expressed in the Sumner SMP. **Any person within two hundred (200) feet of the river or lake considering some type of "development," should consult the City of Sumner Community Development Department to determine**: 1) if the property is indeed within the shoreline jurisdiction; 2) if the Shoreline Master Program applies to the development or use proposed; 3) if a shoreline Substantial Development Permit, Conditional Use, Variance, or other permit is needed; and 4) how to work with the City to submit and process a permit request.

Are there Compensation and Property Tax Relief Opportunities for Properties Affected by the Shoreline Master Program? Property owners whose land is regulated by the Shoreline Master Program may wish to investigate whether or not they are eligible for a reduction in their property taxes. Several tax-relief programs are available though Pierce County, including the Open Space-Public Benefit Rating System (PBRS) program. The program, authorized by RCW 84.34 and adopted by Pierce County, is based on the Current Use Open Space Taxation Act. That Act states that it is in the best interest of the State to maintain, preserve, conserve, and otherwise continue in existence adequate open space lands for the production of food, fiber, and forest crops and to assure the use and enjoyment of natural resources and scenic beauty for the economic and social well-being of the State and its citizens. Upon removal of classification, an additional tax, interest, and penalty shall be due.

The Current Use - Open Space Taxation Act provides for three classifications:

- Open Space Land - Land retained in its natural state. Land that would enhance, protect, or preserve natural areas, for example, parks, sanctuaries, historic sites, scenic resources, streams, wetlands.
- Farm and Agricultural Land - Land primarily devoted to the production of livestock or agricultural commodities for commercial purposes.
- Timber Land - Land in any contiguous ownership of five acres or more, which is primarily devoted to the growth and harvest of timber for commercial purposes.

The program ranks various open space features and the ecological value of the resources present and uses a formula to determine the property tax reduction for which the owner may be eligible.

Additional information on Pierce County's tax programs is available on the County's website at http://www.co.pierce.wa.us/pc/abtus/ourorg/at/content.htm or by calling the Pierce County Assessor-Treasurer at (253) 798-7137. Applications for the Open Space-Public Benefit Rating System-Tax Program are available online or by contacting the Pierce County Planning and Land Services at (253)798-2783. Other tax exemption and deferral programs available include *Damaged or Destroyed Property Exemption*, *Historic Property, Home Improvement Exemption, Non-Profit Exemptions, Property Tax Deferrals, Senior Citizen & Disabled Property Tax Deferral or Exemption, and Three Year Property Tax Exemptions.*

Developers seeking to develop land encumbered by critical areas (e.g., wetlands, streams, steep slopes) are encouraged to consider use of the City's clustering provisions (see *Chapter 6: General Shoreline Policies and Regulations, Section 6.1.10*) which allow for slightly increased densities if the development can be clustered on the site, thereby offering greater protection for the critical areas present.

What Agencies Participate in Review of Development Along the Shoreline? There are many local, state, and federal agencies that play a role in the management of the City of Sumner's shorelines. Various local plans and regulations affect development in the shoreline area, including the City's comprehensive plan, the zoning code, the subdivision code, critical area regulations, storm water regulations, and so forth. The SMP works alongside state agencies mandated with the responsibility to protect state resources such as the state Departments of Ecology, Natural Resources, and Fish and Wildlife. The City is also subject to federal regulations such as those pertaining to agriculture, emergency management, floodplain management, and the maintenance and protection of navigable waterways. The National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service both have an interest in protection of fish species in local waterways from the federal perspective. Development within the waters may require permits from the U.S. Army Corps of Engineers or Coast Guard.

CHAPTER 1 INTRODUCTION

Legislative Findings of the Washington Shoreline Management Act

According to the Revised Code of Washington (RCW) 90.58.020, the Washington State Legislature finds the shorelines of the state are among the most valuable and fragile of the state's natural resources and that there is great concern throughout the state relating to their utilization, protection, restoration, and preservation. In addition, it finds that ever-increasing pressures of additional uses are being placed on the shorelines, necessitating increased coordination in the management and development of the shorelines of the state. The legislature further finds that much of the shorelines of the state and uplands adjacent thereto are in private ownership and that inappropriate development on privately or publicly owned shorelines of the state is not in the best public interest; therefore, coordinated planning is necessary in order to protect the public interest associated with the shorelines of the state which, at the same time, shall be consistent with public interest. There is, therefore, a clear and urgent demand for a planned, rational, and concerted effort, jointly performed by federal, state, and local governments, to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines.

It is the policy of the state to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses. This policy is designed to ensure the development of these shorelines in a manner that, while allowing for limited reduction of rights of the public in navigable water, will promote and enhance the public interest. This policy is intended to protect against adverse effects to the public health, the land and its vegetation and wildlife, and the water of the state and its aquatic life, while generally protecting public rights of navigation and its associated activities.

Requirements of the Shoreline Management Act

In order to protect the public interest in the preservation of the shorelines of the state, the Shoreline Management Act establishes a planning program coordinated between the state and local jurisdictions to address the types and effects of development occurring along the state's shorelines. By law, the City is responsible for the following:

1) Development of a Public Participation Plan. The Shoreline Management Act (SMA) and Ecology Guidelines (RCW 90.58.130 and WAC 173-26-090 and 100) require that local governments inform the people of the state about the planning process and invite and encourage participation by all who have any interest or responsibility related to shorelines. The purpose of the Public Participation Plan is to provide a guide on proactively encouraging public participation throughout the SMP update process.
2) Development of an Inventory and Characterization Report. The report documents current shoreline conditions of the natural and built environment and provides a basis for updating the City's SMP goals, policies, and regulations. This report establishes a baseline of conditions,

evaluates functions and values of resources in its shoreline jurisdiction, and explores opportunities for protection and restoration of ecological functions.

3) Development of a Shoreline Restoration Plan. The City must identify and plan for ways to restore or enhance impaired functions and processes that have been documented in the inventory and characterization report. The restoration plan establishes goals and policies, programmatic and site-specific restoration opportunities, and potential partnerships and funding mechanisms for implementing voluntary restoration actions.

4) Preparation of a Shoreline Master Program (SMP). The Master Program establishes goals, policies and regulations to guide future development along the city's shorelines. Regulations are developed for various types of shoreline development, including the following: agriculture, aquaculture, forest management, commercial development, marinas, mining, outdoor advertising and signs, residential development, utilities, ports and water related industries, bulkheads, breakwaters, jetties and groins, landfills, solid waste disposal, dredging, shoreline protection, road and railroad design, piers, and recreation. The Master Program establishes shoreline environment designations to provide a uniform basis for applying policies and regulations within distinctly different shoreline areas. Administrative process for shoreline permits is also included in the Master Program.

5) Development of Cumulative Impact Analysis and No Net Loss reports. Ecology's Guidelines direct jurisdictions to consider cumulative impacts from the SMP of "reasonably foreseeable future development" on shoreline functions. The reports considered existing conditions, demand for future shoreline use and development, and beneficial effects of established and proposed policies and regulations on shoreline ecological functions. The SMP must meet the test of "no net loss" of shoreline functions and processes to ensure compliance with Ecology's Guidelines.

Local governments have the prime responsibility for developing the planning program and administering the regulatory requirements. The City of Sumner must develop a Shoreline Master Program that is consistent with the guidance and intent provided in the Shoreline Management Act and Ecology's Guidelines. The role of the Department of Ecology is to provide support, review and approval of the Shoreline Master Program and subsequent shoreline permit requests.

Purposes of the Shoreline Master Program

The Shoreline Management Act defines a Master Program as a "comprehensive use plan for a described area." The shoreline planning process differs from the more traditional planning process in that the emphasis is on protecting the shoreline environment through management of uses rather than trying to maximize development potential.

The purposes of the Sumner Master Program are:

1) To carry out the responsibilities imposed on the City of Sumner by the Washington State Shoreline Management Act (RCW 90.58) and its implementing guidelines (WAC 173-26).

2) To promote the public health, safety, and general welfare by providing a guide and regulation for the future development of the shoreline resources of the City of Sumner.

3) To further, by adoption, the policies of RCW 90.58, and the goals of this Master Program, both described in this document.

History of the Sumner Shoreline Master Program

The City of Sumner's Shoreline Master Program (SMP) was originally adopted in 1973 and included extensive public involvement at that time. The SMP then underwent a comprehensive update in 1990 followed by public input. The City then suspended adoption of the proposed 1991 Shoreline Master Program until the State's revisions of the shoreline guidelines, underway at that time, were complete, in order to ensure that their draft would conform to the revised guidelines. That 1991 draft provided the foundation for the 2002 update of the Sumner Shoreline Master Program. The program was updated in 2002 to meet the new state guidelines adopted in 2003 as described below.

2002 Shoreline Master Program Update

After a long period of development, in November 2000, the State Department of Ecology adopted new Shoreline Master Program guidelines. The new guidelines incorporated updated "best available science" into the recommended policy and regulatory framework. The new guidelines also provided jurisdictions with the opportunity to pursue one of two "paths." One path (Path A) required a general level of shoreline inventory information, and similar general policies and regulations. The second path (Path B) required jurisdictions to provide a more detailed inventory of shoreline conditions, as well as more specific policy and regulatory language addressing protection and restoration of the shoreline. The two-path option was intended to offer jurisdictions, through adoption of a "Path B" Shoreline Master Program, the opportunity to seek protection from "takings" allegations resulting from recent listings of salmon under the Endangered Species Act.

The City of Sumner decided to pursue the higher level of legal protection offered under the Path B option and began an update of its 1973 Shoreline Master Program in early 2001. The City developed its shoreline inventory and Master Program goals and policies consistent with the Path B option. That inventory was well underway by the time the appeal of the adopted guidelines was resolved and the new guidelines were declared invalid in August 2001. Although at the time of the Master Program's final review (fall 2002) there were still no adopted shoreline management guidelines, the City completed its Shoreline Master Program consistent with the Shoreline Management Act.

The City notified residents living within the shoreline jurisdiction of the Shoreline Master Program update process and invited them to attend Planning Commission meetings and provide comment. The City's project mailing list grew beyond just those living within the shoreline area to include the names of persons who have signed the attendance sheet at Planning Commission meetings, or had otherwise notified the City of their desire to remain informed. The City has information on its website regularly, as well as Planning Commission agendas and meeting minutes. A public hearing on the draft SMP was held on September 5, 2002. After completing final revisions to the draft Master Program, on November 7, 2002, the Planning Commission voted to recommend approval to the Sumner City Council.

The City Council reviewed the Planning Commission's draft Master Program and held another public hearing on January 21, 2003. Following the hearing, the Council made final changes per discussions and agreements with the U.S. Army Corp of Engineers, U.S. Fish and Wildlife Service, and the National Marine Fisheries Service on the conditions of a permit for the North Sumner Interchange. The City Council passed Resolution No. 1079 with intent to adopt the Shoreline Master Program. Following their approval, the Master Program was forwarded to the Department of

Ecology for their final review and comment. The Department of Ecology approved the Shoreline Master Program on February 9, 2004 and the City Council adopted it on May 17, 2004.

2012 Shoreline Master Program Update

In 2003 the Department of Ecology issued state shoreline guidelines (WAC 173-26), and the state legislature provided funding assistance in the form of grants to local government. The legislature established a timeframe for all jurisdictions with shorelines of the state to update or develop SMPs.

In 2009, the City of Sumner initiated a comprehensive update of its 2004 SMP. The City's first step was to update the shoreline inventory and characterization report and map folio prepared in 2002 to be consistent with the current state shoreline guidelines. The inventory and characterization describes current shoreline conditions and provides a basis for updating the City's SMP goals, policies, and regulations.

The City also prepared a shoreline restoration plan in 2011. The Restoration Plan identifies both programmatic and site specific opportunities for restoring shoreline ecological functions that have been impaired or altered because of past development activities.

The shoreline master program has been revised to be consistent with the current state shoreline guidelines. Major changes from the 2004 SMP include the following:

1) Replacing standards to protect and mitigate impacts to properly functioning conditions for threatened and endangered species under the Endangered Species Act with maintaining no net loss of shoreline ecological functions and processes.
2) Establishing shoreline environment designations for areas not designated under the 2004 SMP (Lake Tapps, area north of Stewart Road on White River and area south of city limits on Puyallup River). Riparian management zone standards were established for each of these newly designated areas.
3) Revising shoreline stabilization standards by requiring a geotechnical report that assesses a property's rate of erosion prior to allowing installation of new structural shoreline armoring. Hard structural armoring cannot be replaced or newly constructed unless non-structural or soft-structural armoring is proven to be infeasible.
4) Requiring non-water oriented industrial and commercial developments to provide public access and ecological restoration.

Similar to the 2002 SMP Update process, the City notified residents living within the shoreline jurisdiction of the update process, invited residents to attend Planning Commission meetings and provide comment, and regularly posted Planning Commission agendas and meeting minutes to the City's website. A public hearing on the draft SMP was held on May 10, 2012 and the Planning Commission voted to recommend approval to the Sumner City Council.

The City Council reviewed the Planning Commission's draft Master Program and held another public hearing on July 16, 2012. The City Council passed Resolution No. XXXX with intent to adopt the Shoreline Master Program. Following their approval, the Master Program was forwarded to the Department of Ecology for their final review and comment. The Department of Ecology approved the Shoreline Master Program on XXXX and the City Council adopted it on XXXX.

Sumner Setting

Sumner is located in Pierce County, approximately 12 miles east of Tacoma and 34 miles south of Seattle at the confluence of the Puyallup and White (Stuck) Rivers. Lake Tapps is located within the City's urban growth area (UGA). Both rivers and Lake Tapps are designated as shorelines of statewide significance and are the only shorelines that are addressed in this Master Program.

The Master Program addresses both shorelines within the current city limits of Sumner as well as shorelines within Pierce County that are in the city of Sumner's existing UGA and the proposed UGA. The proposed UGA is considered an area of special interest which must be approved by Pierce County. The Master Program shall apply to shorelines that are officially within the city limits of Sumner. Areas currently in the City's UGA and the proposed UGA are regulated by the Pierce County SMP. Once those areas are annexed into the City this Master Program shall be in effect (see Map 2-1).

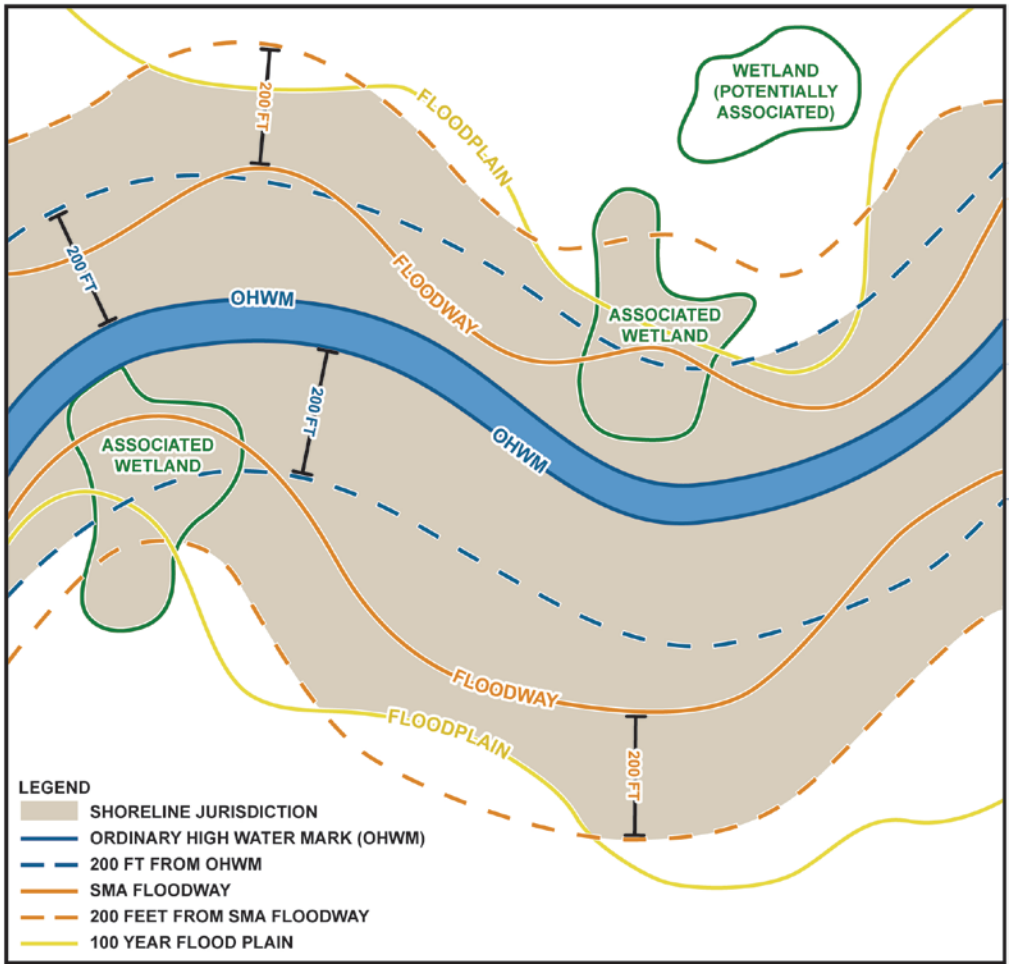
Sumner Shoreline Jurisdiction

Under the SMA, the shoreline jurisdiction includes water bodies that have been designated as *shorelines of statewide significance* or *shorelines of the state* and their associated *shorelands*. Shorelands means those lands extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark (OHWM); floodways and contiguous floodplain areas landward 200 feet from such floodways; and all wetlands and river deltas associated with such streams, lakes, and tidal waters (see Figure 1-1) (RCW 90.58.030).

Associated wetlands are also included as *shorelines of the state* and are regulated under SMA. Associated wetlands are those wetlands in proximity to and either influence or are influenced by tidal waters or a lake or stream subject to the SMA (WAC 173-22-030 (1)). These are typically identified as wetlands that are physically adjacent to a shoreline waterbody in shoreline jurisdiction, or wetlands that are functionally related to the shoreline jurisdiction through surface water connection and/or other factors. A site-specific determination must be made to determine if a wetland meets the definition of *associated wetland*.

When an associated wetland lies within the shoreline jurisdiction as drawn 200 feet from the ordinary high water mark of a waterbody subject to the SMA, then the jurisdictional limits for SMA extend to the upper boundary of the associated wetland. Potentially associated wetlands and SMA jurisdictional limits are shown on Map 2-1. These wetlands were mapped based on information obtained from the National Wetland Inventory map and a wetland inventory conducted by the City in 2006, which was subsequently revised for accuracy by ESA in 2007.

Figure 1-1. Graphic Depiction of the SMA Shoreline Jurisdiction Limits



The approximate shoreline jurisdiction within the city limits of Sumner, its Urban Growth Area (UGA) and its proposed UGA encompasses approximately 9 linear miles of freshwater shorelines as shown on Figure 1-1. This includes the following shoreline areas:

- Puyallup River
- White (Stuck) River
- Lake Tapps
- Associated wetlands

The Puyallup River, White (Stuck) River and Lake Tapps are considered *shorelines of statewide significance* per Revised Code of Washington (RCW) 90.58.030(2)(e).

Under the SMA, local municipalities have the option to extend shoreline jurisdiction to include lands within the 100-year floodplain and/or lands necessary for buffers for critical areas [RCW 90.58.030(2)(f)]. The City of Sumner is not extending shoreline jurisdiction under either of these options.

How the Shoreline Master Program is Used

The City of Sumner Shoreline Master Program is a planning document that outlines goals and policies for the shorelines in the City and establishes regulations for development occurring along those shorelines. The goals and policies of the Shoreline Master Program are included in the City's Comprehensive Plan. The development regulations are adopted and codified in the Sumner Municipal Code (SMC 16.08-16.36).

The SMA and Ecology Guidelines defines for local jurisdictions the content and goals that should be represented in the Shoreline Management Programs developed by each community; within these guidelines, it is left to each community to develop the specific regulations appropriate to that community.

In order to preserve and enhance the shorelines of the City of Sumner it is important that all development proposals relating to the shoreline area be evaluated in terms of the City's Shoreline Master Program, and that the City Shoreline Administrator be consulted. (In the City of Sumner, the Shoreline Administrator function is provided by the Director of Community Development.) Some activities may be exempt from shoreline Substantial Development Permits (SSDP), while others may require a Conditional Use permit or Variance; **ALL** proposals must comply with the policies and regulations established by the state Shoreline Management Act as expressed through this local Shoreline Master Program adopted by the City of Sumner.

Shoreline Environment Designations

Shoreline environment designations are similar to zoning overlays. Each designation permits certain uses and developments, if allowed by the underlying zoning district. The purpose of shoreline environment designations is to provide a uniform basis for applying policies and regulations within distinctly different shoreline areas. Under the SMA, all shorelines of the state receive a given shoreline environmental designation. The purpose of the shoreline designation system is to ensure that all land use, development, or other activity occurring within the designated shoreline jurisdiction is appropriate for that area and provides consideration for the special requirements of that environment.

The shoreline inventory and characterization report provides the basis for designating shoreline environments and developing management policies that will affect each part of the shoreline. Factors such as existing development patterns, biophysical capabilities and limitations, and the aspirations of the local citizenry all play a part in the shoreline environment designation categories selected. The management policies developed for each shoreline environment determine the uses and activities that can be permitted within each environment, and support the specific development standards that are also established. Six shoreline environments have been developed for the Sumner shoreline: Urban Conservancy, Shoreline Residential, Urban, Natural, Tapps Reservoir and Aquatic. These environments are discussed in *Chapter 4: Shoreline Environment Designations* and shown on Map 4-1 in Chapter 4.

When is a Permit Required?

The Sumner Shoreline Master Program addresses a broad range of uses that could be proposed in the shoreline area. This thoroughness is intended to ensure that the Sumner shoreline area is protected from activities and uses that if unmonitored, could be developed inappropriately and could cause damage to the ecological system of the shoreline, or cause the degradation of the

aesthetic values of the shoreline that the community enjoys. The Shoreline Master Program provides the regulatory parameters within which development may occur, or it states that the community considers a certain type of use or activity unacceptable within the City's shoreline jurisdiction, or it states that a use or activity may be considered provided a Conditional Use permit is requested. Overall, the community should be able to ensure that the development is carried out in such a way that the public's interest in protecting the shoreline is retained.

The Permit Process

The Shoreline Master Program regulates "development," defines what is considered "substantial development," and specifies developments that are exempt from the shoreline Substantial Development Permit (SSDP) process. In addition to the SSDP, other shoreline permits include Conditional Use permit and Variance permits.

"**Development**," as defined under the Shoreline Management Act of 1971 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 of the state overlying lands subject to Chapter 90.58 RCW at any state of water level [RCW 90.58.030(3)(a)].

This definition indicates that the "development" regulated by the Shoreline Management Act includes not only those activities that most people recognize as "development" (for example, improving a road surface, building a structure), but also those activities that citizens may do around their own home (for example, clearing and grading an area of riverfront to enhance their personal view of the river). While the impact of these potential "developments" may seem inconsequential at first glance, they may have unwanted and damaging effects on the river and lake ecology, the property of others, and the shoreline aesthetics.

Projects that are identified as "developments" and not "substantial developments" do not require a shoreline Substantial Development Permit; however, they must still comply with all applicable regulations in the City's Shoreline Master Program. In addition, some developments may require a Conditional Use permit or a Variance from the Shoreline Master Program's provisions, although they do not meet the definition of a "substantial development."

"**Substantial development**" as defined under the Shoreline Management Act of 1971 is:

> Any "development" of which the total cost or fair market value exceeds five thousand seven hundred and eighteen dollars ($5,718), or any development which materially interferes with the normal public use of the water or shorelines of the state. The dollar threshold established in this section must be adjusted for inflation by the office of financial management every five years, beginning July 1, 2007, based upon changes in the consumer price index during that time period. "Consumer price index" means, for any calendar year, that year's annual average consumer price index, Seattle, Washington area, for urban wage earners and clerical workers, all items, compiled by the bureau of labor and statistics, United States department of labor. The office of financial management must calculate the new dollar threshold and transmit it to the office of the code reviser for publication in the Washington State Register at least one month before the new dollar threshold is to take effect. [RCW 90.58.030(3)(e)].

Under the Shoreline Management Act, some types of substantial development are exempt from the requirement to apply for and receive a permit before beginning work. These exemptions are listed in Chapter 8: Administration. A project that is exempt from permit requirements must still comply with all applicable regulations in the City's Shoreline Master Program.

The City Shoreline Administrator can help identify whether a project is classified as a development or a substantial development, determine whether a permit is necessary or whether a project is exempt from permit requirements, and identify which regulations in the SMP may apply to the proposed project. The Shoreline Administrator can also provide information on the permit application process and how the SMP process relates to the State Environmental Policy Act (SEPA) process. The permitting process can be divided into three phases: pre-application, submittal, and review (these are discussed in detail in *Chapter 8: Administrative Procedures*).

The Shoreline Permit

There are three types of shoreline permits: the shoreline Substantial Development Permit, the shoreline Conditional Use permit, and the shoreline Variance permit. All of these permits use the same application form; however, they are processed differently.

Requests for a shoreline Substantial Development Permit, Variance, or a Conditional Use permit require review by the City of Sumner Hearing Examiner (per Sumner Municipal Code, Chapter 18.56). There may be instances where a Conditional Use permit or Variance may be approved without the need for a shoreline Substantial Development Permit (e.g., single-family residence). The Hearing Examiner will hold a public hearing on the proposal and approve, approve with conditions, or deny the application. This decision can be appealed to the Sumner City Council. Appeals of the City Council decision go to the State Shoreline Hearings Board. Requests for Conditional Use permits and Variances require final approval by the State of Washington Department of Ecology. A description of exempt projects, and shoreline application procedures and criteria are discussed in *Chapter 8: Administrative Procedures*.

Relationship of this Shoreline Master Program to Other Plans

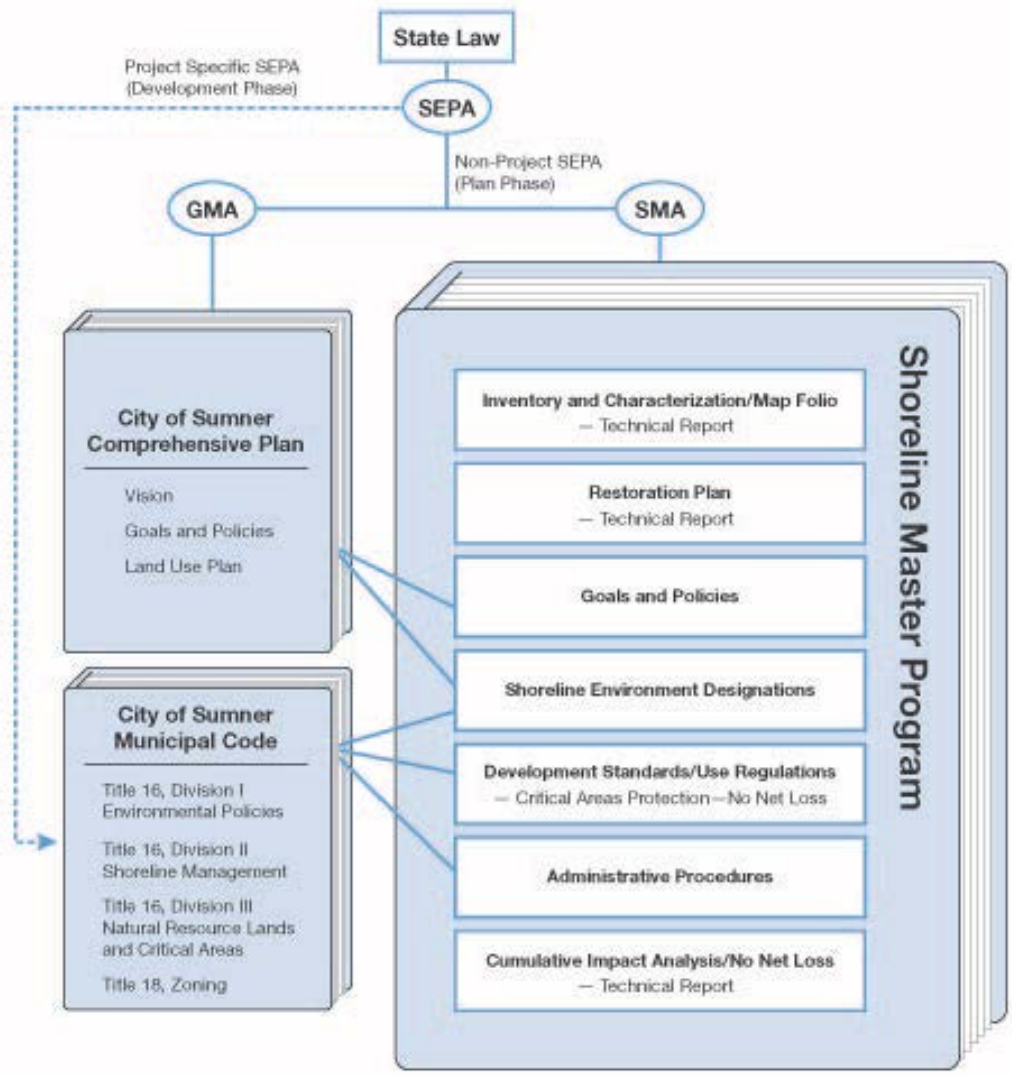
Uses, developments and activities regulated by this Master Program may also be subject to the provisions of the Sumner Comprehensive Plan, the Washington State Environmental Policy Act ("SEPA," Chapter 43.21C RCW and Chapter 197-11 WAC), other provisions of the Sumner Municipal Code (SMC), including Title 16 Environment and Title 18 Zoning, and various other provisions of local, state and federal law, as may be amended. Any conflicts between the SMP and other relevant federal, state, or local regulations are resolved in favor of the regulation that is most protective of the shoreline ecological functions.

Project proponents shall comply with all applicable laws prior to commencing any use, development or activity.

Where this Program makes reference to any RCW, WAC, or other state, or federal law or regulation the most recent amendment or current edition shall apply.

The relationships between three state laws (State Environmental Policy Act [SEPA], Growth Management Act [GMA], and Shoreline Management Act [SMA] and local regulations are shown in the following diagram.

Figure 1-2. Relationship Between State Law and Local Regulations



The Relationship between the Sumner Trails Plan and the Shoreline Master Program

One of the local plans affecting the Sumner shoreline is the Sumner Master Trail Plan. That plan identified the optimum location for a public trail system through the region and identified a route that generally lies on both sides of the White (Stuck) River and portions of the Puyallup River. That plan was adopted, following an extensive public involvement process in 1996, and several links of the planned trail have been constructed as development has occurred in the valley. In 2008, major elements of the plan were updated including maps, trail alignments, cost estimates, and shoreline and environmental goals and regulations.

The trail system is an integral and essential part of the public access component of the Master Program. The Shoreline Management Act emphasizes that the public retains physical or visual access to the State's shorelines. It is a goal of this Master Program to foster the development of a shoreline trail by providing policies and regulations that are both sensitive to the needs of adjacent private property owners to retain the use and privacy of their property, and sensitive to the public's interest in the opportunity to develop a shoreline trail. There are three methods by which land can be acquired and a trail placed along private property:

1) A trail easement or right-of-way dedication is required as a condition of approval of a shoreline permit or other development permit;
2) The City purchases an easement or right-of-way or, in some cases, the entire parcel of land from the property owner; or
3) The property is voluntarily donated to the City by the property owner.

Other Local, County, State, Regional or Federal Regulations and Permits

Submittal of a shoreline permit or exemption for a shoreline development or use does not exempt an applicant from complying with any other local, county, state, regional, or federal statutes or regulations, which may also be applicable to such development or use. Examples of activities that may require permits, review, or approval from other agencies are listed in the following table. Some of the activities listed below are unlikely to occur within the Sumner shoreline jurisdiction. The following list of permits is provided, however, as additional information about regulatory requirements that exist for various land use activities that may occur in the Sumner area.

Table 1-1. Permit Matrix

Agency	Authority/Jurisdiction	Types of Activity Requiring Permit	Permit
Federal Emergency Management Agency (FEMA)	CFR 44, Part 60 This Ordinance applies to the areas designated as flood zones on FEMA's Federal Insurance Rate Map. The adopted FEMA ordinance enables City residents to acquire federal flood insurance and allows Sumner to be eligible to receive Federal Flood Disaster Funds.	All construction within and uses of the Floodplain must meet the standards established in the Sumner Municipal Code, Chapter 15.52 and 16.58.	Review for compliance with FEMA guidelines is conducted through enforcement of the Sumner Flood Damage Prevention Regulations.
U.S. Army Corps of Engineers (USACE)	Sect. 10 of Federal River & Harbor Act Jurisdiction applies to areas in or over any navigable waters of the US, waterward of the Ordinary High Water Mark.	Structures or work in these waters, including marinas, piers, wharves, floats, intake pipes, outfall pipes, pilings, bulkheads, boat ramps, dredging, dolphins, fills, overhead transmission lines, etc.	Section 10 Permit

Agency	Authority/Jurisdiction	Types of Activity Requiring Permit	Permit
U.S. Army Corps of Engineers (USACE) cont.	Sect. 404 of Clean Waters Act Jurisdiction applies to areas in or over waters of the US, waterward of the Ordinary High Water Mark including wetlands	Discharge of dredged materials, fills, grading, ditch sidecasting, groins, breakwaters, road fills, beach nourishment, riprap, jetties, etc.	Section 404 Permit (some limited activities are covered by nationwide general permits)
Washington Department of Agriculture	Varies	Use of pesticides by any means other than hand pumped device - varied restrictions apply depending on the ownership of the property receiving the pesticide, the type of pesticide, etc.	Varies
Washington State Department of Fish and Wildlife (WDFW)	RCW 75.20.100-160. All fresh or salt water in the state	Work, construction, development, or other activities that will change the natural flow or bed of any fresh or salt water in the state.	Hydraulic Project Approval (HPA)
Washington State Department of Natural Resources (DNR)	RCW 79.90. Navigable water bodies, including certain lakes, rivers, and streams. These waters are owned by the State of Washington.	Construction, filling, dredging, drilling, mining, road construction, utility installation, etc., within the beds or shorelines of these waters.	Aquatic Lands Lease and/or Authorization.
	RCW 76.09. Waterbodies near forest activities	Forest activities relating to growing, harvesting or processing timber, road construction and maintenance, brush clearing, slash disposal.	Forest Practice Approval
Washington State Department of Ecology (DOE)	Section 401, Clean Water Act	Any activity that might result in a discharge of dredge or fill material into water or wetlands, or excavation in water or wetlands whether or not such action requires a federal permit.	Water Quality Certification
	RCW 90 (various chapters)	Withdrawal of surface or ground water.	Water Use Permit; Certificate of Water Right
	RCW 43.21C Determined by the scope of the project. See also: City of Sumner, State Environmental Policy Act (SEPA).	SEPA is a process that provides a way to analyze and address the environmental impacts of a project and is geared to mesh with already existing permits, approvals, and/or licenses.	SEPA Review
	Water Pollution Control Act (RCW 90.48)	Act prohibits discharges of polluting matter to any waters of the state, including wetlands. A permit is required for any project potentially impacting state waters.	Various permits, including National Pollutant Discharge Elimination System (NPDES), Municipal Wastewater, and Septic permits.

Agency	Authority/Jurisdiction	Types of Activity Requiring Permit	Permit
City of Sumner	Sumner Shoreline Master Program - SMP jurisdiction is described in Chapter 1 of this document (Shoreline environment designations are provided in Chapter 4).	Development within the shoreline jurisdiction of Sumner.	Shoreline Substantial Development Permit
			Shoreline Conditional Use Permit
			Shoreline Variance
	Sumner Municipal Code, Chapter 15.08	Development over 120 Square feet. See Uniform Building Code	Building Permit
	Sumner Municipal Code, Chapter 15.52 is adopted code intended to carry out FEMA requirements within the 100-year floodplain	All development activity, including buildings, mining, filling, dredging, grading, paving, excavations, drilling operations, and storage of equipment or materials.	Floodplain Development Permit - review for compliance with this ordinance is conducted as a part of the development review and building permit process.
	Title18, Zoning Code	Development within the City of Sumner	Zoning Variance
			Zoning Conditional Use
			Zone Change
	Sumner Municipal Code, Chapter 16.04 contains the Sumner SEPA Policies (This is the local ordinance intended to carry out the SEPA requirements.)	All activity meeting the threshold identified in RCW 43.21C and WAC Chapter 197-11.	SEPA Review
	Sumner Municipal Code, Chapter 16.05 – Control of Erosion and Sedimentation of Waterways (Stormwater Quality)	Fill or grading over 50 cubic yards of material.	Temporary Sedimentation and Erosion Control Permit

At the time of an initial inquiry or when a permit application is submitted, the City Shoreline Administrator should inform an applicant of those regulations and statutes that may be also applicable to the proposed project to the best of the administrator's knowledge, provided, that the final responsibility for complying with such other statutes and regulations shall rest with the applicant.

Other activities that could occur along the shoreline (starting bonfires, disposing, spilling, or releasing regulated or hazardous waste products, use of pesticides, activities within wetlands) may require other permits, review, or approval not identified here. Questions about permits, licenses, or review may be directed to the City of Sumner Community Development Department at 253.299.5530 or through the City website at www.ci.sumner.wa.us.

Title

This document shall be known and may be cited as the **Sumner Shoreline Master Program**. This document may also be referred to as "Master Program."

CHAPTER 2 SHORELINE INVENTORY AND RESTORATION PLANNING SUMMARY

Introduction

As a foundation for the development of the goals, policies and regulations in the City's Shoreline Master Program, the City conducted an inventory of natural and built conditions along the Sumner Shoreline. This inventory identifies existing conditions, and provides an analysis that evaluates the components that make up the ecological health of the shoreline jurisdiction and identifies areas with potential for protection and restoration of ecological functions. This chapter excerpts portions of that inventory and analysis. Please consult *Appendix A: City of Sumner Shoreline Inventory and Characterization* (June 2010) for a full discussion of the complex issues associated with the Sumner shoreline.

The City also prepared a shoreline restoration plan. In addition to the restoration areas identified in the inventory, the restoration plan also identifies programmatic opportunities for restoring shoreline ecological functions that have been impaired or altered. The Restoration Plan prioritizes potential restoration opportunities and identifies potential partnerships and funding mechanisms for implementing voluntary restoration actions. This chapter excerpts key findings and recommendations of that plan. See *Appendix B: City of Sumner Shoreline Restoration Plan Element* (September 2011) for the full report.

Study Area Boundary

The inventory includes the shorelines along the Puyallup and White (Stuck) Rivers and Lake Tapps that fall within the Sumner city limits, its urban growth area (UGA), and its proposed UGA. Both rivers and the lake are shorelines of statewide significance according to the state's Shoreline Management Act, and they are the City's only water bodies regulated under the Act. Under the Shoreline Management Act, the shoreline area to be regulated under the City's Shoreline Master Program must include all areas two hundred (200) feet landward of the ordinary high water mark, as well as floodways and any associated wetlands. For the purposes of the inventory and characterization report, the study boundary for the City of Sumner is shown on Map 2-1 and referred to throughout the report and this chapter as the "shoreline planning area." The shoreline planning area, otherwise known as the study area for this report, encompasses the maximum potential shoreline jurisdiction in the City. The actual shoreline jurisdiction area adopted by this program is described under "Sumner Shoreline Jurisdiction" in *Chapter 1: Introduction*. In general, the shoreline planning area includes:

- The regulated waterbody, including submerged lands lying waterward of the ordinary high water mark (OHWM);
- 200 feet of adjacent upland extending from the mapped edge of the approximate OHWM or floodway, whichever is further landward; and
- Any bordering, neighboring, or contiguous mapped wetlands.

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Map 2-1. Shoreline Planning Areas

PLACEHOLDER (SEE G:\ENVIR IMPACTS\2009 Projects\209439_SumnerSMP\05_Graphics_GIS_Modeling\Figures\August2011_SMP)

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The Puyallup River is located near Sumner's proposed UGA from its southernmost point at approximately River Mile (RM) 13.3 downstream to its confluence with the White River at approximately RM 10.7, west of downtown Sumner. Downstream of Sumner's shoreline jurisdiction, the Puyallup River drains into Commencement Bay in Puget Sound. The White River is located within Sumner's city limits and urban growth area from approximately RM 5.5 at the northern border of the City's urban growth area downstream to its confluence with the Puyallup River at RM 0.3. Approximately 7,000 lineal feet of the northwestern portion of Lake Tapps is located within Sumner's UGA boundaries.

Inventory and Characterization Report

The full inventory and characterization report is divided into six main sections: 1) background and introductory information; 2) methods and data sources; 3) an ecosystem wide characterization, which includes historic land use along the City's regulated shorelines, watershed conditions, climate change, and a characterization of the shorelines' floodplains; 4) land and shoreline use patterns; 5) biological resources and critical and hazard areas; and 6) a segment-by-segment analysis of shoreline conditions and identification of restoration opportunities.

For the purposes of the inventory report, the City's shoreline planning area was organized into ten distinct segments or "reaches" (Segments A through H; UGA-1; UGA-2) based broadly on the physical distinction along the shoreline, the level of ecological functions provided by each segment, as well as existing land uses and zoning. Shoreline Study Segments are described in Table 2-1 and depicted on Map 2-1.

Table 2-1. Sumner Shoreline Study Segments

Location	Segment	Description	Approximate Length (miles)	River Mile
Puyallup River	A	City limits at Orting Highway (SR 162) to Traffic Avenue bridge; Rivergrove and Rainier Manor communities	1.35	12.0 to 10.7
Confluence – Puyallup and White Rivers	B	Traffic Avenue bridge to SR 410 bridge; Sumner Wastewater Treatment Plant, Confluence of White and Puyallup Rivers	0.79	10.7 (Puyallup) to 0.3 (White)
White River	C	SR 410 bridge to Union Pacific spur bridge; Downtown Sumner	0.86	0.3 to 1.1
White River	D	Union Pacific spur bridge to Tacoma Road Bridge; heavy industrial facilities	0.63	1.1 to 1.8
White River	E	Tacoma Road Bridge to City-owned property on right bank; industrial warehouses	0.85	1.8 to 2.6
White River	F	City-owned property to 8th Street Creek; farm land and Sumner Meadows Golf Links on right bank; industrial warehouses on left bank	1.64	2.6 to 4.2
White River	G	8th Street Creek to Stewart Road bridge; industrial facilities	0.74	4.2 to 5.0

Location	Segment	Description	Approximate Length (miles)	River Mile
White River	H	Stewart Road bridge to northern city limits; large wetland complex	0.56	5.0 to 5.5
Lake Tapps	UGA-1	Portion of Lake Tapps within Sumner's UGA	1.28	n/a
Puyallup River	UGA-2	Left Bank in Joint Planning Area beginning at southernmost tip of Riverside Park to city limits at Orting Highway (SR 162)	1.32	13.3 to 12.0
		TOTAL	**10.02**	

Land Use and "Altered" Conditions

The City of Sumner is an urban and urbanizing area encompasses an area of approximately 7.5 square miles. The city's UGA is approximately 1.3 square miles. The City is predominantly located on the valley floor of the Puyallup and White River valleys. As of 2010 (U.S. Census), the City's population was approximately 9,450. Over the recent past, the city has experienced a rapid growth rate, and a portion of this development has occurred in the shoreline areas of the White and Puyallup Rivers.

Existing Land Use

According to Pierce County Assessor records, current land use in Sumner's shoreline planning area is a mix of vacant, industrial/manufacturing, residential, and parks/open space uses. Designated vacant lands are currently the dominant land use (43 percent of entire shoreline planning area) focused mainly in Segments F and UGA-1. While the term "vacant" may not always accurately reflect current conditions (such as protected open space, agriculture, wetlands, or lands with development restrictions), the classification generally indicates that no structural improvements have been made or assessed for taxes on the property.

Industrial/manufacturing is the second most common land use (16 percent of entire shoreline planning area) focused almost entirely along the White River, mainly in Segments E and G. Residential land uses are less common (14 percent of entire shoreline planning area) and mainly concentrated along the Puyallup River as well as Segments E and F on the White River. Designated parks and open space lands compose 11 percent of the entire shoreline planning area with the largest acreage in Segment F.

Comprehensive Plan

According to Sumner's *Comprehensive Plan*, the city contains a variety of designated land uses, ranging from heavy industrial to residential. The predominant comprehensive land use designation in the shoreline planning area within Sumner's city limits and UGA boundaries is Public/Private Utilities and Facilities (44 percent). Light Industrial is the second most common comprehensive plan designation (39 percent). Similar to existing land uses, residential land use designations are less common (10 percent) and are mainly located along the Puyallup River and Segment C on the

White River. Remaining land use designations are almost evenly divided among General Commercial (4 percent) and Heavy Industrial (3 percent). Almost all properties designated Public/Private Utilities and Facilities within Sumner city limits are under City ownership. Most of the remaining properties similarly designated are under Puget Sound Energy ownership in the UGA-1 segment.

Pierce County's *Comprehensive Plan* designates the shoreline planning area within UGA-2 since that area is located outside Sumner's city limits and UGA. Approximately 80 percent of UGA-2 is designated Rural-10 and 20 percent is designated Agriculture Resource Lands. The intent of the Rural-10 comprehensive land use designation is to allow for a basic density of one dwelling unit per 10 acres. Preservation of open space and clustering of units is encouraged through density bonuses.

Zoning Designations

The City's zoning designations generally follow land use designations from the City's comprehensive plan, discussed above. Light Industrial is the most common zoning designation within Sumner's city limits and UGA (54 percent). Agriculture is the second most common zoning designation (15 percent). Residential zoning designations are the third most common (13 percent) and Public/Private Utilities and Facilities are the fourth (10 percent). Remaining zoning designations are almost evenly divided between Heavy Industrial (4 percent) and General Commercial (3 percent).

Pierce County zoning designations are identical to the comprehensive plan designations in Segment UGA-2. Approximately 80 percent of UGA-2 is designated Rural-10 and 20 percent is designated Agriculture Resource Lands.

Biological Resources and Critical Areas - Opportunity Areas

Many of the factors that limit shoreline ecological functions and processes within Sumner's shoreline jurisdiction are caused by factors outside of the City's jurisdiction, such as upstream dam operations, flood control, or timber harvest in the upper portions of the watershed. As a result, this report identifies opportunity areas that are both effective and achievable within the scope of Sumner's jurisdiction. The ability to improve these opportunity areas is dependent upon a number of factors including land acquisition, funding availability, and permits. The preliminary selection of opportunity areas was based on field observations conducted in 2002 and aerial photograph analysis. Opportunity areas identified include both protection and restoration of biological resources and critical areas. Additional opportunity areas were identified in the Draft Restoration Plan Element (see Appendix B).

Opportunity Areas by Inventory Segment

Segment UGA-2 - Riverside Park to City Limits

Protection

A large, mature forest stand is located in the eastern portion of Segment UGA-2, which is documented by WDFW as valuable wildlife habitat. In addition, smaller forested patches are located adjacent to the river within this segment. Protection of these forested areas would help maintain quality habitat for sensitive species.

Restoration

There is limited opportunity to provide areas of overbank flooding and side channel habitat in this segment, given the existing levee and extensive adjacent development. In some portions of this segment, it may be feasible to setback the levee, which would increase the active channel width and subsequently enhance habitat-forming processes.

This reach has vegetation enhancements opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

Segment A- Eastern City Limits to Traffic Avenue Bridge

Protection

The northern portion of Segment A contains a mature, riparian forest stand, which is likely productive wildlife habitat. Protection of this forested area could help maintain quality habitat for sensitive species.

Restoration

There is limited opportunity to provide areas of overbank flooding and side channel habitat in this segment, given the existing levee and extensive adjacent development. However, in the northern portion of the segment, adjacent to SR 410, it may be feasible to setback the levee. This would increase the active channel width and subsequently enhance habitat-forming processes.

This reach has vegetation enhancements opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

Segment B - Confluence of White and Puyallup Rivers

Protection

Black cottonwood-dominated forest is the most common vegetation assemblage found throughout all of the segments and is represented in this segment. Riparian forested areas are typically productive wildlife habitats. Protection of this forested area could increase potential habitat for many sensitive species.

Restoration

City property adjacent to the City's Wastewater Treatment Facility, at the confluence of the White and Puyallup Rivers, is used informally by residents and the Puyallup Tribe for fishing access. Denuded areas, excluding the access for the Puyallup Tribe boat and fish trap, could be planted with native riparian plant species.

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings.

Segment C - SR410 Bridge to Union Pacific Spur Bridge

Protection

Portions of land within the riparian zone of Segment C of the White River have relatively dense cover of riparian vegetation with moderate diversity. Protection of these areas could help maintain quality habitat for sensitive species.

Restoration

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In addition, it may be feasible to setback the levee along the west bank of the White River, adjacent to Pacific Avenue. This would increase the active channel width and subsequently enhance habitat-forming processes.

This segment has significant vegetation enhancement opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

Segment D - Union Pacific Spur Bridge to Tacoma Road Bridge

Restoration

The river banks within Segment D of the White River are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings.

This segment has significant vegetation enhancement opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

Segment E - Tacoma Road Bridge to Public Land

Restoration

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In some portions of this segment, it may be feasible to

setback the existing revetments, which would increase the active channel width and subsequently enhance habitat-forming processes.

This segment has significant vegetation enhancement opportunities, which consist of removing non-native plant species (e.g., Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

Segment F - Public Land to 8th Street Creek

Protection and Restoration

City-owned land along the length of the right bank offers opportunity for habitat preservation and restoration. This segment appears to function as significant rearing habitat for salmonids and therefore is a candidate for preservation. Riparian vegetation can be enhanced throughout this segment. The tailrace and drainage ditch offer potential surface water connections to wetland areas. Flow from the tailrace could be diverted through a separate channel through City-owned farmland, allowing the development of relatively natural meanders, and pool and riffle sequences. Diversion of water from these sources into created or enhanced wetland and stream channel areas could provide off-channel and rearing fish habitat in areas where there is adequate fish passage to the site.

Restoration

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In some portions of this segment, it may be feasible to breach or setback the existing revetments and levees, which would increase the active channel width and connect the river with portions of its historic floodplain, which could significantly enhance habitat-forming processes.

This segment has significant vegetation enhancement opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

The 24th Street Interchange Biological Opinion (see Section 5.3.4 of the Shoreline Inventory and Characterization Report, Appendix A for more information), included the following two conditions that pertain to the White River:

1) The City of Sumner must permanently prohibit impervious development on 30 acres of City-owned property east of the White River.
2) The City of Sumner must permanently restrict new development on 88 acres of City-owned property east of the White River to a maximum impervious coverage of 40 percent.

In addition, in the Biological Opinion USFWS recommended that nonfunctioning levees above the Dieringer Powerhouse outfall (RM 3.6) on the White River be removed or setback, in order to restore floodplain and riparian connectivity and create off channel habitat.

Segment G - 8th Street Creek to Stewart Road Bridge

Protection

The riparian zone of this segment contains a relatively dense cover of riparian vegetation with moderate diversity. Protection of these areas could help maintain quality habitat for sensitive species, including salmonids.

Restoration

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In the eastern portion of this segment, it may be feasible to breach or setback the existing revetments and levee, which would increase the active channel width and connect the river with portions of its historic floodplain, which could significantly enhance habitat-forming processes.

Segment H - Stewart Road Bridge to City Limits

Protection

The majority of land within this segment is upland and wetland habitat, with moderate diversity. Protection of the land within this segment could help maintain quality habitat for sensitive species.

Segment UGA-1 - Lake Tapps

Protection

The shoreline of Lake Tapps within this segment generally consists of mature, mixed forest and scrub-shrub wetland. There is relatively little shoreline development within this segment. Protection of the land within this segment could help maintain quality habitat for sensitive species and the overall biodiversity of the area.

Recommendations

The following provides shoreline management recommendations in the context of other local and regional planning activities. These recommendations identify opportunities for ecological conservation and restoration and policy issues related to future shoreline use and development.

1) The City could explore developing a community education and incentive program to identify and develop voluntary restoration opportunities on private property (with landowner consent and approval) which support the overall goals of shoreline management.
2) For new shoreline stabilization projects, demonstration of the need for engineering approaches to shoreline stabilization could be required before approval. The use of bioengineering, alternative bank stabilization, and/or soft-shore armoring techniques could be encouraged in the City's shoreline master program.
3) The existing shoreline environment designations should be re-evaluated to ensure consistency with both the 2003 state shoreline guidelines (WAC 173-26) and the findings of this shoreline inventory report. Specifically:

a) Reconsider the Natural and Aquatic environment designations to determine applicability;

b) Examine the rationale of applying Urban Conservancy and Shoreline Residential per the findings of this Shoreline Inventory and Characterization report;

c) Determine an appropriate designation to replace the Urban environment since it is not an established designation per Ecology Guidelines.

4) Educate property owners about vegetation maintenance and preservation, benefits of soft shore protection, and low impact development practices.

5) Encourage levee setback projects to allow for channel migration and off-channel habitat for salmonids and restricting new development in the floodplain and channel migration zones.

6) Implement best management practices to control runoff from agricultural lands.

7) Match mitigation for development impacts to the SMP Restoration Plan, watershed management plans and salmon recovery plans.

8) Coordinate restoration efforts with the Puyallup River Watershed Council, Pierce Conservation District, and Pierce County Surface Water Management.

9) Integrate restoration with flood hazard management efforts to reestablish and protect natural floodplain functions.

CHAPTER 3 SHORELINES OF STATEWIDE SIGNIFICANCE

Introduction

The Shoreline Management Act designates certain shorelines as *shorelines of statewide significance*, which are generally described as including 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 fresh water lakes with a surface area of 1,000 acres or more (RCW 90.58.030). All shorelines in the City of Sumner are designated as shorelines of statewide significance, including the Puyallup and White (Stuck) Rivers and Lake Tapps.

In determining that certain shorelines are of statewide significance, the Shoreline Management Act also determined that the interests of all of the people of the State shall be considered in the management of these shorelines. Because the shorelines of the Puyallup and White (Stuck) Rivers and Lake Tapps are a major resource from which all people in the state derive benefit, the Master Program gives preference to uses that favor public and long-range goals.

Give preference to uses and development that meet the principles defined in RCW 90.58.020.

1) Recognize and protect the statewide interest over local interest
2) Preserve the natural character of the shoreline
3) Result in long-term over short-term benefit
4) Protect the resources and ecology of the shoreline
5) Increase public access to publicly owned areas of the shoreline
6) Increase recreational opportunities for the public in the shoreline
7) Provide for other appropriate and necessary uses established by this master program and the Shoreline Management Act.

The following regulations in the Sumner Master Program give preference to the statewide goals:

1) Riparian Management Zones, Chapter 4, Table 4-7;
2) Flood Hazard Reduction, Chapter 7, Section VIII;
3) Environmental Impact Mitigation, Chapter 6, Section V;
4) Critical Areas Protection, Chapter 6, Section VII; and
5) Public Access and Recreational Opportunities, Chapter 6, Section VIII and Chapter 7, Sections XIV.

In the implementation of the SMA principles, 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. To this end, uses shall be preferred that are consistent with control of pollution and prevention of damage to

the natural environment or are unique to or dependent on use of the state's shorelines. Alteration of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for single family residences, ports, parks, marinas, piers, and other improvements facilitating public access to shorelines of the state, and industrial and commercial developments that will provide an opportunity for substantial numbers of the people to enjoy the shorelines of the state.

Permitted uses in the shorelines of the state shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to ecological functions and processes of the shoreline areas and interference with the public's use of the water.

Riparian Management Zones

The purpose of a riparian management zone is to preserve the natural character of Sumner's riverine and lake systems and to protect the resources and ecology of the shoreline. Riparian management zones are designed to protect ecological functions and processes of the shorelines of the state, protect and enhance salmonid habitat and provide a recreational open space system for the City of Sumner.

The shoreline along the White (Stuck) and Puyallup Rivers is lined with a mixture of native and non-native trees and shrubs and is developed in a mixture of residential, commercial, agricultural, and light industrial uses. Retaining the native vegetation that exists along the shoreline will enhance the river-oriented experience both on the water and along the banks. Boaters currently use the river for fishing and others are floating the river in rafts, kayaks, and inner tubes. Tall trees and dense vegetation create a natural experience that complements the recreational activity and is highly valued. As a river trail system develops under the requirements of this Master Program and the Sumner Trail Master Plan, Sumner residents and visitors will be able to enjoy the natural character of the shoreline. The Sumner Comprehensive Plan's objectives for parks, recreation, and open space are supported, and an individual's river-walk experience is enhanced, if the riverbank appears natural (vegetated).

Retaining the natural vegetation along the shoreline is also important to fish and wildlife. Overhanging vegetation provides protective cover to fish and tends to attract insects upon which fish feed. Rivers devoid of vegetative cover have correspondingly low fish populations. The Puyallup and White Rivers provide habitat to federally-listed salmonid species which are protected under the Endangered Species Act. Riparian management zones with native vegetation, particularly native trees and shrubs that overhang the water's edge, provide insects and detritus (organic material) particularly important to the life cycle of salmon. Riparian vegetation also provides both shade and sources of large woody debris (e.g., tree sections, large branches, stumps). Shade is also very important in keeping water temperatures within tolerable limits for fish during the summer. Large woody debris creates habitat complexity in the channel, giving fish opportunities to rest and hide. Additional information on habitat conditions and opportunities for enhancing the Sumner shoreline to protect habitat areas is provided in the shoreline inventory and characterization report, provided in *Appendix A*: *City of Sumner Shoreline Inventory and Characterization*.

Riparian vegetation is also critical to terrestrial wildlife. In general, wildlife values are maximized where dense and diverse native vegetation exists. Vegetation along the rivers provides habitat components such as shelter and food sources. Wildlife species within the city are expected to use the stream and river banks for migration routes, foraging, nesting and feeding. The Sumner Master

Program recognizes the importance of native plants in protecting and maintaining shoreline habitat areas.

The wetland and mature, mixed forest located along the shoreline of Lake Tapps is also critical to wildlife and birds. Wetlands provide specific habitats for aquatic species, beaver, waterfowl and wetland-adapted birds. Wetland habitats are often part of a seasonal migratory route between other habitats.

To protect the riparian vegetation, the Master Program requires development setbacks and places stringent controls on the removal or disruption of vegetation within these setbacks. Riparian management zone policies and regulations are presented in *Chapter 6: General Shoreline Policies and Regulations.*

Floodplain Management

The Master Program establishes policies and direction for floodplain management. Appropriate floodplain management will provide long-term benefits to the City of Sumner. Floodplain management is directed toward the reduction of the damaging effects of floods by maintaining and enhancing natural floodplain values and by making effective use of related water and land resources within the floodplain. It is an attempt to make optimal use of the floodplain, while recognizing the need for economic development, recreation, open space, and other possible uses. Floodplain management policies and regulations are presented in *Chapter 6: General Shoreline Policies and Regulations.*

Floodplain management can reduce the risk to life and property as well as lower public expenditures for flood protection and relief. Floodplain management can also enhance natural floodplain values. These values include the protection of water resources by moderating flood velocities, improving water quality, and allowing for groundwater recharge. Living resource values also benefit from floodplain management. Fish and wildlife and plant resources and habitat can be enhanced by periodic flooding and in some cases, the primary source of water in floodplain wetlands is derived from such flooding. Floodplains also provide cultural values. In the Sumner area, the open space of the valley floor provides exceptional scenic views, which include spectacular views of Mt. Rainer. The fertile valley floor also provides agricultural resource values.

The Master Program requires careful evaluation of proposed shoreline development to determine what influence, if any, the development will have on flood events. Shoreline developments must demonstrate that there will not be an unacceptable increase in the incidence of flooding, either downstream or upstream of the proposed development. In addition, the Master Program provides protection of wetlands that reduce flooding by providing temporary storage of floodwater, thus reducing downstream volumes and velocities.

Environmental Impact Mitigation

The SMP goals, policies and regulations must achieve “no net loss of shoreline ecological functions” from current “baseline” conditions. Baseline conditions are identified and described in the City of Sumner Shoreline Inventory and Characterization Report (see Appendix A). The SMP provides standards and procedures to evaluate individual uses or developments for their potential to impact shoreline resources on a case-by-case basis through the permitting process.

All shoreline use and development should be carried out in a manner that avoids and minimizes adverse impacts so that the resulting ecological condition does not become worse than the current condition. This means assuring no net loss of ecological functions and processes and protecting critical areas that are located in the shoreline. Should a proposed use and development potentially create significant adverse environmental impacts not otherwise avoided or mitigated by compliance with the Master Program, the Shoreline Administrator should require mitigation measures to ensure no net loss of shoreline ecological functions.

Mitigation measures to ensure no net loss must follow the mitigation sequence established in WAC 173-26-201(2)(e) and *Chapter 6: General Shoreline Policies and Regulations, Section V Environmental Impact Mitigation.*

Critical Areas Protection

In addition to establishing riparian management zones for the retention of vegetation along shorelines of the state, this Master Program provides policies and regulations for critical areas. Critical areas include volcanic hazard areas, wetlands, flood hazard areas, fish and wildlife habitat areas, seismic hazard areas, landslide hazard areas, erosion hazard areas, and aquifer recharge areas. Wetlands associated with the Puyallup and White (Stuck) Rivers and Lake Tapps can serve as critical habitat for fish populations. Wetlands also provide wildlife habitat, especially for waterfowl. Wetlands provide food, protection from predators, and nesting and rearing areas. Loss of wetlands drastically reduces the critical habitat required by these species.

Throughout the basin, many former floodplain areas on the landward side of the dikes along the White River and Puyallup River have been converted into residential and industrial development. The loss of natural vegetation and wetlands in the Puyallup River basin has reduced the watershed's ability to store and process flood waters in a manner that will minimize flood event duration and peak flows.

The Washington State Department of Wildlife (WDFW) maintains a Priority Habitats and Species (PHS) list, which is a catalog of habitats and fish and wildlife species considered to be priorities for conservation and management. Three types of priority habitats are mapped within the shoreline planning area: wetland, urban natural open space, and waterfowl concentrations.

Public Access and Recreation

The Master Program requires public access to the shoreline as a condition of approval for many types of development. The authority to require public access derives from the Public Trust Doctrine, which gives individual states the responsibility to hold certain natural resources in trust for the people.[1] The beds and waters of navigable rivers fall into this category. Public access to

[1] "The Public Trust Doctrine (PTD) is a principle based in English Common Law that the state holds domain and sovereignty over all shorelands and navigable water, and administers this right to maintain the public's right to fishing and navigation (and possibly more, depending upon the state) above all other claims of use and ownership. In other words, the State can sell the land, but can not sell the public's right to access the tidelands (land beneath the high tide mark)." *Public Trust Doctrine in Washington State* by Jill Sheldon, Deputy Director, Center for Environmental Law & Policy.

these public trust areas is a priority in the state and is a goal to be achieved through local shoreline planning.

The Master Program policies and regulations recognize the special advantage that Sumner has to provide and protect such public access, open space, and recreational amenities to its residents. While land uses adjacent to the river have changed significantly over the last decade, there is a great deal of natural quality to the riverbank remaining. At this time, the predominant land uses along the shorelines of the White (Stuck) and Puyallup Rivers include vacant residential industrial/manufacturing, and parks/open space uses that are abutted by forested areas and areas of significant native vegetation along the riverbanks. Consistent with the City's interest in protecting the natural environment, the City values the use of environmentally- friendly materials in developing public access facilities within the shoreline environment.

The goals and policies of this Master Program support the continued development of a river trail that will follow the course of both rivers and provide a linear park through the valley, as described in the Sumner Trail Master Plan and supported by the Land Use, and Parks and Open Space elements of the Sumner Comprehensive Plan. In coordination with neighboring jurisdictions, Sumner developed a comprehensive and coordinated approach to providing regional public recreational access. This trail and open space system will develop as the valley develops, and development and shoreline permits are issued for uses and activities along the White and Puyallup Rivers.

Critical to accomplishing a shoreline public access system is the development of a comprehensive public access plan. The foundation of that public access plan was formed in the mid-1990s with the development of the Sumner Trail Master Plan, formed under the guidance of a local Trails Advisory Committee. The goals of that public access foundation have been validated through the continued support of the goals and policies defined in the Sumner Comprehensive Plan. This Master Program recommends that the City of Sumner incorporate the current Sumner/Pacific Trail Master Plan as the foundation for the shoreline public access plan.

CHAPTER 4 SHORELINE ENVIRONMENT DESIGNATIONS

Introduction to Shoreline Environment Designations

The purpose of designating shoreline environments is to provide a uniform basis for applying policies and regulations in specific shoreline areas having similar characteristics. A designation system creates a systematic, rational, and equitable basis upon which to guide and regulate development within specific shoreline areas. To accomplish this, segments of shoreline are given an environment designation based on the following criteria:

1) Existing development patterns together with the City of Sumner Comprehensive Plan land use designations and other officially adopted plans;
2) Ecological functions and processes that characterize the shoreline, together with the degree of human alteration as determined by the 2010 Shoreline Inventory and Characterization Report and any subsequent investigations or analyses as may be required under this Master Program;
3) The guidelines outlined in WAC 173-26-211, Environment Designation System; and
4) SMA priority uses in accordance with guidelines outlined in WAC 173-26-251, Shorelines of Statewide Significance.

Once a shoreline segment has been given an environment designation, management policies are developed. These management policies are used as the basis for determining uses and activities that can be permitted in each environment designation. Specific development standards are also established, which specify how and where permitted development can take place within each shoreline environment.

City of Sumner Shoreline Environment Designations

This Master Program establishes six shoreline environment designations for the City of Sumner. These shoreline environments shall include all shorelines of the state in the City of Sumner. The six environment designations are:

1) Natural
2) Urban Conservancy
3) Shoreline Residential
4) Urban
5) Tapps Reservoir

6) Aquatic

These shoreline environment designations are illustrated on a map incorporated as part of this Program (Map 4-1) that will be known as the Official Shoreline Map. Designation boundaries displayed on the map are described in the text in more detail below. The City may, from time to time as new or improved information becomes available, modify the Official Shoreline Map consistent with state guidelines to more accurately represent, clarify, or interpret the true limits of the shorelines defined in this chapter. As required by the state, any change to the map triggers a master program amendment process.

Areas found to be within shoreline jurisdiction that are not mapped and/or designated are automatically assigned the Urban Conservancy environment designation until re-designated through a master program amendment process.

Each shoreline environment designation shown below includes a definition and statement of purpose, followed by designation criteria, management policies, and development standards.

City of Sumner Shoreline Environment Designation Map

Map 4-1: *Official Shoreline Map* depicts the areas under the jurisdiction of this Master Program and graphically portrays the boundaries of the City's six environment designations. There shall be only one official copy of this map, which shall be kept by the Shoreline Administrator. This official copy shall be available for public inspection at all times during normal business hours. Unofficial copies shall be included as part of all distributed copies of this Master Program. In the event of a mapping error, per WAC 173-26-211(2)(b), the City will rely upon common boundary descriptions and the criteria contained in RCW 90.58.030(2) and chapter 173-22 WAC pertaining to determinations of shorelands, as amended, rather than an incorrect or outdated map.

Map 4-1. Shoreline Environment Designations

(see G:\ENVIR IMPACTS\2009 Projects\209439_SumnerSMP\05_Graphics_GIS_Modeling\Figures\August2011_SMP)

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Natural Environment

Definition

Natural Environment is designated for an area of vacant land uses with relatively unaltered ecological conditions; this area includes a high value, large forested wetland complex with potential for ecological restoration and protection.

Purpose

The purpose of the Natural environment is to protect those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline functions that would become irreversibly impaired as a result of human development and activity. These systems require that only very low intensity uses be allowed in order to maintain the ecological functions and ecosystem-wide processes. Consistent with the policies of the environment, restoration of degraded shorelines within this environment is appropriate.

Designation Criteria

This designation should be applied to shoreline areas in city limits or in designated urban growth areas if any of the following characteristics apply:

1) The shoreline is ecologically intact and therefore currently performing an important, irreplaceable function or ecosystem-wide process that would be damaged by human activity;
2) The shoreline is considered to represent ecosystems and geologic types that are of particular scientific and educational interest; or
3) The shoreline is unable to support new development or uses without significant adverse impacts to ecological functions or risk to human safety.

Management Policies

In addition to the other applicable policies and regulations of this Program, the following management policies should apply:

1) Any use or modification that would substantially degrade the ecological functions or natural character of the shoreline area should not be allowed.
2) Flood control works should be allowed as a conditional use provided they are accomplished in a manner that assures no net loss of ecological functions and ecosystem-wide processes.
3) The following new uses should not be allowed in the natural environment:
    a. Commercial uses;
    b. Industrial uses;
    c. Nonwater-oriented recreation; and
    d. New public infrastructure (such as roads, utility corridors, and parking areas).

4) Single-family residential development may be allowed as a conditional use within the natural environment if the density and intensity of such use is limited as necessary to protect ecological functions and be consistent with the purpose of the natural environment.
5) Agricultural uses of a very low intensity may be consistent with the natural environment when such use is subject to appropriate limitations or conditions to assure that the use does not expand or alter practices in a manner inconsistent with the purpose of the designation.
6) Scientific, historical, cultural, educational research uses, and low-intensity water-oriented recreational access uses may be allowed provided that no significant ecological impact on the area will result.
7) New development or significant vegetation removal that would reduce the capability of vegetation to perform normal ecological functions should not be allowed. Subdividing property in a configuration that, to achieve its intended purpose, will require significant vegetation removal or shoreline modification that adversely impacts ecological functions should not be allowed. That is, each new parcel must be able to support its intended development without significant ecological impacts to the shoreline ecological functions.
8) The City should encourage conservation and/or restoration projects, such as conserving and enhancing riparian forest, re-creating off-channel habitat for salmonids, or establishing setback levees in those opportunity areas referenced in the *City of Sumner Shoreline Restoration Plan Element* (see Appendix B).
9) Publicly-owned lands in this designation may offer protection and/or restoration opportunities, such as conserving and enhancing riparian forest, re-creating off-channel habitat for salmonids, and constructing levee setbacks.

Development Standards

1) **Critical Area Regulations:** Buffers and setbacks for Category I wetlands as established in *Chapter 6: General Shoreline Policies and Regulations, Section VII, Critical Areas Protection* shall be applied to protect ecological functions.
2) **Riparian Management Zone.** Land within the two-hundred (200) foot setback from the OHWM is considered the "Riparian Management Zone." Within this zone, removal of vegetation and topsoil is strictly regulated under the Vegetation Conservation Standards of this Master Program (see *Chapter 6: General Shoreline Policies and Regulations*).

Areas Designated

Description

The Natural designation appears to be appropriate for a portion of the White (Stuck) River shoreline, located in Segment H of the inventory, which is characterized by a large wetland complex.

Table 4-1. Natural Designation Description

Inventory Segment (see Map 2-1)	Area Designated	Shoreline Designation	Rationale
H WHITE RIVER (Stewart Road Bridge to northern city limits)	• Left bank of White River starting at approximately 940 lineal feet north of Stewart Road Bridge north to northern city limits.	Natural	The northern portion of Segment H is characterized by a large wetland complex (20 acres) and riparian vegetation that ranges from 100 to 800 feet in width along the riverbank. The majority of the shoreline area is vacant and undeveloped.

Right bank refers to the river bank which, when one is facing downstream, is to one's right. Left bank refers to that bank to the left when one is facing downstream.

Rationale

Since the area is characterized by a large wetland complex and undeveloped property, a Natural designation would ensure protection of existing ecological functions and processes.

Urban Conservancy Environment

Definition

An area of mixed land uses that include residential, commercial, and industrial developments, generally located in a floodplain with potential for ecological restoration.

Purpose

The purpose of the Urban Conservancy environment is to protect and restore ecological functions of open space, floodplain and other sensitive lands where they exist in urban and developed settings, while allowing a variety of compatible uses.

Designation Criteria

Areas designated Urban Conservancy should be those areas that are appropriate for development that is compatible with maintaining or restoring the ecological functions of the area, generally not suited for water-dependent uses and that lie in incorporated municipalities or urban growth areas and that meet any of the following characteristics:

1) They are suitable for water-related, water-dependent recreational or water-enjoyment uses;
2) They are open space, floodplains or other sensitive areas that should not be more intensively developed;

3) They have potential for ecological restoration;
4) They retain important ecological functions, even though partially developed; or
5) They have the potential for development that is compatible with ecological restoration.

Management Policies

In addition to the other applicable policies and regulations of this Program, the following management policies should apply:

1) Uses that preserve the natural character of the area or promote preservation of open space, floodplain or sensitive lands either directly or over the long term should be the primary allowed uses. Uses that result in restoration of ecological functions should be allowed if the use is otherwise compatible with the purpose of the environment and the setting.
2) Public access should be required of all nonwater-dependent development on previously developed shorelines.
3) Standards should be established for shoreline stabilization measures, vegetation conservation, water quality, and shoreline modifications within the Urban Conservancy designation to ensure that new development does not result in a net loss of shoreline ecological functions or further degrade other shoreline values.
4) Public access and public recreation objectives should be implemented whenever feasible and significant ecological impacts can be mitigated.
5) Water-oriented uses should be given priority over nonwater-oriented uses. For shoreline areas adjacent to commercially navigable waters, water-dependent uses should be given highest priority.
6) The City should encourage conservation and/or restoration projects, such as conserving and enhancing riparian forest, re-creating off-channel habitat for salmonids, or establishing setback levees in those opportunity areas referenced in the *City of Sumner Shoreline Restoration Plan Element* (see Appendix B).
7) Publicly-owned lands in this designation may offer protection and/or restoration opportunities, such as conserving and enhancing riparian forest, re-creating off-channel habitat for salmonids, and constructing levee setbacks.

Development Standards

1) **New residential development on properties with existing residential dwellings.** Properties with a single-family residential dwelling, lawfully constructed as of the effective date of the Shoreline Master Program (May 17, 2004), and that contain a primary residential structure that has any portion of the structure located within two hundred (200) feet of the ordinary high water mark may reduce the setback to 100 feet provided that:
    a. No portion of the existing primary residential structure located within the one hundred (100) foot setback from the ordinary high water mark shall be expanded.
    b. The footprint of the primary residential structure shall not be expanded by more than one hundred percent (100%), nor shall any portion of the expanded footprint of the primary structure or accessory structure be closer than one hundred (100) feet to the ordinary high water mark;

c. The property owner shall record, prior to receipt of a building permit for expansion, a covenant on the property that shall remain in perpetuity that restricts future use of the property to single family residential;

d. No additional dwelling units, except for an accessory dwelling unit (ADU), may be added to the lot, except in conformance with the Sumner Zoning Code; and

e. Any proposed new residential development must meet the requirements for mitigation of impacts pursuant to Regulation #4 below.

2) **New commercial or industrial use on properties with existing residential dwellings**. If the property is converted to an industrial or commercial use, any development shall meet the required two hundred (200) foot setback.

3) **Riparian Management Zone.** Land within the one hundred (100) or two hundred (200) foot setback from the OHWM is considered the Urban Conservancy "Riparian Management Zone." Within this zone, removal of vegetation and topsoil is strictly regulated under Vegetation Conservation standards of this Master Program (see *Chapter 6: General Shoreline Policies and Regulations, Section III*).

4) **Required Mitigation.** Shoreline areas with an Urban Conservancy designation with a one hundred (100) foot setback are required to provide mitigation for impacts to ecological functions and processes as set forth in *Chapter 6: General Shoreline Policies and Regulations, Section V,* Regulation #7. Public access shall also be provided pursuant to Chapter 6 and Chapter 7.

5) **Critical Area Regulations.** Development in the Urban Conservancy environment shall comply with critical areas regulations (see *Chapter 6: General Shoreline Policies and Regulations, Section VII, Critical Areas Protection*).

Areas Designated

Description

The Urban Conservancy designation appears to be appropriate for much of the City's shoreline along both the Puyallup and White (Stuck) Rivers. There are two sub-designations for Urban Conservancy one with a 100 foot setback and one with a 200 foot setback.

Table 4-2. Urban Conservancy Designation Description

Inventory Segment (see Map 2-1)	Area Designated	Shoreline Designation and Riparian Management Zone standard[1]	Rationale
JPA-1 PUYALLUP RIVER (Right bank in Joint Planning Area beginning at southernmost tip of Riverside Park downstream to City limits)	• Right bank[2] of Puyallup River from southern property line of County-owned property downstream to city limits.	Urban Conservancy 100 ft.	This area is predominately residential with Rural-10 and Agriculture Resource Lands zoning districts. In addition, a 50-acre park that has contiguous forested areas is located in this segment. Restoration potential includes setback levees and replanting the riverbank with native species. In order to maintain consistency with Pierce County's proposed SED in the JPA, an Urban Conservancy designation would be appropriate. A 100-foot riparian management zone is appropriate due to the presence of a narrow riparian corridor (ranges from 25- to100-foot wide), and developed residential and agricultural properties.
A PUYALLUP RIVER (City limits at Orting Highway (SR 162) to Traffic Avenue bridge, primarily right bank, small area of land on left bank)	• Left and right banks from west ROW[3] line of Traffic Avenue Bridge upstream to southern property line of City-owned property.	Urban Conservancy 200 ft.	Urban Conservancy designation is recommended for USFWS managed land. May provide additional restoration, protection, and public access opportunity. A 200-foot riparian management zone is appropriate due to the presence of a wide riparian corridor (100- to 200- foot wide) and park land (Girard Park/Grand Park).
B CONFLUENCE OF WHITE & PUYALLUP RIVERS (Traffic Avenue bridge to SR 410 bridge)	• Left and right banks of Puyallup River from west ROW line of Traffic Avenue Bridge downstream to confluence with the White River and; • Left and right bank of White River upstream to south ROW line of SR410 bridge.	Urban Conservancy 200 ft.	Urban Conservancy designation is appropriate for USFWS managed land, shorelines with mix of uses, and shorelines without predominant water-dependent use. The wastewater treatment plant area may provide additional restoration, protection, and public access opportunities. A 200-foot riparian management zone is appropriate due to the presence of a riparian corridor that extends up to 300 feet landward of the OHWM in some locations.

Inventory Segment (see Map 2-1)	Area Designated	Shoreline Designation and Riparian Management Zone standard[1]	Rationale
C WHITE RIVER (SR410 Bridge to Union Pacific Railroad spur bridge both sides of river)	• Right bank of White River from north ROW line of Bridge Street bridge upstream to north ROW line of Union Pacific Railroad Spur bridge.	Urban Conservancy 200 ft.	Urban Conservancy designation is appropriate for shoreline with a mix of uses, and shorelines without predominant water-dependent use. A 200-foot riparian management zone is appropriate due to the presence of existing, large lot, residential developments that are minimally developed with impervious surfaces.
D WHITE RIVER (Union Pacific Railroad Spur Bridge to Tacoma Avenue bridge, both sides of river)	• Left and right banks from south ROW line of Union Pacific Railroad Spur Bridge to south ROW line of 142nd Avenue East.	Urban Conservancy 200 ft.	Urban Conservancy designation is appropriate for shoreline with a mix of uses, and shorelines without predominant water-dependent use. The area with a 200-foot riparian management zone is appropriate due to the presence of Sotain Creek stream mouth and minimally developed properties. The area with a 100-foot riparian management zone, on the other hand, is characterized by properties intensely developed with industrial warehouses and impervious surfaces used for parking and storage.
	• Left and right banks from south ROW line of 142nd Avenue East bridge to south ROW line of Tacoma Avenue bridge.	Urban Conservancy 100 ft.	
E WHITE RIVER (Tacoma Road Bridge to City-owned property on left bank, both sides of river)	• Left bank from south ROW line of Tacoma Avenue bridge to 45th Street East cul-de-sac.	Urban Conservancy 100 ft.	Urban Conservancy designation is appropriate for shoreline with a mix of uses, and shorelines without predominant water-dependent use. The areas designated with a 200-foot riparian management zone are appropriate due to the presence of large-lot industrial and agricultural properties, existing riparian corridors, and Salmon Creek stream mouth. The area designated with a 100-foot riparian management zone is more intensely developed with industrial buildings and parking lots located closer to the White River.
	• Right bank from south ROW line of Tacoma Road bridge to south property line of City-owned land (as shown on Map 4-1).	Urban Conservancy 200 ft.	
	• Left bank from 45th Street East cul-de-sac to south property line of City-owned land (as shown on Map 4-1).	Urban Conservancy 200 ft.	

Inventory Segment (see Map 2-1)	Area Designated	Shoreline Designation and Riparian Management Zone standard[1]	Rationale
F WHITE RIVER (City-owned property to 8th Street Creek, both sides of river)	• Left and right banks from south property line of City-owned land (as shown on Map 4-1) to north ROW line of 16th Street.	Urban Conservancy 200 ft.	Urban Conservancy is recommended for areas in public ownership along the east bank. May provide additional restoration, protection, and public access opportunity. The areas designated with a 200-foot riparian management zone are appropriate due to the presence of large-lot industrial and agricultural properties, existing riparian corridors, park land, wetlands and stream mouths. Urban Conservancy designation is appropriate for shoreline with a mix of uses, and shorelines without predominant water-dependent use. The areas designated with a 100-foot riparian management zone are characterized by a narrower band of riparian vegetation along the golf course, and smaller lot commercial properties with outdoor storage.
	• Left and right banks from north ROW line of 16th Street to 8th Street Creek.	Urban Conservancy 100 ft.	
G WHITE RIVER (8th Street Creek to Stewart Road bridge, both sides of river)	• Left and right banks from 8th Street Creek to south ROW line of Stewart Road bridge and;	Urban Conservancy 100 ft.	Urban Conservancy designation is appropriate for shoreline with a mix of uses, and shorelines without predominant water-dependent use. A 100-foot riparian management zone is appropriate due to the presence of developed industrial properties that have paved areas for outdoor storage.
H (Stewart Road bridge to northern city limits, left bank)	• Left bank from south ROW line of Stewart Road bridge to approximately 940 lineal feet north.	Urban Conservancy 100 ft.	Urban Conservancy designation is appropriate for shoreline characterized by warehouses and outdoor storage of materials. There is band of riparian vegetation 50-100 feet in width along the riverbank. A 100-foot riparian management zone is appropriate due to the presence of developed industrial properties that have paved areas for outdoor storage.

[1]Riparian management standards are discussed in more detail in section below titled *Bulk Dimensional and Vegetation Standards Table.*

[2]Right bank refers to the river bank which, when one is facing downstream, is to one's right. Left bank refers to that bank to the left when one is facing downstream.

[3]Refer to *Map 4-1, Sumner Shoreline Environment Designations*, for specific setback widths within the Urban Conservancy environmental designation.

Rationale

The shorelines designated Urban Conservancy are developed with a variety of shoreline uses including residential, commercial, and industrial. These shoreline areas also have designated critical areas, intact shoreline ecological functions, and areas with potential for restoration, such as property along the White (Stuck) River north of downtown Sumner and City-owned properties along the Puyallup River. Those areas with considerable existing development and small lots constrained between existing roads and the rivers have a riparian management zone of 100 feet. Less developed areas have a riparian management zone of 200 feet.

Shoreline Residential Environment

Definition

An area of low to moderate development intensity with existing and proposed residential land uses that still maintains significant natural features.

Purpose

The Shoreline Residential Environment is intended to accommodate residential development and appurtenant structures that are consistent with the Ecology Guidelines. An additional purpose is to provide appropriate public access and recreational uses.

Designation Criteria

1) A Shoreline Residential environment designation is appropriate for those shoreline areas inside urban growth areas or incorporated municipalities, if they are predominantly single-family or multifamily residential development or are planned and platted for residential development.

Management Policies

In addition to the other applicable policies and regulations of this Program, the following management policies should apply:

1) Development should be permitted only in those shoreline areas where adequate setbacks or buffers are possible to protect ecological functions, where there are adequate access, water, sewage disposal, and utilities systems and public services available, and where the environment can support the proposed use in a manner that protects or restores the ecological functions.
2) Development standards for density or minimum frontage width standards, setbacks, lot coverage, buffers, shoreline stabilization, vegetation conservation, critical area protection, and water quality should be established to assure no net loss of shoreline ecological functions, taking into account the environmental limitations and sensitivity of the shoreline area, the level of infrastructure and services available, and other comprehensive planning considerations..
3) Multifamily and multi-lot residential and recreational developments should provide public access and joint use for community facilities.

4) Access, utilities, and public services should be available and adequate to serve existing needs and/or planned future development.

5) The City should encourage conservation and/or restoration projects, such as conserving and enhancing riparian trees and forest, re-creating off-channel habitat for salmonids, or establishing setback levees in those opportunity areas referenced in the *Sumner Restoration Plan* (see Appendix B).

Development Standards

1) **Critical Area Regulations**. Development in the Shoreline Residential environment shall comply with critical area regulations *(see Chapter 6: General Shoreline Policies and Regulations, Section VII, Critical Areas Protection)*.

2) **Riparian Management Zone**. Land within the 100-foot setback from the OHWM is considered the Shoreline Residential "Riparian Management Zone." Within this zone, removal of vegetation and topsoil is strictly regulated under the Vegetation Conservation standards of this Master Program *(see Chapter 6: General Shoreline Policies and Regulations, Section III).*

Areas Designated

Description

The **Shoreline Residential** designation appears to be appropriate for only a portion of the Puyallup River shoreline, located in Segment A of the inventory, which is predominantly residential and designated for future residential use.

Table 4-3. Shoreline Residential Designation Description

Inventory Segment (see Map 2-1)	Area Designated	Shoreline Designation	Rationale
A PUYALLUP RIVER (City limits at Orting Highway (SR 162) to Traffic Avenue bridge - primarily right bank, small area of land on left bank)	• Right bank of Puyallup River from southern property line of City-owned property upstream to City limits at Orting Highway (SR 162).	Shoreline Residential	Shoreline Residential designation is appropriate for areas of existing and planned residential use.

Note: Right bank refers to the river bank which, when one is facing downstream, is to one's right. Left bank refers to that bank to the left when one is facing downstream.

Rationale

The segment of shoreline designated as Shoreline Residential is planned for low to moderate residential density. As this area develops, both the Puyallup and the White (Stuck) Rivers will become more important to the community as a visual amenity and recreational asset. Maintaining

open space along the shoreline and preserving the natural character as much as possible will make these shorelines a vital part of the residential suburban landscape.

Urban Environment

Definition

An area of high intensity land uses that include residential, commercial, and industrial development.

Purpose

The purpose of the Urban Environment is to accommodate high intensity commercial and residential land uses and provide protection and restoration of ecological functions and processes. The Urban Environment addresses the need to create attractive urban landscapes along shorelines of the state, particularly when public access is required.

Designation Criteria

Areas designated Urban should meet one or more of the following:

1) Shorelines used or designated for high intensity commercial; multi-family and small lot residential development; or a mix of commercial, office and residential; or
2) Shorelines located within the Sumner Town Center.

Management Policies

In addition to the other applicable policies and regulations of this Program, the following management policies should apply:

1) In order to make maximum use of available shoreline and to accommodate future uses, the renewal of substandard or obsolete development within urban shoreline areas should be encouraged.
2) Preference should be given to water-dependent uses, then to water-related and water-enjoyment uses.
3) Non-water-oriented uses should provide water-oriented features as part of new development or redevelopment proposals. Water-oriented features include picnic tables or benches facing the White (Stuck) River. New buildings should be oriented in a manner so that windows, architectural features, and outdoor seating areas face the river.
4) Full utilization of existing urban areas should be achieved before further expansion of intensive development is allowed, provided that as development occurs, properly functioning conditions are maintained or restored.
5) Where visual or physical public access to the shoreline is required under this Master Program aesthetic considerations should be promoted using techniques such as sign control regulation, and development and design guidelines

6) New development should protect and restore shoreline ecological functions, . Where applicable, new development shall include environmental cleanup and restoration of the shoreline in accordance with state and federal requirements.

The City should encourage conservation and/or restoration projects, such as conserving and enhancing riparian forest and vegetation, re-creating off-channel habitat for salmonids, or establishing setback levees, in those opportunity areas referenced in the *City of Sumner Shoreline Restoration Plan Element* (see Appendix B).

Development Standards

1) **Riparian Management Zone**. Land within the fifty (50) foot setback from the OHWM is considered the "Riparian Management Zone." Within this zone, removal of vegetation and topsoil is strictly regulated under the Vegetation Conservation standards of this Master Program (see *Chapter 6: General Shoreline Policies and Regulations, Section III*).

2) **Environmental Mitigation**.

    a. Development requiring a Substantial Development Permit, Conditional Use Conditional Use, or Variance or environmental review under SEPA shall provide a habitat management and mitigation plan as specified in *Chapter 6: General Shoreline Policies and Regulations, Section V, Environmental Impact Mitigation*.

    b. Development that is exempt from a Substantial Development Permit, Conditional Use Conditional Use, or Variance or environmental review under SEPA shall provide for mitigation in a combination of the following ways:

        i. Increased riparian management zone on undeveloped area of the property;

        ii. Increased building setbacks,

        iii. Protection of existing shoreline vegetation contributing to the ecological functions.

        iv. Restoration of shoreline vegetation where it has been removed or degraded;

        v. Enhancements of shoreline vegetation through additional plantings;

        vi. Reduced project scope;

        vii. Limitations on construction hours;

        viii. Limitations on hours of operation;

        ix. Relocation of access; and

        x. Other reasonable mitigation measures as approved by the Shoreline Administrator.

    c. Projects may be denied if the proposal will result in a net loss of shoreline ecological function.

3) **Critical Area Regulations.** Development in the Urban environment shall comply with critical area regulations (see *Chapter 6 General Shoreline Policies and Regulations, Section VII, Critical Areas Protection*).

Areas Designated

Description

The **Urban** designation appears to be appropriate for only a portion of the White (Stuck) River shoreline, located in Segment C of the inventory, which is a mix of residential, industrial, and commercial uses.

Table 4-4. Urban Designation Description

Inventory Segment (see Map 2-1)	Area Designated	Shoreline Designation	Rationale
C WHITE RIVER (SR410 bridge to Union Pacific Railroad spur bridge, both sides of river)	• Right bank from south ROW line of SR 410 bridge to north ROW line of Bridge Street and; • Left bank from south ROW line of SR410 bridge to north ROW line of Union Pacific Railroad spur bridge	Urban	The area is predominately developed as a mix of commercial, residential, and industrial uses. There are smaller residential lots in the downtown area. Limited opportunities for restoration and enhancements are found in opportunity area C-1 as shown in the *Shoreline Inventory*

Note: ROW – Right-of-way.
Right bank refers to the river bank which, when one is facing downstream, is to one's right. Left bank refers to that bank to the left when one is facing downstream.

Rationale

The shorelines designated Urban do not have biophysical limitations to development such as floodplains. In fact, the 100-year floodplain of the White (Stuck) River is very narrow along this segment of shoreline and on the east side, confined within the riverbank. In addition, the shorelines designated Urban are currently used for a multitude of high intensity uses, including industrial, commercial, residential, and public services. There are areas of opportunity along the shoreline where restoration efforts could be concentrated to further enhance and conserve ecological functions and processes.

Tapps Reservoir Environment

Definition

An undeveloped area owned and managed by a utility company on Lake Tapps.

Purpose

The intent of the Tapps Reservoir environment is to accommodate limited development in the shorelines of the Lake Tapps reservoir area, a municipal water reservoir. The Tapps Reservoir Environment is intended to accommodate utility facilities related to reservoir management and preserve ecological function of the shoreline.

Designation Criteria

1) Tapps Reservoir environment designation is appropriate only to areas within or adjacent to Lake Tapps.

Management Policies

In addition to the other applicable policies and regulations of this Program, the following management policies should apply:

1) Give priority to reservoir management where such development can be accommodated without net loss of ecological functions or adversely affecting water quality in the reservoir.
2) Public outdoor recreation facilities should be encouraged if compatible with the character of the area. Preferred recreational uses include water-dependent and water-enjoyment recreation facilities that provide opportunities for substantial numbers of people to access and enjoy the shoreline.

Development Standards

1) **Critical Area Regulations.** Development in the Tapps Reservoir environment shall comply with critical area regulations (see *Chapter 6: General Shoreline Policies and Regulations, Section VII, Critical Areas Protection)*.
2) **Riparian management zone.** Land within the one-hundred (100) foot setback from the OHWM is considered the "Riparian Management Zone." Within this zone, removal of vegetation and topsoil is strictly regulated under the Vegetation Conservation standards of this Master Program (see *Chapter 6: General Shoreline Policies and Regulations, Section III*).

Areas Designated

Description

The **Tapps Reservoir** designation is appropriate for only the Lake Tapps shoreline, located in Segment UGA-1 of the inventory, which is currently undeveloped.

Table 4-5. Tapps Reservoir Designation Description

Inventory Segment (see Map 2-1)	Area Designated	Shoreline Designation	Rationale
UGA-1 Lake Tapps (Portion of Lake Tapps within Sumner's UGA)	• Portion of Lake Tapps within Sumner's UGA	Tapps Reservoir	Land use in this segment is entirely vacant and owned by Puget Sound Energy.

Rationale

The segment has been minimally developed and is primarily wetland and mature, mixed forest. There are 36 acres of mapped wetlands. This segment contains the penstock structure that releases water from Lake Tapps to the White (Stuck) River via the Dieringer Flume. In order to maintain consistency with Pierce County's proposed SED, Tapps Reservoir designation is appropriate.

Aquatic Environment

Definition

Areas waterward of the ordinary high water mark (OHWM). .

Purpose

The purpose of the Aquatic environment is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high-water mark.

Designation Criteria

1) Assign an Aquatic environment designation to lands waterward of the ordinary high-water mark.

Management Policies

In addition to the other applicable policies and regulations of this Program, the following management policies should apply:

1) Allow new over-water structures only for water-dependent uses, public access, or ecological restoration.
2) The size of new over-water structures should be limited to the minimum necessary to support the structure's intended use.

3) In order to reduce the impacts of shoreline development and increase effective use of water resources, multiple use of over-water facilities should be encouraged.
4) All developments and uses on navigable waters or their beds should be located and designed to 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.
5) Uses that adversely impact the ecological functions of critical freshwater habitats should not be allowed except where necessary to achieve the objectives of RCW 90.58.020, and then only when all potential impacts are mitigated as necessary to assure maintenance of shoreline ecological functions and processes.
6) Shoreline uses and modifications should be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.
7) New structures waterward of the ordinary high water mark should only be permitted for water-dependent uses, public access, or ecological restoration. The size of new over-water structures should be limited to the minimum necessary to support the structure's intended use.

Development Standards

Activities in the aquatic environment shall meet the development standards required by the Hydraulic Project Approval (WAC 220-110) and Section 404 permit requirements.

Areas Designated

Description

The **Aquatic** designation is appropriate for only areas waterward of the ordinary high water mark.

Table 4-6. Aquatic Designation Description

Inventory Segment	Area Designated	Shoreline Designation	Rationale
All areas waterward of OHWM Puyallup River, White River and Lake Tapps	• Shoreline of the state waters and underlying submerged lands waterward of the OHWM.	Aquatic	Areas waterward of OHWM contain critical habitats that require a special designation to address in-water work.

Rationale

Areas waterward of OHWM contain critical habitats that require a special designation to address in-water work.

Permitted Use and Modification Table

Chapters 6 and 7 of this Master Program establish policies and regulations for shoreline developments and activities. For each of these developments or activities a determination is made on whether it can be permitted by Substantial Development Permit, Conditional Use Permit, or whether it is prohibited. The reader should turn to Chapters 6 and 7 for the specific uses and modifications that are permitted, conditionally permitted and prohibited and the regulations that apply to such uses and modifications. However, the following table summarizes which shoreline uses and modifications are allowed and under what circumstances, and which uses or modifications are prohibited, in each shoreline environment designation. Uses or activities are noted for each shoreline environment as "P," "CUP," "-," or "N/A." This table is intended for reference purposes only. If information in the table conflicts with provisions in other parts of the SMP, the provisions contained in text sections of the SMP shall apply.

"P" = Permitted - Permitted uses may require Shoreline Exemption letters or Shoreline Substantial Development Permits, and any other permits required by the Sumner Municipal Code and/or other regulatory agencies.

"CUP" = Conditional Use - Conditional uses require Shoreline Conditional Use Permits and may require other permits required by the Sumner Municipal Code and/or other regulatory agencies. Some uses that are considered exempt from a Shoreline Substantial Development Permit per *Chapter 8: Administrative Procedures, Section 1.A* may still be required to obtain a Shoreline Conditional Use Permit.

"-" = Prohibited - Prohibited uses and activities are those which are not allowed to be developed or conducted within the shoreline jurisdiction.

N/A = Not Applicable – Not applicable refers to activities that do not occur in Sumner. Activities that are considered not applicable are prohibited.

Other uses which are not classified or set forth in the applicable master program may be authorized as conditional uses provided the applicant can demonstrate that such use is consistent with:

1) The requirements of this section and,
2) The requirements for conditional uses contained in the Shoreline Master Program and,
3) Is further consistent with the permitted and conditional uses and Conditional Use Permit provisions of the underlying zoning code.

Table 4-7. Permitted Use and Modification Table

Use/Modification	Natural	Urban Conservancy	Tapps Reservoir	Shoreline Residential	Urban	Aquatic
Agriculture	P, existing only	P	-	P	P	-
Aquaculture*	P	P	-	P	P	P
Boating facilities						
Boat launch ramps	-	CUP, only public use	CUP, only public use	CUP, only public use	CUP, only public use	CUP, only public use
Docks*	N/A	N/A	N/A	N/A	N/A	N/A
Dry boat storage	-	CUP	-	-	CUP	-
Marinas*	N/A	N/A	N/A	N/A	N/A	N/A
Breakwaters, jetties, groins, and weirs*	N/A	N/A	N/A	N/A	N/A	N/A
Clearing and grading	P, only in association of a restoration project	P, only in association of an allowed use	P, only in association of an allowed use	P, only in association of an allowed use	P, only in association of an allowed use	N/A
Commercial development						
Water-dependent	-	P	-	-	P	-
Water-related	-	CUP	-	-	P	-
Water-enjoyment	-	P**/CUP	-	-	P	-
Non-water-oriented	-	P**/CUP	-	-	P**/CUP	-

Use/Modification	Natural	Urban Conservancy	Tapps Reservoir	Shoreline Residential	Urban	Aquatic
Dredging and dredge material disposal						
Dredging	CUP	CUP	CUP	CUP	CUP	CUP
Dredge Material Disposal	CUP, only as part of restoration project	CUP	CUP	P	P	CUP
Ecological restoration / enhancement / mitigation						
Ecological restoration / enhancement / mitigation	P	P	P	P	P	P
Shoreline habitat and natural systems enhancement	P	P	P	P	P	P
Wetland Mitigation Bank	P	P	P	P	P	P
Fill						
Within floodway	CUP, only as part of restoration project	CUP, only in association with an allowed use	CUP, only in association with an allowed use	CUP, only in association with an allowed use	CUP, only in association with an allowed use	CUP
Outside floodway	P, only as part of restoration project	P, only in association with an allowed use	P, only in association with an allowed use	P, only in association with an allowed use	P, only in association with an allowed use	CUP
Flood control works						
Dikes and levees	CUP	CUP	CUP	CUP	CUP	CUP
Forest practices	-	-	-	-	-	N/A

Use/Modification	Natural	Urban Conservancy	Tapps Reservoir	Shoreline Residential	Urban	Aquatic
Industrial Development						
Water-dependent	-	P	-	-	P	-
Water-related	-	CUP	-	-	P	-
Non-water-oriented	-	CUP	-	-	CUP	-
In-stream structures	CUP	CUP	CUP	CUP	CUP	CUP
Mining	-	-	-	-	-	-
Parking	-	P, only as an accessory to an allowed use	P, only as an accessory to an allowed use	P, only as an accessory to an allowed use	P, only as an accessory to an allowed use	-
Recreational development						
Water-dependent	P, low-intensity only	P	P	P	P	CUP
Water-related	-	P	P	P	P	-
Water-enjoyment	-	P	P	P	P	CUP
Non-water-oriented	-	CUP	CUP	P	P	-
Residential development	-	CUP	-	P	P	-
Residential docks*	N/A	N/A	N/A	N/A	N/A	N/A
Scientific Research	P	P	P	P	P	P
Shoreline stabilization						
Hard-armoring (bulkheads, revetments)	CUP	CUP	CUP	P	P	CUP/P, see upland designation
Soft-armoring	P	P	P	P	P	P

Use/Modification	Natural	Urban Conservancy	Tapps Reservoir	Shoreline Residential	Urban	Aquatic
Signs	-	P, only in association of an allowed use	P, only in association of an allowed use	P, only in association of an allowed use	P, only in association of an allowed use	P, only in association with a water-dependent use
Stormwater Facilities	-	CUP, only as an accessory to an allowed use	-	CUP, only as an accessory to an allowed use	CUP, only as an accessory to an allowed use	-
Transportation Facilities	CUP	CUP	CUP	P	P	CUP
Utilities						
Water-dependent	CUP	P	P	P	P	P
Non-water-dependent	CUP	CUP	CUP	CUP	CUP	CUP
Unclassified Uses	CUP	CUP	CUP	CUP	CUP	CUP

*Uses such as marinas, docks, and breakwaters would not be feasible in an active river system that frequently floods. These types of water-dependent uses in a flood event would be destroyed or damaged heavily and are inappropriate in Sumner's shoreline jurisdiction. Similarly, such uses would not be feasible in Lake Tapps due to the existing utility use.

**Permitted along both banks of the White (Stuck) River between the Fryar Avenue bridge crossing and the confluence of the White (Stuck) River with the Puyallup River provided Regulation #6 in *Chapter 7: Specific Shoreline Development Policies and Regulations, Section V, Commercial Development Regulations* is met. A CUP is required for all other areas within city limits.

Prohibited Modifications and Uses

The following modifications and uses are prohibited in all shoreline environment designations. See *Chapter 9: Definitions and Acronyms* for definitions of the following modifications and uses:

1) Docks
2) Private boat launch ramps
3) Breakwaters, jetties, groins, and weirs
4) Forest Practices
5) Marinas
6) Mining
7) Parking as a Primary Use
8) Permanent Solid Waste Storage or Transfer Facilities

Bulk Dimensional and Vegetation Standards Table

Table 4-7 establishes standards for building height, impervious surface coverage, and riparian management zone by shoreline environment designation. Regulations for each standard are provided after the table.

Table 4-8. Bulk Dimensional and Vegetation Standards

Bulk Dimensional and Vegetation Standards	Natural	Urban Conservancy	Tapps Reservoir	Shoreline Residential	Urban	Aquatic
Maximum Building Height[1,2,3]	35 feet	35 feet	35 feet	35 feet	35 feet	N/A
Maximum Impervious Lot Coverage[4]	20%	40%	20%	40%	80%	N/A
Minimum Riparian Management Zone[5, 6]	200 feet	100 feet or 200 feet[7]	100 feet	100 feet	50 feet	N/A

[1]As allowed by the underlying zoning.
[2]See Maximum Building Height section below for additional requirements.
[3] The height limit shall not apply to cupolas, water tanks, church spires, flagpoles, transmission lines, and radio and television towers and other similar structures.
[4]See Maximum Impervious Lot Coverage section below for additional requirements.
[5]Minimum riparian management zone standard does not apply to water-dependent development, public access, water-related recreational development, or minor activities allowed in critical areas and buffers pursuant to *Chapter 6: General Shoreline Policies and Regulations, Section VII Critical Areas Protection*.
[6]See Minimum Riparian Management Zone section below and *Chapter 6: General Shoreline Policies and Regulations, Section III, Vegetation Conservation* for additional requirements.
[7]Refer to *Map 4-1, Official Shoreline Map*, for specific riparian management zones within the Urban Conservancy environmental designation.

Maximum Building Height

1) No new or expanded building or structure shall exceed the maximum building height established in Table 4-7, except as follows:

    a. A Shoreline Variance from the maximum height limitation established in Table 4-7 can be granted if the following conditions are met.

        i. The development will not obstruct the view of a substantial number of residences;

        ii. The overriding considerations of the public interest will be served; and

        iii. The requested Variance does not go beyond the minimum necessary to afford relief.

    b. The requested Variance may be granted only when all the following facts and conditions are found to exist:

        i. The requested deviation from the code standards is necessary for the successful physical function of the proposed use;

        ii. Reasonable alternatives which result in reduced or no deviation from the height limitations have been considered;

        iii. The granting of such deviation will not be materially detrimental to the public welfare or injurious to the property or improvements in the adjacent shoreline areas and in the zone in which the subject property is situated; and

iv. The proposed Variance from the height limitation is consistent with the city's comprehensive plan.

c. A shoreline variance from the height limitations shall also comply with the variance criteria listed in *Chapter 8: Administrative Procedures*.

Maximum Impervious Lot Coverage

1) The impervious lot coverage is calculated by dividing the total area of impervious surface (e.g., driveways, buildings, patios, parking lots) located in shoreline jurisdiction by the total lot area that is within shoreline jurisdiction and then multiplied by one-hundred (100) to convert to percentage points.

2) The maximum impervious lot coverage established in Table 4-7 shall not be exceeded.

Minimum Riparian Management Zone

1) A riparian management zone is measured from the ordinary high water mark, on a horizontal plane, perpendicular to the shoreline.

2) Permanent structures, storage, and hard surfaces not associated with water-dependent uses, water-dependent modifications, public access, water-related recreational development or minor activities allowed in critical areas and buffers pursuant to *Chapter 6: General Shoreline Policies and Regulations, Section VII, Critical Areas Protection* shall not be located within the minimum riparian management zone established in Table 4-7. Parking shall not be allowed within the riparian management zone. Developments associated with a water-dependent use, water-dependent modification, public access, water-related recreational development, or minor activities allowed in critical areas and buffers pursuant to *Chapter 6: General Shoreline Policies and Regulations, Section VII, Critical Areas Protection* may be located in the riparian management zone; however, where such development can be approved within the riparian management zone, the placement of structures, storage, and hard surfaces shall be limited to the minimum necessary for the successful operation of the use. Furthermore, public access and water-related recreational development shall comply with regulations in *Chapter 6: General Shoreline Policies and Regulations, Section VIII, Public Access and Chapter 7: Specific Shoreline Development Policies and Regulations, Section XIV, Recreational Development*.

3) Removal of vegetation and topsoil is strictly regulated under the Vegetation Conservation section (see *Chapter 6: General Shoreline Policies and Regulations, Section III*) and the Clearing and Grading section (see *Chapter 7: Specific Shoreline Development Policies and Regulations, Section IV*).

CHAPTER 5 GOALS FOR THE SUMNER SHORELINE MASTER PROGRAM

Introduction

Based on the Shoreline Management Act (RCW 90.58.100), the following elements have been considered in the preparation of this Master Program for the City of Sumner: Economic Development, Public Access, Circulation, Recreation, Shoreline Use, Conservation, and Historical/Cultural Resources. The goals and objectives established for these elements are the basis for policies and regulations included under the general and specific use requirements of this Master Program.

Economic Development Element

Goal Provide for economic activity that is water-dependent, water-related, or that provides an opportunity for a substantial number of people to enjoy the shoreline (water-enjoyment).

Objective To plan for uses that benefit from a shoreline location.

Public Access Element

Goal Increase public access to the shoreline, and preserve and enhance views of the shoreline.

Objective To provide for public access to publicly owned shoreline areas, except where deemed inappropriate due to safety hazards, inherent security problems, environmental impacts, or conflicts with adjacent uses. Require dedication of property or easements to provide for public access across private property as a condition of non-water dependent development.

Circulation Element

Goal Provide safe and adequate vehicular 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 system.

Objective To allow vehicular circulation systems within shoreline jurisdiction that benefit permitted uses without degrading the environment or aesthetic values of the area.

Recreational Element

Goal Provide public access and opportunities for recreation along the shoreline wherever appropriate.

Objective To develop public access and recreation opportunities that are compatible with adjacent uses and that protect the shoreline environment.

Shoreline Use Element

Goal Ensure that the overall design of land use patterns will locate activity and development in areas of the shoreline that will be compatible with adjacent uses and will be sensitive to existing shoreline environments, habitat, and ecological systems.

Objective To promote the best possible pattern of land and water uses consistent with the Shoreline Management Act of 1971, Ecology Guidelines, the City of Sumner Comprehensive Plan, the City of Sumner Parks and Recreation Plan, the Sumner Trail Master Plan, and the Sumner Zoning Code.

Conservation Element

Goal Preserve, protect, and restore to the greatest extent feasible the physical, biological, and visual attributes of the shoreline environment.

Objective Through the use of best available science develop and implement siting criteria, design standards, and best management practices that will ensure the long term enhancement of unique shoreline features, natural resources, and fish and wildlife habitat.

Objective To designate and develop areas where there is an opportunity to restore, enhance, and conserve the natural shoreline for the benefit of fish and wildlife habitat.

Historical/Cultural Element

Goal Identify, preserve, protect, and restore shoreline areas having historical, cultural, educational, or scientific values.

Objective To ensure the recognition, protection, and restoration of shoreline areas that have historical and or cultural value to the City of Sumner and create a unique “sense of place” for public facilities and recreation areas in the shoreline jurisdiction.

Flood Hazard Management

Goal Protect the City of Sumner from losses and damage created by flooding.

Objectives To seek regional solutions to flooding problems through coordinated planning with state and federal agencies, other appropriate interests, and the public

To ensure that flood hazard protection projects have a positive environmental benefit that emphasize long-term solutions over short term solutions.

CHAPTER 6 GENERAL SHORELINE POLICIES AND REGULATIONS

I. Introduction

These general policies and regulations apply to all shoreline development, modifications and uses. Any conflicts between the regulations within this Chapter and other relevant federal, state, or local regulations are resolved in favor of the regulation that is most protective of the shoreline ecological functions.

In addition to the general policies and regulations listed below, all proposed developments must comply with the policies for shorelines of statewide significance (see *Chapter 3: Shorelines of Statewide Significance*) and the policies and regulations for specific uses and modifications (see *Chapter 7: Specific Shoreline Development Policies and Regulations*).

II. Reader's Key

The following abbreviations and terms are used in this chapter. For ease of reading, a quick definition is provided here. These terms are defined in more detail in the following text and again in *Chapter 9: Definitions and Acronyms*.

Table 6-1. Abbreviations & Terms

Abbreviation	Term	Meaning
BMP	Best Management Practices	Physical, structural, and/or managerial practices, that when used singly or in combination, prevent or reduce water pollution, erosion, groundwater contamination, slope instability and similar impacts of construction, development and other actions.
--	Ecological Functions	Those functions that contribute to the maintenance of the aquatic and terrestrial environments that constitute the shoreline's natural ecosystem.

Abbreviation	Term	Meaning
--	Mitigation or Mitigation Sequencing	The process necessary to avoid, minimize or reduce, or compensate for the environmental impact(s) of a proposal. Mitigation or mitigation sequencing means the following sequence of steps listed in order of priority, with (a) of this subsection being top priority (WAC 173-26-201): 1) Avoiding the impact altogether by not taking a certain action or parts of an action; 2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts; 3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment; 4) Reducing or eliminating the impact over time by preservation and maintenance operations; 5) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and 6) Monitoring the impact and the compensation projects and taking appropriate corrective measures.

III. Vegetation Conservation

Definitions

Invasive Species: Plant species, typically non-native, that grows rapidly tending to occupy an area to the detriment of other, typically native, plant species.

Riparian: Of, on, or pertaining to the lands that border rivers or lakes forming transition zones between aquatic and terrestrial habitats.

Riparian Management Zone: Riparian management zones are measured landward from the ordinary high water mark and are established in Table 4-7. The purposes for maintaining a riparian management zone are to preserve the natural character of the shoreline, to protect the functions and values of critical areas, to ensure no net loss of ecological functions and processes and to enhance the recreational experience for the public using the river or lake and adjacent lands. *Chapter 3: Shorelines of Statewide Significance,* describes these purposes in more detail and establishes the riparian management zone as a primary means of complying with the priorities for shorelines of statewide significance.

Significant Vegetation Removal: The removal or alteration of trees, shrubs, and/or ground cover by clearing, grading, cutting, burning, chemical means, or other activity that causes significant ecological impacts to functions provided by such vegetation. The removal of invasive or noxious weeds does not constitute significant vegetation removal. Tree pruning, not including tree topping, where it does not affect ecological functions, does not constitute significant vegetation removal.

Vegetation Conservation Policies

1) Develop measures to conserve native vegetation along shorelines. Vegetation conservation may include avoidance or minimization of clearing and grading, avoidance of tree removal, enhancement of areas of native vegetation, and/or control of invasive or non-native vegetation.

2) Vegetation removal should not be permitted within the riparian management zone, unless ecological functions and processes will not be degraded.

Vegetation Conservation Regulations – General

1) Outside of riparian management zones, normal non-destructive pruning and trimming of vegetation for maintenance purposes shall be permitted. Techniques shall include selective pruning, winnowing and other measures that preserve native plant composition, particularly tree form and structure. Limbing and crown thinning may be appropriate if sufficient crown is retained to preserve the trees fullness, health, and function.

2) Clearing invasive non-native shoreline vegetation listed on the Pierce County Noxious Weed List is permitted, provided hand held equipment is used and native vegetation is promptly reestablished in the disturbed area.

3) Should a development propose unavoidable impacts adverse to native shoreline vegetation located within the shoreline jurisdiction, mitigation shall be required. Mitigation shall ensure that there will be no net loss in the amount of vegetated area or the ecological functions performed by the disturbed vegetation. On-site and in-kind mitigation is preferred. Mitigation plans shall be completed before initiation of permitted activities, unless a phased or concurrent schedule that assures completion prior to occupancy has been approved by the Shoreline Administrator.

4) When restoring or enhancing shoreline vegetation, proponents shall use native species that are of a similar diversity, density, and type to that occurring in the general vicinity of the site prior to any shoreline alteration. The vegetation shall be a mix of native species from each vegetation class of ground cover, shrubs and trees nurtured and maintained to ensure establishment of a healthy and sustainable native plant community over time.

Vegetation Conservation Regulations - Riparian Management Zone

1) The riparian management zone should be established by a permanent protective easement or a public or private land trust dedication. An easement shall also be provided by the underlying property owner that grants the City access to the buffer for the placement of further conservation/restoration measures.

2) In order to maintain riparian corridors along both sides of the White (Stuck) and Puyallup Rivers and along Lake Tapps, the City of Sumner shall regulate the cutting, trimming, and clearing of vegetation within the riparian management zone, as follows:

   a) Topping of trees and trimming of vegetation may be permitted within the riparian management zone, provided all of the following conditions are met:

i. This provision is not interpreted to allow clearing of vegetation,

ii. A certified arborist reviews the tree and states that no alternative to the topping or trimming of trees is appropriate or that work will not harm the vitality of these trees; and

iii. The Shoreline Administrator determines, after consultation with the Washington Department of Fish and Wildlife, that such topping and trimming is not detrimental to the riparian functions and values.

3) Vegetation removal within the riparian management zone is regulated as follows:

a) For water-dependent uses, water-dependent modifications, water-related recreational development and public access, vegetation removal shall be limited to the minimum necessary for the successful operation of the use, subject to the requirements of this section and *Clearing and Grading* provisions in *Chapter 7: Specific Shoreline Development Policies and Regulations*.

b) Vegetation removal is permitted for public access provided that it meets the requirements for public access as set forth *Section VIII, Public Access* section.

4) In all cases where vegetation removal may be approved pursuant to *Section III, Vegetation Conservation Regulations – Riparian Management Zone, Regulation #3* , exposed soils shall be immediately developed or revegetated to prevent erosion. Unless it would interfere with river access or the successful operation of a water-dependent use, cleared land within twenty-five (25) feet of the ordinary high water mark shall be revegetated with plants that benefit ecological functions and processes, such as native trees, shrubs and groundcover.

5) In all cases where clearing is allowed pursuant to *Section III, Vegetation Conservation Regulations – Riparian Management Zone, Regulation #3*, it shall be followed by revegetation; native plants shall be required[1], and cut trees larger than 9 inches caliper, as measured one (1) foot above grade, shall be retained in the vegetation management zone for habitat value.

6) Revegetation shall involve the placement of groundcover, shrubs, or trees and the following regulations shall apply:

a) At the time of planting, groundcover must be planted such that complete coverage is attained within one growing season.

b) At the time of planting, shrubs must be a minimum of twelve (12) inches high. Shrubs should be planted such that within two years the shrubs will cover at least sixty percent (60%) of the area that would be covered when the shrubs have attained a mature size.

c) For every tree greater than four (4) inches caliper, as measured one (1) foot above grade, removed for clearing, a minimum of two trees shall be planted for compensation.

[1] A list of native plants that are adapted to riparian conditions will be provided by the City of Sumner, in consultation with appropriate local and state agencies. The Washington Department of Fish and Wildlife can also provide a list of species that benefit riparian habitat areas.

d) Plants native to western Washington shall be used.

e) A mix of vegetation classes (i.e. ground cover, shrubs, and trees) shall be used. Minimally, trees shall be planted 20 feet on center.

7) The applicant shall install and implement a temporary irrigation system to ensure survival of vegetation planted in compliance with the riparian management provisions of this Master Program. Once the planted vegetation has been properly established, the irrigation system shall be removed.

8) For a period of two (2) years after initial planting, the applicant shall replace any unhealthy or dead vegetation planted as part of an approved landscape plan.

9) The Shoreline Administrator may require an applicant to submit a financial guarantee to the city to guarantee compliance with the riparian management zone regulations as a condition of permit approval. The permit shall not be issued until the appropriate financial guarantee is received by the Shoreline Administrator. Financial guarantees shall be in the amount of 120 percent of the estimate of the cost of compliance with the riparian management zone regulations to allow for inflation and administration should the City have to complete the mitigation or monitoring.

IV. Water Quality

Definition

Water Quality: The physical characteristics of water within shoreline jurisdiction, including water quantity, hydrological, physical, chemical, aesthetic, recreation-related, and biological characteristics. Where used in this master program, the term "water quantity" refers only to development and uses regulated under the Shoreline Management Act and affecting water quantity, such as impermeable surfaces and storm water handling practices. Water quantity, for purposes of this master program, does not mean the withdrawal of groundwater or diversion of surface water pursuant to RCW 90.03.250 through 90.03.340.

Water Quality Policies

1) The City should prevent impacts to water quality and storm water quantity that would result in a net loss of shoreline ecological functions, or a significant impact to aesthetic qualities, or recreational opportunities.

2) Storm water management treatment, conveyance, or discharge facilities should be discouraged in the shoreline jurisdiction, unless no other feasible alternative is available.

3) Low impact development techniques that allow for greater amount of storm water to infiltrate into the soil should be encouraged to reduce storm water run-off.

4) Encourage conservation of existing shoreline vegetation which provides water quality protection by slowing and filtering stormwater runoff.

Water Quality Regulations

1) Shoreline development and activity shall avoid any alteration of natural river flow or floodway capacity and shall comply with the applicable requirements of *Section 6.11, Flood Hazard Area*.

2) Shoreline development and activity shall minimize impacts to hydro-geomorphic processes, surface water drainage, and groundwater recharge and shall comply with the applicable requirements of the City of Sumner Development Specifications and Standard Details, Chapter 5.

3) All practicable measures shall be taken to protect waterbodies and wetlands from all sources of pollution, including, but not limited to sedimentation and siltation, petrochemical use and spillage, and storage of wastes and spoils. Developments shall comply with SMC 16.05, Control of Erosion and Sedimentation of Waterways.

4) Adequate provisions to prevent water runoff from contaminating surface and groundwater shall be included in shoreline development design.

5) Hazardous and/or toxic materials shall be prohibited within shoreline jurisdiction. In addition, emergency methods shall be available to prevent hazardous and/or toxic materials from entering the Puyallup or White (Stuck) Rivers or Lake Tapps and their associated wetlands, if these substances are used or stored in a portion of a shoreline development that extends outside of shoreline jurisdiction.

6) The release of oil, chemical, 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, the further use of such equipment shall be suspended until the deficiency has been satisfactorily corrected. During construction in shoreline areas, the exclusion of vehicle refueling or vehicle maintenance from shoreline areas shall be the preferred BMP. The bulk storage of oil, fuel, chemical, or hazardous materials, on either a temporary or a permanent basis, shall not occur in the shoreline jurisdiction without adequate secondary containment.

7) The use of herbicides and pesticides shall be prohibited to remove noxious and invasive plants in the riparian management zones of rivers, streams, and wetland areas, except where no reasonable alternatives exist and it is demonstrated that such activity is in the public interest. A Conditional Use shall be required in such cases. Mechanical removal of noxious and invasive weeds shall be timed and carried out in a manner to minimize any disruption of wildlife or habitat.

8) For lawns and other vegetation maintained within shoreline jurisdiction, alternatives to the use of chemical fertilizers, herbicides, and pesticides shall be a preferred BMP. Where chemical fertilizer, herbicide, or pesticide use is necessary for protecting existing natural vegetation or establishing new vegetation in shoreline areas as part of an erosion control or mitigation plan, the use of time release fertilizer and herbicides shall be preferred over liquid or concentrate application.

9) Stormwater facilities that are designed to treat surface water runoff for the purpose of maintaining and/or enhancing water quality shall be located outside of shoreline jurisdiction whenever feasible. When located within shoreline jurisdiction, all measures for the treatment of surface water shall be conducted on-site, unless off-site options can

be demonstrated to be more beneficial for shoreline ecological functions and processes. Treatment facilities shall not be allowed within the required riparian management zone, unless the Shoreline Administrator determines there would be a benefit to shoreline functions.

V. Environmental Impact Mitigation

Definitions

Environmental Impacts. The effects or consequences of actions on the natural and built environments. Environmental impacts include effects upon the elements of the environment listed in the State Environmental Policy Act (SEPA) (WAC 197-11-060 and WAC 197-11-444)

Mitigation or Mitigation Sequencing. The steps necessary to avoid, minimize, reduce, or compensate for the environmental impact(s) of a proposal pursuant to the requirements in WAC 173-26-201(2)(e).

Environmental Impact Policy

1) All shoreline use and development should be carried out in a manner that avoids and minimizes adverse impacts so that the resulting ecological condition does not become worse than the current condition. This means assuring no net loss of ecological functions and processes and protecting critical areas designated in *Section VII, Critical Areas Protection* that are located in the shoreline. Should a proposed use and development potentially create environmental impacts, the Shoreline Administrator should require mitigation measures to ensure no net loss of shoreline ecological functions.

Environmental Impact Regulations

1) All shoreline development and activity shall be located, designed, constructed, and managed in a manner that mitigates adverse impacts to the environment. When required, mitigation measures shall be applied in the in the following sequence of steps listed in order of priority, with 1a of this subsection being top priority:
   a) Avoiding the impact altogether by not tak*ing a certa*in action or parts of an action;
   b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;
   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 the compensation projects and taking appropriate corrective measures.

2) In determining appropriate mitigation measures applicable to shoreline development, lower priority measures shall be applied only where higher priority measures are determined to be infeasible or inapplicable.

3) All shoreline development and activity shall be located, designed, constructed, operated, and managed to minimize interference with beneficial natural shoreline processes, such as, but not limited to, water circulation, sand and gravel movement, erosion, and accretion.

4) All shoreline development and activity shall recognize the primacy of preserving the natural character of the White (Stuck) and Puyallup Rivers and Lake Tapps and the fish and wildlife supported by these shorelines, as required for shorelines of statewide significance.

5) In approving shoreline developments, the City of Sumner shall ensure that the development will maintain, enhance, or restore desirable shoreline features, as well as protect ecological functions and processes. To this end, the City will adjust and/or prescribe project dimensions, location of project components on the site, intensity of use, and screening as deemed appropriate.

6) Projects shall be designed to avoid the removal of trees in shorelines, wherever practicable and to minimize the removal of other woody vegetation. Where riparian vegetation is removed, measures to mitigate the loss of vegetation shall be implemented to assure no net loss in ecological function and processes.

7) Mitigation shall be required of the proponent for the loss of ecological functions and processes, including fish and wildlife resources, natural systems, riparian vegetation, wetlands and other critical areas. The mitigation required shall be commensurate to the value and type of resource or system impacted by development and activity in the shoreline. On-site compensatory mitigation shall be the preferred mitigation option, except where off-site mitigation can be demonstrated to be more beneficial to ecological functions and processes If on-site compensatory mitigation is not feasible or if off-site mitigation is demonstrated to be more beneficial to the shoreline environment, participation in a publicly sponsored restoration or enhancement program or credits from a state certified mitigation in accordance with chapter 90.84 RCW shall be the preferred option.

8) Enhancement and/or restoration of coniferous riparian forest or deciduous riparian forest shall be the preferred mitigation for impacts to riparian vegetation when avoidance is not possible. Where mitigation for loss of or impact to ecological function and processes is required, a habitat management plan shall be required. Habitat management plans shall be prepared by a professional wildlife biologist or fisheries biologist as determined appropriate by the Shoreline Administrator. The habitat management plan shall contain at a minimum:

a) A discussion of the project's effects on ecological functions and processes;

b) A discussion of any federal, state, or local special management recommendations which have been developed for species or habitats located on the site;

c) A discussion of measures to preserve existing habitats and restore habitats which were degraded prior to the proposed land use activity. Restoration plans shall

include at a minimum: planting and soil specifications; success standards; and contingency plans;

d) A discussion of proposed measures which mitigate the impacts of the project;

e) An evaluation of the effectiveness of the proposed mitigation and restoration measures;

f) A discussion of ongoing management practices which will protect ecological functions and processes after the project site has been fully developed, including proposed monitoring and maintenance programs;

g) An assessment of habitat recommendations proposed by resource agencies and their applicability to the proposal; and

h) Any additional information necessary to determine the impacts of a proposal and mitigation of the impacts.

i) Habitat management plans shall be forwarded to the appropriate state and/or federal resource agencies for review and comment.

9) Annual monitoring reports shall be provided to the City by the property owner until the mitigation and/or restoration has been in place for at least 10 years and the success standards have been met. The City shall forward the monitoring reports annually to the appropriate federal agencies along with the following:

a) A list and map of the location of development permits issued in the last calendar year;

b) The implementation status of Habitat Management Plans; and

c) The status of the habitat improvements.

10) Based on the habitat management plan, and comments from other agencies, the Shoreline Administrator may require mitigating measures to reduce the impacts of the proposal on critical habitat and/or wildlife areas. Mitigating measures must demonstrate that no net loss of ecological functions has been achieved through the habitat management plan and may include, but are not limited to, increased buffers, building setbacks, enhanced buffers, reduced project scope, limitations on construction hours, limitations on hours of operation, and relocation of access. Projects may be denied if the proposal will result in net loss of ecological functions.

11) Mitigation activities shall be monitored to determine effectiveness of the habitat management plan. Monitoring shall be accomplished by a third party, subject to the approval of the Shoreline Administrator, and shall have the concurrence of the U.S. Fish and Wildlife Service, National Marine Fisheries Service, FEMA, Washington Department of Fish and Wildlife, and, where applicable, the Washington Department of Ecology. Monitoring shall occur over ten (10) years following implementation of the plan. Results of the monitoring shall be publicly available and reported to the U.S. Fish and Wildlife Service and National Marine Fisheries Service. Reports shall contain the following information:

a) A list of parcels subject to this requirement;

b) The implementation status of the habitat management plans;

c) Status of the improvements (e.g. update if success standards are being met, what types of remedial actions have been implemented.)

12) If mitigation is found to be ineffective, corrective action will be required of the proponent, which satisfies the mitigation objectives.

13) If mitigation is found to be inadequate or if adequate mitigation is determined to be impossible, the application shall be denied.

14) Timing of in-water construction, development, or activity shall be determined by Washington Department of Fish and Wildlife

VI. Historical and Cultural Resources

Definition

Archaeological: Having to do with the scientific study of material remains of past human life and activities.

Historical and Cultural Resources Policies

1) Preserve and maintain the historic, cultural, scientific, or educational integrity of known resources, including properties listed on the National or State Register of Historic Places. Plan and design development on sites having historic, cultural, or archeological resources in a manner that prevents impacts to the resource and provides educational benefits to the public, where appropriate.

2) Encourage private and public owners of historic sites to provide public access and educational opportunities in a manner consistent with long term protection of the resource.

Historical and Cultural Resources Regulations

1) Wherever possible, public or private developments shall be prevented from destroying or destructively altering potential or recognizable sites having historic, cultural, scientific, or educational value as identified by appropriate authorities.

2) All shoreline permits and statements of exemption shall contain provisions that require developers to immediately stop work and notify the City of Sumner, the State Department of Archaeology and Historic Preservation (DAHP), the Puyallup Tribe of Indians, and the Muckleshoot Tribe if any artifacts of possible historic, cultural, or archaeological value are uncovered during excavation. In such cases, the developer shall be required to provide for a site inspection and evaluation by a professional archaeologist or historic preservation professional, as applicable, in coordination with the state and/or affected tribes to ensure that all possible valuable historic, cultural, or archaeological artifacts is properly protected or salvaged.

3) Upon receipt of an application for a shoreline permit or request for a statement of exemption for development on properties known to contain an historic, cultural or archaeological resource(s), the City shall require a site inspection, evaluation, and written report by a professional archaeologist or historic preservation professional, as applicable, to determine the presence of cultural, historic or archaeological resource(s). If it is

determined that a site has a significant resource(s), shoreline permits or a statement of exemption shall not be issued until protection or mitigation is developed to the satisfaction of both DAHP and affected tribes.

4) Where provision of public access for purposes of public education related to an identified historic, cultural, or archaeological site is desired by the property owner and the City, then the City, DAHP, Muckleshoot Indian Tribe, Puyallup Tribe of Indians and/or other agencies, as appropriate, shall be consulted and approvals obtained prior to providing public access to the site. Public access shall be consistent with the provisions for public access and shall not damage or reduce the cultural value of the site. A public access management plan shall be developed in consultation with DAHP, affected tribes and/or other agencies to address the following:

   a) The type and/or level of public access that is consistent with the long term protection of both historic resource values and shoreline ecological functions and processes; and

   b) Types and location of interpretative signs, displays and other educational materials; and

   c) Site - and resource-specific conditions, including hours of operation, interpretive and/or directional signage, lighting, pedestrian access, and/or traffic and parking.

VII. Critical Areas Protection

Definition

Critical Areas: Those areas established as volcanic hazard areas, wetlands, flood hazard areas, fish and wildlife habitat areas, seismic hazard areas, landslide hazard areas, erosion hazard areas, and aquifer recharge areas.

Critical Areas Protection Policies

1) Shoreline developments that protect and/or contribute to the long-term restoration of shoreline ecological functions and processes are consistent with the fundamental goals of this Master Program. Shoreline developments that propose to enhance critical areas, other natural characteristics, or resources of the shoreline are also consistent with the fundamental goals of this Master Program, and should be encouraged.

2) Unique, rare, and fragile natural and manmade features as well as scenic vistas, and wildlife habitats should be preserved and protected.

3) The diversity of aquatic life, wildlife, and habitat within the shoreline should be enhanced.

4) Conserve and maintain designated open spaces for ecological reasons and for educational and recreational purposes.

5) Recognize that the interest and concern of the public is essential to the improvement of the environment and sponsor and support public information programs to that end.

6) The level of public access should be appropriate to the degree of uniqueness or fragility of the geological and biological characteristics of the shoreline (e.g., wetlands, spawning areas).

7) Intensive development of shorelines areas that are identified as hazardous or environmentally sensitive to development should be discouraged.

Critical Areas Protection Regulations – General

1) In general, this Master Program shall strive to protect and restore anadromous fisheries in the White (Stuck) and Puyallup Rivers.

2) Shoreline development and uses shall not adversely affect species that are federally-listed as threatened or endangered species under the Endangered Species Act.

3) Shoreline development and activity shall be located and conducted in a manner that minimizes impacts to existing ecological values and natural resources of the area, and conserves properly functioning conditions.

4) Shoreline development and activity shall be scheduled to protect biological productivity and to minimize interference with fish resources including salmonid migration, spawning, and rearing activity.

5) Shoreline activities and development projects shall minimize impacts to natural features of the shoreline as much as possible.

6) Shoreline development and activity shall maintain the unconstrained upstream and downstream migration of both adult and juvenile anadromous and resident fish, when applicable.

7) Gravel bars and other accretion shoreforms are valued for recreation and in some cases may provide fish spawning substrate. Therefore, developments that could disrupt these shoreforms shall be carefully evaluated and only allowed: when such disruption would not reduce shoreline ecological functions and processes; where there is a demonstrated public benefit; and where the Department of Fish and Wildlife determines there would be no significant impact to the fisheries resource.

Critical Areas Protection Regulations – Natural Resource Lands and Critical Areas

6.1 Resource, Wildlife and Hazard Area Regulation Framework

6.1.1. Shoreline jurisdiction limits.

The provisions of *Section VII, Critical Areas Protection* do not extend beyond the shoreline jurisdiction limits specified in this Section and the Act. For regulations addressing critical area buffers that are outside of the shoreline jurisdiction, see SMC Title 16, Division III Natural Resource Lands and Critical Areas.

6.1.2. Purpose.

The purpose of this subsection is to regulate the use of land in and around critical areas, resource lands, wildlife habitat, and natural hazard areas lying within the corporate limits of the city; to incorporate appropriate "best available science" into the regulation of critical areas, resource lands, wildlife habitat, and natural hazard areas (RCW 36.70A.172(1)); and to promote the public health, safety and general welfare in accordance with the standards established by the state and the city, and to:

1) Protect areas of land with valuable and nonrenewable resources for future generations in a manner consistent with the current comprehensive plan until such time as a revised comprehensive plan determines the future use of such lands;

2) Regulate development on and around critical areas in order to protect lives, property and public infrastructure;

3) Prevent development which is incompatible with certain critical areas which are particularly susceptible to water quality, noise, and air quality impacts associated with nearby development;

4) Establish mechanisms to inform present and future landowners of their location on or near resource or critical lands;

6.1.3. General application.

1) This subsection shall apply to all properties which are designated as critical areas or natural resource lands by the city. Properties containing portions of critical areas or natural resource lands are subject to this subsection. When the requirements of this subsection are in conflict with other Sumner ordinances or regulations, the ordinance or regulation that is most consistent with the Shoreline Management Act shall apply.

2) All actions taken by any person, persons, institutions, corporations, or other entity shall comply with the requirements of this subsection or the conditions of any decision resulting from this subsection. Failure to comply with these provisions is a violation of this subsection and shall be subject to enforcement action as provided for in this Program.

3) Where a site contains two or more critical areas or natural resource lands, the site shall meet the minimum standards and requirements for each identified critical area or natural resource land as set forth in this subsection.

6.1.4. Mapping.

Maps have been developed to indicate the location of natural resource lands and critical areas by state and federal agencies. Maps may be developed by the city which show the general location of natural resource lands and critical areas for informational purposes. The actual presence of critical areas and natural resource lands shall be determined by the classification criteria established for each natural resource land and critical area. The burden and costs associated with further delineation of resource or critical lands shall be borne by project applicants.

6.1.5. Permitted uses.

Uses permitted on properties designated as critical areas or natural resource lands shall be the same as those permitted by the underlying zone classification and the Sumner shoreline master program unless specifically regulated by this subsection.

6.1.6. Allowed activities.

The following activities shall be allowed in critical areas and buffers, subject to the standards found in the SMP. Unless specifically modified in other subsections of this section, shall ensure no net loss of ecological functions and processes, and comply with the mitigation sequencing of *Section V, Environmental Impact Mitigation*. All activities in critical areas must comply with *Section 6.1.7, Resource, Wildlife and Hazard Area Regulation Framework Best Management Practices*. This section applies specifically to activities regulated by the city of Sumner. Other state and federal permits and approvals may still apply.

1) Existing or ongoing agricultural activities on agricultural lands;
2) Conservation or preservation of soil, water, vegetation, fish, shellfish, and other wildlife;
3) Outdoor recreational activities, including, but not limited to, fishing, birdwatching, hiking, boating, horseback riding, swimming, canoeing, and bicycling;
4) Education, scientific research, and use of nature trails;
5) Maintenance or reconstruction of existing roads, bridges, and associated storm drainage facilities; provided, that reconstruction does not involve expansion of facilities;
6) Normal and routine maintenance or repair of existing utility structures or right-of-way;
7) Minor site investigative work necessary for land use and building application submittals such as surveys, soil logs, percolation tests and other related activities where such activities do not require construction of new roads or significant amounts of excavation in a critical area or its buffer. In every case, impacts to the critical area shall be minimized and disturbed areas shall be immediately restored;
8) Emergency action necessary to prevent imminent threat or danger to public health or safety, or to public or private property, or serious environmental degradation. The Shoreline Administrator shall review all proposed emergency actions to determine the existence of the emergency and reasonableness of the proposed actions taken; and
9) Projects with the primary purpose of restoring or enhancing wetlands, streams, or fish and wildlife habitat areas; provided that:
    a) Such projects are part of an approved local, state, or federal restoration or enhancement plan; and
    b) The project would not result in adverse impacts to any critical area.

6.1.7. Best management practices.

All activities shall be performed in conformance with best management practices established for that activity.

6.1.8. Clustering.

The clustering of development on portions of property shall be allowed subject to the following standards:

1) For residentially zoned areas subject to *Section 6.5, Wetlands Protection*, and *Section 6.10, Wildlife Habitat Area*, the area of land established in buffers is equal to the "transferable buffer area" (TBA).

   a) Clustering may apply to planned residential developments approved pursuant to chapter 18.40 SMC, Design and Development Guidelines, or to new subdivisions pursuant to chapter 17.16 SMC, Full Subdivisions.

   b) In the case of planned residential developments, the density may be increased beyond that provided for in SMC 18.24.060, Planned Residential Development (PRD) Property Development Standards, provided the transferable buffer area is established as a separate conservation easement, dedication or other permanent method of preserving the land to the satisfaction of the Shoreline Administrator. The transfer rate for PRDs shall be one additional acre of development area credit for each two acres of transferable buffer area.

   c) In the case of a full subdivision, the density allowed by the zoning may be increased beyond the limits of the underlying zoning according to the following table:

Zoning	Cluster Ratio
LDR-12	1 acre credit for 2 TBA acres
LDR-8.5	1 acre credit for 3 TBA acres
LDR-7.2	1 acre credit for 5 TBA acres
LDR-6	1 acre credit for 5 TBA acres

The increase in density and resulting maximum number of lots shall be calculated using the following formula:

$$\frac{(\text{TBA} \times \text{Cluster Ratio}) + (\text{Developable Area})}{\text{Minimum Lot Size of Underlying Zone}} = \text{Maximum Number of Lots}$$

   d) In no case shall the lot size be reduced to less than the minimum set forth below, in square feet:

LDR-6:	4,800
LDR-7.2:	6,000
LDR-8.5:	7,200
LDR-12:	8,500

In no case shall the reduction in lot sizes be combined with the reduction in lot sizes allowed in SMC 18.12.070(A), Property Development Standards for LDR-6, LDR-7.2,

LDR-8.5, and LDR-12 Minimum Lot Area per Building Site in Square Feet, or 18.12.090(A), Traditional Neighborhood Design Optional Development Standards for Lot Sizes.

e) The utilization of the transferable buffer area credits shall accompany a development proposal for the PRD or subdivision. The use of the credits shall be approved by the city council in conjunction with the PRD or preliminary plat.

f) In the case of a full subdivision, the TBA shall be established as a separate conservation easement, dedication or other permanent method of preserving the land to the satisfaction of the Shoreline Administrator.

g) In allowing lots less than 6,000 square feet, the council may reduce the rear yard requirements by a maximum of 40 percent.

2) For residentially zoned areas subject to *Section 6.11, Flood Hazard Areas*, the area of land within the floodfringe or within areas classified as deep and/or fast flowing water are equal to the "transferable buffer area" (TBA), provided any area within 200 feet of the shoreline pursuant to the shoreline master program shall not be included in the TBA. Properties with such flood hazard designations are eligible to modify lot size requirements to achieve clustering.

a) Development transfers may apply to planned residential developments approved pursuant to chapter 18.40 SMC, Design and Development Guidelines, or to a new subdivision pursuant to chapter 17.16 SMC, Full Subdivisions.

b) In the case of planned residential developments, the density may be increased beyond that provided for in SMC 18.24.060, Planned Residential Development Property Development Standards, provided the transferable buffer area is established as a separate conservation easement, dedication or other permanent method of preserving the land to the satisfaction of the Shoreline Administrator. The transfer rate for PRDs shall be one additional acre of development area credit for each two acres of transferable buffer area.

c) In the case of a full subdivision, the density allowed by the zoning may be increased beyond the limits of the underlying zoning according to the following table:

Zoning	Cluster Ratio
LDR-12	1 acre credit for 2 TBA acres
LDR-8.5	1 acre credit for 3 TBA acres
LDR-7.2	1 acre credit for 5 TBA acres
LDR-6	1 acre credit for 5 TBA acres

The increase in density and resulting maximum number of lots shall be calculated using the following formula:

$$\frac{(\text{TBA} \times \text{Cluster Ratio}) + (\text{Developable Area})}{\text{Minimum Lot Size of Underlying Zone}} = \text{Maximum Number of Lots}$$

d) In no case shall the lot size be reduced to less than the minimum set forth below, in square feet:

LDR-6:	4,800
LDR-7.2:	6,000
LDR-8.5:	7,200
LDR-12:	8,500

In no case shall the reduction in lot sizes be combined with the reduction in lot sizes allowed in SMC 18.12.070(A), Property develop standards for LDR-6, LDR-7, LDR-8.5, and LDR-12 Minimum Lot Area per Building Site in Square Feet, or 18.12.090(A), Traditional Neighborhood Design Optional Development Standards for Lot Sizes.

e) The utilization of the transferable buffer area credits shall accompany a development proposal for the PRD or subdivision. The use of the credits shall be approved by the city council in conjunction with the PRD or preliminary plat.

f) In the case of a full subdivision, the TBA shall be established as a separate conservation easement, dedication or other permanent method of preserving the land to the satisfaction of the Shoreline Administrator.

g) In allowing lots less than 6,000 square feet, the council may reduce the rear yard requirements by a maximum of 40 percent.

3) For industrial and commercial zoned areas subject to *Section 6.5, Wetlands Protection*, and *Section 6.10, Wildlife Habitat Area*, the area of land established in buffers is equal to the "transferable buffer area" (TBA). Properties with such flood hazard designations are eligible to modify lot size requirements to achieve clustering.

a) Development transfers may apply to properties zoned industrial or commercial.

b) The density may be increased provided the transferable buffer area is established as a separate conservation easement, dedication or other permanent method of preserving the land to the satisfaction of the Shoreline Administrator. For each acre of TBA, an additional acre of non-TBA land on the same property may increase the allowable building height by 12 feet for structures in the non-TBA portion of the property.

c) The utilization of the transferable buffer area credits shall be approved by the hearing examiner according to the process for an administrative conditional use, chapter 18.56 SMC, Procedures for Land Use Permits, provided the following are satisfied:

i. The TBA transfer is established with a permanent easement, property transfer or other mechanism to ensure the long-term protection of the area; and

ii. The applicant has provided improvements, as necessary, to enhance the function and performance of the TBA.

4) For industrial and commercial zoned areas subject to *Section 6.11, Flood Hazard Areas*, the area of land established in the floodfringe and areas of deep and/or fast flowing water are equal to the "transferable buffer area" (TBA) provided any area within 200 feet of the shoreline pursuant to the shoreline master program shall not be included in the TBA.

Properties with such flood hazard designations are eligible to modify lot size requirements to achieve clustering.

a) Development transfers may apply to properties zoned industrial or commercial.

b) The density may be increased provided the transferable buffer area is established as a separate conservation easement, dedication or other permanent method of preserving the land to the satisfaction of the Shoreline Administrator. For each acre of TBA, an additional acre of non-TBA land on the same property may increase the allowable building height by 12 feet for structures in the non-TBA portion of the property.

c) The utilization of the transferable buffer area credits shall be approved by the hearing examiner according to the process for an administrative conditional use, chapter 18.56 SMC, Procedures for Land Use Permits. provided the following are satisfied:

i. The TBA transfer is established with a permanent easement, property transfer or other mechanism to ensure the long-term protection of the area; and

ii. The applicant has provided improvements, as necessary, to enhance the function and performance of the TBA.

5) In the event an area is within more than one transferable buffer area, the applicant may benefit from only one type of TBA for a given area of land.

6.1.9. Relationship to other regulations.

1) Variance applications from the provisions of the zoning regulations shall be made according to the provisions of chapter 18.50 SMC, Variances and Special Exceptions.

2) This subsection establishes minimum standards which are to be applied to specific activities on natural resource lands and in critical areas in order to achieve the purposes stated. In no way is this subsection intended to limit the application of SEPA or any other city, county, state or federal law or regulation.

6.1.10. Bonds and financial guarantees.

The Shoreline Administrator may require an applicant to submit a financial guarantee to the city to guarantee any performance, mitigation or monitoring required as a condition of permit approval. The permit shall not be issued until the appropriate financial guarantee is received by the Shoreline Administrator. Financial guarantees shall be in the amount of 120 percent of the estimate of the cost of mitigation or monitoring to allow for inflation and administration should the city have to complete the mitigation or monitoring.

6.1.11. Posting conditions.

For activities subject to review under *Section 6.7, Landslide and Erosion Control*, and *Section 6.5, Wetlands Protection*, the applicant shall post the conditions of approval which relate to construction at the construction site. For large sites the Shoreline Administrator may require additional postings.

6.1.12. Interpretation, enforcement and fees.

1) The provisions for interpretation of this subsection shall be pursuant to chapter 18.54 SMC, Interpretations.
2) The provisions of chapter 15.06 SMC, Buildings and Construction Enforcement, shall apply to this chapter.
3) Any person, firm or corporation violating any of the provisions of this chapter shall be subject to the penalty provisions of SMC 15.06.070, Civil Citation Penalties, and 15.06.110, Subsequent Repeat Violation – Failure to Abate - Misdemeanor.

6.1.13. Notice of amendments.

The U.S. Fish and Wildlife Service and the National Marine Fisheries Service shall receive early and continual notice of any amendments to *Section VII, Critical Areas Protection*.

6.2 Agricultural Resource Lands

6.2.1. Purpose.

The purpose of this chapter is to regulate the use of land on and around agricultural resource lands; to protect agricultural activities from new nearby incompatible activities; and to protect existing agricultural land from encroachments inconsistent with the Sumner Comprehensive Plan.

6.2.2. Relationship to framework ordinance.

The provisions of this chapter shall apply in conjunction with Section *6.1.2, Resource, Wildlife and Hazard area Regulation Framework Purpose*, through *Section 6.1.13 Notice of Amendments*.

6.2.3. Applicability.

Agricultural resource lands are 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.

6.2.4. Mapping.

1) Agricultural resource lands are those lands meeting all of the following criteria:
    a) Lands divided into parcels which are five acres or larger in size; and
    b) Lands which are on prime or unique soils as identified in:
        i. United States Department of Agriculture (USDA), Soil Conservation Service. February, 1979. Soil Survey of Pierce County Area, Washington.
        ii. USDA, Soil Conservation Service, June, 1981. Important Farmlands of Pierce County, Washington; and
    c) Lands which are primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries,

grain, hay, straw, turf, seed, Christmas trees not subject to the excise tax imposed by RCW 84.33.100 through 84.33.140, or livestock, and which have long-term commercial significance for agricultural production.

2) Agricultural resource lands are also those lands within 300 feet of any agricultural resource land defined above.

6.2.5. Title notification.

The owner of any site within this designation, for which an application for an activity is submitted, shall record a title notice with the Pierce County auditor. The notice shall be notarized and shall be recorded prior to approval of any development proposal for the site. Such notification shall be in the form as set forth below:

AGRICULTURAL RESOURCE LANDS NOTICE

Parcel Number:_____

Address:_____

Legal Description:_____ _____

Notice: This parcel lies within an area of land designated Agricultural Resource Land by the City of Sumner. A variety of commercial agricultural activities occur in the area that may be inconvenient or cause discomfort to area residents. This may arise from the use of agricultural chemicals, including herbicides, pesticides, and fertilizers; or from spraying, pruning, and harvesting, which occasionally generate dust, smoke, noise, and odor. The City of Sumner has established agriculture as a priority use on existing agricultural resource lands, and residents of adjacent property should be prepared to accept such inconvenience or discomfort from normal, necessary farm operations.

Signature of owner(s)

(NOTARY ACKNOWLEDGEMENT)

6.2.6. Plat notification.

The owner of any site within this designation, on which a short subdivision or subdivision is submitted, shall record a notice on the face of the plat. Such notification shall be in the form as set forth below.

Notice: This property lies within an area of land designated Agricultural Resource Lands by the City of Sumner. A variety of commercial agricultural activities occur in the area that may be inconvenient or cause discomfort to area residents. This may arise from the use of agricultural chemicals, including herbicides, pesticides, and fertilizers; or from spraying, pruning, and harvesting, which occasionally generate dust, smoke, noise, and odor. The City of Sumner has established agriculture as a priority use on existing agricultural resource lands, and residents of adjacent property should be prepared to accept such inconvenience or discomfort from normal, necessary farm operations.

6.3 Right to Farm

6.3.1. Agricultural nuisances.

1) Notwithstanding any other provisions in this Program, agricultural activities conducted on farmland, if consistent with generally accepted agricultural and best management practices and established prior to surrounding activities, are presumed to be reasonable and shall not be found to constitute a nuisance, unless the activity has a substantial adverse effect on the public health and safety.
2) If that agricultural activity is undertaken in conformity with generally accepted agricultural and best management practices and with federal, state and local laws and regulations, it is presumed to be good agricultural practice and not adversely affecting the public health and safety.
3) A farm operation shall not be restricted in its activities to the time of day or days of the week, but shall be conducted according to generally accepted agricultural and best management practices.

6.3.2. Signs.

During any spray operations, farmers may post city-approved caution signs on city right-of-way that read "Caution – Spraying in Progress" or other warnings that may be required by other agencies without a permit.

6.4 Wetlands Protection

6.4.1. Purpose.

The purpose of this subsection is to regulate the use of land on and around wetlands; to protect wetlands from new nearby activities; to comply with city, state, and federal regulations and policies; and to protect the public health, safety and welfare by preventing the adverse environmental impacts of development, and by:

1) Preserving, protecting and restoring wetlands by regulating development within them and their buffers and thereby protecting surface water quality, providing flood storage and protecting and preserving fish and wildlife habitat;
2) Protecting the public against losses from:
    a) Unnecessary maintenance and replacement of public facilities;
    b) Publicly funded mitigation of avoidable impacts:
    c) Expenditures for public emergency rescue and relief operations; and
    d) Potential litigation from improper construction practices authorized for wetland areas;
3) Alerting appraisers, assessors, owners, and potential buyers or lessees to the development limitations of wetlands; and

4) Providing the city with information to evaluate, approve, condition, or deny public or private development proposals.

6.4.2. Relationship to framework ordinance.

The provisions of this chapter shall apply in conjunction with *Section 6.1.2, Resource, Wildlife and Hazard area Regulation Framework Purpose*, through *Section 6.1.13, Notice of Amendments*.

6.4.3. Applicability.

Wetlands and wetlands buffers are those areas within the city which satisfy the definitions established in this Program.

6.4.4. Mapping.

1) The approximate location and extent of wetlands in the city is displayed on the map titled "Wetland Inventory Map, 2007." This inventory is general and not designed to support permit applications, and does not establish jurisdictional boundaries. Furthermore, as site conditions change (due to natural and human processes), wetland areas and characteristics may change as well.
2) The exact location of the wetland boundary shall be determined by the applicant through the performance of a field investigation by a qualified wetland professional applying the wetland definition provided for in this chapter.

6.4.5. Wetlands rating.

Wetlands shall be rated according to the most recent version of Washington State Department of Ecology wetland rating system for Western Washington. This document contains the` definitions and methods for determining if the criteria below are met.

1) Category I. Category I wetlands are those wetlands of exceptional resource value based on their functional value and diversity. Category I wetlands in the city of Sumner are:
    a) Wetlands designated by Washington Natural Heritage Program as high quality;
    b) Bogs;
    c) Mature and old-growth forested wetlands larger than one acre; or
    d) Wetlands that perform high functions (wetlands scoring 70 points or more on the Ecology wetland rating form).
2) Category II. Category II wetlands are those wetlands of significant resource value based on their functional value and diversity. Category II wetlands in the city of Sumner are wetlands scoring between 51 and 69 points on the Ecology wetland rating form.
3) Category III. Category III wetlands are those wetlands of important resource value based on their functional value and diversity. Category III wetlands in the city of Sumner are wetlands with a moderate to low level of functions (wetlands scoring 30 to 50 points on the wetland rating form).
4) Category IV. Category IV wetlands are those wetlands with the lowest level of functions, scoring less than 30 points on the Ecology wetland rating form.

5) Wetland rating categories shall be applied as the wetland exists on the date of adoption of the rating system by the local government; as the wetland may naturally change thereafter; or as the wetland may change in accordance with permitted activities. Wetland rating categories shall not be altered to recognize illegal modifications.

6) Procedures for applying the wetlands rating system shall be based on adopted procedures from the Ecology Department.

6.4.6. Allowed activities.

In addition to those activities listed in *Section6.1.6,* the following activities shall be allowed, subject to the policies and regulations of this SMP, and the shoreline permit procedures and requirements, within a wetland or wetland buffer provided they are conducted using best management practices, except where such activities result in the conversion of a wetland or wetland buffer to a use to which it was not previously subjected:

1) The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, or alteration of the wetland by changing existing topography, water conditions or water sources;

2) Existing and ongoing agricultural activities occurring on agricultural lands;

3) The maintenance of drainage facilities provided they are an integral part of an ongoing agricultural activity and approved by the Shoreline Administrator;

4) In the outer 25% of Category III and IV wetland buffers, a flow control or water quality treatment facility, such as an energy dissipater and associated pipes, associated with stormwater management facilities having no reasonable alternative on-site location;

5) The following uses are allowed within wetlands and/or wetland buffers:

   a) Normal maintenance, repair, or operation of existing serviceable structures, facilities, or improved areas. Maintenance and repair does not include any modification that changes the character, scope, or size of the original structure, facility, or improved area and does not include the construction of a maintenance road;

   b) Minor modification of existing serviceable structures within a buffer zone where modification does not adversely impact wetland functions or increase the size of the structure's footprint; and

   c) Maintenance of utility line activities listed under *Section 6.1.6(7)*;

6) Emergency actions which must be undertaken immediately or for which there is insufficient time for full compliance with this chapter when it is necessary to:

   a) Prevent an imminent threat to public health or safety; or

   b) Prevent imminent danger to public or private property; or

   c) Prevent an imminent threat of serious environmental degradation.

   Prior to engaging in the action, the Shoreline Administrator shall provide a written determination on a case-by-case basis that the emergency action satisfies the general requirements of this subsection.

   In the event a person or emergency agency determines that the need to take emergency action is so urgent that there is insufficient time for review by the Shoreline

Administrator, such emergency action may be taken immediately. The person or agency undertaking such action shall notify the Shoreline Administrator within two working days following the commencement of the emergency action. Following such notification the Shoreline Administrator shall determine if the action taken was within the scope of the emergency actions allowed by this subsection. If the Shoreline Administrator determines that the action taken or part of the action taken is beyond the scope of allowed emergency actions, enforcement action is warranted. The Shoreline Administrator may require payment of fees to recover the costs associated with reviewing the emergency action.

6.4.7. Permit applications.

The following provisions are supplemental to the provisions of *Chapter 8: Administrative Procedures*:

7) If this subsection is applicable, the items listed below may be required as part of a Shoreline Exemption Letter, Shoreline Substantial Development Permit, Conditional Use Permit, and/or Variance submittal and must be completed in consultation with a qualified wetlands professional.

   a) A description and maps overlaid on an aerial photograph at a scale no smaller than one inch equals 400 feet showing the entire parcel of land owned by the applicant, the exact boundary of the wetland pursuant to *Section 6.5.4, Wetlands Protection Mapping*, and the required wetland buffer;

   b) Documentation of any fieldwork performed on the site including field data sheets for wetland delineations, wetland rating forms, etc.;

   c) A description of the methods used to conduct the wetland delineation, function assessment, and impact analysis;

   d) A description of the vegetative cover of the wetland and adjacent area, including dominant species;

   e) The wetland rating and required buffer widths for the subject property, and the rating and buffers for wetlands on any adjacent properties whose buffers extend onto the subject property;

   f) A site plan for the proposed activity overlaid on an aerial photograph at a scale no smaller than one inch equals 400 feet showing the location, width, depth and length of all existing and proposed structures, roads, sewage treatment, and installations;

   g) The exact sites and specifications for all regulated activities including areas of impacts to wetlands and buffers based on a professional survey;

   h) Elevations of the site and adjacent lands within the wetland and its buffer at contour intervals of no greater than five feet;

   i) Top view and typical cross-section views of the wetland and its buffer to scale;

   j) The purposes of the project and an explanation why the proposed activity cannot be located at other sites including an explanation of how the proposed activity is dependent upon wetlands or water-related resources;

   k) Specific means to mitigate any potential adverse environmental impacts of the applicant's proposal.

8) The Shoreline Administrator may require additional information including, but not limited to, an assessment of wetland functional characteristics, including a discussion of the methodology used; documentation of the ecological, aesthetic, economic, or other values of a wetland; a study of flood, erosion, or other hazards at the site and the effect of any protective measures that might be taken to reduce such hazards; and any other information deemed necessary to verify compliance with the provisions of this chapter or to evaluate the proposed use in terms of the purposes of this chapter.

6.4.8. Title notification.

All activity in wetlands protection areas shall be accompanied by the recording of a notice with the Pierce County auditor in the form set forth below:

WETLANDS PROTECTION AREA NOTICE

Parcel Number:_____

Address:_____

Legal Description:_____ _____

Notice: This site lies within a Wetlands Protection Area as defined by Section 6.5 of the Sumner Shoreline Master Program. The site was the subject of a development proposal for _____, Sumner application number ___ filed on _____. Restrictions on use or alterations of the site may exist due to natural conditions of the site and resulting regulation. Review of such application has provided information on the location of a Wetlands Protection Area and any restrictions on use.

Signature of owner(s)

(NOTARY ACKNOWLEDGEMENT)

6.4.9. Plat notification.

For all proposed short subdivisions and subdivision proposals within wetlands protection areas, the applicant shall include a note on the face of the plat as set forth below:

Notice: This site lies within a Wetlands Protection Area as defined by the Sumner Municipal Code. Restrictions on use or alterations of the site may exist due to natural conditions of the site and resulting regulation.

6.4.10. Wetland buffers.

1) Wetland buffer zones shall be required for all regulated activities adjacent to wetlands within the shoreline jurisdiction. Any wetland created/reestablished, rehabilitated, enhanced or preserved as compensation for approved wetland alterations shall also include a buffer equivalent to or greater than that required for the category of the created/reestablished, rehabilitated, or enhanced wetland to be replaced or preserved. The standard width of the wetland buffer shall be based on the wetland category according to the following table:

Wetland Category	Habitat Score[1]	Standard Buffer Width
I		225 feet
II	20 or greater	150 feet
	Less than 20	100 feet
III		100 feet
IV		40 feet
[1]Based on Washington State Wetland Rating System for Western Washington (revised), Department of Ecology Document No. 04-06-025 or as further revised by Ecology.		

2) The Shoreline Administrator may require an additional 25-foot buffer width around a wetland on a case-by-case basis when it can be demonstrated that the increase is necessary to:

   a) Protect the function and value of the wetland; or

   b) To protect habitat for federally or state listed fish and wildlife species, or federally listed plant species, or priority habitats and species documented by the Washington State Department of Wildlife Priority Habitat and Species Program; or

   c) To protect lands adjacent to wetlands from erosion; or

   d) If the adjacent land has minimal vegetative cover or slopes greater than 15 percent.

3) Except as otherwise specified, wetland buffer zones shall be retained in their natural condition. Where buffer disturbance has occurred during construction, revegetation with native vegetation shall be required.

4) A building setback line of 15 feet is required from the edge of any wetland buffer. Structural intrusions into the area of the building setback may be allowed if the Shoreline Administrator determines that such intrusions will not negatively impact the wetland.

5) The outer edge of the wetland buffer shall be marked with sensitive area signs. One sign shall be installed every 100 linear feet or a minimum of one sign per lot, whichever is greater. Separated-rail fencing shall be installed along the outer edge of the buffer. The fencing may not exceed six feet in height, bisect wetlands or streams, or impede the movement of native wildlife.

6.4.11. Avoiding, minimizing and replacing wetlands impacts.

1) Impacts to wetlands must be avoided to the extent possible, by demonstrating that alternative site designs have been considered to avoid wetland impacts in project design.

2) After it has been determined that losses of wetland are unavoidable the applicant shall take deliberate measures to minimize wetland impacts.

3) Steps to minimize impacts to wetlands shall include but are not limited to reduced project scope, sensitive site design, best management practices, off-site construction staging, limiting the season of construction, and consultation with resource agencies in site design.

4) As a condition of any permit allowing alteration of wetlands and/or wetland buffers or as an enforcement action an applicant may be required to provide compensatory mitigation in order to offset the impacts resulting from the applicant's or violator's actions and

recreate as nearly as possible the original wetlands in terms of function, geographic location and setting, and that are larger than the original wetlands.

5) Any person who alters wetlands shall restore, create, enhance or preserve equivalent areas or greater areas of wetlands than those altered in order to replace wetland losses.

6) Where feasible, restored, created, or preserved wetlands shall be a higher category than the altered wetland.

7) Compensatory mitigation areas shall be determined according to function, acreage, type, location, time factors, ability to be self-sustaining and projected success. Wetland functions and values shall be calculated using the best professional judgment of a qualified wetland ecologist using the best available techniques. Multiple compensation projects may be proposed for one project in order to best achieve the goal of no net loss.

8) Methods to achieve compensation for wetland functions and values shall be approached in the following order of preference:

   a) Restoration (includes re-establishment and rehabilitation) of wetlands.

   b) Creation of wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of non-native species. This should be attempted only when there is an adequate source of water and it can be shown that the surface and subsurface hydrologic regime is conducive to the wetland community that is anticipated in the design.

   c) Enhancement of significantly degraded wetlands in combination with restoration or creation. Enhancement alone will result in a loss of wetland acreage and is less effective at replacing the functions lost. Enhancement should be part of a mitigation package that includes replacing the impacted area and meeting appropriate ratio requirements.

   d) Preservation. Preservation of high-quality, at-risk wetlands as compensation is generally acceptable when done in combination with restoration, creation, or enhancement, provided that a minimum of 1:1 acreage replacement is provided by re-establishment or creation.

      Preservation of high-quality, at risk wetlands and habitat may be considered as the sole means of compensation for wetland impacts when the following criteria are met:

      i. Wetland impacts will not have a significant adverse impact on habitat for listed fish, or other ESA listed species.

      ii. There is no net loss of habitat functions within the watershed or basin.

      iii. Mitigation ratios for preservation as the sole means of mitigation shall generally start at 20:1. Specific ratios should depend upon the significance of the preservation project and the quality of the wetland resources lost.

      iv. The impact area is small (generally < ½ acre) and/or impacts are occurring to a low-functioning system (Category III or IV wetland).

      All preservation sites shall include buffer areas adequate to protect the habitat and its functions from encroachment and degradation.

9) The following ratios apply to restoration (re-establishment and rehabilitation), creation, enhancement or preservation, timed prior to or concurrent with alteration, and has a

high probability of success. These ratios do not apply to remedial actions resulting from illegal alterations. The first number specifies the acreage of wetlands requiring compensatory mitigation and the second specifies the acreage of wetlands altered.

Category and Type of Wetland	Restoration		Creation	Enhancement	Preservation
	Re-establishment	Rehabilitation			
Category I: Bog, Natural Heritage site	Not considered possible	6:1	Not considered possible	Case by case	10:1
Category I: Mature Forested	6:1	12:1	6:1	24:1	24:1
Category I: Based on Functions	4:1	8:1	4:1	16:1	20:1
Category II	3:1	6:1	3:1	12:1	20:1
Category III	2:1	4:1	2:1	8:1	15:1
Category IV	1.5:1	3:1	1.5:1	6:1	10:1

10) To more fully protect functions and values, and as an alternative to the mitigation ratios found in the joint guidance "Wetland Mitigation in Washington State Parts I and II"(Ecology Publication #06-06-011a-b, Olympia, WA, March, 2006), the Shoreline Administrator may allow mitigation based on the "credit/debit" method developed by the Department of Ecology in "Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Operational Draft," (Ecology Publication #10-06-011, Olympia, WA, February 2011, or as revised).

11) The Shoreline Administrator may increase the compensatory mitigation ratios to account for uncertainties as to the success of the mitigation, the time required for restored, created or enhanced wetlands to be effective, projected losses in functional value, or in the case of off-site compensation.

12) Unless it is demonstrated that a higher level of ecological functioning would result from an alternative approach, compensatory mitigation for ecological functions shall be either in kind and on site, or in kind and within the same stream reach or sub-basin. Compensatory mitigation actions shall be conducted within the same sub-drainage basin and on the site of the alteration except when all of the following apply:

    a) There are no reasonable opportunities on site or within the sub-drainage basin (e.g., on-site options would require elimination of high-functioning upland habitat), or opportunities on site or within the sub-drainage basin do not have a high likelihood of success based on a determination of the capacity of the site to compensate for the impacts. Considerations should include: anticipated replacement ratios for wetland mitigation, buffer conditions and proposed widths, available water to maintain anticipated hydrogeomorphic classes of wetlands when restored, proposed flood storage capacity, and potential to mitigate riparian fish and wildlife impacts (such as connectivity);

    b) Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland; and

c) Off-site locations shall be in the same sub-drainage basin unless:

i. Established watershed goals for water quality, flood storage or conveyance, habitat, or other wetland functions have been established by the City and strongly justify location of mitigation at another site; or

ii. Credits from a state-certified wetland mitigation bank are used as compensation, and the use of credits is consistent with the terms of the bank's certification.

13) In selecting replacement sites, applicants must consider siting in the following order of preference:

a) Wetland mitigation bank where feasible;

b) In-lieu fee program where feasible;

c) Upland sites which were formerly wetlands;

d) Idled upland sites generally having bare ground or vegetative cover consisting primarily of exotic introduced species, weeds, or emergent vegetation;

e) Other disturbed upland sites.

14) Compensatory mitigation projects shall be completed prior to activities that will disturb wetlands, and immediately after activities that will temporarily disturb wetlands unless otherwise agreed to via permit application. In all other cases, except for Category I wetlands, compensatory mitigation projects should be completed prior to use or occupancy of the activity or development which was conditioned upon such compensatory mitigation. Construction of compensatory mitigation projects shall be timed to reduce impacts to existing wildlife and flora.

6.4.12. Mitigation plans.

All wetland and buffer compensatory mitigation projects required pursuant to this chapter either as a permit condition or as the result of an enforcement action shall follow a mitigation plan prepared by qualified wetland professionals approved by the Shoreline Administrator and shall contain the following:

1) A description of the proposal and summary of impacts to wetlands and buffers;

2) Baseline information for the impacted and any compensation site including written assessment and accompanying maps of the existing acreage; vegetative, faunal and hydrologic conditions; relationship within watershed and to existing water bodies; soil and substrate conditions, topographic elevations; existing and proposed adjacent site conditions; buffers; and ownership;

3) Establish specific criteria (including water quality standards, survival rates of planted vegetation, species abundance and diversity targets, or other ecological, geological or hydrological criteria) for evaluating the mitigation proposal relative to the objectives of this chapter and the goals and objectives of the city's comprehensive plan;

4) Specify and describe the existing functions of the wetland and buffer to be impacted and how lost functions will be mitigated;

5) Specify when mitigation will occur relative to project construction and to the requirements of permits required by other jurisdictions;

6) Detailed construction plans which establish the appropriate methods of construction, sequencing, and times of construction;

7) Planting plan and list of plant species to be installed;

8) Include provisions for monitoring the mitigation area to determine whether the mitigation plan is successful. Monitoring of the area shall include:

   a) Selection and appointment by the Shoreline Administrator of a qualified wetlands professional, at the expense of the applicant, and independent of the development, for purposes of monitoring the progress of the mitigated wetland;

   b) Monitoring shall begin by the designated consultant with a wetland analysis of the wetland being altered. Consultants will use the same data sheets within this analysis as will be used in the monitoring procedure; and

   c) Ten years of monitoring and maintenance shall be required for mitigation of impacts. Monitoring reports shall be submitted by the qualified wetland professional to the city during the following years: one, three, five, eight and ten for a ten-year monitoring period.

6.4.13. Security and bonding.

1) An applicant or other holder of a permit shall be required to create a separate sensitive area tract or tracts containing the wetland and wetland buffer(s) or provide a permanent conservation easement, covenant or other instrument acceptable to the Shoreline Administrator to ensure the long-term protection of the wetland and buffers.

2) The following note shall appear on the face of all plats, short plats, PRDs, PMUDs, or other approved site plans containing separate sensitive area tracts, and shall be recorded on the title of record for all affected lots:

3) NOTE: All lots adjoining separate sensitive area tracts identified as Native Vegetation Protection Easements or protected by deed restriction are responsible for maintenance and protection of the tracts. Maintenance includes insuring that no alterations occur within the separate tract and that all vegetation remains undisturbed unless the express written authorization of the city has been received.

4) The location of the outer extent of the wetland buffer and the areas to be disturbed pursuant to an approved permit shall be marked in the field, and such field marking shall be approved prior to the commencement of permitted activities. Such field markings shall be maintained by the applicant throughout the duration of the permit.

5) The Shoreline Administrator shall require the applicant to post a cash performance bond, assignment of funds or other security acceptable to the Shoreline Administrator in an amount and with surety and conditions sufficient to fulfill the requirements of this chapter and any applicable conditions of approval. Provisions for monetary security shall be in an amount equal to 120 percent of the estimated funds necessary to complete work and monitoring in accordance with the mitigation plan, including restoration or rehabilitation to be performed if planned mitigation fails within the designated period of implementation.

6) The Shoreline Administrator shall require the holder of an approval issued pursuant to this chapter to post a cash performance bond, assignment of funds or other security acceptable to the Shoreline Administrator in an amount and with surety and conditions

sufficient to guarantee that structures, improvements, and mitigation required by this chapter perform satisfactorily for a minimum of five years after they have been completed. The Shoreline Administrator shall release the maintenance bond upon determining that performance standards established for evaluating the effectiveness and success of the structures, improvements, and/or compensatory mitigation have been satisfactorily met for the required period. The maintenance bond applicable to a compensation project shall not be released until the Shoreline Administrator determines that performance standards established for evaluating the effect and success of the project have been met.

6.4.14. Nonconforming activities.

A regulated activity that was approved prior to the passage of this chapter but which is not in conformity with the provisions of this chapter may be continued subject to the provisions of *Chapter 8: Administrative Provisions*.

6.4.15. Assessment relief.

The Pierce County assessor shall consider wetland regulations in determining the fair market value of land. Any owner of an undeveloped wetland who has dedicated an easement or entered into a perpetual conservation restriction with the city or a nonprofit organization to permanently control some or all regulated activities in the wetland shall have that portion of land assessed consistent with those restrictions. Such landowner shall also be exempted from special assessments on the controlled wetland to defray the cost of municipal improvements such as sanitary sewers, storm sewers, and water mains.

6.5 Aquifer Recharge Area

6.5.1. General authority.

This chapter is adopted under the authority of RCW 36.70A.050.

6.5.2. Purpose.

The purpose of this chapter is to regulate development and the use of land in aquifer recharge areas in order to ensure long-term protection of the water supply resources that exist under the city; and to comply with the Washington State Growth Management Act.

6.5.3. Applicability.

Aquifer recharge areas are areas within the city where the prevailing geologic conditions allow infiltration rates which create a high potential for contamination of groundwater resources or contribute to the replenishment of groundwater.

6.5.4. Mapping.

Aquifer recharge areas are those areas defined as follows:

1) Areas with the two highest DRASTIC zones which are rated 180 and above on the DRASTIC index range, as identified in Map of Groundwater Pollution Potential, Pierce County, Washington, National Water Well Association, U.S. Environmental Protection Agency; or

2) Wellhead protection areas designated for water supply wells and springs (pursuant to WAC 246-290-135) and located within the municipal boundary of the city of Sumner.

6.5.5. Title notification.

All activity in aquifer recharge areas shall be accompanied by the recording of a notice with the Pierce County auditor in the form set forth below:

AQUIFER RECHARGE AREA NOTICE

Parcel Number:_____

Address:_____

Legal Description:_____ _____

Notice: This site lies within an Aquifer Recharge Area as defined by Section 6.6 of the Shoreline Master Program. The site was the subject of a development proposal for _____, Sumner application number ___ filed on_____. Restrictions on use or alterations of the site may exist due to natural conditions of the site and resulting regulation. Review of such application has provided information on the location of an Aquifer Recharge Area and any restrictions on use.

Signature of owner(s)

(NOTARY ACKNOWLEDGEMENT)

6.5.6. Plat notification.

For all proposed short subdivisions and subdivision proposals within aquifer recharge areas, the applicant shall include a note on the face of the plat as set forth below:

Notice: This site lies within an Aquifer Recharge Area as defined by the Sumner Municipal Code. Restrictions on use or alterations of the site may exist due to natural conditions of the site and resulting regulation.

6.5.7. Regulations.

1) The following uses of land shall require a hydrogeologic assessment of the proposed site if the site is located in an aquifer recharge area, except that uses in subsection (A)(3) of this section need only provide an assessment of nitrate contamination:

   a) Hazardous substance processing or handling;

   b) Hazardous waste treatment, storage or disposal facility;

   c) Disposal of on-site generated sewage for subdivisions, and commercial and industrial developments;

   d) Sludge land application sites categorized as S-3, S-4, and S-5, as defined in this subsection;

   e) Animal containment areas;

f) Landfills;

g) Sewage treatment plants for off-site generated sewage;

h) Mining.

2) The hydrogeologic assessment shall be prepared by a qualified professional who is a hydrogeologist, geologist, or engineer, who is licensed in the state of Washington and has experience in preparing hydrogeologic assessments and shall include, but is not limited to:

a) Geologic setting;

b) Groundwater survey information, groundwater elevations, background water quality, direction and gradient of groundwater flow, location/depth of perched water tables, recharge potential (permeability and transmissivity);

c) Survey of nearby wells and springs, including all wells and springs within 1,000 feet of the site;

d) Location of nearby surface water and recharge potential;

e) Description of water supply to the site;

f) Information sources for assessment, including any well logs or borings used;

g) Discussion of the effects of the proposed project on the groundwater resource;

h) Recommendations to mitigate the adverse impacts of the project on the groundwater resource;

i) Other information as required by the Tacoma-Pierce County health department (TPCHD).

3) The Shoreline Administrator shall forward the assessment to the TPCHD for review. The applicant shall be responsible for paying any review costs required by the TPCHD. Based on the review by the TPCHD the proposal shall be either approved, approved with conditions or denied. Conditions may be imposed to reduce the impacts of the proposal on the aquifer, reduce the risk of contamination, and protect the long-term viability of the water resource. A proposal may be denied upon a finding that feasible mitigating measures are not sufficient to reduce the contamination risk.

4) The following activities and uses are prohibited within one-year time-of-travel zones for any wellhead protection area:

a) Landfills, including hazardous or dangerous waste, municipal solid waste, special waste, woodwaste, and inert and demolition waste landfills;

b) Underground injection wells that are Class I, III, and IV wells and subclasses 5F01, 5D03, 5F04, 5W09, 5W10, 5W11, 5W31, 5X13, 5X14, 5X15, 5W20, 5X28, and 5N24 of Class V wells;

c) Wood Treatment Facilities. Wood treatment facilities that allow any portion of the treatment process to occur over permeable surfaces (both natural and manmade);

d) Storage, processing, or disposal of radioactive substances. Facilities that store, process, or dispose of radioactive substances;

e) Community septic systems; and

f) Other:

i. Activities that would significantly reduce the recharge to aquifers currently or potentially used as a potable water source;

ii. Activities that would significantly reduce the recharge to aquifers that are a source of significant baseflow to a regulated stream;

iii. Activities that are not connected to an available sanitary sewer system are prohibited from critical aquifer recharge areas associated with sole source aquifers.

6.5.8. Performance standards – Specific uses.

The following are performance standards for specific uses within the one-year time-of-travel zones for wellhead protection areas:

1) All storage tanks proposed must comply with local building code requirements and must conform to the following requirements:

a) All new underground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:

i. Prevent releases due to corrosion or structural failure for the operational life of the tank;

ii. Be protected against corrosion, constructed of noncorrosive material, steel clad with a noncorrosive material, or designed to include a secondary containment system to prevent the release or threatened release of any stored substances; and

iii. Use material in the construction or lining of the tank that is compatible with the substance to be stored.

b) All new aboveground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:

i. Not allow the release of a hazardous substance to the ground, ground waters, or surface waters;

ii. Have a primary containment area enclosing or underlying the tank or part thereof; and

iii. A secondary containment system either built into the tank structure or a dike system built outside the tank for all tanks.

2) Vehicle Repair and Servicing.

a) Vehicle repair and servicing must be conducted over impermeable pads and within a covered structure capable of withstanding normally expected weather conditions. Chemicals used in the process of vehicle repair and servicing must be stored in a manner that protects them from weather and provides containment should leaks occur.

b) No dry wells shall be allowed on sites used for vehicle repair and servicing. Dry wells existing on the site prior to facility establishment must be decommissioned and

mitigated using techniques approved by the state Department of Ecology prior to commencement of the proposed activity.

3) Application of household pesticides, herbicides, and fertilizers shall not exceed times and rates specified on the packaging.

4) Water reuse projects for reclaimed water must be in accordance with the adopted water or sewer comprehensive plans that have been approved by the Departments of Ecology and Health.

   a) Surface spreading must meet the ground water recharge criteria given in RCW 90.46.080 and 90.46.010(10).

   b) Direct injection must be in accordance with the standards developed by authority of RCW 90.46.042.

5) All uses and development within an aquifer recharge area shall be in accordance with applicable state and federal regulations.

6.6 Landslide and Erosion Hazard Area

6.6.1. General authority.

This chapter is adopted under the authority of RCW 36.70A.050.

6.6.2. Purpose.

The purpose of this chapter is to regulate land disturbing activity; to protect lives, property and public infrastructure from impacts associated with construction on steep slopes; reduce erosion impacts associated with construction; reduce sedimentation and water quality impacts associated with uncontrolled surface runoff; and reduce risk of landslide activity.

6.6.3. Exemptions.

The following activities are exempt from *Section 6.7 Landslide and Erosion Hazard Areas*:

1) Approved mining activities on mineral resource lands pursuant *Section 6.4, Mineral Resource Lands*.

6.6.4. Applicability.

1) Unless otherwise stated, landslide hazard areas are those areas subject to risk of mass movement and meeting any of the following criteria:

   a) Areas of historic land failures, including areas of unstable old and recent landslides;

   b) Areas with all three of the following characteristics:

      i. Slopes steeper than 15 percent; and

      ii. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and

      iii. Any signs of springs or groundwater seepage; and

iv. Concave slopes and swales;

c) Slopes that are parallel or subparallel to planes of weakness, such as bedding planes, joint systems, and fault planes, in subsurface materials;

d) Slopes having gradients steeper than 80 percent subject to rockfall during seismic shaking;

e) Areas potentially unstable as a result of rapid stream incision, stream bank erosion, and undercutting by wave action;

f) Any area with a slope of 15 percent or steeper and with a vertical relief of 10 or more feet. A slope is delineated by establishing the toe and top and measured by averaging the inclination over at least 10 feet of vertical relief. Qualifying slopes of 15 percent or greater to less than 25 percent shall be termed "Type II landslide hazard areas" for purposes of this chapter. Qualifying slopes of 25 percent or greater shall be termed "Type I landslide hazard areas";

g) Areas which have a "severe" limitation for building site development because of slope conditions, according to the U.S. Department of Agriculture's Natural Resource Conservation Service;

h) Slopes that contain impermeable soils (typically silt and clay) frequently interbedded with granular soils (predominantly sand and gravel);

i) Any area which has indications of mass wasting during the Holocene epoch (from 10,000 years ago to the present) or which is underlain by mass wastage debris of that epoch.

2) Erosion hazard areas are those areas that are identified by the presence of vegetative cover, soil texture, slope, and rainfall patterns, or human-induced changes to such characteristics, which create site conditions which are vulnerable to excessive erosion. Erosion hazard areas are those areas that are classified as having moderate to severe, severe or very severe erosion potential according to the Natural Resource Conservation Service.

6.6.5. Mapping.

Areas meeting the criteria established above may be delineated in the following documents:

1) Soil Survey of Pierce County Area, Washington, 1979, Soil Conservation Service, United States Department of Agriculture (USDA);

2) Areas designated as slumps, earthflows, mudflows, lahars, or landslides on maps published by the United States Geologic Survey or Washington Department of Natural Resources Division of Geology and Earth Resources;

3) Existing or newly developed topographic surveys prepared by the city, USGS, the state, or by applicants or their representatives;

4) The actual presence or location of an active landslide hazard area and/or additional potential landslide hazard areas that have not been mapped, but may be present on or adjacent to a site, shall be evaluated using the site evaluation procedures established in this chapter.

6.6.6. Title notification.

1) All activity in Type I landslide hazard areas shall be accompanied by the recording of a notice with the Pierce County auditor in the form set forth below:

HIGH LANDSLIDE HAZARD AREA NOTICE

Parcel Number:_____

Address:_____

Legal Description:_____ _____

Notice: This site lies within a Landslide Hazard Area as defined by Section 6.7 of the Sumner Shoreline Master Program. The site was the subject of a development proposal for _____, Sumner application number ___ filed on_____. Restrictions on use or alterations of the site may exist due to natural conditions of the site and resulting regulation. Review of such application has provided information on the location of a Landslide Hazard Area and any restrictions on use.

Signature of owner(s)

(NOTARY ACKNOWLEDGEMENT)

2) All activity in erosion hazard areas shall be accompanied by the recording of a notice with the Pierce County Auditor in the form set forth below:

EROSION HAZARD AREA NOTICE

Parcel Number:_____

Address:_____

Legal Description:_____ _____

Notice: This site lies within an Erosion Hazard Area as defined by Section 6.7 of the Sumner Shoreline Master Program. The site was the subject of a development proposal for _____, Sumner application number ___ filed on_____. Restrictions on use or alterations of the site may exist due to natural conditions of the site and resulting regulation. Review of such application has provided information on the location of an Erosion Hazard Area and any restrictions on use.

Signature of owner(s)

(NOTARY ACKNOWLEDGEMENT)

6.6.7. Plat notification.

1) For all proposed short subdivisions and subdivision proposals within Type I landslide hazard areas, the applicant shall include a note on the face of the plat as set forth below:

2) Notice: This site lies within a Landslide Hazard Area as defined by the Sumner Municipal Code. Restrictions on use or alterations on the site may exist due to natural conditions of the site and resulting regulation.

3) For all proposed short subdivisions and subdivision proposals within erosion hazard areas, the applicant shall include a note on the face of the plat as set forth below:

4) Notice: This site lies within an Erosion Hazard Area as defined by the Sumner Municipal Code. Restrictions on use or alterations on the site may exist due to natural conditions of the site and resulting regulation.

6.6.8. Submittal requirements.

1) All activities except for those that are exempt within a Type I landslide hazard area, a site evaluation shall be submitted; provided, where an applicant can demonstrate through submittal of a geotechnical letter, that there are no Type I landslide hazard areas on-site, the requirement for the site evaluation as set forth in subsection B of this section may be waived. The geotechnical letter shall include at a minimum the following:
    a) A brief description of the project (including the proposed land use) and a description of the area to be developed.
    b) A paragraph that states the following specific language:
    c) The services described in this report were prepared under the responsible charge of (Individual's Name). (Individual's Name) meets the qualifications contained in Title 16, Section 16.50.090 to prepare a landslide hazard geological assessment. (Individual's Name) understands the requirements of the current Landslide and Erosion Hazard Area Chapter 16.50 and the definitions of the applicable terms contained within Chapter 16.04. Individuals under the responsible charge of (Individual's Name) have performed a landslide hazard geological assessment, conducted a field investigation, and researched historic records on or in the vicinity of the above referenced site. In my opinion, the scope of services completed for this project is adequate to meet the requirements of the Sumner Municipal Code and it does not appear that an active landslide hazard area exists on site.
    d) The geotechnical letter shall be prepared under the responsible charge of an appropriately licensed geotechnical professional(s) and be signed, sealed and dated by the geotechnical professional(s).
2) The site evaluation shall address the existing geologic, topographic, and hydrologic conditions on a site, including an evaluation of the ability of the site to accommodate the proposed activity. The site evaluation shall include at a minimum the following:
    a) Topographic data showing the site with a maximum five-foot contour interval. Slopes shall be clearly delineated for the ranges between 15 and 24 percent, and 25 percent or greater, including calculations for areal coverage of each slope category on the site. When site conditions indicate the necessity, the department may require the topographic data to be field surveyed and/or may require that a contour interval of one foot be used.
    b) Site history data describing prior uses, grading, soil instability, or slope failures on the property.
    c) Geotechnical report prepared by a professional engineer, geologist, engineering geologist, or hydrogeologist, licensed by the state of Washington with expertise in geotechnical engineering. The report shall include the following:
        i. Results from boring logs, exploration pits, and any other exploration methods;
        ii. Data concerning the vulnerability of the site to unusual seismic events;
        iii. Slope stability analysis and opinion(s) regarding the stability of the slope;
        iv. Proposed angles of cut and fill slopes and site grading requirements;
        v. Structural foundation requirements and estimated foundation settlements;

vi. Soil compaction criteria;

vii. Proposed surface and subsurface drainage and calculations regarding design;

viii. Lateral earth pressure values and calculations for all lateral pressure walls;

ix. Suitability of on-site material for fill;

x. Laboratory data and soil index properties for soil samples; and

xi. Any additional information necessary for the Shoreline Administrator to determine the stability of the site and adjacent properties.

3) Location of all vegetation, including location and description of all trees and shrubs over three inches diameter measured five feet above the base of the trunk.

4) Grading plans showing all proposed grading activity, timing of construction, location of existing and proposed structures, location of underground utilities, location of any required buffers or conservation easements, and location and nature of any off-site improvements which are associated with the activity.

6.6.9. Regulations.

The provisions of this section apply in all Type I landslide hazard areas:

1) Any disturbance of the earth shall be limited to no more than 25 cubic yards of cut and fill provided such grading is in conjunction with construction of access roads, pedestrian paths and utility corridors. Essential public facilities may disturb more than 25 cubic yards, but shall not exceed the minimum necessary for the public facility.

2) Any clearing of natural or planted vegetation shall be prohibited, except that up to 2,500 square feet of clearing may be allowed in order to construct access roads, pedestrian paths and utility corridors provided no removal of trees greater than six inches in diameter shall occur. Essential public facilities may clear more than 2,500 square feet, but shall not exceed the minimum necessary for the public facility.

3) Upon a showing that the trees are not necessary to preserve slope stability or reduce erosion, the Shoreline Administrator may permit a maximum of 40 percent of the trees greater than six inches in diameter to be removed in conjunction with construction.

4) Based on the information provided in the site evaluation, project plans, and geotechnical report, the Shoreline Administrator may approve, conditionally approve or deny the proposal. Any conditions shall be necessary to ensure the stabilization of the site during and/or following construction.

5) Water tanks shall be screened or use a minimally invasive design to reduce visual impacts to adjacent property owners and major transportation thoroughfares.

6.6.10. Performance standards.

The following standards shall apply to all actions in Type I and Type II landslide hazard areas:

1) All disturbed areas on the site, including areas proposed for disturbance, shall be controlled in a manner sufficient to control drainage and prevent erosion during construction consistent with chapter 16.05 SMC, Control of Erosion and Sedimentation of Waterways, and revegetated as soon as possible to promote drainage control and prevent

erosion during and after construction. In cases where erosion potential could threaten the stability of the site, the Shoreline Administrator may require a revegetation plan be submitted and implemented prior to permit issuance.

2) The Shoreline Administrator may restrict development coverage and construction activity areas to the most level, environmentally suitable and naturally stable portion of the site. Grading activities may be restricted beyond those required by *Section 6.7.10, Landslide and Erosion Hazard Area Regulations*, if necessary to ensure stability of the site.

3) Impervious surfaces shall only be located within the site's development coverage and construction activity areas and shall be limited to a maximum of 40 percent of the lot area. The maximum lot coverage restrictions may be waived by the city council in approving a planned residential development pursuant to the zoning code.

4) All drainage systems and discharge points associated with actions shall be approved by the city engineer.

5) All grading in all landslide hazard areas shall be stabilized by October 1st of each year and may not resume until April 1st of the following year; provided, that if the applicant submits documentation to substantiate that adverse impacts will not result from construction and site activity between these dates, the Shoreline Administrator may authorize certain activity.

6) Construction shall adhere to a prepared schedule to be approved with the construction plans.

7) Construction and site actions shall conform to best management practices for the types of construction or activity.

6.6.11. Buffers.

1) A buffer, consisting of undisturbed natural vegetation, and measured horizontally from all sides of Type I landslide hazard areas shall be provided. The buffer width shall be as required by the Uniform Building Code as adopted by the city.

2) In order to increase the functional attributes of the buffer, the Shoreline Administrator may require that the applicant enhance the buffer with native vegetation.

3) The edge of the buffer shall be clearly staked, flagged, and fenced prior to any site clearing or construction. Field marking shall be shown on the construction plans and shall remain in place, in functional condition, for the duration of construction. D. The Shoreline Administrator may require additional building setbacks or buffers if recommended by the geotechnical report.

4) Buffers shall be shown or described on all plats recorded in conjunction with development.

6.6.12. Subdivision regulations.

Where a site is proposed for short subdivision or subdivision, up to 50 percent of the total site's area which is designated as being a Type I landslide hazard area (25 percent slope or greater), may be permitted for use in calculating minimum lot area for the proposed lots.

6.6.13. Erosion control.

All actions shall conform to the city requirements for erosion control established in chapter 16.05 SMC, Control of Erosion and Sedimentation of Waterways. Erosion control plans and the requirements of that section apply regardless of the exemption status resulting from this title.

6.7 Seismic Hazard Area

6.7.1. General authority.

This chapter is adopted under the authority of RCW 36.70A.050.

6.7.2. Purpose.

The purpose of this chapter is to regulate the use of land in seismic hazard areas in order to protect lives, property, and public infrastructure.

6.7.3. Applicability.

Seismic hazard areas are areas subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, fault rupture, or soil liquefaction.

6.7.4. Mapping.

Seismic hazard areas are areas where the suspected risk of earthquake-induced landsliding, dynamic settlement, fault rupture, or ground deformation caused by soil liquefaction, is sufficient to require a further seismic hazard area review as set forth in *Section 6.8.8, Seismic Hazard Area Regulations*. These potential seismic hazard areas are determined using the following criteria:

1) Earthquake-Induced Landslide Hazard Areas. Areas identified as potential landslide hazard areas in *Section 6.7.5, Landslide Hazard Area Applicability*.

2) Liquefaction and/or Dynamic Settlement Hazard Areas. Areas identified as high and moderate liquefaction and dynamic settlement hazard areas on the Washington Department of Natural Resources, Division of Geology and Earth Resources liquefaction and dynamic settlement hazard area Geographic Map No. 44.

6.7.5. Title notification.

All activity in seismic hazard areas shall be accompanied by the recording of a notice with the Pierce County auditor in the form set forth below:

SEISMIC HAZARD AREA NOTICE

Parcel Number:_____

Address:_____

Legal Description:_____ _____

Notice: This site lies within a Seismic Hazard Area as defined by Section 6.8 of the Sumner Shoreline Master Program. The site was the subject of a development proposal for _____,

Sumner application number ___ filed on_____. Restrictions on use or alterations of the site may exist due to natural conditions of the site and resulting regulation. Review of such application has provided information on the location of a Seismic Hazard Area and any restrictions on use.

Signature of owner(s)

(NOTARY ACKNOWLEDGEMENT)

6.7.6. Plat notification.

For all proposed short subdivisions and subdivision proposals within seismic hazard areas, the applicant shall include a note on the face of the plat as set forth below:

Notice: This site lies within a Seismic Hazard Area as defined by the Sumner Municipal Code. Restrictions on use or alterations of the site may exist due to natural conditions of the site and resulting regulation.

6.7.7. Regulations.

For all nonexempt activities proposed within seismic hazard areas, a geotechnical report prepared by a professional engineer, geologist, or engineering geologist licensed by the state of Washington with expertise in geotechnical engineering shall be submitted.

1) The geotechnical report shall address the existing geologic, topographic and hydrologic conditions on a site, including an evaluation of the ability of the soil and structure to withstand the anticipated earthquake ground shaking and subsequent effects.

2) The geotechnical report shall include a discussion of the mitigation measures which can be taken to reduce seismic risks associated with the underlying surficial geology.

3) The geotechnical report shall include an evaluation of the effectiveness of the proposed mitigation measures.

4) The development proposal may be approved, approved with conditions, or denied based on the Shoreline Administrator's evaluation of the ability of the proposed mitigation measures to reduce seismic risks associated with the underlying surficial geology.

5) The development may be approved subject to additional review of the architectural and structural drawings by the building official for conformance with the geotechnical report and recommendations.

6) Should an applicant question the presence of seismic hazard areas on-site, the applicant may submit a geotechnical assessment sufficient to demonstrate to the building official's satisfaction, that the site is not located in a seismic hazard area. If the building official determines that the site is not in a seismic hazard area, the provisions of this chapter may be waived except that the requirements of *Section 6.8.6, Seismic Hazard Area Title Notification,* and *Section 6.8.7, Seismic Hazard Area Plat Notification*, may not be modified.

6.8 Volcanic Hazard Area

6.8.1. Purpose.

At over 14,410 feet high, Mount Rainier dominates the skyline of the southern Puget Sound region. This glacier-clad active volcano is capable of spewing ash from pyroclastic eruptions, and generating large volumes of lahars and floods which have, in the recent geologic past, inundated various watersheds and reached the shores of Puget Sound significantly altering pre-flood conditions. The purpose of this chapter is to regulate the use of land in and around volcanic hazard areas in order to protect lives, property, and public infrastructure.

6.8.2. Applicability.

Volcanic hazard areas are areas within the city which show a likelihood of lahars, debris flows and related flooding associated with volcanic activity from Mt. Rainier.

6.8.3. Mapping.

1) Volcanic hazard areas are those areas that, in the recent geologic past, have been inundated by Case I or Case II lahars or other types of debris flows, according to a map showing Volcano Hazards from Mount Rainier, Washington: Pyroclastic-flow hazard zone and inundation zones for Case I, II, and III lahars, published by the U.S. Geological Survey, Revised 1998: USGS Open-File Report 98-428. Volcanic hazard areas also include areas that have not been affected recently, but could be affected by future such events. Volcanic hazard areas are classified into the following categories:

    a) Inundation Zone for Case I Lahars. Areas that could be affected by cohesive lahars that originate as enormous avalanches of weak chemically altered rock from the volcano. Case I lahars can occur with or without eruptive activity. The average reoccurrence rate for Case I lahars on Mount Rainier is about 500 to 1,000 years.

    b) Inundation Zone for Case II Lahars. Areas that could be affected by relatively large noncohesive lahars, which most commonly are caused by the melting of snow and glacier ice by hot rock fragments during an eruption, but which can also have a noneruptive origin. The average time interval between Case II lahars from Mount Rainier is near the lower end of the 100- to 500-year range, making these flows analogous to the so-called “100-year flood” commonly considered in engineering practice.

2) Time Travel Zones. The ability to evacuate people from within a volcanic hazard area correlates to the distance from the source of an event (i.e., those areas closest to the event will have less time to evacuate than those areas farther away from the source of an event) and the amount of time for evacuation from the public notification (via a warning alarm system) that a lahar event has occurred. The amount of time that is anticipated for a debris flow, lahar, flood, or avalanche (estimated at 100 million cubic feet of volume) to travel from either the source of the event or the point where the AFM alarm is sounded is classified into the time travel zones. The city of Sumner and the urban growth area boundary are within Time Travel Zone C identified on the Pierce County Volcanic Hazard Areas Map which is based on the Bulletin of Volcanology, Vol. 60, pp. 98-109, titled: An Empirical Method for Estimating Travel Times for Wet Volcanic Mass Flows by T.C. Pierson, 1998. Time Travel Zone C is described as follows:

a) Time Travel Zone C on the Nisqually and White River systems is that area greater than an estimated 1-1/2-hour travel distance and less than or equal to an estimated two-hour travel distance from the source of the event.

b) Time Travel Zone C on the Puyallup and Carbon River systems is that area greater than an estimated one-hour travel distance and less than or equal to a 1-1/2-hour travel distance from the point where the AFM alarm is sounded.

6.8.4. Title notification.

All activity in volcanic hazard areas shall be accompanied by the recording of a notice with the Pierce County auditor in the form set forth below:

VOLCANIC HAZARD AREA NOTICE

Parcel Number:_____

Address:_____

Legal Description:_____ _____

Notice: This site lies within a Volcanic Hazard Area as defined by Section 6.9, of the Sumner Shoreline Master Program. The site was the subject of a development proposal for _____, Sumner application number ___ filed on_____. Restrictions on use or alterations of the site may exist due to natural conditions of the site and resulting regulation. Review of such application has provided information on the location of a Volcanic Hazard Area and any restrictions on use.

Signature of owner(s)

(NOTARY ACKNOWLEDGEMENT)

6.8.5. Plat notification.

For all proposed short subdivisions and subdivision proposals within volcanic hazard areas, the applicant shall include a note on the face of the plat as set forth below:

Notice: This site lies within a Volcanic Hazard Area as defined by the Sumner Municipal Code. Restrictions on use or alterations of the site may exist due to natural conditions of the site and resulting regulation.

6.8.6. Regulations.

1) No critical facilities shall be constructed or located in volcanic hazard areas as set forth in *Section 6.9. 4, Volcanic Hazard Area Mapping*. Critical facilities are those listed below:

   a) Hospitals;

   b) Jails and detention facilities, excluding temporary holding cells in police stations;

   c) Institutional or congregate care facilities for care of greater than 50 incapacitated patients;

   d) All structures with occupant load of greater than 5,000 people as established by the Uniform Building Code.

2) The applicant or property owner for a critical facility shall submit to the Shoreline Administrator, prior to occupancy of any critical facility, a written plan for evacuation of residents or occupants. The plan shall be approved by the city prior to final occupancy

approval. The applicant or property owner shall also obtain and maintain a weather radio as approved by the National Oceanic and Atmospheric Administration (NOAA) for receiving notice of a lahar.

6.9 Wildlife Habitat Area

6.9.1. Purpose.

The purpose of this chapter is to regulate development and the use of land in order to preserve and protect areas of critical and endangered fish and wildlife habitat.

6.9.2. Applicability.

Fish and wildlife habitat areas are those areas identified as being of critical importance to maintenance of fish, wildlife, or plant species, including:

1) Areas with which federally or state-listed endangered, threatened, or sensitive species of fish, wildlife, or plants have a primary association;
2) Areas with habitats and species of local importance, including the following:
    a) Areas with which state-listed monitor or candidate species or federally listed candidate species have a primary association, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term;
    b) Special habitat areas which may provide specific habitats which certain animals and plants require such as breeding habitat, winter range, and movement corridors;
3) Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish and wildlife habitat;
4) Waters of the state, including all water bodies classified by the Washington State Department of Natural Resources water typing classification system as detailed in WAC 222-16-031;
5) Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;
6) State natural area preserves and natural resource conservation areas.

6.9.3. Mapping and documentation.

Fish and wildlife habitat areas shall be identified in the following documents:

1) The Washington Department of Natural Resources Water typing maps;
2) The Washington Department of Wildlife Priority Habitats and Species (PHS) Program.
3) Other appropriate documents prepared by state or federal agencies, or documents prepared by qualified professional consultants for the city.

6.9.4. Habitat assessments.

For all nonexempt activities proposed on a site which contains or is within 1,000 feet of documented habitat for threatened, endangered, or sensitive fish or wildlife species as identified by documents listed under *Section 6.10.4, Wildlife Habitat Area Mapping and Documentation,* a habitat assessment, prepared by a professional fisheries or wildlife biologist, shall be submitted. The habitat assessment shall include a discussion and inventory of species or habitats known or expected to be located on or near the site.

6.9.5. Habitat management plans.

1) If the habitat assessment demonstrates to the satisfaction of the Shoreline Administrator that fish and wildlife habitat areas are not within 1,000 feet, then the development can proceed without further requirements for special fisheries or wildlife studies pursuant to this chapter. Otherwise, a habitat management plan shall be submitted. The purpose of the habitat management plan is to provide for the implementation, monitoring, and maintenance of permanent mitigation and restoration measures for fish and wildlife habitat. Habitat management plans shall be prepared by a professional wildlife biologist or fisheries biologist as determined appropriate by the Shoreline Administrator. At the discretion of the Shoreline Administrator, habitat assessments and management plans prepared for federal permits or approvals may be used to fulfill the requirements of this section. Prior to application for a permit the applicant may elect to waive the habitat assessment and submit a habitat management plan if potential habitat is known to exist. The habitat management plan shall contain at a minimum:
    a) A discussion of the project's effects on fish and wildlife habitat;
    b) A discussion of any federal, state, or local special management recommendations which have been developed for species or habitats located on the site;
    c) A discussion of measures to preserve existing habitats and restore habitats which were degraded prior to the proposed land use activity. Restoration plans shall include at a minimum the following:
        i. Planting and soil specifications;
        ii. Success standards; and
        iii. Contingency plans;
    d) A discussion of proposed measures which mitigate the impacts of the project;
    e) An evaluation of the effectiveness of the proposed mitigation and restoration measures;
    f) A discussion of ongoing management practices which will protect fish and wildlife habitat after the project site has been fully developed, including proposed monitoring and maintenance programs;
    g) An assessment of habitat recommendations proposed by resource agencies and their applicability to the proposal; and
    h) Any additional information necessary to determine the impacts of a proposal and mitigation of the impacts.

2) Habitat management plans shall be forwarded to the appropriate state and/or federal resource agencies for review and comment.

3) Annual monitoring reports shall be provided to the city by the property owner until the mitigation and/or restoration has been in place for at least 10 years and the success standards have been met. The city shall forward the monitoring reports annually to the appropriate federal agencies along with the following:

   a) A list and map of the location of development permits issued in the last calendar year;

   b) The implementation status of habitat management plans; and

   c) The status of the habitat improvements.

6.9.6. Regulations.

Based on the habitat assessment, habitat management plan, and comments from other agencies, the Shoreline Administrator may require mitigating measures to reduce the impacts of the proposal on critical habitat and/or wildlife areas. Mitigating measures may include, but are not limited to, increased buffers, building setbacks, enhanced buffers, reduced project scope, limitations on construction hours, limitations on hours of operation, and relocation of access. Projects may be denied if the proposal is likely to result in adverse effects to a threatened or endangered fish or wildlife species; or will result in extirpation or isolation of other critical fish, wildlife, or plant species or its habitat. The authority of the State Environmental Policy Act shall provide possible mitigation for all areas of wildlife habitat not covered by this section.

6.9.7. Stream buffers.

1) Based on the information provided in the habitat management plan, buffers of undisturbed native vegetation shall be provided to ensure retention of fish and wildlife habitat areas.

2) Buffers established for fish and wildlife habitat areas shall be established by the Shoreline Administrator in order to provide adequate protection of the resource. The buffer shall be established in consultation with state and federal resource agencies. Buffers established by other regulations in this title shall be given substantial weight towards addressing the mitigation of fish and wildlife and habitat impacts.

3) Buffers, consisting of undisturbed native vegetation, shall be required along all streams, lakes and ponds as classified by the DNR interim water typing classification system (WAC 222-16-031) and the table shown below. The buffer for Type 3 (Type F), 4 (Type Np) and 5 (Type Ns) water types shall extend landward from the ordinary high water mark of the water body. The buffer for Type 3 (Type F), 4 (Type Np) and 5 (Type Ns) water types shall not extend landward beyond a public right-of-way that contains an improved street. The buffer shall be separated from adjacent private property by a physical barrier such as, but not limited to, a pathway, berm, vegetation, or fence. The barrier shall be designed to allow for the movement of fish and wildlife and shall be approved by the Shoreline Administrator. The width of the buffer shall be established by the chart below. The buffer shall be established by a permanent protective easement, public or private land trust dedication, or similar protective mechanism as approved by the Shoreline Administrator. An easement shall also be provided by the underlying property owner that grants the city access to the buffer for the placement of further conservation/restoration measures.

DNR Interim Water Type	Buffer Width in Feet
3 (Type F)	100
4 (Type Np)	50
5 (Type Ns)	25

4) The buffer widths for shorelines of the state are established in *Chapter 4: Shoreline Environment Designations,* Table 4-7.

5) Buffers for Type 4 (Type Np) and 5 (Type Ns) streams which are not required by other regulations, may be modified by the Shoreline Administrator upon a showing that the following are satisfied:

   a) Fish, wildlife and plant habitat will not be harmed by the reduction in buffer area based on the proposed use and site development proposed;

   b) The buffer area includes enhancement measures to improve the functional attributes of the buffer through the use of plantings of native plant species. The improvements must be shown to improve the habitat conditions for wildlife;

   c) A best management practices plan addressing the proper design, layout, construction and use of the site is provided which is sufficient to mitigate impacts to wildlife and habitat areas;

   d) Under no circumstance shall the buffer be reduced below those shown in the table below:

DNR Interim Water Type	Buffer Width in Feet
4 (Type Np)	25
5 (Type Ns)	20

6.10 Flood Hazard Area

6.10.1. Purpose.

The purpose of these regulations is to protect floodplains which serve a particular value for hydrologic functions or which present a significant risk to people or property.

6.10.2. Applicability.

Flood hazard areas are those areas within the city which show a past history or potential for flooding as established by the Sumner flood damage prevention regulations, chapter 15.52 SMC, Flood Damage Prevention.

6.10.3. Mapping.

The boundaries established as flood hazard areas are those established as areas of special flood hazard by SMC 15.52.070, Flood Damage Prevention Map Adopted by Reference.

6.10.4. Title notification.

All activity in flood hazard areas shall be accompanied by the recording of a notice with the Pierce County auditor in the form set forth below:

FLOOD HAZARD AREA NOTICE

Parcel Number:_____

Address:_____

Legal Description:_____ _____

Notice: This site lies within a Flood Hazard Area as defined by Section 6.11, Flood Hazard Area, of the Shoreline Master Program. The site was the subject of a development proposal for _____, Sumner application number ___ filed on_____. Restrictions on use or alterations of the site may exist due to natural conditions of the site and resulting regulation. Review of such application has provided information on the location of a Flood Hazard Area and any restrictions on use.

Signature of owner(s)

(NOTARY ACKNOWLEDGEMENT)

6.10.5. Plat notification.

For all proposed short subdivisions and subdivision proposals within flood hazard areas, the applicant shall include a note on the face of the plat as set forth below:

Notice: This site lies within a Flood Hazard Area as defined by the Sumner Municipal Code. Restrictions on use or alterations to the site may exist due to natural conditions of the site and resulting regulation.

6.10.6. Regulations.

The regulations of chapter 15.52 SMC, Buildings and Construction Flood Damage Prevention, apply to flood hazard areas, except as modified below:

1) No encroachments, filling, new construction, or substantial improvements shall be permitted in floodways, except as follows:
    a) Work done by or for a public agency or utility, such as bridges, flood control works, revetments, retaining walls, drainage structures, or other structures necessary to promote the public's health, safety, and welfare when the improvements do not obstruct the floodway, increase the water surface elevation more than one foot, or cause an adverse impact to adjacent, cross-channel or downstream properties, and the improvements utilize appropriate flood hazard protection standards;
    b) Agricultural uses or recreational facilities that do not require the installation of utilities or structures;

c) Repair, maintenance and interior remodels to an existing structure that do not increase the ground floor area or overall square footage of the structure.

6.10.7. Transfer of development rights.

The flexibility in the layout and design of parcels for development shall be accorded as provided in *Section 6.1.8 Resource, Wildlife and Hazard Area Regulation Framework Clustering.*

VIII. Public Access

Definitions

Shoreline public access is the physical ability of the general public to reach and touch the water's edge, to travel on the waters of the state, and to view the water and the shoreline from adjacent locations. There are a variety of types of public access, including picnic areas, pathways and trails, promenades, bridges, street ends, ingress and egress, parking and others, although some of these are not currently provided along the City of Sumner's shorelines.

Physical Public Access. Unobstructed access with public use improvements that are available to the general public and that extend from the land to the water's edge or critical area.

Visual Access. Access with improvements that provide a view of the shoreline or water, but do not include physical access to the shoreline.

Limited Public Access (Physical or Visual). Restrictions on access that are deemed necessary for the health, safety, or welfare of the public or for the protection and maintenance of the particular site.

Public Access Policies

1) Public access to the Sumner shorelines does not include the right to enter upon or cross private property, except for on dedicated public easements.
2) Public access provisions should be incorporated into all private and public developments. Exceptions may be considered for the following types of uses:
   a) A single family residence;
   b) An individual multi-family structure containing four (4) dwelling units or less; and
   c) Where deemed inappropriate due to reasons of safety, security, or impact to the shoreline environment.
3) Development uses and activities on or near the shoreline should not impair or detract from the public's visual or physical access to the water.
4) Preservation and enhancement of the public's visual access to Sumner's shoreline areas should be encouraged.
5) Public access to the shoreline should be sensitive to the unique characteristics of the shoreline and should preserve the natural character and quality of the environment and critical areas.

6) Where appropriate, public access should be provided as close as possible to the water's edge without adversely affecting a sensitive environment.

7) Except for access to the water, the preferred location for placement of public access trails is at the farthest landward edge of the riparian management zone. Public access facilities should provide auxiliary facilities, such as parking and sanitation facilities, when appropriate, and should be designed for accessibility by handicapped and physically impaired persons. Publicly owned shorelines should be limited to water-dependent or public recreation uses, otherwise such shorelines should remain protected open space.

8) Shoreline areas that hold unique value for public enjoyment should be purchased for public use, and public access area should be of sufficient size to allow passage and allow the visitor to stop, linger, and contemplate the setting.

9) Public access afforded by shoreline street ends should be preserved, maintained and enhanced.

10) Public access should be designed to provide for public safety and to minimize potential impacts to private property and individual privacy. This may include providing a physical separation to reinforce the distinction between public and private space, achieved by providing adequate space, through screening with landscape planting or fences, or other means.

11) Public views from the shoreline upland areas should be enhanced and preserved. Enhancement of views should not be construed to mean excess removal of vegetation that partially impairs views.

12) Public access facilities should be constructed of environmentally friendly materials and support healthy natural processes, whenever financially feasible and possible.

13) Public access facilities should be maintained to provide a clean and safe experience and protect the environment.

Public Access Regulations

1) In reviewing shoreline permit applications, the City of Sumner shall consider potential and current public use of the shoreline, total water surface reduction, and restriction to navigation.

2) Public access shall be required for all shoreline development and uses, except for a single family residence, residential projects containing four (4) or less dwelling units, or subdivisions of land into 4 or fewer parcels. A shoreline development or use that does not provide public access may be authorized; provided it is demonstrated by the applicant and determined by the City that one or more of the following provisions apply.

   a) Unavoidable health or safety hazards to the public exist which cannot be prevented by any practical means;

   b) Inherent security requirements of the proposed development or 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 total long-term cost of the proposed development, as determined by the Shoreline Administrator.

   d) Unacceptable environmental impacts that cannot be mitigated would occur; 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.

3) Provided further, that the applicant has first demonstrated and the City has determined that all reasonable alternatives have been exhausted, including but not limited to:

a) Regulating access by such means as maintaining a gate and/or limiting hours of use to daylight hours; and.

b) Providing access that is physically separated from the development proposal, such as a nearby street end, an offsite viewpoint, or a trail system

c) Designing separation of uses and activities, with such means as fences, terracing, hedges, and landscaping.

4) Where the above conditions 3(a)-(e) cannot be met, a payment in lieu of providing public access shall be required in accordance with RCW 82.02.020. Payment in-lieu option may only be used when the City has an in-lieu program available. Payment in-lieu may include in-kind work or services.

5) Developments, uses, and activities shall be designed and operated to avoid blocking, reducing, or adversely interfering with the public's visual or physical access to the water and the shorelines. In providing visual access to the shoreline, the natural vegetation shall not be excessively removed either by clearing or by topping.

6) Public access sites shall be connected directly to the nearest public street.

7) Public access sites shall be made barrier free for the physically disabled where feasible.

8) Required public access sites shall be fully developed and available for public use at the time of occupancy or use of the development or activity.

9) Public access easements and permit conditions shall be recorded on the deed where applicable or on the face of a plat or short plat as a condition running in perpetuity with the land. Said recording with the Auditor's office shall occur at the time or permit approval (RCW 58.17.110).

10) The standard state approved logo and other approved signs that indicate the public's right of access and hour of access shall be constructed, installed, and maintained by the applicant in conspicuous locations at public access sites. In accordance with *Public Access* regulation 3 in this section, signs controlling or restricting public access may be approved as a condition of permit approval.

11) Future actions by the applicant or other parties shall not diminish the usefulness or value of the public access site.

12) Development on or over the water shall only be allowed for water-dependent uses and shall be constructed as far landward as possible to avoid interference with views from surrounding properties to the shoreline and adjoining waters and navigability.

13) Physical public access shall be designed to prevent net loss of ecological functions and processes.

14) Whenever financially feasible and practical, the City shall require the use of environmentally friendly materials and technology in such things as building materials, paved surfaces, porous pavement, etc., when developing public access to the shoreline.

15) Where public access is to be provided through the Sumner Master Trail Plan and where the subject property is located within the *Action Area* (south of 16th Street East and north of Bridge Street) the following requirements shall apply:

a) The trail shall be no wider than 16 feet, plus 2 foot gravel shoulders for a maximum width of 20 feet.

b) The trail shall be placed on one side of the White River or the other, not both sides.

c) Where feasible the trail shall be placed on the furthest landward edge of the riparian management zone. If this is not feasible the trail shall:

i. Be a minimum of 100 feet from the ordinary high water mark of the White River;

ii. Within the entire riparian management zone provided that restoration and mitigation will be provided per a habitat management plan as required in *Section V, Environmental Impact Mitigation;*

iii. Restoration/mitigation within the riparian management zone between the trail and the ordinary high water mark will be in place before construction of the trail.

d) On City owned property on the east bank of the White River, and where possible, the trail shall be placed outside the riparian management zone in the Urban Conservancy shoreline designation.

e) Except when the trail is constructed within the riparian management zone per *Section VIII, Public Access Regulations, Regulation #15.c.iii.*, the riparian management zone shall be restored between the trail and the White River in conjunction with the development of the trail. Restoration of the riparian management zone prior to trail construction is preferred.

f) Direct access from the trail to the water's edge of the White River, should be granted no more than every three hundred (300) feet.

i. The width of the water access trails should not exceed 36 inches; and

ii. All water access trails shall be of pervious materials.

g) The restoration and landscaping vegetation should be designed, installed and maintained to achieve full canopy cover over the trail and the access trails that lead to the White River.

h) Stormwater runoff should be sheet flowed (as opposed to conveyed) through either an amended soil treatment and/or vegetated filter and then into nearby vegetation.

i) Trail uses restrictions and/or best management practices are encouraged to reduce potential damage to ecological functions and processes, such as, but not limited to: leash and cleaning of waste requirement for dogs, hours of use, trash cans, etc.

j) The City will fund and implement a regular maintenance program that will, at a minimum:

i. Remove trash and animal waste.

ii. Maintain the filtration function of the porous pavement (e.g. sweepers/ vacuums).

iii. Maintain the water quality function of the soil or vegetative filter used to treat stormwater runoff from the trail.

k) As the trail construction and design advances, if the above measures cannot be met the City will consult further with the appropriate federal agencies.

NOTE: Additional public access regulations may be required for specific use requirements. *See Chapter 7: Specific Shoreline Development Policies and Regulations.*

CHAPTER 7 SPECIFIC SHORELINE DEVELOPMENT POLICIES AND REGULATIONS

I. Introduction

The following policies and regulations apply to shoreline modifications and uses allowed in one or more shoreline environment designation. A proposal can consist of one or more of these modifications or uses. For example, a proposal to mine river gravel would have to be consistent with the policies and regulations pertaining to industrial development and mining. If the proposed project includes other specific developments such as an instream structure or a road, then these aspects of the project must also be reviewed for consistency with the applicable policies and regulations listed below.

All shoreline modifications and uses must also be consistent with the Shoreline Environmental Designations of Chapter 4, the Goals and Objectives of Chapter 5, and the General Shoreline Policies and Regulations of Chapter 6.

II. Agriculture

Definitions

Agricultural activities are agricultural uses and practices including, but not limited to: producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie fallow in which it is plowed and tilled but left unseeded; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing agricultural equipment; maintaining, repairing, and replacing agricultural facilities, provided that the replacement facility is no closer to the shoreline than the original facility; and maintaining agricultural lands under production or cultivation (WAC 173-26-020).

Note on Existing Agricultural Activities: In accordance with RCW 90.58.065, this Master Program does not regulate existing or ongoing agricultural activities occurring on agricultural lands. However, new agricultural use and development on lands not meeting the definition of agricultural land must comply with this Master Program.

Note on Permit Exemptions for New Agricultural Activities: For activities subject to this Master Program, the Shoreline Management Act exempts the construction and practices normal or necessary for farming, irrigation, and ranching activities from the Substantial Development Permit requirement. This exemption would apply to agricultural service roads, utilities, and the

construction and maintenance of irrigation structures such as head gates, pumping facilities, and irrigation channels. Also exempt is the operation and maintenance of any system of dikes, ditches, drains, or other facilities that were in existence prior to September 8, 1975, and that were created, developed, or utilized primarily as a part of an agricultural drainage or diking system.

The exemption for agricultural uses does not apply to a feedlot of any size, processing plants, other activities of a commercial nature, or the alteration of the contour of the land by leveling or filling other than that which results from normal cultivation (see RCW 90.58.030). A feedlot is defined as an enclosure or facility used or capable of being used for feeding livestock hay, grain, silage or other livestock feed. A feedlot is not land used for growing crops or vegetation for livestock feeding or grazing and does not include normal livestock wintering operations.

Although specific agricultural activities and structures are exempt from the Shoreline Substantial Development Permit (SSDP) requirement, new agricultural use and development on lands not meeting the definition of agricultural land must comply with all applicable prohibitions, regulations, goals, policies and development standards contained within this Master Program. If necessary, a Conditional Use and/or Variance Permit must be obtained.

Agriculture lands being converted to another use and development on lands not meeting the definition of agricultural land must comply with the policies and regulations of the proposed use.

See *Chapter 8: Administrative Procedures*, Section 1.A. for more information.

Agriculture Policies

1) A vegetative buffer of native plants should be maintained between agricultural lands and shorelines, wetlands, landslide and erosion hazard areas, and/or wildlife habitat areas in order to reduce harmful bank erosion and resulting sedimentation, enhance water quality by slowing and filtering runoff, and avoid impacts to ecological functions and processes.
2) Animal feeding operations, retention and storage ponds, feedlot waste and manure storage should be located out of the shoreline jurisdiction and constructed to prevent contamination of water bodies and degradation of the shoreline environment.
3) Appropriate farm and soil management techniques should be utilized to prevent fertilizers, herbicides, and pesticides from contaminating water bodies and critical areas and having a harmful effect on ecological functions and processes.
4) Public access to the shoreline should be encouraged where it does not conflict with agricultural activities.

Agriculture Regulations

1) In accordance with RCW 90.58.065, this Program shall not restrict existing or ongoing agricultural activities occurring on agricultural lands.
2) New agricultural use and development on lands not meeting the definition of agricultural land may be allowed when it complies with this Program and all of the following regulations.
3) A buffer of permanent native vegetation shall be established and maintained between areas used for cultivation or grazing and adjacent water bodies and critical areas. The plant composition and width of the buffer shall be based on the site conditions, including type of vegetation, soil types, drainage patterns, and slope. The buffer shall not be less

than the riparian management zone established in *Chapter 4: Shoreline Environment Designations* as measured landward and perpendicular from the ordinary high water mark (OHWM). The buffer shall be of sufficient width to retard runoff, reduce sedimentation, and provide riparian habitat. All agricultural structures must be located outside of the riparian management zone established in Table 4-7.

a. Riverbanks and water bodies shall be protected from damage due to concentration and overgrazing of livestock by providing the following when warranted:

    i. Ample supplies of clean water in tanks on dry land for stock watering; and,

    ii. Fencing or other grazing controls to prevent overgrazing and damage to buffer vegetation.

b. Adequate provision shall be made during the application of agricultural chemicals to prevent contamination of water bodies, wetlands, or aquifers.

c. The following agricultural developments and activities are prohibited within the shoreline jurisdiction:

    i. Animal feedlot operations, including the collection of feedlot wastes, stockpiling of manure solids, and storage of noxious chemicals.

    ii. Aerial spraying of chemical pesticides or herbicides over water bodies, wetlands, or within a floodway, or within two hundred (200) feet of the OHWM, unless specifically permitted under the Washington Departments of Agriculture or Public Health

    iii. The disposal of inorganic farm wastes, chemicals, fertilizers, and associated containers and equipment.

    iv. Any agricultural activity waterward of the ordinary high water mark.

    v. Manure lagoons.

    vi. Manure spreading on agricultural fields.

Agriculture Environment Specific Regulations

Urban Conservancy, Shoreline Residential, and **Urban:** Existing agriculture and new agriculture activity such as tilling of the land or animal grazing is a permitted use.

Natural: Existing agriculture activity is a permitted use. New agricultural activity is prohibited.

Tapps Reservoir and Aquatic: New agricultural activity is prohibited.

III. Aquaculture

Definition

Aquaculture is the culture or farming of fish, shellfish, or other aquatic plants and animals.

Aquaculture Policies

1) Aquaculture should be located in areas that will not result in a net loss of ecological function to the shoreline and not negatively impact nacigation and other water dependent uses.
2) Aquculture should be allowed for the restoration of native fish runs of the Puyallup and White Rivers.

Aquaculture Regulations

General

1) Aquaculture is only permitted in association with the restoration of native fish species on the Puyallup and White Rivers.

IV. Boating Facilities

Definition

Boating facilities include marinas, boat launch ramps (public and private), wet and dry boat storage, related sales and service for pleasure and commercial watercraft, and docks (piers) except docks serving four or fewer single-family residences are excluded from this definition.

Boating Facilities Policies

1) New public boat launch ramps may be permitted in the Sumner shoreline. If allowed, such facilities should be designed to accommodate public access and enjoyment of the shoreline location. Depending on the scale of the facility, public access should include walkways, viewpoints, restroom facilities, and other recreational uses.
2) Boating facilities including marinas, docks, piers, wet boat storage and private boat launch ramps should be prohibited within Sumner shoreline jurisdiction due to the specific nature and configuration of the shorelines identified in the City.
3) Boat launch ramps can have a significant impact on riverine and lake habitat and river mechanics; for this reason, the impacts of boat launch ramps should be reviewed thoroughly before they are permitted in the Sumner shoreline jurisdiction.

4) Encourage design elements that increase light penetration to the water below an existing or new boat launch ramp, such as modifying orientation and size; and using grating as a surface material.

5) Locate, design, and operate public boat launch ramps to avoid adverse proximity impacts to adjacent land uses such as noise, light and glare, aesthetic impacts, and impacts to public visual access.

6) Dry boat storage should not be considered a water-oriented use.

Boating Facilities Regulations

General

1) Boating facilities, as defined in this section, shall require a Conditional Use Permit, unless otherwise specified.

2) The City of Sumner shall require the following information in its review and evaluation of boating facility proposals in addition to the requirements of WAC 173-27-180 and *Chapter 8: Administrative Procedures, Section II, Shoreline Permit Procedures*:

   a. A description of the existing natural shoreline features and uses;

   b. A description of the geohydraulic processes at the site including, accretion/erosion characteristics, flood levels, and surface drainage;

   c. A description of the ecological functions in the upland and aquatic environments;

   d. An estimate of the area of surface water to be appropriated;

   e. A description of any shoreline stabilization and/or flood control works proposed as part of the project;

   f. A description of any dredging that may be required as part of construction and maintenance; and

   g. Other information determined by the Shoreline Administrator to be relevant to the protection of the shoreline habitat and ecological functions and processes.

3) Boating facilities may be permitted only if:

   a. It can be demonstrated that the facility will not adversely impact critical areas including fish or wildlife habitat areas and associated wetlands; or adversely affect ecological functions and processes; and

   b. Adequate mitigation measures ensure that there is no net loss of the functions or values of riparian habitat as a result of the facility.

Boat Launch Ramps

1) Private boat launch ramps are a prohibited use along the White (Stuck) and Puyallup Rivers and Lake Tapps.

2) Boat launch ramps shall locate on stable shorelines where water depths are adequate to eliminate or minimize the need for channel maintenance activities.

3) Boat launch ramps may be permitted on accretion shoreforms, provided any necessary grading is not harmful to affected resources and any accessory facilities are located landward of the OHWM.

4) Where boat ramps are permitted, parking shall not be located on scarce accretion shoreforms, which have high value for general shore recreation.

5) Boat launch ramps may be permitted on stable non-erosional banks where the need for shoreline stabilization is minimized.

6) Boat launch ramps shall be placed near flush with the foreshore slope to minimize the interruption of geohydraulic processes.

7) Boat launch ramps shall avoid impediments to migrating fish and will not locate in spawning, feeding or rearing areas for salmonids.

8) Boat launch ramps shall be designed and constructed using methods/technology that have been recognized and approved by state and federal resource agencies as the best currently available. Rail and track systems shall be preferred over concrete ramps or similar facilities.

9) Launch access for non-motorized watercraft shall use gravel or other permeable material. Removal of vegetation for launch access shall be limited to twelve (12) feet in width. The boat launch ramp shall be a maximum of ten (10) feet in width.

10) Removal of vegetation for launch access accessible by trailer shall be limited to eighteen (18) feet in width with 6 feet revegetated once launch access has been constructed. The boat launch ramp shall be a maximum of twelve (12) feet in width.

11) The boat launch shall be designed so that structures are aesthetically compatible with, or enhance, existing shoreline features and uses.

12) Boat launch sites that are open to the public shall have adequate restroom facilities operated and maintained in compliance with Tacoma-Pierce County Health Department regulations.

Docks

1) Docks and piers are a prohibited use along the White (Stuck) and Puyallup Rivers and Lake Tapps.

Dry Boat Storage

1) Dry boat storage shall not be considered a water-oriented use and must respect the appropriate shoreline environment setback (see *Chapter 4: Shoreline Environment Designations, Table 4-7, Bulk Dimensional and Vegetation Standards Table).*

Marinas

1) Marinas are a prohibited use along the White (Stuck) and Puyallup Rivers and Lake Tapps.

Boating Facilities Environment Specific Regulations

Natural, Tapps Reservoir, Shoreline Residential, and **Aquatic**: Boat launch ramps for public use are permitted as a conditional use. Private boat launch ramps, docks, dry boat storage and marinas are prohibited.

Urban Conservancy and **Urban**: Boat launch ramps for public use are permitted as a conditional use. Dry boat storage may be permitted as a conditional use. Private boat launch ramps, docks and marinas are prohibited.

V. Clearing and Grading

Definitions

Clearing: The removal of vegetation from a site in such a manner as to affect the erosive potential of the soils on a site.

Grading: The movement or redistribution of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land.

Clearing and Grading Policies

1) Clearing and grading activities should only be allowed in association with an allowed (permitted) shoreline development.
2) Clearing and grading activities should be limited to the minimum necessary to accommodate the shoreline development or as part of a landscape plan developed in conjunction with the shoreline development.
3) Clearing and grading should not be permitted within shoreline environment setbacks, unless fish and wildlife habitat will not be degraded.
4) Best management practices should be used during clearing and grading to control erosion.
5) For extensive clearing and grading proposals, a plan addressing plant species removal, revegetation, irrigation, erosion and sedimentation control, and other methods of riparian corridor protection should be required.

Clearing and Grading Regulations

1) Clearing and grading activities shall only be allowed in association with a permitted shoreline development, use or restoration activity.
2) Clearing and grading activities shall comply with Sumner Municipal Code (SMC) Chapter 16.05, Control of Erosion and Sedimentation of Waterways.
3) All clearing and grading activities shall be limited to the minimum necessary for the intended development, including any clearing and grading approved as part of a landscape plan. Surfaces cleared of vegetation and not developed with structures or impervious

surfaces must be replanted as soon as possible. Full groundcover must be reestablished within two (2) years.

4) Clearing and grading within the Riparian Management Zones established in Table 4-7 (see *Chapter 4: Shoreline Environment Designations*) shall comply with the requirements established in *Chapter 6: General Shoreline Development Policies and Regulations, Section III, Vegetation Conservation* .

5) If the area of clearing or grading totals one-acre or greater (43,560 square feet), located on site, in or outside of shoreline jurisdiction, then water quality and erosion control measures shall be established through the National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit and associated Stormwater Pollution Prevention Plan (SWPPP).

6) All shoreline development and activity shall use effective measures to minimize increases in surface water run off that may result from clearing and grading activity in compliance with the 2005 version of the Stormwater Management Manual for Western Washington issued by the Washington State Department of Ecology. The applicant must include in the proposal the methods that will be used to control, treat, and release runoff so that receiving water quality and shore properties and features shall not be adversely affected. Such measures may include but are not limited to dikes, berms, catch basins or settling ponds, installation and maintenance of oil/water separators, grassy swales interceptor drains, and landscaped buffers.

7) Stabilization of exposed erosional surfaces along shorelines shall, whenever feasible, utilize soil bioengineering techniques.

8) Developments in the floodplain that alter the topography of the shoreline shall be carefully evaluated to determine compliance with *Chapter 6: General Shoreline Policies and Regulations, Section 6.11*.

9) Developments that alter the topography of the shoreline shall be carefully evaluated to determine if such alteration would impact ecological functions and processes. Mitigation shall be required for projects to ensure no net loss of ecological functions and processes.

10) An erosion and sedimentation control program shall be submitted with a permit application that involves the removal of vegetation, stockpiling of earth or other materials, or any activity that could result in shoreline erosion and siltation of the Puyallup or White (Stuck) Rivers, Lake Tapps and their associated wetlands. Stockpiling of earth or other materials is only allowed as needed for a permitted development.

11) The proponent shall incorporate BMP measures into the erosion and sedimentation control program. The Shoreline Administrator shall determine what BMP measures are applicable for erosion and sedimentation control for projects in shorelines.

12) All debris, overburden, and other waste materials from construction shall be disposed of in such manner as to prevent their entry into a waterbody by erosion.

13) All disposal sites for soils and materials resulting from the shoreline development shall be identified and approved before permit issuance.

Clearing and Grading Environment Specific Regulations

Urban Conservancy, Tapps Reservoir, Shoreline Residential and **Urban**: Clearing and grading is a permitted activity when associated with a development that is consistent with the provisions of

this Master Program. Clearing and grading associated with development that is not consistent with the provisions of this Master Program is a prohibited activity.

Natural and **Aquatic**: Clearing and grading is a permitted activity only when associated with a restoration project. Clearing and grading not associated with a restoration project is a prohibited activity.

VI. Commercial Development

Definition

The providing of goods, merchandise or services for compensation, including, but not limited to, retail shopping, commercial recreation, business and professional offices, highway-oriented business, automotive, boat and cycle mechanical sales and services as included in the commercial classifications of Title 18 of the SMC.

Commercial Development Policies

1) Give preference to water-dependent commercial uses over non-water-dependent commercial uses, then to water-related and water-enjoyment commercial uses over non-water-oriented commercial uses in shoreline locations. Non-water oriented commercial uses may be allowed if they are combined with public benefits, such as public access and shoreline ecological restoration of shoreline ecological functions and processes, and are located on properties where river navigability is severely limited.
2) Priority of any commercial development should also be given to uses that provide the greatest opportunity for the public to enjoy the shoreline in Sumner. This includes restaurants that provide a view of the river to customers; motels and hotels that provide walking areas for the public along the shoreline; office buildings and retail sales buildings that have a riverfront theme with public access to the waterfront.
3) Non-water-dependent commercial uses should take advantage of the shoreline location by locating and designing the use to bring a large number of community members to the shorelines.
4) Public access and ecological restoration should be considered as potential mitigation of impacts to shoreline resources for all water-related and water-dependent commercial uses consistent with all relevant constitutional and other legal limitations on the regulation of private property.
5) Over-water commercial development should be prohibited.
6) New commercial development on shorelines should be encouraged to locate in areas with existing commercial uses.
7) Commercial development should be required to provide physical or visual access to the shoreline or other opportunities for the public to enjoy shorelines of statewide significance.
8) Site plans for commercial developments should include multiple use concepts such as open space and recreation.

9) Commercial development in the shoreline jurisdiction should include native landscaping to enhance the shoreline area.

Commercial Development Regulations

1) Only water-dependent commercial development shall be permitted within the riparian management zone established by this Master Program (see *Chapter 4: Shoreline Environment Designations, Bulk Dimensional and Vegetation Standards Table, Table 4-7*).

2) Accessory commercial development that does not require a shoreline location shall be located upland of the water-dependent portions of the development and setback from the OHWM as set forth in *Chapter 4: Shoreline Environment Designations*. Accessory development includes, but is not limited to, parking, storm runoff control facilities, utilities, and land transportation corridors.

3) Over-water construction of commercial uses is prohibited.

4) Non-water-oriented commercial uses are allowed in the shoreline jurisdiction if they meet the following criteria:

   a. The site is physically separated from the shoreline by another property in separate ownership or public right of way; or

   b. The use is part of a mixed use project that includes water-dependent uses and provides significant public benefit with respect to the city's Shoreline Master Program objectives; or

   c. Navigability on the shoreline waterbody is severely limited at the proposed site; or

   d. The commercial use provides a significant public benefit in the form of public access and ecological restoration of shoreline ecological functions and processes.

5) When permitted pursuant to Section V, Commercial Development Regulations, Regulation #4 above, non-water-oriented uses shall provide public access (see Chapter 6: General Shoreline Policies and Regulations, Section VIII, Public Access) and restore shoreline ecological functions as follows:

   a. When part of a mixed-use development – Eighty percent (80%) of the riparian management zone shall be restored or enhanced consistent with opportunities identified in the Restoration Plan or Inventory and Characterization report.

   b. When not part of a mixed-use development, the City shall determine the type and extent of restoration on a case-by-case basis according to the opportunities and constraints provided by the site.

6) Water-enjoyment and non-water-oriented commercial developments that are not required to obtain a conditional use permit (see *Chapter 4: Shoreline Environment Designations, Permitted Use and Modification Table, Table 4-6*) shall either through the nature of their use, their design and location, and/or through provisions for public access, take full advantage of the riverfront setting to maximize views of the shoreline both for the commercial use and for the general public, and enhance the aesthetic value of the shoreline through appropriate design treatments. An applicant shall demonstrate the following:

   a. That the proposed development will be designed and oriented to take advantage of the riverfront setting and the water view;

b. That the proposed development will be designed to maximize to the greatest extent feasible public view and public access to and along the shoreline, as provided in *Chapter 6: General Shoreline Policies and Regulations, Section VIII, Public Access*;

c. That the proposed development will be designed to be compatible with existing and/or proposed uses and plans for adjacent properties;

d. That landscaping for proposed developments will screen unsightly aspects of their operation from the public view to minimize blockage of the existing river scenic view; and

e. That the proposed development will be designed to have a minimum adverse impact on the natural environment of the site, and shall fully mitigate for any adverse impact.

7) All commercial development within shoreline jurisdiction shall provide for public visual and physical access to the shoreline. Where on-site public access is appropriate, commercial development shall dedicate, improve, and provide maintenance for a pedestrian easement that provides area sufficient to ensure usable access to and along the shoreline for the general public. Public access easements shall be a minimum of twenty-five (25) feet in width and shall comply with the public access standards contained in this Master Program (see *Chapter 6: General Shoreline Policies and Regulations, Section VIII, Public Access*).

8) Off-site public access to the Sumner shoreline shall be required if on-site public access would pose an unacceptable risk to the public health, safety, and welfare. Off-site public access must meet the same standards and requirements as on-site public access.[1]

9) All commercial loading and service areas shall be located on the upland side of the commercial activity or provisions shall be made to screen the loading and service areas from the shoreline.

10) Commercial development shall be designed and maintained in a neat and orderly manner, consistent with the character and features of the surrounding area.

Commercial Development Environment Specific Regulations

Urban: Water-oriented commercial developments are permitted uses, unless otherwise stated in this Master Program. Non-water-oriented developments located along either bank of the White (Stuck) River between the Fryar Avenue bridge crossing and the confluence of the White (Stuck) River with the Puyallup River are permitted uses. Non-water-oriented developments located elsewhere within city limits may be permitted as a conditional use.

Urban Conservancy: Water-dependent commercial development is a permitted use. Water-related commercial development may be permitted as a conditional use. Water-enjoyment and non-water-oriented developments located along either bank of the White (Stuck) River between the Fryar Avenue bridge crossing and the confluence of the White (Stuck) River with the Puyallup River

[1] NOTE: Offsite public access could be provided either through a payment in lieu agreement with the City or through the purchase of land or an easement at a location appropriate to provide the access deemed necessary.

are permitted uses. Water-enjoyment and non-water-oriented developments located elsewhere within city limits may be permitted as a conditional use.

Natural, Aquatic, Shoreline Residential and **Tapps Reservoir:** Commercial development is prohibited.

VII. Dredging and Dredge Material Disposal

Definitions

Dredging: The removal or displacement of earth such as gravel, sand, mud, or silt from the bottom or banks of a body of water or wetland. Dredging is normally done for specific purposes or uses such as maintaining navigation channels, constructing bridge footings, laying submarine pipelines or cable, obtaining bottom materials, or for flood control.

Dredge material: The material removed by dredging.

Dredge material disposal: The depositing of dredged materials on land or into water bodies for the purpose of disposing of the material in an acceptable manner.

Dredging and Dredge Material Disposal Policies

1) Dredging waterward of the ordinary high-water mark for the primary purpose of obtaining fill material is prohibited.
2) New development should be sited and designed to avoid or, if that is not possible, to minimize the need for new and maintenance dredging.
3) Removal of gravel for flood management purposes should be allowed provided it is consistent with an adopted flood hazard reduction plan, has a long term benefit to flood hazard reduction, does not result in a net loss of shoreline ecological functions and processes, and is part of a comprehensive flood management solution.
4) Dredge material disposal in water bodies, on shorelands, or wetlands within a river's channel migration zone should be discouraged except for habitat improvement.
5) Dredge material disposal on land should occur in areas where environmental impacts will not be significant.

Dredging and Dredge Material Disposal Regulations

1) Applications for shoreline dredging and dredge material disposal shall provide, at a minimum, the following information in addition to the requirements of WAC 173-27-180 and *Chapter 8: Administrative Procedures, Section II Shoreline Permit Procedures*:
    a. A description of the purpose of the proposed dredging and an analysis of compliance with the policies and regulations of this Program.
    b. A detailed description of the physical, chemical, and biological characteristics of the materials to be dredged, including:

i. Physical analysis of material to be dredged: material composition and amount, particle size distribution, organic materials present, source of material;

ii. Chemical analysis of material to be dredged: volatile solids, chemical oxygen demand (COD), grease and oil content, oxygen and heavy metals; and

iii. Biological analysis of material to be dredged: nutrients, sulfides and biological organisms, both permanent and migratory/transitory.

c. Dredging technique, schedule, frequency, hours of operation, and procedures.

d. Method of dredge material disposal, including the location, size, capacity and physical characteristics (i.e., topography and existing drainage patterns for both surface and ground water) of the soil disposal area, proposed dewatering and stabilization of materials, methods of controlling erosion and sedimentation, transportation method and routes, hours of operation, and schedule.

e. Plans for disposal of maintenance materials for at least a fifty (50) year period.

f. Location and stability of bedlands adjacent to proposed dredging area.

g. Hydraulic analyses, including current flows, direction, and projected impacts. Hydraulic modeling studies sufficient to identify existing geo-hydraulic patterns and probable effects of dredging are required for large scale, extensive dredging projects.

h. Assessment of water quality impacts.

i. Assessment of biological impacts to fish and wildlife habitat including migration, seasonal use, forage, spawning and disruption to life cycle.

2) Dredging and dredge material disposal shall be permitted only where it is demonstrated that the proposed actions will not:

a. Result in a net loss of ecological functions and processes; significant damage to water quality, fish, and other essential biological elements; adversely alter natural drainage and circulation patterns, currents, river flows; significantly reduce floodwater capacities; or significantly impact the functions and values of critical areas.

b. Causes significant adverse impact to threatened or endangered species protected under the Endangered Species Act.

3) Proposals for dredging and dredge material disposal shall include all feasible mitigating measures to protect ecological functions and processes and to minimize adverse impacts such as turbidity, release of nutrients, heavy metals, sulfides, organic materials, or toxic substances, depletion of oxygen, disruption of food chains, loss of benthic productivity, and disturbance of fish runs and important localized biological communities.

4) Dredging and dredge material disposal shall not occur in wetlands, except as allowed under *Chapter 6: General Shoreline Policies and Regulations, Section VII, Critical Areas Protection*. Dredging and dredge material disposal in wetlands can occur for the purposes of enhancing or restoring valuable wetland functions.

5) Dredging waterward of the OHWM shall only be allowed when necessary to support the following uses and developments:

a. Establishing, expanding, relocating or reconfiguring navigational channels and basins where necessary to assure the safety and efficiency of existing navigational uses;

b. Maintenance dredging for the purpose of restoring a lawfully established use or development;

c. In conjunction with a water-dependent use;

d. Environmental clean-up activities required by the Model Toxics Control Act or Comprehensive Environmental Response, Compensation, and Liability Act;

e. As part of an approved habitat improvement project;

f. To improve flood control, water flow or water quality, provided that all dredged material shall be contained and managed so as to prevent it from reentering the water;

g. In conjunction with a bridge, utility, navigational structure, or instream structure, for which there is a documented public need and where other feasible sites or routes do not exist.

6) Maintenance dredging of established navigation channels and basins shall be restricted to maintaining location, depth, and width previously authorized under this program.

7) Dredging waterward of the OHWM for the sole purpose of obtaining fill material or aggregate resources is prohibited, except when the material is necessary for the restoration of ecological functions. When allowed, the site where the fill is to be placed must be located waterward of the OHWM. The project must be either associated with a Model Toxics Control Act (MTCA) or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) habitat restoration project or, if approved through a shoreline conditional use permit, any other significant habitat enhancement project.

8) When dredging is permitted, the dredging shall be the minimum necessary to accommodate the proposed use.

9) Dredging shall utilize techniques that cause minimum dispersal and broadcast of bottom material; hydraulic dredging shall be used wherever feasible in preference to agitation dredging.

10) Disposal of dredge material on shorelands or wetlands within a river's channel migration zone shall be discouraged. In the limited instances where it is allowed, such disposal shall require a conditional use permit.

11) Dredged material may be disposed at approved upland sites. If disposal is proposed on shorelands or wetlands within a river's channel migration zone, a conditional use permit is required. The disposal of dredge material on upland sites shall be considered "Fill" and must be consistent with all applicable provisions of this Master Program.

12) Depositing dredge materials waterward of the OHWM shall be allowed only by Conditional Use Permit; when approved by applicable agencies, which may include the U.S. Army Corps of Engineers pursuant to Section 10 (Rivers and Harbors Act) and Section 404 (Clean Water Act) permits, and Washington State Department of Fish and Wildlife Hydraulic Project Approval (HPA); and when found to meet one of the following reasons:

a. For wildlife habitat improvements;

b. To correct problems of material distribution that are adversely affecting fish resources; or

c. When land disposal alternatives are more detrimental to shoreline resources than depositing it in water areas.

13) Pursuant to 12.c listed above, when land disposal alternatives are more detrimental to shoreline resources than depositing it in water areas , water disposal sites shall be identified consistent with the following criteria:
    a. Disposal will not interfere with geomorphological or hydrological processes;
    b. The dredge material has been analyzed by qualified personnel and found to be minimally or nonpolluting;
    c. The proposed action includes all feasible mitigation measures to protect freshwater and terrestrial species and habitats and not cause significant adverse impact to threatened or endangered species; and
    d. The site and method of disposal meets all requirements of applicable regulatory agencies.
14) The City may impose reasonable limitations on dredge disposal operating periods and hours and may require provision for buffer strips at land disposal sites.

Dredging Environment Specific Regulations

Natural, Urban Conservancy, Tapps Reservoir, Shoreline Residential, Urban, and **Aquatic**: Dredging associated with a MTCA or CERCLA habitat restoration project is permitted. Dredging not associated with a MTCA or CERCLA habitat restoration project may be permitted as a conditional use.

Dredge Material Disposal Environment Specific Regulations

Natural: Dredge material disposal may be permitted as a conditional use only if part of a restoration project. Dredge material disposal not associated with a restoration project is prohibited.

Urban Conservancy, Tapps Reservoir, and **Aquatic**: Dredge material disposal may be permitted as a conditional use.

Shoreline Residential and **Urban**: Dredge material disposal on shorelands or wetlands outside a river's channel migration zone is permitted as a conditional use. Dredge material disposal on shorelands or wetlands within a river's channel migration zone may be permitted as a conditional use.

VIII. Ecological Restoration, Enhancement and Mitigation

Definitions

Restore, Restoration, or Ecological Restoration: 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.

Wetland Mitigation Bank: A site where wetlands are restored, created, enhanced, or in exceptional circumstances, preserved, expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to aquatic resources.

Note on Permit Exemptions: Watershed restoration projects and public or private projects that meet the definition for such exemptions outlined in WAC 173-27-040 and are designed to improve fish or wildlife habitat or fish passage are exempt from obtaining a Shoreline Substantial Development Permit (SSDP). See *Chapter 8: Administrative Procedures*, *Section 1.A.* for more information.

Ecological Restoration, Enhancement and Mitigation Policies

1) Incorporate habitat enhancement elements into the design and implementation of public infrastructure improvement projects.
2) Identify specific restoration opportunities where the City can take the lead with support from other regional entities.
3) Employ incentives and encourage actions in shorelines and critical areas that restore the ecological functions and ecosystem-wide processes of the City's shorelines.
4) Educate the community and encourage public involvement in the restoration of the shoreline by creating and leveraging programs, such as the NPDES Phase II stormwater requirements.
5) Consideration should be made for potential adverse effects of global climate change when designing restoration and remediation projects.
6) Encourage establishment of wetland mitigation banks on appropriate sites that conform with state and federal guidelines.

Ecological Restoration, Enhancement and Mitigation Regulations

1) Restoration of ecological functions and processes shall be allowed on all shorelines and shall be located, designed and implemented in a manner that observes the critical area standards in *Chapter 6: General Shoreline Policies and Regulations, Section VII, Critical Areas Protection* section and assures compatibility with other shoreline uses.
2) Ecological restoration projects shall be carried out in accordance with City- or resource agency-approved restoration plan and in accordance with the policies and regulations of this Program.
3) Wetland mitigation banks shall be allowed in all shoreline environments.

Ecological Restoration, Enhancement and Mitigation Environment Specific Regulations

Natural, Urban Conservancy, Tapps Reservoir, Shoreline Residential, Urban, and **Aquatic**: Ecological restoration projects, shoreline habitat and natural systems enhancement projects, and wetland mitigation banks are permitted.

IX. Fill

Definition

Fill is 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.

Fill Policies

1) Fills waterward of the floodway should be discouraged and only allowed when necessary to facilitate water-dependent uses consistent with this Master Program for necessary river crossings and for projects beneficial to ecological functions and processes.
2) Prohibit fill activity that would result in a subsequent need for armoring, riprap, or other hard shoreline stabilization structures to maintain the fill.
3) The perimeter of fills should be designed to avoid or eliminate erosion and sedimentation impacts, both during initial fill activities and over time.
4) Where permitted, fills should be the minimum necessary to provide for the proposed use and should be permitted only when tied to a specific development proposal that is permitted by the Master Program. Speculative fill activity should be prohibited.
5) Mitigation for wetland impacts must be implemented pursuant to the Chapter 6: General Shoreline Development Policies and Regulations, Section 6.5.

Fill Regulations

1) Applications for fill permits shall include the following in addition to the requirements of WAC 173-27-180 and *Chapter 8: Administrative Procedures, Section II Shoreline Permit Procedures*:
    a. Proposed use of the fill area;
    b. Physical, chemical, and biological characteristics of the fill material;
    c. Source of fill material.
    d. Method of placement and compaction;
    e. Location of fill relative to natural and/or existing drainage patterns;

f. Location of the fill perimeter relative to the floodway and OHWM;

g. Perimeter erosion control or stabilization means;

h. Type of surfacing and runoff control devices; and

i. Location of wetlands or other critical areas.

2) Fill waterward of the floodway shall be permitted as a conditional use only:

a. In conjunction with a water-dependent use permitted under this Master Program.

b. In conjunction with a bridge, utility, or navigational structure for which there is a demonstrated public need and where no feasible upland sites, design solutions, or routes exist.

c. As part of an approved ecological restoration or enhancement project such as instream habitat restoration.

d. When disposal of dredged material is considered suitable under, and conducted in accordance with the Dredged Material Management Program of the Department of Natural Resources.

e. For public access.

f. When cleanup and disposal of contaminated sediments is part of an interagency environmental clean-up plan.

3) Pier or pile supports shall be utilized in preference to fills. Fills for approved road development in floodways or wetlands shall be permitted only if pile or pier supports are proven structurally infeasible.

4) Fill shall not be located where shoreline stabilization will be necessary to protect materials placed or removed.

5) Fills shall only be permitted in conjunction with a specific development already permitted by this Master Program or proposed simultaneously as part of a Conditional Use Permit application. Speculative fills are prohibited.

6) Fill shall be permitted only where it is demonstrated that the proposed action will not:

a. Result in a net loss of ecological functions and processes.

b. Adversely alter natural drainage and current patterns or significantly reduce floodwater capacities.

7) Where fills are permitted, the fill shall be the minimum necessary to accommodate the proposed use.

8) Fills shall be designed, constructed, and maintained to prevent, minimize, and control all material movement, erosion, and sedimentation from the affected area. Fill perimeters shall be designed and constructed with silt curtains, vegetation, retaining walls, or other mechanisms to prevent material movement. In addition the sides of the fill shall be appropriately sloped to prevent erosion and sedimentation, both during initial fill activities and afterwards.

9) Fill materials shall be clean sand, gravel, soil, rock, or similar material. Use of polluted dredge spoils and sanitary fill materials are prohibited. The developer shall provide evidence that the material has been obtained from a clean source prior to fill placement.

10) Fills not overlain with impervious surface shall be composed of material that allow surface water penetration into aquifers, if such conditions existed prior to the fill.

Fill Environment Specific Regulations

Natural: Fill within the floodway may be permitted as a conditional use provided it is part of a restoration project. Fill outside the floodway is a permitted use provided it is part of a restoration project. Fill that is not associated with a restoration project is prohibited

Shoreline Residential, Urban, Tapps Reservoir, and **Urban Conservancy**: Fill within the floodway may be permitted as a conditional use provided it is in association with an allowed use. Fill outside the floodway is a permitted use provided it is in association with an allowed use. Fill not associated with an allowed use is prohibited.

Aquatic: Fill may be permitted as a conditional use both within and outside the floodway.

X. Flood Hazard Reduction

Definitions

Floodplain: A term synonymous with the hundred-year floodplain and means that land area susceptible to inundation with a one percent chance of being equaled or exceeded in any given year. The limit of this area shall be based upon flood ordinance regulation maps.

Flood Hazard Reduction: Flood hazard reduction involves actions taken with the primary purpose of preventing or mitigating damage due to flooding. Flood hazard reduction can involve site design, land-use controls and zoning to control development, either to reduce risks to human life and property or to prevent development from contributing to the severity of flooding. Flood hazard reduction can also address the design of developments to reduce flood damage and the construction of flood controls, such as dikes, dams, engineered floodways, and bioengineering.

Structural flood hazard reduction measures: Structural modifications such as dikes, levees, revetments, floodwalls, channel realignment, and elevation of structures consistent with the National Flood Insurance Program.

Levee: A large dike or embankment, often having an access road along the top, which is designed as part of a system to protect land from floods.

Dike: An embankment to prevent flooding by a stream or other waterbody.

Berm: A mound of earth material used as a protective barrier or to control the direction of water flow.

Note on Permit Exemption: Dikes existing on September 8, 1975, which were created, developed, or utilized primarily as an agricultural drainage or diking system may be operated and maintained without obtaining a shoreline Substantial Development Permit. Maintenance does not include expanding the length or width of the dike or levee. However, reconstruction to the original built height may be allowed, if settling has occurred.

Flood Control Works Policies

1) Flood management planning should be undertaken in a coordinated manner among affected property owners and public agencies and should consider the entire river system. This planning should consider off-site impacts such as erosion, accretion, and/or flood damage that might occur if shore protection structures are constructed. The plans should prevent needless flood damage, maintain the natural hydraulic capacity of floodways, and conserve valuable, limited resources such as fish, water, soil, and recreation and scenic areas.
2) The City should manage flood protection through the City's Comprehensive Plan, stormwater regulations, critical areas regulations, flood hazard areas regulations and the National Flood Insurance Program.
3) The City supports the protection and preservation of the aquatic environment and the habitats it provides, and advocates balancing these interests with the City's intention to ensure protection of life and property from damage caused by flooding.
4) Where possible, public access should be integrated into the design of publicly financed flood management facilities.
5) Non-structural flood hazard reduction measures should be given preference over structural measures. Structural solutions to reduce shoreline damage should be allowed only after it is demonstrated that non-structural solutions would not be able to reduce the damage. When necessary, structural solutions should be accomplished in a manner that assures no net loss of ecological functions and ecosystem-wide processes. Non-structural measures include setbacks, land use controls prohibiting or limiting development in areas that are historically flooded, stormwater management plans, or bioengineering measures.
6) Substantial stream channel modification, realignment, and straightening should be discouraged as a means of flood protection except where it can be demonstrated that such modifications would benefit the ecological functions and processes.
7) Decisions regarding dikes and levees should balance the benefits of development with potential flood losses and destruction of natural and beneficial floodplain values. Floodplain values include water resource values (moderation of floods, water quality maintenance, and groundwater recharge), living resource values (fish, wildlife, and plant resources and habitat), cultural resource values (open space, natural beauty, scientific study, outdoor education, and recreation) and cultivated resource values (agriculture, aquaculture, and forestry).
8) Proposals for dikes and levees should be located, designed, constructed and maintained to protect life and property without impacting upstream or downstream properties or river resources and assuring no net loss of ecological functions.

Flood Control Works Regulations

1) The City shall require and utilize the following information as appropriate during its review of shoreline flood management projects and programs in addition to the requirements of WAC 173-27-180 and *Chapter 8: Administrative Procedures, Section II Shoreline Permit Procedures*.

a. River channel hydraulics and floodway characteristics up and downstream from the project area.

b. Existing shoreline stabilization and flood protection works within the area.

c. Physical, geological, and soil characteristics of the area.

d. Biological resources and predicted impact to riverine ecology, including fish, vegetation, and animal habitat.

e. Predicted impact upon area shore and hydraulic processes, adjacent properties, and shoreline and water uses; and,

f. Analysis of alternative flood protection measures, both non-structural and structural.

2) Proposals for structural flood hazard reduction measures such as dikes and levees shall contain a detailed evaluation of potential losses to floodplain values. This evaluation shall address:

a. Groundwater discharge,

b. Associated wetlands,

c. Water quality,

d. Erosion/sedimentation, and

e. Ecological functions and processes.

3) The City shall require engineered design of flood protection works where such projects may cause interference with normal river geohydraulic processes, off-site impacts, or adverse effects to shoreline resources and uses.

4) New structural flood hazard reduction measures shall be allowed only under the following circumstances:

a. When it can be demonstrated by a scientific and engineering analysis that they are necessary to protect existing development;

b. That non-structural measures are not feasible;

c. That impacts to ecological functions and priority species and habitats can be successfully mitigated so as to assure no net loss;

d. That significant adverse impacts to federally listed threatened and endangered species, including anadromous fish, will not occur; and

e. That appropriate vegetation restoration and conservation actions are undertaken consistent with regulations in *Chapter 6: General Shoreline Development Policies and Regulations, Section III, Vegetation Conservation and Section VII, Critical Areas Protection*.

5) Expansion of existing flood control structures, such as levees and dikes, whose primary purpose is to contain the 1-percent annual chance flood event, shall be allowed only where it can be demonstrated by an engineering analysis that the existing structure:

a. Does not provide an appropriate level of protection for surrounding lands;

b. Does not meet appropriate engineering design standards for stability (e.g., oversteepened side slopes for existing soil and/or flow conditions); or

c. If a new flood control measure is identified by a local or regional flood protection plan.

Expanded flood control structures shall maintain equal or lesser side slope angles to existing conditions, and shall not extend the toe of slope laterally into the channel.

6) Normal maintenance and repair of existing flood control structures, such as levees and dikes, to a state comparable to its original condition, shall be allowed per WAC 173-27-040(2) (b).

7) Dikes and levees shall only be authorized by Conditional Use Permit and shall be consistent with all flood control management plans and regulations adopted by the City of Sumner.

8) New dikes, levees, berms and similar flood control structures shall be shaped and planted with vegetation suitable for wildlife habitat.

9) New structural flood hazard reduction measures, such as dikes, levees, berms shall be placed landward of associated wetlands, and designated riparian management zones, except when the project includes increasing ecological functions as part of the design or as mitigation for impacts.

10) New structural flood hazard reduction measures, such as dikes, levees, berms and similar flood control structures should be placed landward of the floodway, except as current deflectors necessary for protection of bridges and roads.

11) Flood protection measures shall be planned and constructed based on a state approved comprehensive flood hazard management plan, when available, and in accordance with the National Flood Insurance Program and the City of Sumner's Flood Damage Prevention Code, Chapter 15.52.

12) Dikes and levees shall be limited in size to the minimum height required to protect adjacent lands from the projected flood stage, as identified in the Sumner Flood Damage Prevention Code, Chapter 15.52.

13) Shoreline developments and activities shall not increase the base flood elevation by more than one (1) foot, unless appropriate legal documents are prepared in which all property owners affected by the increased flood elevations consent to the impacts on their property. These documents shall be filed with the title of record for the affected properties. Grading or other activity that would reduce the effective storage volume must be mitigated by creating compensatory storage on the site, or off-site if legal arrangements can be made to assure that the effective compensatory storage volume will be preserved over time.

14) New structural public flood hazard reduction measures, such as dikes and levees shall dedicate and provide or improve public access unless public access improvements would cause unavoidable health or safety hazards to the public, inherent and unavoidable security problems, significant ecological impacts that cannot be mitigated, unavoidable conflict with the proposed use, or a cost that is disproportionate and unreasonable to the total long-term cost of the development.

15) The removal of gravel for flood management purposes shall be consistent with an adopted flood hazard reduction plan and allowed only after a biological and geomorphological study shows that extraction has a long-term benefit to flood hazard reduction, does not result in a net loss of ecological functions, and is part of a comprehensive flood management solution.

Flood Control Works Environment Specific Regulations

Natural, Urban Conservancy, Tapps Reservoir, Shoreline Residential, Urban, and **Aquatic**: Dikes and levees may be permitted as a conditional use.

XI. Industrial Development

Definition

Industrial developments are facilities for processing, manufacturing, and storage of finished or semi-finished goods.

Industrial Development Policies

1) Shorelines particularly suitable for water-dependent and water-related industrial development should be identified and reserved for these uses.
2) Give preference to water-dependent industrial uses over non-water-dependent industrial uses, then to water-related and water-enjoyment industrial uses over non-water-oriented industrial uses in shoreline locations. Non-water oriented industrial uses may be allowed if they are combined with public benefits, such as public access and shoreline ecological restoration, and are located on properties where river navigability is severely limited.
3) New industrial development should be required to provide physical and visual access to shorelines whenever possible, provided such access does not interfere with operations or hazards to life and property.
4) Joint use of storage, parking, and other accessory facilities among private or public entities should be strongly encouraged or required in shoreline industrial areas.
5) Industrial development should not be located on sensitive and ecologically valuable shorelines such as natural accretion shoreforms or estuaries, wildlife habitat areas, wetlands, nor on shores inherently hazardous for such development, such as flood hazard areas.
6) Industrial uses and redevelopment projects should be encouraged to locate where environmental cleanup and restoration can be accomplished.

Industrial Development Regulations

1) Only water-dependent industrial development shall be permitted within the riparian management zone established by this Master Program (see *Chapter 4: Shoreline Environment Designations, Bulk Dimensional and Vegetation Standards Table, Table 4-7*).
2) Over- water construction of industrial uses is prohibited.
3) Non-water-oriented industrial uses are allowed in the shoreline jurisdiction provided significant public benefit in the form of public access and ecological restoration is provided and they meet one of the following criteria:

a. The site is physically separated from the shoreline by another property in separate ownership or public right of way; or

b. The use is part of a mixed use project that includes water-dependentuses and provides significant public benefit with respect to the city's Shoreline Master Program objectives; or

c. Navigability is severely limited at the proposed site.

4) When permitted pursuant to Section X, Industrial Development Regulations, Regulation #3 above, non-water-oriented uses shall provide public access (see Chapter 6: General Shoreline Policies and Regulations, Section VIII, Public Access) and restore shoreline ecological functions as follows:

a. When part of a mixed-use development – Eighty percent (80%) of the riparian management zone shall be restored or enhanced consistent with opportunities identified in the Restoration Plan or Inventory and Characterization report.

b. When not part of a mixed-use development, the City shall determine the type and extent of restoration on a case-by-case basis according to the opportunities and constraints provided by the site.

5) Where on-site public access is appropriate, industrial development shall dedicate, improve, and provide maintenance for a pedestrian easement that provides area sufficient to ensure usable access to and along the shoreline for the general public. Public access easements shall be a minimum of twenty-five (25) feet in width and shall comply with the public access standards contained in this Master Program (see *Chapter 6: General Shoreline Policies and Regulations, Public Access* section).

6) Off-site public access to the Sumner shoreline shall be required if on-site public access would pose an unacceptable risk to the public health, safety, and welfare. Off-site public access must meet the same standards and requirements as on-site public access.

7) Accessory industrial development that does not require a shoreline location shall be located upland of the water-dependent portions of the development and setback from the OHWM as set forth in *Chapter 4: Shoreline Environment Designations*. Accessory development includes, but is not limited to, parking, warehousing, open-air storage, waste storage and treatment, storm runoff control facilities, utilities, and land transportation corridors.

8) Sewage treatment and water reclamation may only be permitted by conditional use and shall be located where they do not interfere with and are compatible with recreational, residential, or other public uses of the water and shorelines.

9) Storage and/or disposal of industrial wastes is prohibited within shoreline jurisdiction, provided that public wastewater treatment system may be allowed if alternate inland areas are unavailable.

10) All new or expanded industrial development shall be set back and landscaped from adjacent shoreline properties that are used for nonindustrial purposes. Landscaped setbacks shall be of adequate width and height, to protect adjacent land uses from visual or noise intrusion and shall comply with SMC 18.18. New or expanded industrial development shall be set back from the shoreline (see *Chapter 4: Shoreline Environment Designations, Bulk Dimensional and Vegetation Standards Table, Table 4-7*) except those water-dependent portions of the development that require direct access to the water.

11) Buffers shall not be used for storage of industrial equipment or materials, or for waste disposal. Buffers may be used for outdoor recreation if consistent with public access provisions.

12) Display and other exterior lighting shall be designed, shielded, and operated to minimize glare, to avoid illuminating nearby properties, and to prevent hazards for public traffic.

13) Unpaved storage areas underlain by permeable soils shall have at least a 4-foot separation between the ground surface and the highest seasonal water table.

14) Berms, dikes, grassy swales, vegetated buffers, retention ponds, or other means shall be used to ensure that surface runoff is collected and discharged from the storage area at one point, if possible. It shall be demonstrated that water quality standards will not be violated by such runoff under any conditions of flow, leaving the site and entering into nearby watercourses.

15) Industrial projects of statewide significance determined to be particularly dependent on a location on or requiring use of the shorelines of the state in Sumner shall be reviewed per the City's goals and policies addressing facilities of statewide significance contained within the City's comprehensive plan, and shall be consistent with the provisions of this Master Program.

Industrial Development Environment Specific Regulations

Urban: Water-dependent and water-related industrial uses are permitted uses. Non-water-oriented industrial uses are conditionally permitted.

Urban Conservancy: Water-dependent industrial uses are a permitted use. Water-related and non-water-oriented industrial uses are conditionally permitted.

Shoreline Residential, Tapps Reservoir, Natural and **Aquatic:** Industrial development is prohibited.

XII. Instream Structures

Definition

Instream structures are placed by humans within a stream or river waterward of the ordinary high-water mark that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. In-stream structures may include those for hydroelectric generation, irrigation, water supply, flood control, transportation, utility service transmission, fish habitat enhancement, or other purpose. In-stream structures do not include structures placed beneath the stream or river bed. Both the structures themselves and their support facilities are covered by this section. This applies to their construction, operation and maintenance, as well as the expansion of existing structures and facilities.

Instream Structures Policies

1) Location and Design Features

a. Applications for instream structures should clearly document the suitability of the proposed site for the specific type of development, including alternative locations. Such site suitability analysis should thoroughly consider the environmental effects of the proposed facilities at the primary site and at alternative sites.

b. All instream structures should be designed to permit natural transport of bed load materials.

c. Instream structures and their support facilities should be designed to minimize removal of riparian vegetation and avoid the use of hardened shoreline armoring wherever feasible.

d. All nonwater-oriented facilities associated with instream structures, such as staging and storage areas, switching yards, utility transmission lines and in many cases power houses, should be located outside of shoreline jurisdiction.

e. In determining the appropriateness of hydroelectric development, the recommendations and conclusions of the Northwest Power Planning Council (1988) or equivalent state-adopted site ranking study should be considered.

f. Mitigation should be required for loss of fisheries and wildlife resources, natural systems including wetlands, and other sensitive areas. No net loss in critical area function, value, or acreage should occur as a result of instream structures and ecological functions should be conserved. When required, mitigation measures should be properly planned and monitored to ensure their effectiveness.

g. Instream structures should not cause significant adverse impact or harm to threatened or endangered species protected under the Endangered Species Act.

h. When possible, instream structures should be designed and constructed to insure public access to and along the shoreline, in accordance with the public access policies and regulations contained in this Master Program. Existing public access and recreational opportunities should be retained, enhanced, or replaced.

Instream Structures Regulations

1) Instream structures may be permitted as a conditional use.

2) All permit applications shall contain, at a minimum, the following in addition to the requirements of WAC 173-27-180 and *Chapter 8: Administrative Procedures, Section II Shoreline Permit Procedures*:

   a. A site suitability analysis that provides sufficient justification for the proposed site. The analysis must fully address alternative sites for the proposed development.

   b. Proposed location and design of the instream structure, accessory structures, and access/service roads.

   c. Provision for public access to and along the affected shoreline and proposed recreational features at the site, where applicable.

   d. A plan that describes the extent and location of vegetation that is proposed to be removed to accommodate the proposed facility, and any site revegetation plan required by this Master Program.

e. A hydraulic analysis prepared by a licensed professional engineer which sufficiently describes the project's effects on floodway hydraulics, including potential increases in base-flood elevation, changes in stream velocity, and the potential for re-direction of the normal flow of the affected river.

f. Biological resource inventory and analysis that sufficiently describes the project's effects on ecological functions and processes and fisheries and wildlife resources, prepared by a professional biologist.

g. Provision for erosion control, protection of water quality, and preservation of fishery and wildlife resources during construction.

h. Long-term management plans that described provisions for protection of in-stream resources during operation. The plan shall include means for monitoring its success over a ten-year period.

3) Structural Development

a. Instream structures shall be designed, located, and constructed in such a manner as to avoid extensive topographical alteration.

b. Instream structures that divert water shall return flow to the stream in as short a distance as possible.

c. All instream structures shall be designed to permit the natural transport of bedload materials.

d. Powerhouses associated with hydroelectric facilities shall be located a minimum of fifty (50) feet from the OHWM, provided that this does not apply to raceways.

Instream Structures Environment Specific Regulations

Natural, Urban Conservancy, Tapps Reservoir, Shoreline Residential, Urban, and **Aquatic**: Instream structures may be permitted as a conditional use.

XIII.Parking

Definition

Parking is the use of land for the purpose of accommodating motor vehicles, motorized equipment, or accessory units, such as trailers. Land used for this purpose is leveled, cleared, and often covered with an impermeable surface.

Parking Policies

1) Parking in shoreline areas should be minimized.

2) Parking within shoreline jurisdiction should directly serve a permitted use on the property and should be sensitive to the adjacent shorelines and properties.

3) Parking facilities in shoreline areas should be located and designed to minimize adverse impacts including those related to stormwater runoff, water quality, visual qualities, public access, and vegetation and habitat maintenance.

4) Encourage the use of pervious materials in parking facilities.

5) Landscaping should consist of native vegetation in order to enhance the habitat opportunities within the shorelines area.

6) Discourage location of parking facilities in critical areas.

Parking Regulations

Parking for specific land use activities within the City of Sumner is subject to the requirements and standards set forth in the *Sumner Zoning Code*. In addition, the following parking requirements shall apply to all developments within shoreline jurisdiction.

1) Parking as a primary use shall be prohibited within shoreline jurisdiction.

2) The location of parking areas in or over critical fish water habitat, wetlands, and the associated buffers shall be prohibited.

3) Parking or storage of recreational vehicles or travel trailers as a primary use shall be prohibited in all shoreline environment jurisdictions.

4) Parking in shoreline areas must directly serve an approved shoreline use.

5) Parking areas within shoreline jurisdiction shall be designed and landscaped to minimize adverse impacts upon adjacent shorelines and abutting properties. The landscaping shall preferably consist of native vegetation, to be planted within one (1) year after completion of construction and provide an effective screening three (3) years after planting. Adequate screening or landscaping for parking lots shall consist of one or more of the following:

    a. A strip of land fifteen (15) feet wide landscaped with trees, shrubs, and groundcover.

    b. A building or enclosed structure.

    c. A strip of land not less than five (5) feet in width that is occupied by a continuous wall, fence, plant material, or combination of both; which shall be at least six (6) feet high at time of installation. The plant material shall be evergreen and spaced not more than three (3) feet on center if pyramidal in shape, or not more than five (5) feet if wider in branching habit. If the plant material is used in conjunction with a wall or fence meeting the minimum height requirements then said material may be of any kind and spacing.

   The requirement for screening may be waived by the Director of Community Development, where screening would obstruct a significant view of the river from public property or public roadway.

6) All landscaping shall be designed to provide biofiltration functions for runoff from the parking area.

7) Alternatives to conventional storm water treatment, such as use of pervious materials, shall be considered in order to minimize impacts due to runoff and the need for storm water treatment.

8) All landscaping must be maintained in a neat and orderly manner. In no event shall such landscape areas be used for the storage of materials or parking of automobiles, or recreational or other vehicles.

9) Parking facilities shall not be permitted over the water.

10) Parking shall be located on the landward side of the development unless parking is contained within a permitted structure.

11) Where there is no available land area on the landward side of the development, parking shall extend no closer to the shoreline than a permitted structure.

Parking Environment Specific Regulations

Urban Conservancy, **Tapps Reservoir, Shoreline Residential,** and **Urban**: Parking is permitted only as an accessory to an allowed use. Parking shall not be allowed within the minimum riparian management zone (as defined in *Chapter 4: Shoreline Environment Designations*) unless the applicant can meet the criteria for granting a shoreline variance in *Chapter 8: Administrative Procedures*. Primary parking is prohibited.

Natural and **Aquatic:** Parking is prohibited.

XIV. Recreational Development

Definition

Commercial and public facilities designed and used to provide recreational opportunities to the public. Recreational development provides opportunities for the refreshment of body and mind through forms of play, sports, relaxation, amusement, or contemplation. It includes facilities for passive recreational activities, such as hiking, photography, viewing, and fishing. It also includes facilities for active or more intensive uses such as parks, campgrounds, and golf courses. This section applies to both publicly- and privately-owned shoreline facilities intended for use by the public or a private club, group, association, or individual.

Recreational Development Policies

1) The coordination of local, state, and federal recreation planning should be encouraged so as to mutually satisfy recreational needs. Shoreline recreational developments should be consistent with all adopted park, recreation, and open space plans.

2) Shoreline areas with a potential for providing recreation or public access opportunities should be identified for this use and acquired by lease or purchased and incorporated into the public park and open space system.

3) The linkage of shoreline parks, recreation areas, and public access points in a linear system, such as hiking paths, bicycle paths, and scenic drives should be encouraged.

4) Recreational developments should be located and designed to preserve, enhance, or create scenic views and vistas.

5) All recreational developments should make adequate provisions for:

a. Vehicular and pedestrian access.

b. Proper water, solid waste, and sewage disposal methods.

c. Security and fire protection for the use itself and for any use-related impacts to adjacent private property.

d. The prevention of overflow and trespass onto adjacent properties.

e. Buffering of such development from adjacent private property or natural area.

Recreational Development Regulations

1) Valuable shoreline resources and fragile or unique areas, such as wetlands and accretion shore forms, shall be used only for non-intensive and nonstructural recreation activities.

2) For recreation developments such as golf courses and playfields that require the use of fertilizers, pesticides, or other chemicals, the applicant shall submit plans demonstrating the methods to be used to prevent these chemical applications and resultant leachate from entering adjacent water bodies. Native vegetation buffer strips shall be required between the river or lake and recreation developments that use fertilizers, pesticides, or other chemicals. The Shoreline Administrator shall determine the maximum width necessary for buffer strips. Buffers shall not be less than twenty-five (25) feet wide, measured on a horizontal plane, perpendicular to the OHWM. The developer shall also be required to leave a chemical-free swath at least one hundred (100) feet in width next to water bodies and wetlands.

3) Recreational facilities shall make adequate provisions, such as screening, buffer strips, fences, and signs, to prevent overflow onto adjacent private properties.

4) Waterward of the OHWM, no recreational buildings or structures shall be built, except water-dependent and/or water-enjoyment structures as follows: bridges, and viewing platforms. Such uses may be permitted as a conditional use.

5) New recreational use/development shall be located landward of the riparian management zone area required *Chapter 6: General Shoreline Development Policies and Regulations* except that components of the recreational use or development that are water-dependent or water-related may be allowed within the riparian management zone.

6) Proposals for recreational development shall include adequate facilities for water supply, sewage, and garbage disposal.

Recreational Development Environment Specific Regulations

Natural: Low-intensity water-dependent recreational developments are a permitted use. Water-related, water-enjoyment, and non-water-oriented recreational developments are prohibited.

Urban Conservancy and **Tapps Reservoir**: Water-dependent, water-related, and water-enjoyment recreational developments are permitted. Non-water-oriented recreation developments may be permitted as a conditional use.

Shoreline Residential and **Urban**: All recreational developments, including water-dependent, water-related, water-enjoyment, and non-water-oriented uses, are permitted.

Aquatic: Water-dependent and water-enjoyment recreational developments may be permitted as a conditional use. Water-related and non-water-oriented recreational developments are prohibited.

XV. Residential Development

Definitions

Residential development refers to one or more buildings, structures, lots, parcels, or portions of parcels that are used or intended to be used to provide a place of abode for human beings. Residential development includes single family residences, multifamily residences, apartments, townhouses, mobile home parks, other similar group housing, condominiums, subdivisions, planned unit developments, and short subdivisions. Residential development also includes accessory structures such as a garage, a shed, a tennis court, a swimming pool, a parking area, a fence, a cabana, a sauna, and a guest cottage. Residential development does not include hotels, motels, or any other type of overnight or transient housing or camping facilities.

Note on Permit Exemption: A Shoreline Substantial Development Permit (SSDP) is not required for construction of a single family residence by an owner, lessee, or contract purchaser for their own use or the use of their family. However, such construction and all normal appurtenant structures must otherwise conform to this Master Program. In addition, when applicable, all residential development is subject to the Variance and conditional use requirements of this Master Program. For example, a Variance will be required for any residential development that proposes to locate within the shoreline environment setbacks established in *Chapter 4: Shoreline Environment Designations* of this Master Program.

Uses and facilities associated with residential development, which are identified as separate use activities in this Master Program, such as clearing and grading and fill are subject to the regulations established for those uses in this section. Clearing and grading may be exempted from the Shoreline Substantial Development Permit (SSDP) requirement, provided it is associated with an exempted single family residence and the following conditions are met: the clearing and grading activity is confined to the construction site and grading does not exceed 250 cubic yards.

See *Chapter 8: Administrative Procedures*, Section 1.A. for more information.

Residential Development Policies

1) In accordance with the Public Access requirements in *Chapter 6: General Shoreline Development Policies and Regulations*, residential developments of four (4) or more dwelling units should provide dedicated and improved public access to the shoreline.
2) Residential development and accessory uses should be prohibited over the water.
3) New subdivision development should be encouraged to cluster dwelling units in order to preserve natural features, minimize physical impacts, and provide for public access to the shoreline.
4) Accessory development should be designed and located to blend into the site as much as possible. Accessory use and structures should be located landward of the principal residence.

5) Residential development should apply best management practices in developing surface and storm water facilities.

Residential Development Regulations

1) Residential development is prohibited waterward of the OHWM.
2) Residential development shall be located and designed to avoid the need for structural shore defense and flood protection works in the foreseeable future.
3) If wetlands or other critical areas are located on the development site, clustering of residential units shall be required in order to avoid these areas. Clustering shall be in accordance with the Sumner Critical Areas Regulations, SMC 16.40.
4) The maximum height above average grade level of any residential structure shall not exceed 35 feet and must be in compliance with the underlying zoning district.
5) The creation of new lots shall be prohibited unless all of the following can be demonstrated.
    a. A primary residence can be built on each new lot without any of the following being necessary:
        i. New structural shoreline stabilization;
        ii. New improvements (sewer, water, streets, etc.) in the required riparian management zone or required critical area buffer;
        iii. Causing significant vegetation removal that adversely impacts ecological functions;
        iv. Causing significant erosion or reduction in slope stability; and
        v. Causing increased flood hazard or erosion in the new development or to other properties.
    b. Adequate sewer, water, access, and utilities can be provided.
    c. The intensity and type of development is consistent with the City comprehensive plan and development regulations.
    d. Potential significant adverse environmental impacts (including significant ecological impacts) can be avoided or mitigated to achieve no net loss of ecological functions, taking into consideration temporal loss due to development and potential adverse impacts to the environment.
    e. The development is consistent with the development standards required by the underlying zoning and with the following:
        i. Lot area must have a minimum frontage width of 25 feet.
6) Storm drainage and treatment facilities shall be required by the City for proposals of five or more dwellings. Drainage facilities shall be separate from sewage disposal facilities. Drainage systems shall include provisions to prevent the direct entry of uncontrolled and untreated surface water runoff into receiving waters. Such provisions may include retention ponds, vegetated swales, and artificial wetlands.
7) Subdivisions and planned unit developments of more than four (4) lots/units shall dedicate, improve, and provide maintenance provisions for a pedestrian easement that

provides area sufficient to ensure usable access to and along the shoreline for all residents of the development and the general public. When required, public access easements shall be a minimum of twenty-five (25) feet in width and shall comply with the public access standards contained in this Master Program (see *Chapter 6: General Shoreline Development Policies and Regulations, Section VIII, Public Access* section).

Residential Development Environment Specific Regulations

Shoreline Residential and **Urban**: Residential development is a permitted use.

Urban Conservancy: Residential development may be permitted as a conditional use.

Aquatic, Tapps Reservoir and **Natural:** Residential development is prohibited.

XVI. Scientific Research

Definitions

Scientific Research: The collecting of information for scientific purposes.

Scientific Research Policies

1) Scientific research that would cause a net-loss of ecological function to the shorieline should not be allowed. The placement of structures either permanent or temporary should be sited and designed to not cause negative impacts to hydrology, navigation, or other existing uses.
2) Scientific research designed to collect information related to restoration projects should be encouraged in the shoreline.

Scientific Research Regulations

1) Scientific research is permittable in all shoreline environments for the purposes of collecting information releated to shoreline restoration.
2) Scientific research not directly related to the collection of information to shoreline ecology, biology, or other natural processes must demonstrate the need for a shoreline location, and is prohibited in the aquatic environment.

XVII. Shoreline Stabilization

Definitions

Shoreline stabilization: Actions taken to address erosion impacts to property and dwellings, businesses, or structures caused by natural processes, such as current, flood, tides, wind, or wave action. These actions include structural and nonstructural methods.

Nonstructural methods include building setbacks, relocation of the structure to be protected, stormwater management, and planning and regulatory measures to avoid the need for structural stabilization

"Hard" structural stabilization measures refer to those with solid, hard surfaces, such as concrete bulkheads, while "soft" structural measures rely on softer materials, such as biotechnical vegetation measures or beach enhancement. Generally, the harder the construction measure, the greater the impact on shoreline processes, including sediment transport, geomorphology, and biological functions. Structural shoreline stabilization also often results in vegetation removal and damage to riparian habitat and shoreline corridors. There is a range of measures varying from soft to hard that include:

1) Vegetation enhancement;
2) Upland drainage control;
3) Biotechnical measures;
4) Beach enhancement;
5) Anchor trees;
6) Gravel placement;
7) Rock revetments;
8) Gabions;
9) Concrete groins;
10) Retaining walls and bluff walls; and
11) Bulkheads.

Replacement shoreline stabilization: The construction of a new structure to perform a shoreline stabilization function of an existing structure that can no longer adequately serve its purpose. Additions to or increases in size of existing shoreline stabilization measures shall be considered new structures.

Bulkheads: Walls usually constructed parallel to the shore whose primary purpose is to contain and prevent the loss of soil by erosion, wave, or current action. Bulkheads are used to protect riverbanks by retaining soil at the toe of the slope or by protecting the toe of the bank from erosion and undercutting.

Bulkheads are typically constructed of poured-in-place concrete, steel or aluminum sheet piling, wood, or wood and structural steel combinations.

Revetments: A sloped shoreline structure built to protect an existing eroding shoreline or newly placed fill against river currents. Revetments are most commonly built of randomly placed

boulders (riprap) but may also be built of sand cement bags, paving, or building blocks, gabions (rock filled wire baskets) or other systems and materials. The principal features of a revetment, regardless of type is a heavy armor layer, a filter layer, and toe protection.

Normal Maintenance: Those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition.

Normal Repair: 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 the shoreline resource or environment. 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

Note on Permit 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. See *Chapter 8: Administrative Procedures*, Section 1.A. for more information.

Shoreline Stabilization Policies

General Policies

1) All shoreline development should be located and designed to avoid or minimize the need for shoreline stabilization measures, such as bulkheads, revetments, or substantial site regrades. Where measures and works are demonstrated to be necessary, biostabilization techniques should be the preferred design option.
2) Structural solutions to reduce shoreline damage should be allowed only after it is demonstrated that nonstructural solutions would not be able to reduce the damage.
3) Hard shoreline stabilization techniques should be allowed only after it is demonstrated that soft shoreline stabilization techniques are not feasible.
4) Stabilization and protection works which are more natural in appearance, more compatible with ongoing shore processes, and more flexible for long term erosion management such as protective berms, beach enhancement, or vegetative stabilization should be encouraged over structural means such as concrete bulkheads, extensive revetments, or other structural defense works of materials such as steel, wood, or concrete.
5) Bulkheads, riprapping, and other bank stabilization measures should be located, designed, and constructed primarily to prevent damage to existing development. New development requiring shoreline stabilization should be discouraged.
6) Use of car bodies, scrap building equipment, or appliances for shoreline stabilization should be prohibited.
7) Substantial river channel realignment should be discouraged as a means of shoreline stabilization.

8) The design of bank stabilization should provide for the long term multiple use of shoreline resources and public access to public shorelines. In the design of publicly financed or subsidized works, consideration should be given to providing pedestrian access to shorelines for low intensity outdoor recreation.

9) All new shoreline stabilization measures should be placed landward of the OHWM, including associated wetlands.

10) If through construction and/or maintenance of shoreline modification developments, the loss of riparian vegetation and wildlife habitat occurs mitigation should be required.

11) The cumulative effect of allowing bulkheads and revetments along river segments should be evaluated. If it is determined that the cumulative effect of new bulkheads and revetments would have a deleterious effect on ecological functions or processes, then exemptions and permits should not be granted.

12) Bulkheads should not be approved as a solution to geo-physical problems such as mass slope failure, sloughing, or landslides. Bulkheads should only be approved for the purposes of preventing bank erosion by the river.

Shoreline Stabilization Regulations

General Regulations

1) All new shoreline development and modification activity shall be located and designed to prevent or minimize the need for shoreline stabilization.

2) The City shall require and utilize the following information during its review of shoreline stabilization proposals in addition to the requirements of WAC 173-27-180 and *Chapter 8: Administrative Procedures, Section II Shoreline Permit Procedures*:

   a. Purpose of the project;

   b. Hydraulic characteristics of the river within one-half (0.5) mile on each side of the proposed project;

   c. Existing shoreline stabilization and flood protection devices within one-half (0.5) mile upstream and downstream of the proposed project;

   d. Biological characteristics of the area, including fish and wildlife resources;

   e. Construction material and methods;

   f. Physical, geological, and/or soil characteristics of the area;

   g. Predicted impact upon area shore and hydraulic processes, habitat and other ecological functions, adjacent properties, and shoreline and water uses; and

   h. Alternative measures (including non-structural and soft structural measures) that will achieve the same purpose.

3) Geotechnical analysis required pursuant to this section shall address the necessity for shoreline stabilization by estimating time frames and rates of erosion and report on the urgency associated with the specific situation.

4) Subdivisions shall be designed to assure that future development of the established lots will not require structural shoreline stabilization. Use of a bulkhead, revetment or similar structure to protect a platted lot where no structure presently exists shall be prohibited.

5) The City shall not approve new bulkheads, revetments, and similar hard structures unless there is conclusive evidence that such structures are deemed necessary to protect:

   a. Existing primary structures in danger of shoreline erosion caused by currents or waves and not caused by normal sloughing, vegetation removal, or poor drainage as demonstrated in a geotechnical analysis, such that there is a significant possibility that such a structure will be damaged within three (3) years as a result of shoreline erosion in the absence of such hard armoring measures, or where waiting until the need is that immediate, would foreclose the opportunity to use measures that avoid impacts on ecological functions; or

   b. New development in danger of shoreline erosion caused by currents or waves and not caused by normal sloughing, vegetation removal, or poor drainage, and a geotechnical analysis documents that alternative solutions including location outside of the shoreline, are not feasible or do not provide sufficient protection to protect the primary structure from damage within three (3) years, and where ongoing monitoring, maintenance and mitigation for impacts to shoreline ecological functions and processes are provided; or

   c. Projects whose primary purpose is remediating hazardous substances pursuant to RCW 70.105 when non-structural or soft structural approaches such as vegetation planting and/or onsite drainage improvements are not feasible or do not provide sufficient protection.

6) An existing shoreline stabilization structure shall not be replaced with a similar structure unless there is need to protect primary structures from erosion caused by currents or waves. At the discretion of the City Engineer, the demonstration of need does not necessarily require a geotechnical report by a licensed geotechnical engineer or related licensed professional. The replacement structure shall be designed, located, sized, and constructed to minimize harm to ecological functions. Replacement walls or bulkheads shall not encroach waterward of the OHWM or existing structures unless the residence was occupied prior to January 1, 1992, and there are overriding safety or environmental concerns. In such cases, the replacement structure shall abut the existing shoreline stabilization structure. Soft shoreline stabilization that restores ecological functions may be permitted waterward of the OHWM.

7) Provided that regulation #6 has been met, the replacement of lawfully established, existing bulkheads or revetments shall be allowed, subject to the following priority system:

   a. First priority. The first priority would be no action (allow the shoreline to retreat naturally), increase building setbacks, and relocate structures.

   b. Second priority. The second priority for replacement of bulkheads or revetments shall be to install “soft” shoreline protection measures or bioengineering erosion control designs.

   c. Third priority. The third priority for replacement of existing bulkheads or revetments shall be to install “hard” shoreline protection measures only when “soft” measures would not provide adequate upland protection of existing structures or would pose a threat or risk to adjacent property.

d. Fourth priority. The fourth priority for replacement of bulkheads or revetments shall be landward of the existing bulkhead.

e. Fifth Priority. The fifth and last priority for replacement of existing bulkheads or revetments shall be to replace in place (at the bulkhead's existing location).

8) Shoreline stabilization shall not be designed and constructed in such a manner as to result in channelization of normal stream flows.

9) River and stream channel direction modification, and realignment are prohibited.

10) Shoreline stabilization are prohibited in wetlands and on point and channel bars. They are also prohibited in salmon or trout spawning areas.

11) New bulkheads and expansions of existing bulkheads shall incorporate features that minimize adverse effects on habitat, salmon spawning and migration, and water quality. Such features shall include native vegetation, beach coves, incline gravel fill, large wood, rocks and other techniques that have been shown to mitigate the effects of bulkheads on shoreline ecology. 'Green Shoreline' approaches consistent with U.S. Army Corps of Engineers (USACE) shoreline protection alternatives guidance (SPAG) or National Marine Fisheries Service (NMFS) standards should be utilized for the design of new or expanded bulkheads.

12) Bank protection material shall be placed on/from the bank. Dumping of bank protection material directly from a truck bed onto the bank face is prohibited.

13) Bank protection material shall be clean and shall be of a sufficient size to prevent its being washed away by high water.

14) Upon project completion, all disturbed shoreline areas shall be restored to as near pre-project configuration as possible and replanted with appropriate vegetation. All losses in riparian vegetation or wildlife habitat shall be mitigated at a ratio of 1:2 (habitat lost to habitat replaced).

15) Shoreline stabilization shall to the extent possible, be planned, designed, and constructed to allow for channel migration. These developments shall not reduce the volume and storage capacity of rivers and adjacent wetlands or flood plains.

16) Use of car bodies, scrap building materials, asphalt from street work, or any discarded piles of equipment or appliances for the stabilization of shorelines shall be prohibited.

Bulkhead Regulations

1) Bulkheads shall not be located on shorelines where valuable geo-hydraulic or biological processes are sensitive to interference. Examples of such areas include wetlands and accretion landforms.

2) Bulkheads are to be permitted only where local physical conditions, such as foundation bearing materials, and surface and subsurface drainage, are suitable for such alterations.

3) Bulkheads shall be sited and designed consistent with appropriate engineering principles. Professional geologic site studies or design may be required for any proposed bulkhead if the Shoreline Administrator determines sufficient uncertainties exist.

4) When a bulkhead is required at a public access site, provision for safe access to the water shall be incorporated into bulkhead design.

5) Bulkheads shall be designed for the minimum dimensions necessary to adequately protect the development.

6) Stairs or other permitted structures may be built into a bulkhead but shall not extend waterward of it.

7) Bulkheads shall be designed to permit the passage of surface or groundwater without causing ponding or saturation of retained soil/materials.

8) Adequate toe protection consisting of proper footings, a fines retention mesh, etc., shall be provided to ensure bulkhead stability without relying on additional riprap.

9) Materials used in bulkhead construction shall meet the following standards:

   a. Bulkheads shall utilize stable, nonerodable, homogeneous materials such as concrete, wood, and rock that are consistent with the preservation and protection of the ecological habitat.

   b. Shore materials shall not be used for fill behind bulkheads, except clean dredge material from a permitted off-site dredge and fill operation.

Revetment Regulation

1) The Shoreline Administrator shall require professional design of a proposed revetment, if it is determined that uncertainties exist, such as:

   a. Inadequate data on local geophysical conditions;

   b. Inadequate data on stream flow, velocity, and/or flood capacity; and

   c. Effects on adjacent properties.

2) Bank revetments, where permitted shall be placed at the extreme landward edge of the riverbank.

3) Design of public works shall include and provide improved access to public shorelines whenever possible.

4) When permitted, the siting and design of revetments shall be performed using appropriate engineering principals, including guidelines of the U.S. Natural Resources Conservation Service and the U.S. Army Corps of Engineers.

5) 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 river scouring or wave action; and

   d. Fish habitat components, such as large boulders, logs, and stumps shall be considered in the design subject to Hydraulic Project Approval by the Washington Department of Fisheries.

Shoreline Stabilization Environment Specific Regulations

Hard-armoring (Bulkheads and Revetments)

Natural, Urban Conservancy, and **Tapps Reservoir**: Bulkheads and revetments may be permitted as a conditional use.

Shoreline Residential and **Urban**: Bulkheads and revetments are permitted.

Aquatic: Shoreline stabilization measures are permittable according to the adjacent upland environmental designation as specified above.

Soft-armoring

Natural, Urban Conservancy, Tapps Reservoir, Shoreline Residential, Urban, and **Aquatic**: Soft armoring is permitted in all shoreline environment designations.

XVIII. Signs

Definition

Any visual communication device, structure, placard or fixture that uses color, form, graphic, illumination, symbol, or writing to advertise, announce the purpose of, or identify the purpose of a person or entity, or to communicate information of any kind to the public. For the purpose of this master program, a sign is not considered to be a building or structural design, but is restricted solely to graphics, symbols or written copy that is meant to be used in the aforementioned way.

However, a sign shall not include the following:

Official notices authorized by a court, public body or public officer.

Direction, warning, or information sign authorized by federal, state, or municipal authority.

The official flag, emblem, or insignia of a government, school or religious group or agency.

A memorial plaque or tablet, or cornerstones indicating the name of a building and date of construction, when cut or carved into any masonry surface or when made of bronze or other incombustible part of the building or structure.

Signs Policy

Signs should be designed and placed so that they are compatible with the natural quality of the shoreline environment and adjacent land and water uses.

Signs Regulations

1) Signs within the City of Sumner are subject to the requirements and standards specified in the Sumner sign regulations (SMC, Chapter 18.44). In addition, the following sign requirement shall apply to signs within shoreline jurisdiction.
   a. Over-water signs or signs on floats or pilings shall be related to water-dependent uses only.
   b. No signs that impair visual access from public viewpoints in view corridors shall be permitted.

Signs Environment Specific Regulations

Urban Conservancy, Tapps Reservoir, Shoreline Residential, and **Urban**: Signs are permitted only in association with an allowed use. Signs not associated with an allowed use are prohibited.

Aquatic: Signs are permitted only in association with a water-dependent use. Signs not associated with a water-dependent use are prohibited.

Natural: Educational signs only are allowed. Non-educational signs are prohibited.

XIX. Stormwater Management Facilities

Definition

Stormwater management facilities are utilities that retain, detain, clean and convey stormwater run-off.

Stormwater Management Facilities Policies

1) Stormwater conveyance facilities should utilize existing transportation and utility sites, rights-of-way and corridors, whenever possible. Joint use of rights-of-way and corridors should be encouraged.
2) Stormwater facilities should be prohibited within the riparian management areas, wetlands, and other critical areas.
3) New stormwater facilities should be located so as not to require any shoreline protection works.
4) New stormwater facilities should ensure no net loss of ecological functions and processes.
5) Stormwater facilities located in the shoreland area should be maintained only to the degree necessary to ensure the capacity and function of the facility including the removal of non-native invasive plant species.
6) Low impact development techniques that allow for a greater amount of stormwater to infiltrate into the soil should be encouraged to reduce stormwater run-off.

Stormwater Management Facility Regulations

1) Applications for the installation of stormwater management facilities shall include the following in addition to the requirements of WAC 173-27-180 and *Chapter 8: Administrative Procedures, Section II Shoreline Permit Procedures*:
    a. Description of the proposed stormwater facilities;
    b. Reasons why the stormwater facility requires a shoreline location;
    c. Alternative locations considered and reasons for their elimination;
    d. Location of other stormwater facilities in the vicinity of the proposed project and any plans to provide for consolidation of area-wide stormwater facilities that would reduce demand on shoreline locations;
    e. Plans for reclamation of areas disturbed during construction;
    f. Temporary sediment and erosion control plans during construction and operation;
    g. Identification of any possibility for locating the proposed stormwater facility at another existing site or within an existing stormwater facility;
    h. A mitigation and monitoring plan per the requirements of *Chapter 6: General Shoreline Development Policies and Regulations*, *Section V, Environmental Impact Mitigation*.
2) New stormwater facilities shall be located so as not to require any shoreline stabilization.
3) Stormwater facilities shall not be located in the riparian management zone.
4) Stormwater facility development shall include public access to the shoreline, trail systems, and other forms of recreation, providing such uses will not unduly interfere with stormwater facility operations, endanger the public health, safety, and welfare, or create a significant and disproportionate liability for the owner.
5) Construction of stormwater facilities in shoreland areas or in adjacent wetlands shall be timed to avoid fish and wildlife migratory and spawning periods.
6) Low impact development approaches shall be considered and implemented to the maximum extent feasible. Low impact development facilities shall not be allowed within the required riparian management zone, unless the Shoreline Administrator determines there would be a benefit to shoreline functions.

Stormwater Management Facilities Environment Specific Regulations

Urban Conservancy, **Shoreline Residential,** and **Urban**: Stormwater management facilities may be permitted as a conditional use and only as accessories to allowed uses. Stormwater management facilities that are accessory to prohibited uses are prohibited.

Aquatic, Tapps Reservoir and **Natural**: Stormwater management facilities are prohibited.

XX. Transportation Facilities

Definition

Transportation facilities are those structures and developments that aid in land and water surface movement of people, goods, and services. They include roads and highways, bridges and causeways, bikeways, trails, railroad facilities, and boat and floatplane terminals.

Transportation Facilities Policies

1) New roads and railroads within shoreline jurisdiction should be minimized.
2) Roads and railroad locations should be planned to fit the topographical characteristics of the shoreline such that minimum alternation of natural conditions result. The number of river crossings should be minimized to the maximum extent possible.
3) Trail and bicycle systems should be encouraged along the White (Stuck) River and Puyallup Rivers to the maximum extent feasible.
4) When existing transportation corridors are abandoned they should be reused for water-dependent use or public access.
5) Joint use of transportation corridors within shoreline jurisdiction for roads, utilities, and motorized forms of transportation should be encouraged.

Transportation Facilities Regulations

1) Transportation facilities and services shall utilize existing transportation corridors wherever possible, provided the shoreline is not adversely impacted and the development is otherwise consistent with this Master Program.
2) Transportation and primary utility facilities shall be required to make joint use of rights-of-way and to consolidate river crossings.
3) Fills for transportation facility development are prohibited in water bodies, critical areas, except as allowed in *Chapter 6: General Shoreline Policies and Regulations, Section VII Critical Area Protection,* and on accretion beaches, except when all structural and upland alternatives have proven infeasible and the transportation facilities are necessary to support uses consistent with this Master Program.
4) Major new highways, freeways, and railways shall be located outside shoreline jurisdiction, except where a river crossing is required. These roads shall cross shoreline areas and rivers by the shortest, most direct route, unless this route would cause more damage to the environment.
5) New transportation facilities shall be located and designed to minimize or prevent the need for shoreline modification.
6) All bridges must be built high enough to allow the passage of debris and provide three (3) feet of clearance above the base flood elevation.

7) 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.
8) Cut and fill slopes shall be designed at the normal angle of repose or less.
9) Cut and fill and sidecast slopes shall be protected from erosion by mulching, seeding, compacting, riprapping, benching, or other suitable means.
10) Bridge abutments and necessary approach fills shall be located landward of the OHWM, except bridge piers may be permitted in a water body as a conditional use.

Transportation Facilities Environment Specific Regulations

Shoreline Residential and **Urban**: Transportation development is a permitted use.

Natural, Urban Conservancy, Tapps Reservoir, and **Aquatic**: Transportation development may be permitted as a conditional use.

XXI. Utilities

Definition

Utilities are services and facilities that produce, convey, store, or process power, gas, sewage, communications, oil, waste and the like. On-site utility features serving a primary use, such as a water, sewer or gas line to a residence, are "accessory utilities" and shall be considered a part of the primary use.

Utilities Policies

1) Utilities should utilize existing transportation and utility sites, rights-of-way and corridors, whenever possible. Joint use of rights-of-way and corridors should be encouraged.
2) Unless no other feasible alternative exists, utilities should be prohibited in wetlands and other critical areas.
3) New utility facilities should be located so as not to require extensive shoreline protection works.
4) Whenever feasible, utilities should be placed underground or affixed to bridges.
5) Solid waste disposal activities and facilities should be prohibited in shoreline areas.
6) Utility facilities should be encouraged to be located within existing public, private, and utility right-of-ways.

Utilities Regulations

1) Applications for the installation of utility facilities shall include the following in addition to the requirements of WAC 173-27-180 and *Chapter 8: Administrative Procedures, Section II, Shoreline Permit Procedures*:

a. Description of the proposed facilities;

b. Reasons why the utility facility requires a shoreline location.

c. Alternative locations considered and reasons for their elimination.

d. Location of other utility facilities in the vicinity of the proposed project and any plans to include the other types of utilities in the project.

e. Plans for reclamation of areas disturbed both during construction and following decommissioning and/or completion of the useful life of the utility.

f. Plans for control of erosion and turbidity during construction and operation; and

g. Identification of any possibility for locating the proposed facility at another existing utility facility site or within an existing utility right-of-way.

2) Utility development shall, through coordination with local government agencies, provide for compatible, multiple use of sites and rights-of-way.

3) Utility development shall include public access to the shoreline, trail systems, and other forms of recreation, providing such uses will not unduly interfere with utility operations, endanger the public health, safety, and welfare, or create a significant and disproportionate liability for the owner.

4) Proposals for new utility corridors or river crossings shall fully substantiate the infeasibility of existing routes.

5) Existing solid waste disposal and transfer facilities within shoreline jurisdiction shall be expeditiously phased out and rehabilitated.

6) The following utility facilities, which are not essentially water-dependent, may be permitted as a conditional use if it can be shown that no reasonable alternative exists.

a. Water system treatment plants;

b. Sewage system line, interceptors, pump stations, and treatment plants;

c. Electrical energy generating plants (except for instream structures), substations, lines, and cables.

d. Petroleum and natural gas transmission pipelines.

7) New solid waste disposal sites and facilities are prohibited.

8) New utility lines including electrical distribution, communications, and fuel lines shall be located underground whenever feasible.

9) Transmission and distribution facilities shall cross areas of shoreline jurisdiction by the shortest most direct route feasible, unless such route would cause significant environmental damage.

10) Utility facilities requiring withdrawal of water from streams or rivers shall be located only where minimum flows, as established by the Washington State Department of Ecology, can be maintained.

11) Utility developments shall be located and designated so as to avoid the use of any structural or artificial shore modification works whenever feasible.

12) Water lines shall be completely buried under the riverbed in all river crossings except where such lines may be affixed to a bridge structure and except for appropriate water or sewage treatment plant intake pipes or outfalls.

13) All underwater pipelines transporting liquids intrinsically harmful to aquatic life or potentially injurious to water quality are prohibited, unless no other alternative exists. In those instances where no other alternative exists, the use may be permitted as a conditional use. However, automatic shut-off valves shall be provided on both sides of the water body.

14) Construction of utilities underwater or in adjacent wetlands shall be timed to avoid fish and wildlife migratory and spawning periods.

Utilities Environment Specific Regulations

Natural: Utilities, as a primary use are prohibited.

Urban Conservancy, Tapps Reservoir, Shoreline Residential, Urban, and **Aquatic**: Water-dependent utilities are permitted. Non-water-dependent utilities may be permitted as a conditional use.

CHAPTER 8 ADMINISTRATIVE PROCEDURES

I. Shoreline Permit Requirements

Any person wishing to undertake a substantial development within shoreline jurisdiction shall apply to the Shoreline Administrator for a Shoreline Permit. Based on the provisions of this Master Program, the Shoreline Administrator shall determine if a Substantial Development Permit, a Shoreline Conditional Use Permit, and/or a Shoreline Variance is required.

Exempt developments, which are outlined below in *Section A*, shall not require a Substantial Development Permit. However, an exempt development may require a Conditional Use Permit, and/or a Variance from Master Program provisions.

A. Exemptions from Substantial Development Permit Requirements

Certain specific developments as listed in WAC 173-27-040 are exempt from the substantial development permit process of the SMA. As established under WAC 173-27-040, the following applies:

1) Exemptions shall be construed narrowly. Only those developments that meet the precise terms of one or more of the listed exemptions may be granted exemption from the substantial development permit process.
2) An exemption from the substantial development permit process is not an exemption from compliance with the act or the local master program, nor from any other regulatory requirements. To be authorized, all uses and developments must be consistent with the policies and provisions of the applicable master program and the Shoreline Management Act. A development or use that is listed as a conditional use pursuant to the local master program or is an unlisted use, must obtain a conditional use permit even though the development or use does not require a substantial development permit. When a development or use is proposed that does not comply with the bulk, dimensional and performance standards of the master program, such development or use can only be authorized by approval of a variance.
3) The burden of proof that a development or use is exempt from the permit process is on the applicant.
4) If any part of a proposed development is not eligible for exemption, then a substantial development permit is required for the entire proposed development project.
5) Local government may attach conditions to the approval of exempted developments and/or uses as necessary to assure consistency of the project with the act and the local master program.

The following developments shall not require shoreline substantial development permits:

1) Any development of which the total cost or fair market value, whichever is higher, does not exceed six thousand four hundred sixteen dollars (or the value as amended or adjusted for inflation per RCW 90.58.030 [3] [e]), 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. 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.

3) Construction of a normal protective bulkhead common to single family residences. A normal protective bulkhead is not exempt if constructed for the purpose of creating dry land. When a vertical or near vertical wall is being constructed or reconstructed, not more than one cubic yard of fill per one foot of wall may be used as backfill. When an existing bulkhead is being repaired by construction of a vertical wall fronting the existing wall, it shall be constructed no further waterward of the existing bulkhead than is necessary for construction of new footings. When a bulkhead has deteriorated such that an ordinary high water mark 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 ordinary high water mark. Beach nourishment and bioengineered erosion control projects may be considered a normal protective bulkhead when any structural elements are consistent with the above requirements and when the project has been approved by the department of fish and wildlife;

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. Where new protective structures are deemed by the Shoreline Administrator to be the appropriate means to address the 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 the local master program, obtained. All emergency construction shall be consistent with the policies of chapter 90.58 RCW and the local master program. 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.

5) Construction and practices normal or necessary for farming, irrigation, and ranching activities, including agricultural service roads and utilities, and the construction and maintenance of irrigation structures including but not limited to head gates, pumping facilities, and irrigation channels: Provided that a feedlot of any size, all processing plants, other activities of a commercial nature, alteration of the contour of the shorelands by leveling or filling other than that which results from normal cultivation, shall not be considered normal or necessary farming or ranching activities. A feedlot shall be an enclosure or facility used or capable of being used for feeding livestock, hay, grain, silage, or other livestock feed, but shall not include land for growing crops or vegetation for livestock feeding and/or grazing, nor shall it include normal livestock wintering operations;

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

7) Construction on shorelands by an owner, lessee, or contract purchaser of a single family residence for their own use or for the use of their family, which residence does not exceed a building height of thirty-five (35) feet above average grade level and which meets all requirements of the state agency or local government having jurisdiction thereof, other than requirements imposed pursuant to chapter 90.58 RCW. "Single-family residences" means a detached dwelling designed for and occupied by one family including those structures and developments within a contiguous ownership which are a normal appurtenances. An "appurtenance" is necessarily connected to the use and enjoyment of a single-family residence. On a statewide basis, normal appurtenances include a garage; deck; driveway; utilities; fences; installation of a septic tank and drainfield and grading which does not exceed two hundred fifty cubic yards and which does not involve placement of fill in any wetland or waterward of the ordinary high water mark. Local circumstances may dictate additional interpretations of normal appurtenances which shall be set forth and regulated within the applicable master program. Construction authorized under this exemption shall be located landward of the ordinary high water mark;

8) Construction of a dock, including community dock, designed for pleasure craft only, for the private noncommercial use of the owner, lessee, or contract purchaser of a single family residence or multi-family residences. The fair market value of the dock does not exceed ten thousand ($10,000) dollars, but if subsequent construction having a fair market value exceeding two thousand five hundred ($2,500) dollars occurs within five years of completion of the prior construction, the subsequent construction shall be considered a substantial development;

9) Operation, maintenance, or construction of canals, waterways, drains, reservoirs, or other facilities that now exist or are hereafter created or developed as part of an irrigation system for the primary purpose of making use of system waters, including return flow and artificially stored ground water for the irrigation of lands;

10) The marking of property lines or corners on state owned lands, when such marking does not significantly interfere with the normal public use of the surface of the water;

11) Operation and maintenance of any system of dikes, ditches, drains, or other facilities existing on September 8, 1975, which were created, developed or utilized primarily as part of an agricultural drainage or diking system.

12) Any project with certification from the Governor pursuant to chapter 80.50 RCW.

13) Site exploration and investigation activities that are prerequisite to preparation of an application for development authorization under this Master Program, if:

- The activity does not interfere with the normal public use of the surface waters;
- The activity will have no significant adverse impact on the environment including but not limited to fish, wildlife, fish or wildlife habitat, water quality, and aesthetic values;
- The activity does not involve the installation of any structure, and upon completion of the activity the vegetation and land configuration of the site are restored to conditions existing before the activity;
- A private entity seeking development authorization under this section first posts a performance bond or provides other evidence of financial responsibility to the local jurisdiction to ensure that the site is restored to preexisting conditions.
- The activity is not subject to the permit requirements of RCW 90.58.550;

14) 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;

15) **Watershed restoration projects.** The City of Sumner shall review the projects for consistency with the Shoreline Master Program in an expeditious manner and shall issue its decision along with any conditions within forty-five (45) 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.

16) A public or private project that is designed to improve fish or wildlife habitat or fish passage, when it meets the criteria established in WAC 173-27-040(p) and RCW 90.58.147 and all of the following:

- The project has been approved in writing by the department of fish and wildlife;
- The project has received hydraulic project approval by the department of fish and wildlife pursuant to chapter 77.55 RCW; and
- The City of Sumner has determined that the project is substantially consistent with the Shoreline Master Program. The City of Sumner shall make such determination in a timely manner and provide it by letter to the project proponent.

17) **Hazardous substance remedial actions.** Requirements to obtain a substantial development permit, conditional use permit, or a variance shall not apply to any person conducting a remedial action at a facility pursuant to a consent decree, order or agreed order has been issued pursuant to chapter 70.105D RCW, or to the department of ecology when it conducts a remedial action under chapter 70.105D RCW. Instead of the City issuing a shoreline permit, the Department of Ecology shall, in consultation with the City of Sumner, ensure compliance with the substantive requirements of chapter 90.58 RCW, chapter 173-26 WAC and the local master program, through the consent decree, order, or agreed order issued pursuant to chapter 70.105D, or during the department-conducted remedial action, pursuant to RCW 70.150D.090.

B. Unclassified Uses

Uses that are not classified in *Chapter 7: Specific Shoreline Development Policies and Regulations* may be authorized as Conditional Uses provided the applicant can demonstrate compliance with the criteria listed in *Section III.B.3* and all other applicable policies and regulations of this Master Program.

II. Shoreline Permit Procedures

Pre-application

A. Information Prior to Submitting Application

Prior to submitting a complete application for a Substantial Development Permit, a Conditional Use Permit, and/or a Variance, the applicant may request preliminary site plan review by the City departments. This will enable the applicant to become familiar with the requirements of this Master Program, other applicable regulations, and the approval process. The preliminary site plan review shall be conducted according to procedures established by the Shoreline Administrator.

Submittal

B. Statement of Exemption

A Statement of Exemption must be obtained from the Shoreline Administrator for a development that is exempt from Shoreline Substantial Development Permit requirements, but which requires other permit approvals, such as a building permit. This statement will verify that the development is exempt. The statement will also list any provisions that must be followed to ensure that the development is also consistent with the goals and intents of the Master Program and the Act. The Statement of Exemption shall be attached to the other permit approvals.

Whenever a development falls within the exemption criteria listed above and is subject to a U.S. Army Corps of Engineers Section 10 or Section 404 Permit, the Shoreline Administrator shall prepare a Statement of Exemption and send a copy of this statement to the Washington Department of Ecology.

Before issuing a Statement of Exemption, the Shoreline Administrator shall review the Master Program to determine if the proposed development requires a Shoreline Conditional Use Permit and/or a Variance. It may be necessary for the Shoreline Administrator to conduct a site inspection to ensure that the proposed development meets the exemption criteria.

1) **Application Forms.** Applications for such shoreline exemptions shall be made on forms provided by the Shoreline Administrator.
2) **Site Plan. –** a site plan shall meet the requirements of the underlying development permit and shall include those items listed *Section C.2* below.

C. Substantial Development Permits

1) **Application Forms.** No substantial development shall be undertaken on shorelines of the City without first obtaining a Substantial Development Permit from the Hearing Examiner. Applications for such permits shall be made on forms provided by the Shoreline Administrator.
2) For Variance and Conditional Use Permit requests, the application shall also demonstrate compliance with the provisions of *Section III* in this chapter. In addition to the information

requested on the application, the applicant shall provide, at a minimum, the following information:

3) **Site Plan** - drawn to scale and including:
    a. Site boundary.
    b. Property dimensions in the vicinity of project.
    c. Ordinary high water mark
    d. Location, size, and type of critical areas, if present.
    e. Typical cross section or sections showing:
        i. existing ground elevation
        ii. proposed ground elevation
        iii. height of existing structures
        iv. height of proposed structures
    f. Where appropriate, proposed land contours using one-foot intervals, if development involves grading, cutting, filling, or other alteration of land contours.
    g. Show dimensions and locations of existing structures which will be maintained.
    h. Show dimensions and locations of proposed structures.
    i. Identify source, composition, and volume of fill material.
    j. Identify composition and volume of any extracted materials and identify proposed disposal area.
    k. Location of proposed utilities, such as sewer, septic tanks, and drainfields, water, gas, and electricity.
    l. If the development proposes septic tanks, does proposed development comply with local and state health regulations?
    m. Shoreline designation according to the Master Program.
4) Vicinity Map
    a. Indicate site location using common points of reference (roads, state highways, prominent landmarks, etc.).
    b. If the development involves the removal of any soils by dredging or otherwise, identify the proposed disposal site on the map. If the disposal site is beyond the confines of the vicinity map, provide another vicinity map showing the precise location of the disposal site and its distance to the nearest city or town.
    c. Give brief narrative description of the general nature of the improvements and land use within 1,000 feet in all directions from development site (i.e., residential to the north, commercial to the south, etc.).

D. Application Fees

A filing fee in an amount established in SMC 18.56 shall be paid to the City of Sumner at the time of application.

E. Complete Application

Complete application and documents for all Shoreline Permits shall be submitted to the Shoreline Administrator for processing and review. The application will be reviewed for completeness and a determination of completeness made per SMC 18.56.

Review

F. Permit Process

When a complete application and associated information have been received by the Shoreline Administrator, the actions listed below shall be taken. These actions also apply to shoreline Conditional Use Permits and requests for Variances:

1) **Public Notice.** The Shoreline Administrator shall have a Notice of Application for Substantial Development Permit, Conditional Use, or Variance (as applicable) published in a newspaper of general circulation, within the area in which the development is proposed.
2) The Notice of Application for Substantial Development Permit, Conditional Use, or Variance (as applicable) describes the location of the project and includes a statement that any person desiring to present their views to the Hearing Examiner may do so in writing within thirty (30) days of the final newspaper publication. The notice also provides the date when a public hearing will be held on the application and states that any person may submit oral or written comments at the hearing. All persons who indicate their desire to receive a copy of the final order shall be notified, in a timely manner, of the Hearing Examiner's decision.
3) The Notice of Application for a Substantial Development Permit, Conditional Use, or Variance (as applicable) must be published in the appropriate newspaper at least once a week, on the same day of the week, for two consecutive weeks.
4) The Shoreline Administrator shall also post the Notice of Application for a Substantial Development Permit, Conditional Use or Variance (as applicable) on-site per SMC 18.56.
5) The Shoreline Administrator may require any other manner of public notice deemed appropriate to accomplish the objectives of reasonable notice to the adjacent landowners and the public.
6) The Shoreline Administrator shall notify the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the Federal Emergency Management Agency when application is made for a Variance.
7) **Public Hearing.** At least one public hearing shall be held by the Hearing Examiner regarding an application for a Substantial Development Permit, Conditional Use, or Variance. The public hearing should be held at the earliest possible date after the thirty (30) day public comment period has ended.
8) A written notice of the public hearing at which the Hearing Examiner will consider the application shall be mailed or delivered to the applicant a minimum of seven (7) days prior to the hearing. The Shoreline Administrator's findings and conclusions and recommended action on the application shall be sent to the applicant with the notice of public hearing.
9) **Hearing Examiner Review.** The Hearing Examiner shall review an application for a Substantial Development Permit, Conditional Use, or Variance using the following information:

a. The application.

b. Applicable SEPA documents.

c. Evidence presented at the public hearing.

d. Written and oral comments from interested persons.

e. The findings, conclusions, and recommendation of the Shoreline Administrator.

f. Information and comment from other City departments.

g. Independent study of the Hearing Examiner.

The Hearing Examiner may require an applicant to furnish information and data in addition to that contained or required on the substantial Development Permit, Conditional Use, or Variance application.

10) **Hearing Examiner Review Criteria.** The Hearing Examiner shall review the application and related information and make a decision to approve, approve with condition, or deny the application for a Substantial Development Permit, Conditional Use, or Variance. No Permit shall be granted unless the proposed development is consistent with the provisions of this Master Program, the Shoreline Management Act of 1971, and the rules and regulations adopted by the Department of Ecology there under.

11) **Burden of Proof on Applicant.** The burden of proving that the proposed development is consistent with the criteria which must be met before a Permit is granted shall be on the applicant.

12) **Conditional Approval.** Should the Hearing Examiner find that any application does not substantially comply with criteria imposed by the Master Program and the Shoreline Management Act of 1971, they may deny such application or attach any terms or condition which is deemed suitable and reasonable to affect the purpose and objective of this Master Program.

13) **Bonds.** The Hearing Examiner may require the applicant to post a bond in favor of the City of Sumner to assure full compliance with any terms and conditions imposed by the Hearing Examiner on any Substantial Development Permit. Said bond shall be in an amount to reasonably assure the City that any deferred improvement will be carried out within the time stipulated.

14) Appeals

a. **Local Appeals.** Any decision made by the Hearing Examiner may be appealed to the City Council subject to the following provisions:

i. Appeals shall be submitted in writing to the city clerk by 5:00 p.m. of the twenty-first calendar day following the date of the Hearing Examiner's decision. When the last day of the comment period so computed is a Saturday, Sunday, or federal or city holiday, the period shall run until 5:00 p.m. on the next business day. The appeal shall be in writing and shall state specific objections to the decision and the relief sought. The appeal shall be accompanied with any applicable filing fees.

ii. The record established by the hearing examiner (including testimony, exhibits, comment letters, plans, staff reports, etc.) shall be the record used by council unless it is supplemented by the city council pursuant to this section. A request to supplement the record shall be made in a separate document that is attached to the appeal. The appeal shall not mention or refer to the material that is proposed to be added to the record. A

request to supplement the record shall include a brief description of the nature of the material to be added and a separate, attached copy of the material to be added. The request to supplement the record must clearly establish that the new evidence or information to be added to the record was not available or could not have been reasonably produced at the time of the open record hearing before the hearing examiner.

iii. The council may affirm, modify, reverse the hearing examiner's decision, remand to the hearing examiner with directions for further proceedings, or grant other appropriate relief. If the council reverses or modifies the hearing examiner's decision, the council shall enter findings and/or conclusions to support the decision.

iv. The hearing examiner's decision on appeal shall be given substantial weight.

v. The city council shall establish rules for council appeals.

15) **Filing with the Deparment of Ecology**

The following information shall be provided concurrently to the applicant, the Department of Ecology, and the Attorney General upon the close of the local appeal process, or where appealed upon the rendering of the final decision:

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 City;

d. The permit data sheet per WAC 173-27-990;

e. Affidavit of public notice; and

f. Where ~~possible~~ applicable the Shoreline Administrator shall also file the applicable documents required by the State Environmental Policy Act (RCW 43.21C). The Shoreline Administrator shall provide Notice of Final Decision per SMC 18.56.

16) **Department of Ecology Review of Variance and Conditional Use Permits.** After the Hearing Examiner has approved a Variance or Conditional Use Permit, the Shoreline Administrator shall submit the Permit to the Department of Ecology for its approval, approval with conditions, or denial. When a Substantial Development Permit and Conditional Use or Variance Permit are required for development, the submittal on the Permits shall be made simultaneously. The Department of Ecology shall render and transmit its final decision approving, approving with conditions, or disapproving the Variance or Conditional Use Permit within thrity (30) days of submittal by the City of Sumner. Filing is not complete until all the required documents have been received by the Department of Ecology and the Attorney General. Upon receipt of the Department of Ecology's final decision the Shoreline Administrator shall notify those interested persons having requested notification of such decision.

17) Development authorized by a Variance or Conditional Use Permit shall not begin until twenty-one (21) days from the date the City receives the decision of the Department of Ecology, provided no appeal proceedings have been initiated.

18) **Washington State Department of Ecology Review.** Development authorized by a Shoreline Substantial Development Permit shall not begin until twenty-one (21) days from the date the Department of Ecology acknowledges in writing receipt of the Shoreline Substantial Development Permit; provided no appeals have been initiated during this twenty-one (21) day period.19) **Appeals to State Shorelines Hearings Board.** Any person aggrieved by the granting, denying, or rescinding of a Shoreline Permit on shorelines of the state pursuant to RCW 90.58.140 may seek review from the State Shorelines Hearings Board by filing a petition for review within twenty-one (21) days of the date of filing. Appeals of any final permit decision may be made pursuant to the procedures established in RCW 90.58.180 (Appeals from Granting, Denying, or Rescinding Permits) and WAC 461-08 (Practice and Procedure, Review of the Granting, Denying or Rescinding of Substantial Development Permits, Hearings). The request for review shall be in the form required by the rules for practice and procedure before the Shorelines Hearings Board. The person seeking review shall also file a copy of the request for review with the State Department of Ecology and the Attorney General.

i. For substantial development permits the date of filing is the day the Department of Ecology receives the City of Sumner's final decision.

ii. For shoreline Variance and Conditional Use Permits the date of filing is the day the City of Sumner receives the Department of Ecology's final decision.

III. Variance and Conditional Use Permit Criteria

The Shoreline Management Act states that Master Programs shall contain provisions covering Conditional Uses and Variances. These provisions should be applied in a manner, which while protecting the environment, will assure that a person will be able to use his/her property in a fair and equitable manner.

A. Variances

1) **Purpose.** The purpose of a Variance Permit is strictly limited to granting relief from specific bulk, dimensional, or performance standards set forth in the Master Program where there are extraordinary circumstances relating to the physical character or configuration of property such that the strict implementation of the Master Program would impose unnecessary hardships on the applicant or thwart the policies set forth in RCW 90.58.020.

   Construction pursuant to this Permit shall not begin nor can construction be authorized except as provided in RCW 90.58.020. In all instances, extraordinary circumstances shall be shown and the public interest shall suffer no substantial detrimental effect.

2) **Application.** An application for a shoreline Variance shall be submitted on a form provided by the Shoreline Administrator and accompanying material as required by SMC 18.56.

   An applicant for a Substantial Development Permit who wishes to request a Variance shall submit the Variance application and the Substantial Development Permit simultaneously.

3) **Criteria for Granting Variances.** Variance permits should be granted in circumstances where denial of the permit would result in a thwarting of the policy enumerated in RCW 90.58.020. In all instances the applicant must demonstrate that extraordinary circumstances shall be shown and the public interest shall suffer no substantial detrimental effect.

Variance Permits for development and/or uses that will be located landward of the ordinary high water mark and/or landward of any wetland, 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 Master Program precludes, or significantly interferes with, reasonable use of the property.

b. That the hardship described above is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features and the application of the Master Program, and not, for example, from deed restrictions or the applicant's own actions.

c. That the design of the project will be compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and shoreline master program and will not cause adverse impacts to the shoreline environment.

d. That the Variance will not constitute a grant of special privilege not enjoyed by the other properties in the area

e. That the Variance requested is the minimum necessary to afford relief.

f. That the public interest will suffer no substantial detrimental effect.

Variance permits for development that will be located waterward of the ordinary high water mark or within any wetland, may be authorized provided the applicant can demonstrate all of the criteria following:

a. That the strict application of the bulk, dimensional or performance standards set forth in the Master Program precludes all reasonable use of the property

b. That the proposal is consistent with the criteria established under subsection 4.b. through 4.f. of this section

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

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 should also remain consistent with the policies of RCW 90.58.020 and shall not cause substantial adverse effects to the shoreline environment.

Variances from the use regulations of the master program are prohibited. Such requests shall be evaluated using the Conditional Use criteria set forth below.

B. Conditional Use

1) **Purpose.** The purpose of a Conditional Use Permit is to provide a system within the Master Program which allows flexibility in the application of use regulations of the Master Program in a manner consistent with the policies of RCW 90.58.020. In authorizing a Conditional Use, special conditions may be attached to the permit by the City of Sumner or by the Department of Ecology to prevent undesirable effects of the proposed use and/or to assure consistency of the project with the Act and the Master Program. Uses that are specifically prohibited by the Master Program may not be authorized with the approval of a Conditional Use Permit.

2) **Application.** An application for a Shoreline Conditional Use Permit shall be submitted on a form provided by the Shoreline Administrator and accompanying material as required by SMC 18.56.

3) An applicant for a Shoreline Substantial Development Permit which requires a Conditional Use Permit shall submit applications for both permits simultaneously.

4) **Criteria for Granting Shoreline Conditional Use Permits.** Uses which are classified or set forth in the Master Program as conditional uses may be authorized provided that the applicant demonstrates all of the following:

    a. That the proposed use is consistent with the policies of RCW 90.58.020 and the Master Program;

    b. That the proposed use will not interfere with the normal public use of public shorelines;

    c. That the proposed use of the site and design of the project will be compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and Master Program;

    d. That the proposed use will cause no significant adverse effects to the shoreline environment in which it is to be located; and

    e. That the public interest suffers no substantial detrimental effect.

    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.

    Other uses which are not classified or set forth in the Master Program may be authorized as conditional uses provided the applicant can demonstrate consistency with the requirements of this section and the requirements for conditional uses contained in the Master Program.

    Uses which are specifically prohibited by this Master Program may not be authorized pursuant to this section.

IV. Time Requirements and Revisions

A. Time Requirements for Shoreline Permits

1) **Duration of Permits:** The City of Sumner may issue shoreline permits with termination dates of up to five years. If a Permit does not specify a termination date, the following requirements apply, consistent with WAC 173-27:

    a. **Time Limit for Substantial Progress.** Construction activities shall be commenced or, where no construction activities are involved, the use or activity shall be commenced within two (2) years after approval of the effective date of a Shoreline Permit.

    b. **Extension for Substantial Progress.** The City of Sumner may authorize a single extension for a period not to exceed one (1) 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 on the Shoreline Permit and to the Department of Ecology.

c. **Five-Year Permit Authorization**. If construction has not been completed within five (5) years after the effective date of a Shoreline Permit, the City will review the Permit and, upon showing of good cause, either extend the Permit for one year based on reasonable factors, or terminate the Permit. A request for extension must be filed before the expiration date and notice of the proposed extension is given to parties of record and the Department of Ecology. Note: Only one (1) single extension is permitted.

B. Revision of Permits

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. 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, the Master Program and/or the policies and provisions of chapter 90.58 RCW. Changes which are not substantive in effect do not require approval of a revision. When an applicant desires to revise a Permit, the applicant must submit detailed plans and text describing the proposed changes. If the Shoreline Administrator determines that the revisions proposed are *within the scope and intent of the original Permit*, consistent with the Master Program, and the Shoreline Management Act, the Shoreline Administrator may approve the revision. "Within the scope and intent of the original Permit" means all of the following:

1) Ground area coverage and height is not increased more than ten percent (10%) from the provisions of the original permit;
2) The revised permit does not authorize development to exceed height, setback, lot coverage, or any other requirement of the City of Sumner Shoreline Master Program except as authorized under a variance granted as the original permit or part thereof;
3) Additional or revised landscaping is consistent with conditions (if any) attached to the original Permit;
4) The use authorized pursuant to the original Permit is not changed; and
5) No adverse environmental impact will be caused by the project revision.

If the sum of the proposed revision and any previously approved revisions do not meet the criteria above, an application for a new Shoreline Permit must be submitted. If the revision involves a Conditional Use or Variance, the Shoreline Administrator must submit the revision to the Department of Ecology for the Ecology's approval, approval with conditions, or denial, and shall indicate that the revision is being submitted under the requirements of WAC 173-27-100. Ecology shall render and transmit to the City of Sumner and the applicant its final decision within fifteen (15) days of the date of Ecology's receipt of the submittal from the City. The Shoreline Administrator shall notify parties of record of Ecology's final decision. (see WAC 173-27).

The City of Sumner or the Department of Ecology's decision on revision to the Permit may be appealed within twenty-one (21) days of such decision, in accordance with WAC 173-27-100.

Construction allowed by the revised Permit that is not authorized under the original Permit is undertaken at the applicant's own risk until the expiration of the appeals deadline.

V. Nonconforming Development, Development & Building Permits, and Unclassified Uses

A. Nonconforming Development

Nonconforming development is a shoreline use or structure which was lawfully constructed or established prior to the effective date of the Act or the Master Program, or amendments thereto, but which does not conform to present regulations or standards of the Master Program or policies of the act. In such cases, the following standards shall apply:

1) Nonconforming development may be continued provided that any enlargement or expansion does not increase the extent of nonconformity and by further encroaching upon or extending into areas where construction or use would not be allowed for new development or uses;

2) A nonconforming development which is moved any distance must be brought into conformance with the Master Program and the Act;

3) If a nonconforming structure is damaged to an extent not exceeding seventy-five (75) percent replacement cost of the nonconforming structure, it may be reconstructed to those configurations existing immediately prior to the time the structure was damaged, so long as restoration is completed within one year of the date of damage, with the exception that, single family nonconforming development may be one hundred (100) percent replaced if restoration is completed within three years of the date of damage;

4) If a nonconforming use is discontinued for twelve (12) consecutive months or for twelve (12) months during any two-year period, any subsequent use shall be conforming; it shall not be necessary to show that the owner of the property intends to abandon such nonconforming use in order for the nonconforming rights to expire;

5) A nonconforming use shall not be changed to another nonconforming use, regardless of the conforming or nonconforming status of the building or structure in which it is housed; and

6) An undeveloped lot, tract, parcel, site, or division which was established prior to the effective date of the Act and the Master Program (May 17, 2004), but which does not conform to the present lot size or density standards may be developed so long as such development conforms to all other requirements of the Master Program and the Act.

7) A use which is listed as a conditional use but which existed prior to adoption of the Master Program for which a Conditional Use Permit has not been obtained shall be considered a nonconforming use.

8) 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. Development and Building Permits

1) No building permit or other development permit shall be issued for any parcel of land developed or divided in violation of this Master Program. All purchasers or transferees of property shall comply with provisions of the Act and this Master Program and each purchaser or transferee may recover damages from any person, firm, corporation, or agent selling,

transferring, or leasing land in violation of the Act or this Master Program including any amount reasonable spent as a result of inability to obtain any development permit and spent to conform to the requirements of the Act or this Master Program as well as cost of investigation, suit, and reasonable attorney's fees occasioned thereby. Such purchaser, transferee, or lessor may, as an alternative to conforming their property to these requirements, may rescind the sale, transfer, or lease and recover cost of investigation, and reasonable attorney's fees occasioned thereby from the violator.

C. Unclassified Uses

Uses that are not classified in *Chapter 7: Specific Shoreline Development Policies and Regulations* may be authorized as Conditional Uses provided the applicant can demonstrate compliance with the criteria listed in *Section III.B.3* and all other applicable policies and regulations of this Master Program.

VI. Enforcement and Penalties

A. Enforcement

1) The provisions of chapter 15.06 SMC relating to Enforcement shall apply to this chapter.
2) All provisions of the Master Program shall be enforced by the Shoreline Administrator and/or a designated representative. For such purposes, the Shoreline Administrator or a duly authorized representative shall have the power of a police officer.
3) The choice of enforcement action and the severity of any penalty should be based on the nature of the violation and the damage or risk to the public or to public resources. The existence or degree of bad faith of the persons subject to the enforcement action, the benefits that accrue to the violator, and the cost of obtaining compliance may also be considered.

B. Penalty

1) Any person found to have willfully engaged in activities on the city's shorelines in violation of the Shoreline Management Act of 1971 or in violation of the city's Master Program, rules or regulations adopted pursuant thereto shall be subject to the penalty provisions of SMC 15.06.070 (Civil citation penalties) and 15.06.110 (Subsequent repeat violation – Failure to abate – Misdemeanor).

C. Public and Private Redress

Any person subject to the regulatory program of the Master Program who violates any provision of the Master Program or the provisions of a Permit issued pursuant thereto shall be liable for all damages to public or private property arising from such violation, including the cost of restoring the affected area to its condition prior to such violation. The City attorney may bring suit for damages under this section on behalf of the City. Private persons shall have the right to bring suit for damages under this section on their own behalf and on behalf of all persons similarly situated. If liability has been established for the cost of restoring an area affected by violation, the court shall

make provisions to assure that restoration will be accomplished within a reasonable time at the expense of the violator. In addition to such relief, including monetary damages, the court, in its discretion, may award attorneys' fees and costs of the suit to the prevailing party.

D. Delinquent Permit Penalty

A person applying a Permit after commencement of the use or activity may, at the discretion of the City be required, in addition, to pay a delinquent Permit penalty not to exceed three (3) times the appropriate Permit fee: Provided, that a person who has caused, aided or abetted a violation within two (2) years after the issuance of a regulatory order, notice of violation or penalty by the Department of Ecology or the City against said person may be subject to a delinquent Permit penalty not to exceed ten (10) times the appropriate Permit fee. Delinquent Permit penalties shall be paid in full prior to resuming the use or activity.

VII. Master Program – Review, Amendments and Adoption

A. Master Program Review

This Master Program shall be periodically reviewed and adjustments shall be made as are necessary to reflect changing local circumstances, new information or improved data, and changes in State statutes and regulations. This review process shall be consistent with WAC 173-26 requirements and shall include a local citizen involvement effort and public hearing to obtain the views and comments of the public.

B. Amendments to Master Program

Any of the provisions of this Master Program may be amended as provided for in RCW 90.58.120 and .200 and Chapter 173-26 WAC. Amendments or revision to the Master Program, as provided by law, do not become effective until approved by the Washington State Department of Ecology.

The U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the Federal Emergency Management Agency shall receive early and continual notice of any amendments to the Shoreline Master Program.

Proposals for shoreline environment redesignation (i.e., amendments to the shoreline maps and descriptions), must demonstrate consistency with the criteria set forth in WAC 173-26.

C. Severability

If any provisions of this Master Program, or its application to any person or legal entity or parcel of land or circumstances, is held invalid, the remainder of the Master Program, or the application of the provisions to other persons or legal entities or parcels of land or circumstances, shall not be affected.

D. Effective Date

This ordinance shall be effective fourteen days from the Department of Ecology's final written approval.

CHAPTER 9 DEFINITIONS AND ACRONYMS

For the purpose of this Master Program, certain terms and their derivations shall be construed as specified in this section. Words in the singular include the plural, and the plural, the singular. The words "shall" and "will" are mandatory; the word "may" is permissive. Additional definitions applicable to this Master Program and adopted by reference herein, are found in the Revised Code of Washington (RCW) 90.58 and applicable sections of the Washington Administrative Code (WAC). The following definitions apply throughout this Program, unless otherwise indicated.

Undefined words and phrases.

The definition of any word or phrase not listed in the definitions, which is in question when administering this Program, shall be defined from one of the following sources. Said sources shall be utilized by finding the desired definition from source number one, but if it is not available there, then source number two may be used and so on. The sources are as follows:

1) Any city resolution, ordinance, code or regulation;
2) Any statute or regulation of the state of Washington;
3) Legal definitions from Washington common law or a law dictionary;
4) The common dictionary.

Accessory Use or Accessory Structure[4]

A use or structure customarily incidental to a permitted principal use located on the same lot. An accessory use or structure is subordinate and functionally supports the principal use. A swimming pool is considered an accessory structure for the purposes of this Program.

Accretion[1]

The growth of a beach by the addition of material transported by wind and/or water. Included are such shoreforms as barrier beaches, points, spits, hooks and tombolos.

Act[2]

The Washington State Shoreline Management Act of 1971, as amended (RCW 90.58.030).

Action[3]

Any grading, clearing, filling, construction, dredging, removal of trees or use on a piece of property.

Activity[4]

Any conduct, enterprise, or use on a lot, tract or parcel of land. Examples of shoreline activities include but are not limited to fishing, swimming, boating, dredging, fish spawning, wildlife nesting, or discharging of materials.

Adjacent Lands[2]

Lands adjacent to the shorelines of the state or shorelands, and therefore outside of shoreline jurisdiction as defined by SMA. The SMA directs local governments to develop land use controls (i.e., zoning, comprehensive planning) for such lands consistent with the policies of the SMA, related rules and the local shoreline master program (see Chapter 90.58.340 RCW).

Shoreline Administrator[1]

The Sumner Director of Community Development, or his/her designee, charged with the responsibility of administering the shoreline master program.

Agricultural Activities[2]

Agricultural uses and practices including, but not limited to: producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie fallow in which it is plowed and tilled but left unseeded; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing agricultural equipment; maintaining, repairing, and replacing agricultural facilities, provided that the replacement facility is no closer to the shoreline than the original facility; and maintaining agricultural lands under production or cultivation (WAC 173-26-020).

New agricultural activities[2]

Activities that meet the definition of agricultural activities but are proposed on land not currently in agricultural use (WAC 173-26-241).

Agricultural Products[2]

Includes, but is not limited to, horticultural, viticultural, floricultural, vegetable, fruit, berry, grain, hops, hay, straw, turf, sod, seed, and apiary products; feed or forage for livestock; Christmas trees; hybrid cottonwood and similar hardwood trees grown as crops and harvested within twenty years of planting; and livestock including both the animals themselves and animal products including but not limited to meat, upland finfish, poultry and poultry products, and dairy products (WAC 173-26-020).

Agricultural Equipment and Agricultural Facilities[2]

Includes, but is not limited to: (i) The following used in agricultural operations: Equipment; machinery; constructed shelters, buildings, and ponds; fences; upland finfish rearing facilities; water diversion, withdrawal, conveyance, and use equipment and facilities including but not limited to pumps, pipes, tapes, canals, ditches, and drains; (ii) corridors and facilities for transporting personnel, livestock, and equipment to, from, and within agricultural lands; (iii) farm residences and associated equipment, lands, and facilities; and (iv) roadside stands and on-farm markets for marketing fruit or vegetables (WAC 173-26-020).

Agricultural Land[2]

Those specific land areas on which agriculture activities are conducted as of the date of adoption of this master program (May 17, 2004) pursuant to the state guidelines adopted December 17, 2003, as evidenced by aerial photography or other documentation. After the effective date of the master program, land converted to agricultural use is subject to compliance with the requirements of the master program (WAC 173-26-020).

Agricultural Resource Lands[3]

Those 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.

Amendment[2]

A revision, update, addition, deletion, and/or reenactment to an existing shoreline master program (WAC 173-26-020).

Anadromous Fish[1]

Fish species, such as salmonids or salmon, which are born in fresh water, spend a large part of their lives in the sea, and return to freshwater rivers and streams to spawn. Anadromous fish include Chinook salmon, sockeye salmon, coho salmon, sea-run cutthroat trout and other fish species that spend part of their lifecycle in salt waters.

Animal Containment Area[3]

A site where two or more animal units of large animals per acre or 0.75 of an animal unit of small animals per acre are kept, and where a high volume of waste material is deposited in quantities capable of impacting groundwater resources.

Animal Unit

The equivalent of 1,000 pounds of animal.

Applicant[3]

A person, party, firm, corporation, or other legal entity who files an application for approval under this Program and who is either the owner of the land on which that proposed activity would be located, a contract vendee, or lessee of the land, the person who would actually control and direct the proposed activity, or the authorized agent of such a person.

Approval[2]

An official action by a local government legislative body agreeing to submit a proposed shoreline master program or amendments to Ecology for review and official action pursuant to this Program; or an official action by Ecology to make a local government shoreline master program effective, thereby incorporating the approved shoreline master program or amendment into the state master program (WAC 173-26-020).

Appurtenance[2]

A structure or development that is necessarily connected to the use and enjoyment of a single-family residence and is located landward of the ordinary high water mark and the perimeter of a wetland. On a statewide basis, normal appurtenances include a garage; deck; driveway; utilities; fences; installation of a septic tank and drainfield and grading which does not exceed two hundred fifty (250) cubic yards and which does not involve placement of fill in any wetland or waterward of the ordinary high water mark (WAC 173-27-040).

Aquaculture[2]

The culture or farming of fish, shellfish, or other aquatic animals and plants (WAC 173-26-050(6)).

Aquatic[1]

A shoreline environment designation under the Shoreline Management Act for areas waterward of the ordinary high water mark (OHWM) that contain critical freshwater habitats.

Aquifer Recharge Area[3]

Areas that have a critical recharging effect on groundwaters used for potable water supplies and/or that demonstrate a high level of susceptibility or vulnerability to groundwater contamination from land use activities.

Examples of aquifer recharge areas include:

1) Wellhead protection areas delineated pursuant to the Federal Safe Drinking Water Act; and
2) Other areas with a high level of susceptibility or vulnerability to contamination as demonstrated through the use of the DRASTIC model.

Archaeological[1]

Having to do with the scientific study of material remains of past human life and activities.

Associated Wetlands[2]

Those wetlands that are in proximity to and either influence, or are influenced by tidal waters or a lake or stream subject to the Shoreline Management Act (WAC 173-22-030). Associated wetlands are regulated parts of the shoreline jurisdiction in Sumner. The Department of Ecology makes the final determination as to whether or not wetlands within the shoreline are considered associated wetlands.

Average Grade Level[2]

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; provided, that in the case of structures to be built over water, average grade level shall be the elevation of ordinary high water. 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 (WAC 173-27-030).

Berm[1]

A mound of earth material used as a protective barrier or to control the direction of water flow.

Best Management Practices (BMPs)[3]

"Best management practices (BMPs)" mean physical, structural, and/or managerial practices, that when used singly or in combination, prevent or reduce water pollution, erosion, groundwater contamination, slope instability and similar impacts of construction, development and other actions. Source control BMPs include those which keep the pollutant from ever coming in contact with stormwater, and stormwater treatment BMPs include those which consist of various methods of treating stormwater. BMPs could include, but are not limited to, use of hay bales and plastic coverings to reduce erosion, education programs for employees regarding the use and disposal of chemicals, signage for customers regarding use of gasoline fueling facilities, and use of grass-lined swales to reduce pollutants in stormwater.

Boat Launch or Ramp[1]

Graded slopes, slabs, pads, planks, or rails used for launching boats by means of a trailer, hand, or mechanical device.

Boat Lift[1]

A mechanical device that can hoist vessels out of the water for storage. These devices are usually located along a pier.

Boat Rail or Railway[1]

A set of steel rails running from the upland area into the water upon which a cart or dolly can carry a boat to be launched.

Boathouse[1]

A structure designed for storage of vessels located over water or in upland areas. Boathouses should not be confused with "houseboats."

Boating Facilities[1, 2]

Boating facilities include marinas, boat launch ramps (public and private), wet and dry boat storage, related sales and service for pleasure and commercial watercraft, and docks (piers) except docks serving four or fewer single-family residences are excluded from this definition (WAC 173-26-241).

Breakwater[1]

An off-shore structure generally built parallel to the shore that may or may not be connected to land. Its primary purpose is to protect a harbor, moorage, or navigational activity from wave and wind action by creating a still-water area along the shore. A secondary purpose is to protect the shoreline from wave-caused erosion.

Buffer Area[1]

The zone contiguous to a sensitive area that is required for the continued maintenance, function, and/or structural stability of the sensitive area. Buffer widths vary depending on the relative quality and sensitivity of the area being protected. The critical functions of the riparian buffer (those associated with an aquatic system) include shading, input of organic debris and coarse sediments, uptake of nutrients, stabilization of banks, interception of sediments, overflow during high water event, protection from disturbance by humans and domestic animals, maintenance of a wild habitat, and room for variation of aquatic system boundaries over time due to hydrological or climatic effects. The critical functions of terrestrial buffers include protection of slope stability, attenuation of surface water flows from stormwater runoff and precipitation, and erosion control.

Building[1]

Any structure having a roof supported by columns or walls used or intended to be used for the shelter or enclosure of any use or occupancy.

Building Official[3]

The city staff person responsible for the administration of the Uniform Building Code or his or her designee.

Building Setback[3]

A distance within which no structures may be built. A fence may be allowed in the building setback, provided it does not exceed six feet in height and does not bisect wetlands or streams or impede the movement of native wildlife.

Building Setback Line[1]

Unless otherwise indicated within this Master Program, the line which establishes the limits of all buildings, fencing and impervious surfaces along the shoreline.

Bulkhead[1]

A wall-like structure generally placed parallel to and near the ordinary high water mark to retain an upland or fill area prone to gliding or sheet erosion, and to protect an upland from erosion by wave action. Bulkheads are normally lighter than a seawall and similar to structures termed "revetments." (See also **Normal Protective Bulkhead**)

Buoy[1]

Buoys are floating devices anchored to a lake or river bottom used for navigational purposes or moorage. (See also **Mooring Buoy**)

Channel[1]

An open conduit for water either naturally or artificially created, but does not include artificially created irrigation, return flow, or stockwatering channels. (See also **Stream)**.

Channel Improvement[1]

Enlargement of a natural stream's discharge capacity by means of straightening, making "cutoffs", cleaning vegetation, widening, or deepening, and thereby decreasing flood stages.

Channel migration zone (CMZ)[2]

The area along a river within which the channel(s) can be reasonably predicted to migrate over time as a result of natural and normally occurring hydrological and related processes when considered with the characteristics of the river and its surroundings (WAC 173-26-020).

Circulation[1]

Those means of transportation that carry passengers or goods to, from, over, or along a corridor.

Clearing[1]

The removal of vegetation from a site in such a manner as to affect the erosive potential of the soils on a site.

Contaminant[3]

Any chemical, physical, biological or radiological substance that does not occur naturally or occurs at concentrations and duration as to be injurious to human health or welfare or shown to be ecologically damaging.

Covered Moorage[1]

Boat moorage, with or without walls, that has a roof to protect the vessel.

Commercial Development[1]

The providing of goods, merchandise or services for compensation, including, but not limited to, retail shopping, commercial recreation, business and professional offices, highway-oriented business, automotive, boat and cycle mechanical sales and services as included in the commercial classifications of SMC Title 18.

Community Structure[1]

A building, dock, or other structure that 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.

Comprehensive Plan[1]

Comprehensive plan means the document, including maps, adopted by the city council that outlines the City's goals and policies relating to management of growth, and prepared in accordance with Ch. 36.70A RCW. The term also includes adopted subarea plans prepared in accordance with Ch. 36.70A RCW.

Conditional Use[2]

A use, development, or substantial development that is classified as a conditional use or is not classified within the master program (WAC 173-27-030).

Corridor[1]

A circulation right-of-way and the area immediately adjacent to it.

Creation[2]

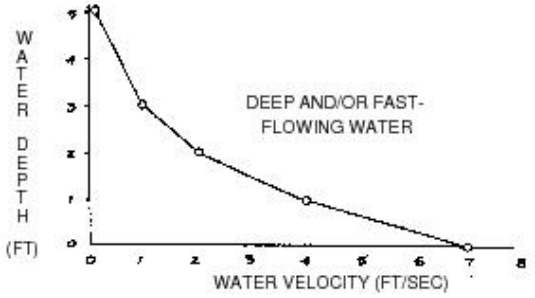
For purposes of wetland regulations in *Chapter 6 General Shoreline Policies and Regulations, Section VII, Critical Areas Protection*, "creation" means the manipulation of the physical, chemical, or biological characteristics to develop a wetland on an upland or deepwater site, where a wetland did not previously exist. Creation results in a gain in wetland acreage and function. A typical action is the excavation of upland soils to elevations that will produce a wetland *hydroperiod* and hydric soils, and support the growth of hydrophytic plant species.

Critical Areas[3]

Those areas established as volcanic hazard areas, wetlands, flood hazard areas, fish and wildlife habitat areas, seismic hazard areas, landslide hazard areas, erosion hazard areas, and aquifer recharge areas.

Deep and/or Fast-Flowing Water[3]

A combination of water depth and velocity as shown in the graph below. For purposes of this Program, the floodway area will also be called deep and/or fast-flowing water.



Degrade[1]

To scale down in desirability or salability, to impair in respect to some physical property or to reduce in structure or function.

Development[2]

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 other 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 Act at any state of water level (RCW 90.58.030). (See also: **Substantial Development)**

Development Regulations[2]

The controls placed on development or land uses, including, but not limited to, zoning ordinances, critical areas ordinances, all portions of a shoreline master program other than goals and policies approved or adopted under chapter 90.58 RCW, planned unit development ordinances, subdivision ordinances, and binding site plan ordinances together with any amendments thereto (WAC 173-26-020).

Dike[1]

An embankment to prevent flooding by a stream or other waterbody.

Dock[1]

A dock or pier is a landing and moorage facility for watercraft that abuts the shoreline and does not include recreational decks, storage facilities, or other appurtenances.

DRASTIC[3]

"DRASTIC" means a model developed by the National Water Well Association and Environmental Protection Agency used to measure aquifer susceptibility to contamination.

Dredge Spoil or Dredge Material Disposal[1]

Dredge spoil is the material removed by dredging. Dredge material disposal is the depositing of dredged materials on land or into water bodies for the purpose of either creating new or additional lands or for disposing of the material in an acceptable manner.

Dredging[1]

The removal or displacement of earth such as gravel, sand, mud, or silt from the bottom or banks of a body of water for the purpose of deepening or maintaining a navigational channel, constructing bridge footings, laying submarine pipelines or cable, obtaining bottom materials, or for flood control.

Dwelling, Multiple-family[1]

Multiple-family dwelling means a residential building designed for or occupied by two (2) or more families, with the number of families in residence not exceeding the number of units provided.

Earth Material[1]

Any rock, natural soil or fill, and/or any combination thereof.

Ecological Functions[2]

Ecological functions or shoreline functions means the work performed or role played by the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments that constitute the shoreline's natural ecosystem (WAC 173-26-020).

Ecology (Department of Ecology)[3]

The Washington State Department of Ecology.

Economic Development[1]

A development that provides a service, produces a good, retails a commodity, or engages in any other use of activity for the purpose of making financial gain.

Ecosystem-wide Processes[2]

The suite of naturally occurring physical and geologic processes of erosion, transport, and deposition; and specific chemical processes that shape landforms within a specific shoreline ecosystem and determine both the types of habitat and the associated ecological functions (WAC 173-26-020).

Effective Date of Permit[2]

The effective date of a substantial development, conditional use and variance permits shall be the date of filing (for shoreline substantial development permit the date of filing is the date an applicant and local government receive a letter of receipt from Ecology; for conditional use and variance permits the date of filing is the date an applicant and local government receive a letter of decision from Ecology). The permit time periods per Chapter 8 do not include the time during which a use or activity was not actually pursued due to the pendency of administrative appeals or legal actions or due to the need to obtain any other government permits and approvals for the development that authorize the development to proceed, including all reasonably related administrative or legal actions on any such permits or approvals.

Elements[1]

Major aspects of land and water use for which goals are written as part of a Shoreline Master Program.

Emergency[2]

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 does not include development of new permanent protective structures where none previously existed. 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 (WAC 173-27-040).

Emergent Wetland[3]

A regulated wetland with at least 30 percent of the surface area covered by erect, rooted, herbaceous vegetation as the uppermost vegetative strata.

Endangered Species Act (ESA)

A federal law intended to protect any fish or wildlife species that is threatened with extinction throughout all or a significant portion of its range.

Enhancement[1, 2]

Alteration of an existing resource to improve or increase its characteristics and processes without degrading other existing functions. Enhancements are to be distinguished from resource creation or restoration projects.

For purposes of wetland regulations in *Chapter 6 General Shoreline Policies and Regulations, Section VII, Critical Areas Protection*, "enhancement" means the manipulation of the physical, chemical, or biological characteristics of a wetland to heighten, intensify, or improve specific function(s) or to change the growth stage or composition of the vegetation present. Enhancement is undertaken for specified purposes such as water quality improvement, flood water retention, or wildlife habitat. Enhancement results in a change in wetland function(s) and can lead to a decline in other wetland functions, but does not result in a gain in wetland acres. Examples are planting vegetation, controlling non-native or invasive species, and modifying site elevations to alter hydroperiods.

Environmental Impacts[1]

The effects or consequences of actions on the natural and built environments. Environmental impacts include effects upon the elements of the environment listed in the State Environmental Policy Act (SEPA) (WAC 197-11-600 and WAC 197-11-444).

Environment(s) (Shoreline Environment Designation(s))[1]

Designations given to specific shoreline areas based on the existing use pattern, the biological and physical character of the shoreline, and the goals and aspirations of the community.

Erosion[1]

The wearing away of land by the action of natural forces.

ESA

See Endangered Species Act.

Excavate[1]

Any person-made cut, cavity, trench, or depression in the earth's surface, formed by earth removal.

Exempt[2]

Exempt developments are those set forth in *Chapter 8: Administrative Procedures, Section I.A* of this Program which are not required to obtain a Shoreline Substantial Development Permit but which must otherwise comply with applicable provisions of the act and the local master program (WAC 173-27-030).

Exotic[3]

Any species of plants or animals that are not native to western Washington.

Extraordinary Hardship[3]

Strict application of this Program would prevent all reasonable economic use of the parcel.

Facility[3]

For purposes of aquifer protection regulations in *Chapter 6 General Shoreline Policies and Regulations, Section VII, Critical Areas Protection*, "facility" means all structures, contiguous land, appurtenances, and other improvements on the land used for recycling, reusing, reclaiming, transferring, storing, treating, disposing of, or otherwise handling a hazardous substance. Use of the term "facility" includes underground and aboveground tanks, and operations which handle, use, dispose of, or store hazardous substances.

Fair Market Value[2]

The open market bid price for conducting the work, using the equipment and facilities, and purchase of the 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 (WAC 173-27-030).

Farm[3]

The land, buildings, manure lagoons, ponds, freshwater culturing and growing facilities, and machinery used in commercial production of farm products.

Farmland[3]

Land or freshwater ponds devoted primarily to the production, for commercial purposes, of livestock, freshwater aquaculture or other agricultural commodities.

Farm Product[3]

Those plants and animals (and the products thereof) useful to human beings which are produced on farms, and include, but are not limited to, forages and sod crops, grain and feed crops, dairy and dairy products, poultry products, livestock, including breeding, grazing and feed lots, fruits,

vegetables, flowers, seeds, grasses, nursery products, trees and forest products, including Christmas trees and timber, freshwater fish and fish products, rabbits, apiaries, equine and similar products, or any other product which incorporates the use of food, feed, fiber or fur.

Feasible[2]

An action, such as a development project, mitigation, or preservation requirement, that meets all of the following conditions:

1) The action can be accomplished with technologies and methods that have been used in the past in similar circumstances, or studies or tests have demonstrated in similar circumstances that such approaches are currently available and likely to achieve the intended results;
2) The action provides a reasonable likelihood of achieving its intended purpose; and
3) The action does not physically preclude achieving the project's primary intended legal use.

In cases where these guidelines require certain actions unless they are infeasible, the burden of proving infeasibility is on the applicant.

In determining an action's infeasibility, the reviewing agency may weigh the action's relative public costs and public benefits, considered in the short- and long-term time frames (WAC 173-26-020).

Federal Emergency Management Administration (FEMA)[1]

This branch of the federal government is responsible for responding to emergencies such as flood events. FEMA administers the National Flood Insurance Program, develops floodplain maps, and enforces federal regulations pertaining to flood plain management.

FEMA

See **Federal Emergency Management Agency**

Fill[2]

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 (WAC 173-26-020).

Financial Guarantee[3]

A letter of credit, certified bond, assignment of funds or other instrument acceptable to the city to ensure the satisfactory compliance with conditions or standards of this Program.

Float[1]

A shoreline platform structure anchored in and floating upon a water body that does not connect to the shore, and that provides landing for water-dependent recreation or moorage for watercraft, and that does not include above water storage. Floats are either attached to a pier or are anchored to the riverbed so as to allow free movement up or down with the rising or falling water levels.

Flood Control[1]

Any undertaking for the conveyance, control, and dispersal of floodwaters caused by abnormally high direct precipitation or stream overflow.

Floodplain[2]

A term synonymous with the hundred-year floodplain and means that land area susceptible to inundation with a one percent chance of being equaled or exceeded in any given year. The limit of this area shall be based upon flood ordinance regulation maps (WAC 173-26-020).

Floodway[2]

The area, as identified in a master program, that either: i) Has been established in FEMA flood insurance rate maps or floodway maps. The floodway shall not include those lands that can reasonably be expected to be protected from flood waters by flood control devices maintained by or maintained under license from the federal government, the state, or a political subdivision of the state (RCW 90.58.030).

Footprint[3]

The area of a building site bounded by foundation walls or equivalent to the area of the site covered by structures if no foundation walls are present.

Forested Wetland[3]

A regulated wetland with at least 30 percent of the surface area covered by woody vegetation greater than 20 feet in height.

Functions and Values[1]

The beneficial roles served by critical areas including, but are not limited to, water quality protection and enhancement, fish and wildlife habitat, food chain support, flood storage, conveyance and attenuation, ground water recharge and discharge, erosion control, wave attenuation, protection from hazards, historical and archaeological and aesthetic value protection, educational opportunities, and recreation. These beneficial roles are not listed in order of priority. Critical area functions can be used to help set targets (species composition, structure, etc.) for managed areas, including mitigation sites.

Gabions[1]

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.

Generally Accepted Agricultural and Best Management Practices[3]

Sound, economically feasible farming techniques and best management practices as defined and/or recommended by the American Society of Agronomy, United States Department of Agriculture

Natural Resource Conservation Service, Washington State Cooperative Extension Service, and other professional or industrial agricultural organizations.

Geotechnical Report or Geotechnical Analysis[2]

A scientific study or evaluation conducted by a qualified expert that includes a description of the ground and surface hydrology and geology, the affected land form and its susceptibility to mass wasting, erosion, and other geologic hazards or processes, conclusions and recommendations regarding the effect of the proposed development on geologic conditions, the adequacy of the site to be developed, the impacts of the proposed development, alternative approaches to the proposed development, and measures to mitigate potential site-specific and cumulative geological and hydrological impacts of the proposed development, including the potential adverse impacts to adjacent and down-current properties. Geotechnical reports shall conform to accepted technical standards and must be prepared by qualified professional engineers or geologists who have professional expertise about the regional and local shoreline geology and processes (WAC 173-26-020).

Grading[2]

The movement or redistribution of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land (WAC 173-26-020).

Grassy Swale[1]

A vegetated drainage channel that is designed to remove various pollutants from storm water runoff through biofiltration.

Groin[1]

A barrier-type structure extending from the backshore or stream bank into a water body. The purpose of a groin is to interrupt sediment movement along the shore. A groin is also referred to as a spur dike or rock weir.

Guidelines[2]

Those standards adopted by Ecology to implement the policy of chapter 90.58 RCW and WAC 173-26 for regulation of use of the shorelines of the state prior to adoption of master programs. Such standards shall also provide criteria for local governments and Ecology in developing and amending master programs (WAC 173-26-020).

Habitat[1]

The place or type of site where a plant or animal naturally or normally lives and grows.

Hazardous Substances[3]

Any liquid, solid, gas, or sludge, including any materials, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the characteristics or criteria of hazardous waste; and including waste oil and petroleum products.

Hazardous Substance Processing or Handling[3]

The use, storage, manufacture, or other land use activity involving hazardous substances, but does not include individually packaged household consumer products or quantities of hazardous substances of less than five gallons in volume per container. Hazardous substances shall not be disposed of on-site unless in compliance with Dangerous Waste Regulations, chapter 173-303 WAC, and any pertinent local ordinances, such as sewer discharge standards.

Hazardous Waste[3]

All dangerous waste and extremely hazardous waste as designated pursuant to chapter 70.105 RCW, chapter 173-303 WAC.

Hazardous Waste Treatment and Storage Facility[3]

A facility that treats and stores hazardous waste and is authorized pursuant to chapter 70.105 RCW, chapter 173-303 WAC. It includes all contiguous land and structures used for recycling, reusing, reclaiming, transferring, storing, treating, or disposing of hazardous waste. Treatment includes using physical, chemical, or biological processing of hazardous wastes to make such waste nondangerous or less dangerous and safer for transport, amenable for energy or material resource recovery. Storage includes the holding of waste for a temporary period but not the accumulation of waste on the site of generation as long as the storage complies with applicable state requirements.

Hearing Examiner (Land Use)[4]

The Hearing Examiner of the City of Sumner.

Hearings Board[1, 2]

The state shorelines hearings board established by 90.58 RCW (RCW 90.58.030). This is the hearings board established by the Shorelines Management Act of 1971 to decide appeals of cases involving shoreline substantial development permits, conditional uses, or variances.

Height[2]

The distance measured from the average grade level 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 (or the master program specifically requires that such appurtenances be included): *provided* further, that temporary construction equipment is excluded in this calculation (WAC 173-27-030).

HPA - Hydraulic Project Approval[1]

The permit issued by the Washington State Department of Fish and Wildlife pursuant to the State Hydraulic Code Chapter 75.20.100-140 RCW.

Hydric Soil[3]

A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper soil horizon(s), thereby influencing the growth of plants. The presence of hydric soil or wetland soil shall be determined following the methods described in the Washington State Wetland Identification and Delineation Manual.

Hydrophytic Vegetation[3]

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. The presence of hydrophytic vegetation shall be determined following the methods described in the Washington State Wetland Identification and Delineation Manual.

Industrial Development[1]

Facilities for processing, manufacturing, and storage of finished or semi-finished goods.

In-kind Compensation[3]

To replace wetlands with substitute wetlands whose characteristics closely approximate those destroyed or degraded by a regulated activity. It does not mean replacement "in-category."

In-kind Replacement[3]

To replace wetlands, biota or other organisms with substitute flora or fauna whose characteristics closely match those destroyed, displaced, or degraded by an activity.

In-stream Structure[2]

A structure placed by humans within a stream or river waterward of the ordinary high-water mark that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. In-stream structures may include those for hydroelectric generation, irrigation, water supply, flood control, transportation, utility service transmission, fish habitat enhancement, or other purpose (WAC 173-26-241). In-stream structures do not include structures placed beneath the stream or river bed.

Invasive Species[1]

Plant species, typically non-native, that grows rapidly tending to occupy an area to the detriment of other, typically native, plant species.

Lake[2]

A body of standing water in a depression of land or expanded part of a river, including reservoirs, of twenty (20) acres or greater in total area. A lake is bounded by the ordinary high water mark or, where a stream enters a lake, the extension of the elevation of the lake's ordinary high water mark within the stream(WAC 173-22-030).

Landscaping[1]

Vegetative ground cover including shrubs, trees, flower beds, grass, ivy and other similar plants and including tree bark and other materials which aid vegetative growth and maintenance.

Landslide Hazard Area – Type 1[3]

A Slope of 25 percent or greater

Landslide Hazard Area – Type 2[3]

A slope of less than 25 percent and equal to or greater than 15 percent.

Levee[1]

A large dike or embankment, often having an access road along the top, which is designed as part of a system to protect land from floods.

Licensed Engineer[1]

A professional engineer, licensed to practice in the State of Washington.

Littoral[1]

Living on, or occurring on, the shore.

Littoral Drift[1]

The mud, sand, or gravel material moved parallel to the shoreline in the nearshore zone by waves and currents.

Local Government[2]

The City of Sumner (RCW 90.58.030).

Marina[1]

A use providing moorages for pleasure craft, which also may include boat launching facilities, storage, sales, and other services.

Master Program[2]

The comprehensive use plan for the City of Sumner, and the use regulations, together with maps, diagrams, charts or other descriptive material and text, a statement of desired goals and standards developed in accordance with the policies enunciated in RCW 90.58.020 (RCW 90.58.030).

May[2]

The action is acceptable, provided it conforms to the provisions of this Master Program (WAC 173-26-020).

Minerals[3]

Gravel, sand, and valuable metallic substances. Topsoil is not a mineral.

Mineral Resource Lands[3]

Lands primarily devoted to the extraction of minerals or that have known or potential long-term commercial significance for the extraction of minerals.

Mining[1, 2]

The removal of sand, gravel, soil, minerals, and other earth materials for commercial, industrial or construction use. Historically, the most common form of mining in shoreline areas is for sand and gravel because of the geomorphic association of rivers and sand and gravel deposits (WAC 173-26-241).

Mitigation or Mitigation Sequencing[2]

The process necessary to avoid, minimize or reduce, or compensate for the environmental impact(s) of a proposal. Mitigation or mitigation sequencing means the following sequence of steps listed in order of priority, with (a) of this subsection being top priority (WAC 173-26-201):

1) Avoiding the impact altogether by not taking a certain action or parts of an action;
2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;
3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
4) Reducing or eliminating the impact over time by preservation and maintenance operations;
5) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and
6) Monitoring the impact and the compensation projects and taking appropriate corrective measures.

Mixed-use Development[1]

Development that combines water-dependent with water-enjoyment uses and/or nonwater-oriented uses.

Moorage[1]

Any device or structure used to secure a vessel for temporary anchorage, but which is not attached to the vessels (such as a docks or buoy~~s~~).

Moorage Piles[1]

Structural members that are driven into the lake bed to serve as a stationary moorage point. They are typically used for moorage of small boats in the absence of, or instead of, a dock or pier. In some cases, moorage piles may be associated with a dock or pier.

Mooring Buoy[1]

A floating object anchored to the bottom of a water body that provides tie up capabilities for vessels.

Multi-family or Multiple-family

See Dwelling, Multiple-family

Multiple-Use[1]

The combining of compatible uses within one development.

Must[2]

A mandate; the action is required (WAC 173-26-020).

Native Plants or Native Vegetation[1]

These are plants that occur naturally, and that distribute and reproduce without aid. Native plants in western Washington are those that existed prior to intensive settlement that began in the 1850s. Agencies such as the Washington State Extension Service, the State Department of Natural Resources, the State Department of Ecology and Pierce County should be consulted for assistance in identifying native plants.

Native Vegetation[3]

Plant species which are indigenous to the Pacific Northwest.

Natural Environment[1]

Natural Environment is a shoreline environment designation for an area of vacant land uses with relatively unaltered conditions that includes a high value, large forested wetland complex with potential for ecological restoration and protection.

Natural Resource Lands[3]

All areas classified as mineral resource lands or agricultural resource lands.

1 = Definition unique to 2003/2011 SMP; 2 = RCW/WAC; 3 = SMC, Title 16; 4 = SMC, Title 18; 5 = SMC, Title 17

Natural Riparian Habitat Corridors[1]

The streamside environment designed and maintained primarily for fisheries and wildlife habitat, water quality improvements and secondarily for flood control works, while allowing controlled public access to avoid damage to the resource.

Natural Topography or Existing Topography[2]

The topography of the lot, parcel, or tract of real property immediately prior to any site preparation or grading, including excavation or filling (WAC 173-27-030).

Non-conforming Use or Development[1]

A shoreline use or structure or portion thereof which was lawfully constructed or established prior to the effective date of the local shoreline master program but no longer conforms to the policies and regulations of this Master Program.

Non-water-Oriented Use[2]

Those uses that are not water-dependent, water-related, or water-enjoyment (WAC 173-26-020). Examples include professional offices, multifamily residential development, and mini-storage facilities.

Normal Maintenance[2]

Those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition (WAC 173-27-040). See also **Normal Repair.**

Normal Protective Bulkhead[2]

Those structural and nonstructural developments installed at or near, and parallel to, the ordinary high water mark for the sole purpose of protecting an existing single-family residence and appurtenant structures from loss or damage by erosion (WAC 173-27-040).

Normal Repair[2]

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 the shoreline resource or environment. 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 (WAC 173-27-040). See also **Normal Maintenance**.

Off-site Replacement[1,3]

To replace wetlands or other shoreline environmental resources away from the site on which a resource has been impacted by a regulated activity.

OHWM

See **Ordinary high water mark.**

On-site Replacement[3]

To replace wetlands or other shoreline environmental resources at or adjacent to the site on which a resource has been impacted by a regulated activity.

One-hundred-year Flood

(See **Floodplain**).

One-year Time Travel Zone Boundary[3]

The maximum distance around a pumping well from which a contaminant hypothetically present in groundwater could travel to the well within a one-year time period.

Open Space[4]

Land used for recreation, resource protection, project utilities, safety or buffers, and is protected by the provisions of the municipal code and ordinances of Sumner to ensure that it remains in such use. Open space shall be left in a substantially natural state except in the case of recreation or other approved uses that may contain limited impervious surfaces.

Ordinary High Water Mark (OHWM)[2]

"Ordinary high water mark" on all lakes, streams, and tidal water is that 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 upland, in respect to vegetation; as that condition exists on June 1, 1971 or as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or Ecology PROVIDED, That in any area where the ordinary high water mark cannot be found, the ordinary high water mark adjoining fresh water shall be the line of mean high water (RCW 90.58.030). The following criteria clarify this mark on those waters within the City of Sumner per WAC 173-22-030(11), specifically, lakes, and streams:

1) Lakes. Where the ordinary high water mark cannot be found, it shall be the line of mean high water; and
2) Streams. Where the ordinary high water mark cannot be found, it shall be the line of mean high water. For braided streams, the ordinary high water mark is found on the banks forming the outer limits of the depression within which the braiding occurs.

Out-of-Kind Replacement[3]

To replace wetlands with substitute wetlands whose characteristics do not closely approximate those destroyed or degraded by a regulated activity. It does not refer to replacement "out-of-category."

Over-water Structure[1]

Any device or structure projecting over the ordinary high water mark, including, but not limited to piers, docks, floats, and moorage or anchor buoys.

Parking[1]

Parking is the use of land for the purpose of accommodating motor vehicles, motorized equipment, or accessory units, such as trailers. Land used for this purpose is leveled, cleared, and often covered with an impermeable surface.

Parking Space or Parking Stall[4]

"Parking area" means an area accessible to vehicles, which area is provided, improved, maintained and used for the sole purpose of accommodating a motor vehicle.

Party of Record[2]

All persons, agencies or organizations who have submitted written comments in response to a notice of application; made oral comments in a formal public hearing conducted on the application; or notified the City of Sumner of their desire to receive a copy of the final decision on a permit and who have provided an address for delivery of such notice by mail (WAC 173-27-030).

Permit (or Shoreline Permit)[2]

Any substantial development, variance or conditional use permit, or revision, or any combination thereof, authorized under chapter 90.58 RCW (WAC 173-27-030).

Person[3]

An individual, facility, partnership, co-partnership, firm, company, association, joint-stock company, corporation, government entity or agent.

Pier

See **Dock**.

Pollutant[1]

Any substance that has been or may be determined to cause or tend to cause injurious, corrupt, impure, or unclean conditions when discharged to surface water, air, ground, sanitary sewer system, or storm drainage system.

Port[1]

A center for water-borne traffic.

Practical Alternative[3]

An alternative that is available and capable of being carried out after taking into consideration cost, existing technology and logistics in light of overall project purposes and having less impacts to shoreline resources. It may include an area not owned by the applicant which could reasonably have been or be obtained, utilized, expanded, or managed in order to fulfill the basic purpose of the proposed activity.

Preservation[2]

For purposes of wetland regulations in *Chapter 6 General Shoreline Policies and Regulations, Section VII, Critical Areas Protection*, "preservation" means the removal of a threat to, or preventing the decline of, wetland conditions by an action in or near a wetland. This term includes the purchase of land or easements, repairing water control structures or fences, or structural protection. Preservation does not result in a gain of wetland acres but may result in a gain in functions over the long term.

Priority Habitat[2]

A habitat type with unique or significant value to one or more species. An area classified and mapped as priority habitat must have one or more of the following attributes:

1) Comparatively high fish or wildlife density;
2) Comparatively high fish or wildlife species diversity;
3) Fish spawning habitat;
4) Important wildlife habitat;
5) Important fish or wildlife seasonal range;
6) Important fish or wildlife movement corridor;
7) Rearing and foraging habitat;
8) Important marine mammal haul-out;
9) Refugia habitat;
10) Limited availability;
11) High vulnerability to habitat alteration;
12) Unique or dependent species; or
13) Shellfish bed.

A priority habitat may be described by a unique vegetation type or by a dominant plant species that is of primary importance to fish and wildlife (such as oak woodlands or eelgrass meadows). A priority habitat may also be described by a successional stage (such as, old growth and mature forests). Alternatively, a priority habitat may consist of a specific habitat element (such as a consolidated marine/estuarine shoreline, talus slopes, caves, snags) of key value to fish and

wildlife. A priority habitat may contain priority and/or nonpriority fish and wildlife (WAC 173-26-020).

Priority Species[2]

Species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels. Priority species are those that meet any of the criteria listed below.

1) Criterion 1. State-listed or state proposed species. State-listed species are those native fish and wildlife species legally designated as endangered (WAC 232-12-014), threatened (WAC 232-12-011), or sensitive (WAC 232-12-011). State proposed species are those fish and wildlife species that will be reviewed by the department of fish and wildlife (POL-M-6001) for possible listing as endangered, threatened, or sensitive according to the process and criteria defined in WAC 232-12-297.
2) Criterion 2. Vulnerable aggregations. Vulnerable aggregations include those species or groups of animals susceptible to significant population declines, within a specific area or statewide, by virtue of their inclination to congregate. Examples include heron colonies, seabird concentrations, and marine mammal congregations.
3) Criterion 3. Species of recreational, commercial, and/or tribal importance. Native and nonnative fish, shellfish, and wildlife species of recreational or commercial importance and recognized species used for tribal ceremonial and subsistence purposes that are vulnerable to habitat loss or degradation.
4) Criterion 4. Species listed under the federal Endangered Species Act as either proposed, threatened, or endangered (WAC 173-26-020).

Provisions[2]

Policies, regulations, standards, guideline criteria or environment designations (WAC 173-26-020)

Public Access[2]

The ability of the general public to reach, touch, and enjoy the water's edge, to travel on the waters of the state, and to view the water and the shoreline from adjacent locations (WAC 173-26-221).

Public Interest[2]

The interest shared by the citizens of the state or community at large in the affairs of government, or some interest by which their rights or liabilities are affected such as an effect on public property or on health, safety, or general welfare resulting from a use or development (WAC 173-27-030).

Qualified Wetlands Professional[3]

An individual that has both the academic qualifications and field experience to provide the technical expertise for making competent wetland delineations and recommendations necessary to implement the requirements of this program.

Railroad[4]

A surface linear passageway with tracks for train traffic and auxiliary facilities, but not including freight depots or stations, loading platforms, train sheds, warehouses, car or locomotive shops, or car yards.

RCW

Revised Code of Washington.

Recreation[1]

The refreshment of body and mind through forms of play, amusement, or relaxation. The recreational experience may be active, such as boating, fishing, and swimming, or may be passive such as enjoying the natural beauty of the shoreline or its wildlife.

Recreational Development[1, 2]

Commercial and public facilities designed and used to provide recreational opportunities to the public (WAC 173-26-241). Recreational development provides opportunities for the refreshment of body and mind through forms of play, sports, relaxation, amusement, or contemplation. It includes facilities for passive recreational activities, such as hiking, photography, viewing, and fishing. It also includes facilities for active or more intensive uses such as parks, campgrounds, and golf courses.

Reestablishment[2]

For purposes of wetland regulations in *Chapter 6 General Shoreline Policies and Regulations, Section VII, Critical Areas Protection*, "reestablishment" means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former wetland. Re-establishment results in rebuilding a former wetland and results in a gain in wetland acres and functions. Activities could include removing fill, plugging ditches, or breaking drain tiles.

Rehabilitation[2]

For purposes of wetland regulations in *Chapter 6 General Shoreline Policies and Regulations, Section VII, Critical Areas Protection*, "rehabilitation" means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural or historic functions and processes of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres. Activities could involve breaching a dike to reconnect wetlands to a floodplain or returning tidal influence to a wetland.

See Normal Maintenance or Normal Repair. Replacement Project[3]

Actions necessary to replace project-induced wetland and wetland buffer losses, including land acquisition, planning, construction plans, monitoring and contingency actions.

Replacement Shoreline Stabilization[1]

The construction of a new structure to perform a shoreline stabilization function of an existing structure that can no longer adequately serve its purpose. Additions to or increases in size of existing shoreline stabilization measures shall be considered new structures. See **Shoreline Stabilization.**

Residential Development[1]

Residential development refers to one or more buildings, structures, lots, parcels, or portions of parcels that are used or intended to be used to provide a place of abode for human beings. Residential development includes single family residences, multifamily residences, apartments, townhouses, mobile home parks, other similar group housing, condominiums, subdivisions, planned unit developments, and short subdivisions. Residential development also includes accessory uses and structures such as garages, sheds, tennis courts, swimming pools, parking areas, fences, cabanas, saunas, and guest cottages. Residential development does not include hotels, motels, or any other type of overnight or transient housing or camping facilities.

Residential Docks[1]

Docks (piers) serving four or fewer single-family residences.

Restore, Restoration or Ecological Restoration[2]

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 (WAC 173-26-020).

Revegetation[1]

The planting of vegetation to cover any land areas that have been disturbed during construction. This vegetation shall be maintained to insure its survival and shall be consistent with planting requirements of the Sumner Landscape Code.

Revetment[1]

Facing of stone, concrete, etc., built to protect a scarp, embankment, or shore structure against erosion by waves of currents. The principal features of a revetment are: 1) heavy armor layer, 2) filter layer, and 3) toe protection.

Riparian[1]

Of, on, or pertaining to the banks of a river.

Riparian Management Zone[1]

The regulated buffer area that includes the land from the ordinary high water mark to a specified distance (see *Chapter 4: Shoreline Environment Designations, Table 4-7*) as measured horizontally in each direction.

Riprap[1]

A layer, facing, or protective mound of stone placed on shoulders, slopes, or other such places to protect them from erosion, scour, or sloughing of a structure or embankment; also, the stone so used.

River Bank[1]

The upland areas immediately adjacent to the floodway, which confine and conduct flowing water during nonflooding event. The riverbank, together with the floodway, represent the river channel capacity at any given point along the river.

River Channel Capacity[1]

The maximum flow that can pass through a channel without overflowing the banks and inundating normally dry land.

Riverfront Road[1]

A public street or road that lies alongside the Puyallup or White (Stuck) Rivers and which has no major development between it and the river.

Rock Weir[1]

A structure made of loose rock that is designed to control sediment movement, water flow, or both. A rock weir adjacent to a shoreline is typically formed by placing rock in a line outward from the shore, with the top of the rock embankment below the water level to restrict current movements parallel to the shore without completely blocking flow.

Runoff[1]

Water that is not absorbed into the soil but rather flows along the ground surface following the topography.

S-1[3]

Sites of less than one acre with an application rate of less than 10 dry tons of sludge per acre per five-year period.

S-2[3]

Sites of less than 40 acres with an application rate of less than 20 dry tons of sludge per acre per 10-year period or less than an annual application of two dry tons of sludge per acre.

S-3[3]

Sites with an application rate of more than 20, but less than 43 dry tons of sludge per 10-year period or 4.3 dry tons per acre per year.

S-4[3]

Sites with one-time applications greater than 43 dry tons per acre and cumulative limits for metals greater than state-designated practices for agricultural cropland application.

S-5[3]

Sites which are permanent landfill disposal facilities.

Salmon and Steelhead Habitats[1]

Gravel bottomed streams, creeks, and rivers used for spawning; streams, creeks, rivers, side channels, ponds, lakes, and wetlands used for rearing, feeding, and cover and refuge from predators and high water; streams, creeks, rivers, estuaries, and shallow areas of saltwater bodies used as migration corridors; and salt water bodies used for rearing, feeding, and refuge from predators and currents.

Scrub-Shrub Wetland[3]

A regulated wetland with at least 30 percent of its surface area covered by woody vegetation less than 20 feet in height as the uppermost strata.

Sediment[1]

The fine-grained material deposited by water or wind.

SEPA

See **State Environmental Policy Act.**

Shall[2]

A mandate; the action must be done (WAC 173-26-020).

Shoreland Areas or Shorelands[2]

Those lands extending landward for two hundred (200) feet in all directions as measured on a horizontal plane from the ordinary high water mark, floodways and contiguous floodplain areas landward two hundred (200) feet from such floodways; and all wetlands and river deltas associated with the streams, and lakes which are subject to the provisions of this Chapter 173-22 WAC, as may be amended; the same to be designated as to location by the Washington Department of Ecology (RCW 90.58.030).

Shoreline Environment(s)

See **Environment**

Shoreline Habitat and Natural Systems Enhancement Projects[2]

Projects which include those activities proposed and conducted specifically for the purpose of establishing, restoring, or enhancing habitat for priority species in shorelines.

Shoreline Jurisdiction[2]

Shorelines of the state and shorelands (WAC 173-26-020).

Shoreline Management Act of 1971[2]

Chapter 90.58 RCW, as amended.

Shoreline Master Program (SMP)[2]

As provided in RCW 36.70A.480, the goals and policies of a shoreline master program approved under chapter 90.58 RCW shall be considered an element of the city's comprehensive plan. All other portions of the shoreline master program for a city adopted under chapter 90.58 RCW, including use regulations, shall be considered a part of the city's development regulations (WAC 173-26-020).

Shoreline Permit

See **Permit.**

Shoreline Modifications[2]

Actions that modify the physical configuration or qualities of the shoreline area, usually through the construction of a physical element such as a dike, breakwater, pier, weir, dredged basin, fill, bulkhead, or other shoreline structure. They can include other actions, such as clearing, grading, or application of chemicals (WAC 173-26-020).

Shoreline Residential Environment[1]

A shoreline environment designation under the Shoreline Management Act for areas of low to moderate development intensity with a residential land use that still maintains significant natural features.

Shoreline Stabilization[2]Shoreline stabilization includes actions taken to address erosion impacts to property and dwellings, businesses, or structures caused by natural processes, such as current, flood, tides, wind, or wave action. These actions include structural and nonstructural methods.

Nonstructural methods include building setbacks, relocation of the structure to be protected, stormwater management, and planning and regulatory measures to avoid the need for structural stabilization

"Hard" structural modification measures refer to those with solid, hard surfaces, such as concrete bulkheads, while "soft" structural measures rely on softer materials, such as biotechnical vegetation measures or beach enhancement (WAC 173-26-231).

Shoreline Substantial Development Permit (SSDP)[1]

SSDPs are permit required for all substantial developments within the jurisdiction of the Shoreline Master Program. The permit process includes public notice, a public hearing, approval or denial by the Hearing Examiner, and review by the Department of Ecology.

Shorelines[2]

All water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them, except: (i) shorelines of statewide significance; (ii) shorelines on segments of streams upstream of a point where the mean annual flow is twenty (20) cubic feet per second or less and the wetlands associated with such upstream segments, and (iii) shorelines on lakes less than twenty (20) acres in size and wetlands associated with such lakes (RCW 90.58.030).

Shorelines Hearings Board

See **Hearings Board.**

Shorelines of the State[2]

The total of all "shorelines" and "shorelines of statewide significance" within the state (RCW 90.58.030).

Shorelines of Statewide Significance[2]

Shorelines of the state that meet the criteria for shorelines of statewide significance contained in RCW 90.58.030(2)(f). Within Sumner, the Puyallup and White (Stuck) Rivers and Lake Tapps are the only waters that qualify as shorelines of statewide significance.

Should[2]

The particular action is required unless there is a demonstrated, compelling reason, based on policy of the Shoreline Management Act and the Guidelines, against taking the action (WAC 173-26-020).

Sign[4]

Any visual communication device, structure, placard or fixture that uses color, form, graphic, illumination, symbol, or writing to advertise, announce the purpose of, or identify the purpose of a person or entity, or to communicate information of any kind to the public. For the purpose of this master program, a sign is not considered to be a building or structural design, but is restricted solely to graphics, symbols or written copy that is meant to be used in the aforementioned way.

However, a sign shall not include the following:

1) Official notices authorized by a court, public body or public officer.

2) Direction, warning, or information sign authorized by federal, state, or municipal authority.

3) The official flag, emblem, or insignia of a government, school or religious group or agency.
4) A memorial plaque or tablet, or cornerstones indicating the name of a building and date of construction, when cut or carved into any masonry surface or when made of bronze or other incombustible part of the building or structure.

Significant Vegetation Removal[2]

The removal or alteration of trees, shrubs, and/or ground cover by clearing, grading, cutting, burning, chemical means, or other activity that causes significant ecological impacts to functions provided by such vegetation. The removal of invasive or noxious weeds does not constitute significant vegetation removal. Tree pruning, not including tree topping, where it does not affect ecological functions, does not constitute significant vegetation removal (WAC 173-26-020).

Single-family Residence (SFR)[2]

A detached dwelling designed for and occupied by one family including those structures and developments within a contiguous ownership that are a normal appurtenance (WAC 173-27-040).

Site[1]

Any lot or parcel of land or contiguous combination thereof, under the same ownership, on which development is proposed.

Slope[1]

An inclined ground surface. The inclination is expressed as a ratio or horizontal distance to vertical distance.

Sludge Land Application Site[3]

A site where stabilized sludge, septage, and other organic wastes are applied to the surface of the land in accordance with established agronomic rates for fertilization or soil conditioning. Sludge land application sites are classified under the following five-category system:

SMA

See **Shoreline Management Act.**

Small Animal[3]

An animal with an average weight of less than 100 pounds.

SMP

See **Shoreline Master Program.**

1 = Definition unique to 2003/2011 SMP; 2 = RCW/WAC; 3 = SMC, Title 16; 4 = SMC, Title 18; 5 = SMC, Title 17

Soil Bioengineering[1]

An applied science that combines structure, biological and ecological concepts to construct living structures that stabilizes the soil to control erosion, sedimentation and flooding using live plant materials as a main structural component.

Solid Waste[1]

Solid waste includes all putrescible and nonputrescible solid and semisolid wastes, including garbage, rubbish, ashes, industrial wastes, wood wastes and sort yard wastes associated with commercial logging activities, swill, demolition and construction wastes, abandoned vehicles and parts of vehicles, household appliances and other discarded commodities. Solid waste does not include sewage, dredge material or agricultural or other commercial logging wastes not specifically listed above.

SSDP

See **Shoreline Substantial Development Permit.**

State Environmental Policy Act, (SEPA)[1]

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. As part of the SEPA process, EISs may be required to be prepared and public comments solicited.

Stream[1]

A naturally occurring body of periodic or continuously flowing water where: a) the mean annual flow is greater than twenty cubic feet per second and b) the water is contained within a channel. See also **Channel.**

Structure[2]

A permanent or temporary edifice or building, or any piece of work artificially built or composed of parts jointed together in some definite manner, whether installed on, above, or below the surface of ground or water, except for vessels (WAC 173-27-030).

Subdivision[5]

The division or redivision of land into lots, tracts, parcels, sites or divisions for the purpose of sale, lease, or transfer of ownership.

Substantial Development[2]

Any development of which the total cost or fair market value exceeds five thousand seven hundred and eighteen dollars ($5,718), or as adjusted by the State Office of Financial Management, or any development which materially interferes with the normal public use of the water or shorelines of the state (RCW 90.58.030). See also **Development** and **Exemption.**

Substantially Degrade[2]

To cause significant ecological impact (WAC 173-26-020).

Structural Flood Hazard Reduction Measures[1]

Structural modifications such as dikes, levees, revetments, floodwalls, channel realignment, and elevation of structures consistent with the National Flood Insurance Program.

Tapps Reservoir[1]

A shoreline environment designation under the Shoreline Management Act for undeveloped areas owned and managed by a utility company on Lake Tapps.

TBA[3]

"TBA" means transferable buffer area. The transferable buffer areas shall not include areas of improved right-of-way within the wildlife habitat area buffer or wetland buffer.

Ten-year Time Travel Zone Boundary[3]

The maximum distance around a pumping well from which a contaminant hypothetically present in groundwater could travel to the well within a 10-year time period.

TPCHD[3]

The Tacoma-Pierce County health department.

Transmit[2]

To send from one person or place to another by mail or hand delivery. The date of transmittal for mailed items is the date that the document is certified for mailing or, for hand-delivered items, is the date of receipt at the destination (WAC 173-27-030).

Transportation Facility[1]

Structures and developments that aid in land and water surface movement of people, goods, and services. They include roads and highways, bridges and causeways, bikeways, trails, railroad facilities, and boat and floatplane terminals.

Truck Maneuvering Area[1]

An area of a site used by trucks for turning and backing or for access to loading/unloading areas.

Underground Tank[3]

Any one or a combination of tanks (including underground pipes connected thereto) which are used to contain or dispense an accumulation of hazardous substances or hazardous wastes, and the

volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground.

Upland[1]

The area above and landward of the ordinary high water mark.

Urban Environment[1]

A shoreline environment designation under the Shoreline Management Act for areas of high intensity land uses that include residential, commercial, and industrial development.

Urban Conservancy Environment[1]

A shoreline environment designation under the Shoreline Management Act for areas of high intensity mixed land uses that include residential, commercial, and industrial development, generally located in a floodplain with potential for ecological restoration.

Use or Use Activity[4]

The purpose or activity for which the land, or building thereon, is designed, arranged or intended, or for which it is occupied or maintained and shall include any manner of performance or operation of such activity with respect to the provision of this Master Program . The definition of "use" also includes the definition of "development."

USGS[3]

The United States Geologic Survey.

Utilities[2]

Services and facilities that produce, convey, store, or process power, gas, sewage, communications, oil, waste and the like. On-site utility features serving a primary use, such as a water, sewer or gas line to a residence, are "accessory utilities" and shall be considered a part of the primary use (WAC 173-26-241).

Utility Line[3]

Pipe, conduit, cable or other similar facility by which services are conveyed to the public or individual recipients. Such services shall include, but are not limited to, water supply, electric power, gas, communications, storm sewers (except open ditches) and sanitary sewers.

Variance[2]

A means to grant relief from specific bulk, dimensional or performance standards set forth in this master program and not a means to vary a use of a shoreline (WAC 173-27-030).

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Water-dependent Use[2]

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 its operations. Examples include stormwater outfalls, docks, boat launches, and dredging (WAC 173-26-020).

Water-enjoyment Use[2]

Recreational uses or other uses that facilitates public access to the shoreline as a primary characteristic of the use; or a use that provides for recreational use or aesthetic enjoyment of the shoreline for a substantial number of people as a general characteristic of the use and which through location, design, and operation ensures the public's ability to enjoy the physical and aesthetic qualities of the shoreline. In order to qualify as a water=enjoyment use, 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 (WAC 173-26-020). Examples include parks, piers, museums, and educational/scientific reserves.

Water Quality[2]

The physical characteristics of water within shoreline jurisdiction, including water quantity, hydrological, physical, chemical, aesthetic, recreation-related, and biological characteristics. Where used in this master program, the term "water quantity" refers only to development and uses regulated under the Shoreline Management Act and affecting water quantity, such as impermeable surfaces and storm water handling practices. Water quantity, for purposes of this master program, does not mean the withdrawal of groundwater or diversion of surface water pursuant to RCW 90.03.250 through 90.03.340 (WAC 173-26-020).

Water-oriented Use[2]

A use that is a water-dependent, water-related, or water-enjoyment use, or a combination of such uses (WAC 173-26-020).

Water-related Use[2]

A use or a portion of a use which is not intrinsically dependent on a waterfront location but whose economic viability is dependent upon a waterfront location because:

1) The use has a functional requirement for a waterfront location such as the arrival or shipment of materials by water or the need for large quantities of water; or
2) The use provides a necessary service supportive of the water-dependent uses and the proximity of the use to its customers makes its services less expensive and/or more convenient (WAC 173-26-020).

Examples include warehousing of goods transported by water, seafood processing plants, hydroelectric generating plants, dry boat storage, and oil refineries where transport is by tanker.

Watershed Restoration Project[2]

"Watershed restoration project" means 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 ten (10) miles of streamreach, in which less than twenty-five (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 the fishery resource available for use by all of the 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 two hundred (200) square feet in floor area and is located above the ordinary high water mark of the stream (WAC 173-27-040).

Watershed Restoration Plan[2]

"Watershed restoration plan" means 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 (WAC 173-27-040).

Wellhead Protection Area[3]

The area within the 10-year time-of-travel zone boundary of a group A public water system well, as delineated by the water system purveyor or its designee, pursuant to WAC 246-290-135.

Wetlands or Wetland Areas[2]

"Wetlands" or "wetland areas" means areas that are inundated or saturated by surface 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 generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland 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 nonwetland areas to mitigate the conversion of wetlands (RCW 90.58.030).

Wetland Buffer or Wetland Buffer Zone[3]

An area that surrounds and protects a regulated wetland from adverse impacts to the wetland's functions and values.

Wetland Creation[3]

"Creation" – Actions performed to intentionally establish a wetland at a site where it did not formerly exist.

Wetland Edge[3]

The boundary of a wetland as delineated based on the definitions contained in this Program.

Wetland Enhancement[3]

"Enhancement" – Actions performed to improve the condition of existing degraded wetlands so that the functions they provide are of a higher quality.

Wetland Mitigation Bank[1]

A site where wetlands are restored, created, enhanced, or in exceptional circumstances, preserved, expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to wetland resources.

Wetland Restoration[3]

"Restoration" – Actions performed to reestablish wetland functional characteristics and processes which have been lost by alterations, activities, or catastrophic events within a former wetland area which no longer meets the definition of a wetland.

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SUMNER SHORELINE MASTER PROGRAM UPDATE

Draft Shoreline Inventory and Characterization Report
Grant Agreement No. G1000024, Tasks 2.1, 2.2, 2.3

Prepared for: **June 2010**

City of Sumner

ESA Adolfson

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1.0 INTRODUCTION

1.1 Background and Purpose

The purpose of this report is to conduct a baseline inventory of existing natural and built conditions in the City of Sumner's shoreline jurisdiction to provide a basis for the update of the City's Shoreline Master Program (SMP). Adolfson prepared an original shoreline inventory and characterization report for the City in 2002. Shortly thereafter, in 2003, the Washington State Legislature passed Substitute Senate Bill (SSB) 6012, which established timelines for all cities and counties to amend their local SMPs consistent with the Shoreline Management Act (SMA), Revised Code of Washington (RCW) 90.58 and its updated implementing guidelines, Washington Administrative Code (WAC) 173-26. The WAC 173-26 is commonly referred to as the 2003 shoreline guidelines.

The City of Sumner is required to prepare a comprehensive update to its SMP by the end of 2011.The City's first step towards this comprehensive SMP update is revising the 2002 shoreline inventory report to update technical information that has changed or been made available since, and to be consistent with the current 2003 shoreline guidelines. The report provides:

- Analysis and characterization of ecosystem-wide processes that affect the City's shorelines;
- Analysis and characterization of shoreline functions;
- Opportunities for protection, restoration, public access and shoreline use; and
- Shoreline management recommendations and policy options for consideration in subsequent phases of the SMP update.

The inventory and characterization documents current shoreline conditions and provides a basis for updating the City's SMP goals, policies, and regulations. This report will help the City establish a baseline of conditions, evaluate functions and values of resources in its shoreline jurisdiction, and explore opportunities for conservation and restoration of ecological functions.

Washington State Department of Ecology (Ecology) has provided state grant funds to assist the City in its comprehensive SMP update, including the completion of this report. The Ecology grant (No. G1000024) to the City is provided through the State General Fund. Recommendations outlined in Chapter 7 of the SMP Handbook provided by Ecology in draft form (August 2009) have been consulted related to the components of a complete inventory and characterization report (Ecology, 2010b).

1.2 Report Organization

This report is divided into six main sections. After Section 1.0, which provides background and introductory information, Section 2.0 describes the methods and data sources used to analyze the Sumner shorelines. Section 3.0 presents an ecosystem wide characterization, which includes historic land use along the City's regulated shorelines, watershed conditions, climate change, and a characterization of the shorelines' floodplains. Section 4.0 describes land and shoreline use patterns along the shorelines. Section 5.0 focuses on biological resources, and critical and hazard areas. Section 6.0 provides a segment-by-segment analysis of shoreline conditions and identifies restoration opportunities.

Also accompanying this report are several maps that identify the City's shoreline planning area; identify shoreline planning segments; and document various biological, land use, and physical elements. Maps are referred to throughout the document and are contained in Appendix A. Appendix B contains additional floodplain characterization data in table format.

Throughout this report the terms "left bank" and "right bank" are used. Right bank refers to the river bank which, when one is facing upstream, is to one's right. Similarly, left bank refers to that bank to the left when one is facing upstream[1].

1.3 Regulatory Overview

1.3.1 Shoreline Management Act and Shoreline Guidelines

Washington's Shoreline Management Act (SMA) was passed by the State Legislature in 1971 and adopted by the public in a referendum. The SMA 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 SMA 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 SMA is also intended to provide for appropriate shoreline use by encouraging land uses that enhance and conserve shoreline functions and values.

The primary responsibility for administering the SMA is assigned to local governments through the mechanism of local shoreline master programs, adopted under guidelines established by Ecology. The guidelines (WAC 173-26) establish goals and policies that are

[1] "Upstream" of the White River extends generally to the north from where it joins the Puyallup River. "Upstream" on the Puyallup River generally extends to the south and east.

implemented through use 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 managed over time.

1.3.1.1 Shoreline Master Program Update

The SMA is implemented through the development of local SMPs, which establish a system to classify shoreline areas into specific "environment designations." The purpose of the shoreline environment designation system is to provide a uniform basis for applying policies and use regulations within distinctly different shoreline areas. In a regulatory context, shoreline environment designations provide the governing policy and regulations that apply to land within the SMP jurisdiction. Portions of individual parcels that are outside SMP jurisdiction are governed by zoning and other applicable land use regulations. Generally, environment designations should be based on existing and planned development patterns, biological and physical capabilities and limitations of the shoreline, and a community's vision or objectives for its future development. Under the city's existing SMP (adopted in 2004) three shoreline environments are established: Urban, Shoreline Residential, and Urban Conservancy.

Refer to the existing SMP for additional information on the existing goals, policies, and environment designations (City of Sumner, 2004). Shoreline properties within the City's UGA are regulated under the Pierce County SMP, until such properties are annexed and the City's SMP is amended.

1.3.1.2 Shoreline Jurisdiction

Under the SMA, the shoreline jurisdiction includes waters that have been designated as "shorelines of statewide significance" or "shorelines of the state." These designations were established in 1972, and are described in Washington Administrative Code (WAC) 173-18.

- "Shorelines of statewide significance" are generally described as including portions of Puget Sound and other marine water bodies, rivers west of the Cascade range that have a mean annual flow of 1000 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 fresh water lakes with a surface area of 1,000 acres or more.

- "Shorelines of the state" are generally described as all marine shorelines and shorelines of all other streams or rivers having a mean annual flow of 20 cfs or greater and lakes with a surface area greater than 20 acres.

In Sumner, the designated shorelines of the state are the Puyallup River, White (Stuck) River[2], and Lake Tapps that fall within the Sumner city limits and urban growth area (UGA) (Map 1 in Appendix A). Both rivers and the lake are also designated as shorelines of statewide significance.

This report will also include a portion of the Puyallup River in Sumner's joint planning area (JPA) in unincorporated Pierce County. The study area boundary is bordered by the city limits and the Orting Highway (SR 162) on the west; city limits and SR 410 on the north; and extending east and south along the Puyallup River to the boundaries of Pierce County's Riverside County Park. This area is considered an area of special interest which may be considered for inclusion in the City's UGA sometime during the SMP update.

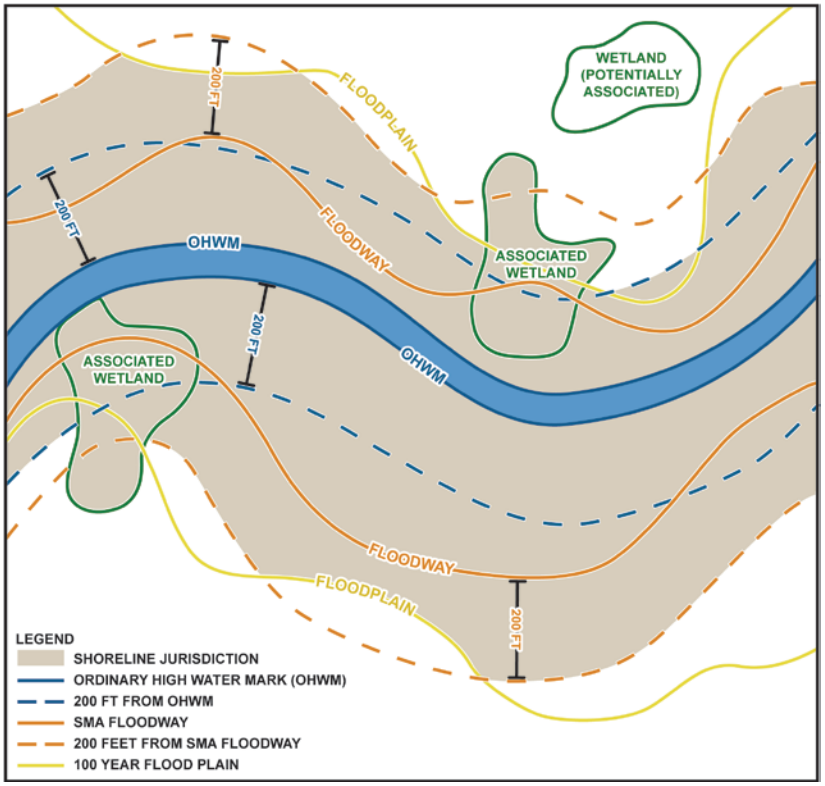
Unless otherwise stated, generalized references to the city or the city's shoreline jurisdiction include shorelines in the UGA and the study area boundary as described above.

The shoreline jurisdiction under SMA also includes "shorelands" adjacent to shorelines of the state. "Shorelands" or "shoreland areas" means those lands extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark (OHWM); floodways and contiguous floodplain areas landward 200 feet from such floodways; and all wetlands and river deltas associated with such streams, lakes, and tidal waters (see Figure 1-1).

"Associated wetlands" means those wetlands, that are in proximity to and either influence or are influenced by tidal waters or a lake or stream subject to the SMA (WAC 173-22-030 (1)). These are typically identified as wetlands that physically extend into the shoreline jurisdiction, or wetlands that are functionally related to the shoreline jurisdiction through surface water connection and/or other factors.

[2] Throughout this inventory, the terms "White (Stuck) River" and "White River" are used interchangeably to refer to that portion of this river system located in Sumner. In 1914, the White River was permanently diverted into the former channel of the Stuck River.

Figure 1-1. Graphic Depiction of the SMA Shoreline Jurisdiction Limits



The Puyallup River is located within Sumner's joint planning area from its southernmost point at approximately River Mile (RM) 13.3 downstream to its confluence with the White River at approximately RM 10.7, west of downtown Sumner. Downstream of Sumner's shoreline jurisdiction, the Puyallup River drains into Commencement Bay in Puget Sound. The White River is located within Sumner's city limits and urban growth area from approximately RM 5.5 at the northern border of the City's urban growth area downstream to its confluence with the Puyallup River at RM 0.3. Approximately 7,000 lineal feet of the northwestern portion of Lake Tapps is located within Sumner's UGA boundaries.

1.3.2 Existing Plans, Programs and Regulations

A variety of other regulatory programs, plans, and policies work in concert with the City's SMP to manage shoreline resources and regulate development near the shoreline. The City's Comprehensive Plan establishes the general land use pattern and vision of growth the City has adopted for areas both inside and outside the shoreline jurisdiction. The Growth Management Act provides that SMP goals and policies are integrated as an element of the Comprehensive Plan (RCW 36.70A.480). As such, SMP goals and policies should be consistent with general goals and policies for land use, environment, and other elements

contained in the Comprehensive Plan, and vice versa. Various sections of the City's municipal code are relevant to shoreline management, such as zoning, flood damage prevention, and stormwater management. The City's development standards and use regulations for environmentally critical areas are particularly relevant to the City's SMP. Designated environmentally critical areas are found throughout the City's shoreline jurisdiction, including streams, wetlands, aquifer recharge areas, wildlife habitat areas and flood hazard areas.

1.3.2.1 Comprehensive Plan, Zoning and Other City Regulations

City of Sumner Comprehensive Plan – The City of Sumner *Comprehensive Plan*, adopted in 2005, outlines general growth management goals over the next 20 years. The Plan includes goals and policies for shoreline management, land use, and the environment (City of Sumner, 2005). Amendments to the Comprehensive Plan are currently underway and are likely to be adopted by the end of 2010. Eleven "land use categories" are described in the Plan. These categories serve as the basis for more detailed zoning code designations. Land use categories include:

- *Residential*: Residential protection, low density residential, medium density residential, and high density residential
- *Commercial*: Agriculture, general commercial, interchange commercial, neighborhood commercial, central business district, mixed use development, and urban village
- *Manufacturing*: Light manufacturing and heavy manufacturing

The *Comprehensive Plan* references policies established in other adopted Sumner planning documents, including the City's Parks and Open Space Plan, Comprehensive Transportation Plan, Water System Plan, Stormwater Comprehensive Plan, and Sewer Collection System Comprehensive Plan.

Land use designations are relevant to this shoreline characterization report as they establish the general land use patterns and vision of growth the City has adopted for areas both inside and outside the shoreline planning area. Comprehensive Plan designations are shown on Map 8.

Sumner Municipal Code, Title 18: Zoning – Title 18 of the *Sumner Municipal Code* (SMC) establishes zoning districts in the city (City of Sumner, 2009c). These districts, which follow land use designations established in the City *Comprehensive Plan*, include eight residential zones, four mixed residential/commercial zones, a commercial-only zone, two manufacturing/industrial zones, and an agricultural zone. Zoning is shown on Map 9.

Sumner Municipal Code, Chapter 16.04 (State Environment Policy Act) and Division III, Chapters 16.40-16.58 (Natural Resource Lands and Critical Areas) – Chapter 16.04

of the SMC provides guidance to project applicants that require State Environmental Policy Act (SEPA) environmental review. Division III of the SMC (Chapters 16.40-16.58) establishes development standards, construction techniques, and permitted uses in critical areas and/or their buffers (wetlands, streams, wildlife habitat areas, aquifer recharge areas, landslide and erosion hazard areas, seismic hazard areas, volcanic hazard areas, and flood hazard areas) to protect these areas from adverse impacts. Division III also establishes protections for agricultural lands and regulatory standards for surface mining on mineral resource lands.

1.3.2.2 State and Federal Regulations

A number of state and federal agencies may have jurisdiction over land or development activities in the City's shoreline jurisdiction. Local development proposals most commonly trigger requirements for state or federal permits when they impact wetlands or streams; potentially affect fish and wildlife listed under the federal Endangered Species Act (ESA); result in over one acre of clearing and grading; or affect the floodplain or floodway. As with local requirements, state and federal regulations may apply throughout the city, but regulated resources are common within the City's shoreline jurisdiction. The state and federal regulations affecting shoreline-related resources include, but are not limited to:

- Endangered Species Act (ESA): The federal ESA addresses the protection and recovery of federally listed species. The ESA is jointly administered by the National Oceanic and Atmospheric Administration (NOAA) Fisheries (formerly referred to as the National Marine Fisheries Service [NMFS]), and the United States Fish and Wildlife Service (USFWS).

- Clean Water Act (CWA): The federal CWA requires states to set standards for the protection of water quality for various parameters, and it regulates excavation and dredging in waters of the U.S., including wetlands. Certain activities affecting wetlands in the City's shoreline jurisdiction or work in the adjacent rivers may require a permit from the U.S. Army Corps of Engineers and/or Ecology under Section 404 and Section 401 of the CWA, respectively.

- Hydraulic Project Approval (HPA): The Washington Department of Fish and Wildlife (WDFW) regulates activities that use, divert, obstruct, or change the natural flow of the beds or banks of waters of the state and may affect fish habitat. Projects in the shoreline jurisdiction requiring construction below the ordinary high water mark of rivers and lakes in the City could require an HPA from WDFW. Projects creating new impervious surface that could substantially increase stormwater runoff to waters of the state may also require approval.

- National Pollution Discharge and Elimination System (NPDES): Ecology regulates activities that result in wastewater discharges to surface water from industrial facilities or municipal wastewater treatment plants. NPDES permits are also required for stormwater discharges from industrial facilities, construction sites of

one or more acres, and municipal stormwater systems that serve populations of 100,000 or more.

1.3.2.3 National Marine Fisheries Service Biological Opinion on National Flood Insurance Program

The National Flood Insurance Program (NFIP) of the Federal Emergency Management Agency (FEMA) released draft Federal Insurance Rate Maps (DFIRM) that revised the extent of the White River and Puyallup River floodplain. The revised maps indicate a larger 100-year floodplain area than the maps that are currently in effect. Since the DFIRM maps have not been adopted by FEMA the 1987 maps remain in effect from a regulatory standpoint, based on City code.

In September 2008, a Biological Opinion issued by the National Marine Fisheries Service (NMFS) determined that the effects of certain elements of the NFIP throughout Puget Sound is likely to jeopardize the continued existence of the following species listed under the ESA: Puget Sound Chinook salmon, Puget Sound steelhead, Hood Canal summer-run chum salmon, and Southern Resident killer whales. The Biological Opinion also determined that NFIP is likely to adversely modify the following ESA designated critical habitats: Puget Sound Chinook salmon, Hood Canal summer-run chum salmon, and Southern Resident killer whale critical habitats. The biological opinion provides a reasonable and prudent alternative which can be implemented to avoid jeopardy and adverse modification of critical habitat. In response to the Biological Opinion, FEMA is in the process of developing guidance for NFIP participating communities, which includes the City of Sumner. The Biological Opinion establishes a 2010-2011 timeline for compliance for all NFIP participating communities within the Puget Sound Basin (NMFS, 2008).

1.3.3 Limitations Established by 24th Street Interchange Biological Opinions

The City of Sumner and WSDOT applied for a Corp of Engineer (COE) permit to authorize one acre of wetland fill to allow for development of the 24th Street Interchange, providing direct access from SR 410 to north Sumner. WSDOT submitted a Biological Assessment to the COE. The COE requested Endangered Species Act Section 7 formal consultation with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service. Both agencies issued a Biological Opinion in 2003.

The Biological opinions issued by NMFS concluded that the proposed action is not likely to jeopardize the continued existence of Puget Sound (PS) chinook (*Oncorhynchus tshawytscha*) Evolutionarily Significant Unit (ESU) (NMFS, 2003). The Biological opinion issued by USFWS concluded that the proposed action is not likely to jeopardize the Coastal/Puget Sound bull trout (USFWS, 2003). The opinions established terms and conditions including the following which applied to the White River within the *action area*:

1. Establish and maintain in perpetuity a 200-foot buffer along the White River.

2. The City's proposed trail will incorporate the following features and/or measures:

    a. The trail will be placed on only one side of the White River.

    b. The trail will be no larger than 16 feet wide, including two-foot gravel shoulders, and be placed on the furthest landward edge of the buffer.

    c. If and where placement of the trail on the furthest landward edge of the buffer cannot be achieved, the trail must not be placed any closer than 100 feet from the White River.

    d. On the City owned lots on the east bank of the White River, and wherever possible, the trail will be placed outside the 200-foot buffer.

    e. Access from the trail to White River, should be granted no more than every 300 feet.

    f. The width of the water access trails should not exceed 36 inches.

In response, the City of Sumner incorporated the terms and conditions listed above into the 2003 Shoreline Master Program.

2.0 METHODS AND DATA INVENTORY

2.1.1 Data Sources

The Ecology 2003 shoreline guidelines state that shoreline inventory and characterizations to support local SMP amendments should be based on "best available scientific and technical information." Inventories should use existing sources of information that are both relevant and reasonably available (WAC 173-26-201(3)(c)). Aside from reconnaissance-level field visits completed as part of the 2002 Inventory, no new field-based data collection efforts were performed to develop the summaries and characterization included in this document.

This report incorporates and builds on past work the City of Sumner has undertaken relevant to it's SMPs. Key sources of information include city planning documents and technical studies (including comprehensive plans and basin plans), and watershed planning documents for WRIA 10 (Puyallup/White River). Mapping information and other studies from state agencies (including Washington Department of Fish and Wildlife, Department of Ecology, and Department of Natural Resources) were also used. To analyze spatial patterns and visually display data, numerous cartographic resources were consulted and used in ArcGIS (ArcMap 9.3).

A complete list of technical and scientific references is included in Section 9 of this report. The map folio prepared for this SMP update is provided in Appendix A.

2.1.2 Determining Planning Area Boundary and Study Segments

For the purposes of this inventory and characterization report, the study boundary for the City of Sumner is shown on Map 1 and referred to throughout this report as the "shoreline planning area." In general, it includes:

- The regulated waterbody, including submerged lands lying waterward of the ordinary high water mark (OHWM);
- 200 feet of adjacent upland extending from the mapped edge of the approximate OHWM or floodway, whichever is further landward; and
- Any bordering, neighboring, or contiguous mapped wetlands.

For the purposes of this study, the City's shoreline planning area was organized into ten distinct segments or "reaches" (Segments A through H; UGA-1; JPA-1) based broadly on the

physical distinction along the shoreline, the level of ecological functions provided by each segment, as well as existing land uses and zoning. Shoreline Study Segments are described in Table 2-1 and depicted on Map 1.

Table 2-1. Sumner Shoreline Study Segments

Location	Segment	Description	Approximate Length (miles)	River Mile
Puyallup River	**A**	City limits at Orting Highway (SR 162) to Traffic Avenue bridge; Rivergrove and Rainier Manor communities	1.35	12.0 to 10.7
Confluence – Puyallup and White Rivers	**B**	Traffic Avenue bridge to SR 410 bridge; Sumner Wastewater Treatment Plant, Confluence of White and Puyallup Rivers	0.79	10.7 (Puyallup) to 0.3 (White)
White River	**C**	SR 410 bridge to Union Pacific spur bridge; Downtown Sumner	0.86	0.3 to 1.1
White River	**D**	Union Pacific spur bridge to Tacoma Road Bridge; heavy industrial facilities	0.63	1.1 to 1.8
White River	**E**	Tacoma Road Bridge to City-owned property on right bank; industrial warehouses	0.85	1.8 to 2.6
White River	**F**	City-owned property to 8th Street Creek; farm land and Sumner Meadows Golf Links on right bank; industrial warehouses on left bank	1.64	2.6 to 4.2
White River	**G**	8th Street Creek to Stewart Road bridge; industrial facilities	0.74	4.2 to 5.0
White River	**H**	Stewart Road bridge to northern city limits; large wetland complex	0.56	5.0 to 5.5
Lake Tapps	**UGA-1**	Portion of Lake Tapps within Sumner's UGA	1.28	n/a
Puyallup River	**JPA-1**	Left Bank in Joint Planning Area beginning at southernmost tip of Riverside Park to city limits at Orting Highway (SR 162)	1.32	13.3 to 12.0
		TOTAL	10.02	

3.0 ECOSYSTEM WIDE CHARACTERIZATION

3.1 Historic Land Use and Watershed Conditions

Historically, the surface geology of the valley floor in Sumner has been determined by frequent flooding of the White and Puyallup Rivers. Periodic mudflows from Mount Rainier have historically covered the valley with layers of mud, silt, ash, and glacial debris. The most recent mudflow (named the Osceola mudflow) occurred in the valley about 5,600 years ago.

Sumner lies within the Puyallup-White River Water Resource Inventory Area (WRIA 10). This watershed includes both the White River and its major tributaries and the Puyallup River to its mouth at Commencement Bay in Tacoma (see Map 2). Both rivers originate from glaciers on Mount Rainier. Most of WRIA 10 lies within Pierce County with a portion that extends north into King County, Washington.

The White River subbasin originates at the terminus of the Winthrop, Fryingpan and Emmons glaciers on the slopes of Mt. Rainier and drains an area of approximately 494 square miles (Williams, 1975). Flowing from its origin to the confluence with the Puyallup River, the White River is approximately 68 miles in length.

The Puyallup River Basin was one of the earliest areas settled in the Puget Sound basin. Historically, the study area was characterized by large tracts of old-growth forests, fertile river valley soils, and abundant runs of salmon (Kerwin, 1999). Homesteads and settlements began appearing as early as 1850.

The headwaters of both the upper Puyallup and White Rivers are predominantly located within the Mt. Rainier National Park, Mount Baker-Snoqualmie National Forest and private commercial timberlands. Urbanization and development have been limited in these areas compared to urban areas in the Puget Sound lowlands. However, both the upper Puyallup and upper White River watersheds have been affected by timber harvest and road building practices that have reduced the ability of riparian areas to provide wood and shade to the rivers and stream channels. These areas also continue to contribute to fine sediments from road construction and landslides in each river system. These activities continue to adversely impact natural salmonid production (Kerwin, 1999).

The historic Puyallup River Basin was characterized by frequent seasonal flooding across an extensive river floodplain, which supported a complex network of wetlands and habitats for fish and wildlife. In addition, the river's mouth at Commencement Bay occupied an extensive tidal flat and wetland estuary delta. Urbanization and an extensive system of flood control structures such as dams, levees, and culverts, have radically altered much of the Puyallup River and its tributaries. The estuary delta at the mouth of the Puyallup River has

been almost completely replaced with the facilities of the Port of Tacoma, with less than 5% of the original estuarine habitat remaining.

Early in the 1900's the majority of the White River flow was naturally directed north into the Green and Duwamish Rivers. A small overflow channel, called the Stuck River, flowed south from the vicinity of Auburn into the Puyallup River at Sumner. A rain-on-snow event triggered a significant flood event on November 14, 1906, creating a debris dam in the White River and directing the entire flow into the Stuck River. The former White River channel into the Green River went dry as a part of this event (Stein, 2001). A permanent diversion wall was constructed at Auburn in 1915; as a result, the White River remains a tributary of the Puyallup today.

Photograph 3-1. Drift barrier to permanently divert White River at the upper end of the old Stuck Creek Channel, dated November 18, 1922 (Pierce County River Improvement District).

Formed in 1907, the Pierce County River Improvement District began straightening the Puyallup River and constructing levees as part of an overall flood control project for the Puyallup valley in the vicinity of Sumner. Channel straightening and levee construction resulted in a loss of floodplain wetlands and off-channel habitats.

Photograph 3-2. Marion drag line and dredging along the Puyallup River during channel straightening dated October 11, 1916 (Pierce County River Improvement District, 1991).

There are three major dams affecting flow on the rivers in Sumner: 1) Electron Dam, a hydroelectric dam operated by Puget Sound Energy on the Puyallup River, 2) Lake Tapps Hydroelectric Project, a diversion dam to Lake Tapps and 3) Mud Mountain Dam, a flood control dam on the White River. Mud Mountain Dam, constructed in the early 1940s, regulates flood events by holding back surface water from heavy rains and snow melt in the reservoir, and then releasing it slowly back to the White River. Salmon are blocked from passage at the Lake Tapps diversion dam (Shared Salmon Strategy, 2006).

As part of flood control efforts in the valley, river channels and embankments have been generally kept clear of debris such as gravel bars, large trees, logjams, and other woody debris. These modifications have radically altered the natural character of the rivers. River widths have been generally reduced and channel migration zones eliminated. Water now fills nearly all of the land between river banks, instead of the historic pattern of braided meanders and wetlands.

The chronology of events presented in Table 3-1 includes events and impacts resulting from settlement and water body modifications between 1792 and 2009.

Table 3-1. Puyallup River Basin Chronology of Events

Date	Event	Impacts
1792	First European description of the Puyallup River mouth	Initial description of attributes of Commencement Bay as a possible port
1850	Donation Land Claim Law	Encouraged settlement of Oregon and Washington
1851	Initial European settlers arrive in vicinity of Tacoma	Land clearing and farming begins
1852	Pierce County organized	First citizen based government formed
1852	First commercial lumber mill constructed	Timber harvest begins
1853	First railroad surveys conducted	First mapping attempts of historical habitat
1854	Medicine Creek Treaty signed	Large tracts of land are given up by the Puyallup and Muckleshoot Tribes
1858	Laws permitting draining passed Coal discovered in upper Carbon River subbasin	Wetlands drainage begins. Mining was initiated in 1873.
1870	Irrigation of agricultural lands begins	Water withdrawals from surface waters
1873	First railroad into Puyallup River valley	Allows easy access into and out of Tacoma
1874	Initial railroad construction across Commencement Bay tidal marshes	First filling of tidal marshes and tideflats in Commencement Bay
1883	First report of RR bridge across White River	Railroad is constructed east/west in the then White/Green river valley
1890s	Tacoma Land Co. began dredging of western channel of Puyallup River	Significant loss of estuarine environment and function in Commencement Bay
1899	Mt. Rainier National Park established	Headwaters of Puyallup and White rivers preserved
1903	Electron Power Project construction started. Began operation in 1904	26 miles of spawning and rearing habitat lost and 10 miles of mainstem river habitat impacted due to reduced flows
1906	Flood event (probably a 100-year flood event)	Log jam on White River diverts White into Stuck River and Puyallup River basin
1907	Washington State Legislature grants county governments authority to do flood protection work	Pierce County River Improvement District (PCRI) formed and channelization efforts begin between White River and Puyallup River mouth
1908	Channel realignment, bank stabilization and diking projects started in Puyallup, Carbon and White Rivers	Instream habitat losses associated with each project
1911	Debris barrier constructed in White River upstream of the 1906 diversion; Lake Tapps Reservoir and associated hydroelectric facilities were built by Puget Sound Energy	Removed large woody debris from portions of the White and lower Puyallup Rivers; Diverted water from RM 3.6 to RM 24.3 on the White River

Date	Event	Impacts
1913	State Legislation passed permitting Inter-County River Improvement District to be formed in 1914	Pierce and King counties work together to perform flood control projects
1914	Concrete Diversion constructed at Auburn permanently diverting White River into Stuck River	Increased Puyallup River flows by approximately 50 percent at confluence with White River
1917	Puyallup River Relocation Project complete	Channel relocation, diking alterations to salt/freshwater mixing, erosion and changes to the estuarine environment -- 1,800 acres of tidal marsh lost
1930s	Work on St. Paul, Wapato (Blair) and Hylebos waterways	Estimated 570 acres of mudflats and 121 acres of salt marsh filled
1933	Maximum discharge recorded at the USGS Gage Station on the Puyallup River at Puyallup	Major driver behind the 1936 authorization under the Flood Control Act for levee improvements and the construction of Mud Mountain Dam on the White River
1939	Mud Mountain Dam construction begins; completed in 1948	Barrier to anadromous fish migration
1946	Army Corps of Engineers' channelization and diking projects	Lower three (3) river miles of Puyallup River diked
1940s – 1970s	Major logging activities in the upper watershed	Logging road construction and impacts watersheds to riparian buffers and habitat
1950s	Construction of residential housing began along Lake Tapps Reservoir shoreline	Increase in impervious surfaces adjacent to Lake Tapps
By 1970s	Major channelization projects completed	45 miles of three rivers in basin had been channelized (14.7 miles of dikes with concrete armoring, 57.3 miles of dikes and river banks with rock riprap)
1974	County gravel removal projects started	Rivers maintained by lowering of riverbed instead of raising heights of dikes
1988	Puyallup Land Claims Settlement	Major property ownership issues settled
1996	Largest flood event since 1933	Flood levels at tops of levees, Mud Mountain Dam may have prevented overtopping
1999	Puget Sound Chinook Listed as Threatened under the federal Endangered Species Act	Chinook present in White and Puyallup Rivers
2004	White River Hydroelectric Project at Lake Tapps Reservoir ceased operation	Hydroelectric power from Lake Tapps Reservoir ceased
2008	Puyallup River flooded	Flood levels overtopped levees leading to evacuations and property damage.

Date	Event	Impacts
2009	Puyallup and White Rivers flooded	Flood levels overtopped levees leading to evacuations and property damage. Mud Mountain Dam may have prevented overtopping.
2009	On December 18, Cascade Water Alliance purchased the Hydroelectric Project	Cascade Water Alliance is proposing to utilize the Lake Tapps Reservoir as a water supply

(Source: Kerwin, 1999; Pierce County, 2009a; Cascade Water Alliance, 2010)

3.2 Climate Change

Many changes in global climate have been documented over the last century. Various reports published in recent years indicate that there is an overall warming climate trend. The nature and causes of these changes has been comprehensively documented in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 2007). In 2009, a detailed report on climate change in the United States was published by the United States Global Change Research Program (USGCRP, 2009). The USGCRP report includes a brief analysis of the Northwest part of the United States. The Climate Impact Group (CIG) at the University of Washington (CIG, 2009) has developed climate models specifically focused on Puget Sound and published reports about possible climate impacts in Puget Sound. The possible climate impacts outlined in the 2009 report by the CIG include:

- Continued warming on the order of 0.2 - 1.0 ºF through 2050. The rate of change after the 2050s depends increasingly on the choice of greenhouse gas emissions scenarios.
- Possible decrease in summer precipitation and increase in winter precipitation with little change in the annual mean.
- Decrease in April 1 snowpack of 30 percent by the 2020s to 65 percent in the 2080s.

These factors have the potential to influence the functioning of Puget Sound ecosystems. Warmer temperatures will influence the nature and geographic extent of the snowpack that feeds the higher elevation streams. Warmer temperatures could also result in higher summer water temperatures, having the potential to negatively impact several water quality parameters. Additional precipitation, and a broadened rain-on-snow area, has the potential to influence flow regimes.

One of the anticipated effects of climate change in the Pacific Northwest is sea-level rise. Sea-level rise will likely change coastal processes and habitats, if water elevations increase as predicted. A recent study has been published by the National Wildlife Federation (NWF) on sea-level rise and coastal habitats in the Pacific Northwest (NWF, 2007). This study evaluated the Puget Sound, southwestern Washington, and northwestern Oregon coasts specifically, and identified 11 different sites within the Puget Sound for sea-level modeling. The model used a range of sea-level rise scenarios as predicted by the IPCC from 3.0 inches

increase in global sea levels by 2025 to a 27.3 inches increase to 2100. Sea-level rise within this range is anticipated to affect coastal habitats and fish and wildlife dependent upon the coastal areas of the Puget Sound. Mote et al. (2008) recently calculated sea-level rise projections specific to the Puget Sound region. Three estimates were reported based on greenhouse gas emissions scenarios. These new scenarios report rise in sea level ranging from 3 to 22 inches by 2050, and from 6 to 50 inches by 2100.

The Puyallup delta in Tacoma is already developed and protected by dikes and levees. Therefore, sea-level rise in Commencement Bay is likely to cause a loss of marine beaches at the mouth of the Puyallup, but not likely to impact riparian habitats or wetlands (since so few remain) (NWF, 2007). Sumner is located inland and may not be directly affected by sea level rise, but could be affected by changes in river flow regime due to climate change.

3.3 Watershed Conditions

NMFS (NMFS, 1996) and USFWS (NMFS and USFWS, 1998) define "not properly functioning" watershed conditions by the presence of many valley bottom roads, the disturbance of greater than 15 percent of a watershed, and fragmented riparian conditions. Beyond this threshold, watershed conditions can be expected to continue to degrade. In the Puyallup watershed, future land development is expected to continue, increasing peak flows within the White and Puyallup Rivers and exacerbating existing erosion, sedimentation, and water quality problems. In addition, due to past and ongoing urbanization, Sumner and its surroundings contain many valley bottom roads. These factors have resulted in a "not properly functioning" watershed condition. Section 6 includes details related to watershed conditions for each shoreline segment within the City of Sumner's shoreline planning area.

3.4 Floodplain Characterization

The 100-year (one percent annual chance) floodplain for Sumner and surrounding areas has been mapped by Federal Emergency Management Agency (FEMA) (Map 4) and released as draft Federal Insurance Rate Maps (DFIRM). Flooding along the Puyallup River and the White River is primarily due to high streamflow during winter months. Sumner is located in a low-lying area that includes a relatively wide floodplain for the majority of the SMP area (Map 3). The floodplain is partially confined in many areas by levees and concrete revetments. Section 5.5 includes a discussion of frequently flooded areas. Section 6 includes floodplain characterization, including modifications, for each shoreline segment within the City of Sumner's shoreline planning area.

The entire floodplain is not regulated under the SMP regulations for the City of Sumner, but is an essential part of the ecosystem characterization. The addition of additional impervious area and development within the designated floodplain may result in increases in water surface elevations and extent of flooding during a large flood event, such as a 100-year flood.

The 100-year floodplain designated by FEMA extends significantly farther than the Sumner SMP segments in many locations along the White River and Puyallup River (Map 4). Table 3-2 indicates the differences in acreage of floodplain area.

Table 3-2. Acres in Floodplain both inside and outside shoreline planning segments

Waterbody	Floodplain in Shoreline Planning Area Segments (acres)	Floodplain outside of Shoreline Planning Area Segments (acres)	Total Floodplain (acres)
Puyallup River	130	68	198
White River	425	587	1,012

The 100-year floodplain outside of the segments includes an additional 65 acres of developed area along the Puyallup River and 377 acres along the White River (Table 3-3). See Appendix B (graphs B-1 and B-2 for a more detailed breakdown of land cover).

Table 3-3. Summary of existing land cover outside of the segments

Type of Land Cover	Puyallup River Floodplain		White River Floodplain	
	Area (Acres)	Area (%)	Area (Acres)	Area (%)
Developed (0-100% Impervious Surfaces)	65	95	377	64
Agriculture (Cultivated, Pasture/Hay, Grass)	1	1	187	32
Vegetated (Forest, Shrubs, and Wetlands)	3	4	23	4
Total	**69**	**100**	**586**	**100**

The approximate impervious area percentages for the entire floodplain are significantly higher than in the floodplain within the segments along the Puyallup River and the White River (Table 3-4).

Table 3-4. Summary of approximate impervious area percentages

Water Body	Land Use (impervious percentage)	Floodplain within segment (percent)	Floodplain outside of segment (percent)	Entire Floodplain (percent)
Puyallup River	High Intensity Developed (80-100%)	1	4	2
	Medium Intensity Developed (50-79%)	12	39	21
	Low Intensity Developed (21-49%)	31	48	37
	Developed Open Space (0-20%)	13	4	10
	Total Impervious Area (0-100%)	**57**	**95**	**70**
White River	High Intensity Developed (80-100%)	3	25	16
	Medium Intensity Developed (50-79%)	9	16	13
	Low Intensity Developed (21-49%)	15	13	14
	Developed Open Space (0-20%)	5	10	8
	Total Impervious Area (0-100%)	**32**	**64**	**51**

Existing land use designations do not differ as dramatically between the floodplain area and the floodplain within shoreline segments. See Appendix B (Graphs B-3 and B-4) for graphs comparing existing land use designations.

- Existing land use within the Puyallup River floodplain within the segments is mainly a mix of low-density residential (36 percent) and multi-family residential (34 percent). Existing land use within the entire Puyallup River floodplain is similar with a slightly lower amount of low-density residential (29 percent) and higher amount of multi-family residential (36 percent).

- Existing land use within the White River floodplain within the segments is a mix of vacant lands (42 percent), industrial/manufacturing (23 percent) and low-density residential (15 percent). Existing land use within the entire White River floodplain is composed of less vacant lands (35 percent) and higher amount of industrial/manufacturing (31 percent).

Existing zoning designations are generally similar both within shoreline segments and within the entire floodplain. See Appendix B (Graphs B-5 and B-6) for graphs comparing zoning designations.

- Zoning designations within the *Puyallup River floodplain within the segments* is a mix of low-density residential (41 percent) and high-density residential (30 percent). Zoning designations within the entire Puyallup River floodplain are focused slightly less on low-density residential 1200 (36 percent) and more on high-density residential (33 percent). Pierce County zoning in Segment JPA-1 is almost identical when comparing the entire floodplain and the floodplain with the shoreline segment.

- Zoning designations within the White River floodplain within the segments are a mix of light industrial (69 percent) and agriculture (21 percent). Zoning designations within the entire *White River floodplain* is almost identical with a mix of light industrial (66 percent) and agriculture (19 percent).

There is a higher amount of documented wetland area in the White River floodplain within shoreline segments (7 percent) than within the entire White River (3 percent). The Puyallup River floodplain does not contain any documented wetland area. See Appendix B (Graphs B-7 and B-8) for graphs comparing wetland areas.

4.0 LAND AND SHORELINE USE PATTERNS

The City of Sumner, located approximately 12 miles east of Tacoma and 34 miles south of Seattle, encompasses an area of approximately 7.5 square miles. The city's UGA is approximately 1.3 square miles. The City is predominantly located on the valley floor of the Puyallup and White River valleys. As of 2009, the City's population was approximately 9,085. Over the recent past, the city has experienced a rapid growth rate, and a portion of this development has occurred in the shoreline areas of the White and Puyallup Rivers.

4.1 Existing Land Use

According to Pierce County Assessor records (City of Sumner, 2009b; Pierce County, 2008a), current land use in Sumner's shoreline planning area is a mix of vacant, industrial / manufacturing, residential, and parks/open space uses. Designated vacant lands are currently the dominant land use (43 percent of entire shoreline planning area) focused mainly in Segments F and UGA-1. While the term "vacant" may not always accurately reflect current conditions (such as protected open space, agriculture, wetlands, or lands with development restrictions), the classification generally indicates that no structural improvements have been made or assessed for taxes on the property.

Industrial/manufacturing is the second most common land use (16 percent of entire shoreline planning area) focused almost entirely along the White River, mainly in Segments E and G. Residential land uses are less common (14 percent of entire shoreline planning area) and mainly concentrated along the Puyallup River as well as Segments E and F on the White River. Designated parks and open space lands compose 11 percent of entire shoreline planning area with the largest acreage in Segment F (City of Sumner, 2009b; Pierce County, 2008a).

4.2 Comprehensive Plan

According to Sumner's *Comprehensive Plan* (City of Sumner, 2005), the city contains a variety of designated land uses, ranging from heavy industrial to residential (Map 8). The predominant comprehensive land use designation in the shoreline planning area within Sumner's city limits and UGA boundaries is Public/Private Utilities and Facilities (44 percent). Light Industrial is the second most common comprehensive plan designation (39 percent). Similar to existing land uses, residential land use designations are less common (10 percent) and are mainly located along the Puyallup River and Segment C on the White River. Remaining land use designations are almost evenly divided among General Commercial (4 percent) and Heavy Industrial (3 percent) (City of Sumner, 2009b).

The purpose of the Public/Private Utilities and Facilities comprehensive plan designation is

> *To identify lands utilized to provide public and private utilities, facilities, and services. Allowable uses include parks, schools, medical facilities, non-profit service uses/organizations, public and private utilities, and government buildings (City of Sumner, 2005).*

The types of uses the Light Industrial comprehensive plan designation allows for are described below:

> *Principle uses include light manufacturing (particularly assembling and manufacturing of products from previously prepared material), office, warehouse/distribution, and packaging plants. Secondary uses include service retail, restaurant, government, agricultural activities, and utilities subject to compatibility criteria (City of Sumner, 2005).*

Almost all properties designated Public/Private Utilities and Facilities within Sumner city limits are under City ownership. Most of the remaining properties similarly designated are under Puget Sound Energy ownership in the UGA-1 segment.

Pierce County's *Comprehensive Plan* (Pierce County, 1994) designates the shoreline planning area within JPA-1 since that area is located outside Sumner's city limits and UGA. Approximately 80 percent of JPA-1 is designated Rural-10 and 20 percent is designated Agriculture Resource Lands (Pierce County, 2006). The intent of the Rural-10 comprehensive land use designation is to allow for a basic density of 1 dwelling unit per 10 acres. Preservation of open space and clustering of units is encouraged through density bonuses (Pierce County, 1994).

4.3 Zoning Designations

The City's zoning designations generally follow land use designations from the City's comprehensive plan, discussed above (Map 9). Light Industrial is the most common zoning designation within Sumner's city limits and UGA (54 percent). Agriculture is the second most common zoning designation (15 percent). Residential zoning designations are the third most common (13 percent) and Public/Private Utilities and Facilities are the fourth (10 percent). Remaining zoning designations are almost evenly divided between Heavy Industrial (4 percent) and General Commercial (3 percent) (City of Sumner, 2009b).

The major difference between the Comprehensive Plan designations and zoning designations is that Public/Private Utilities and Facilities is not as prevalent a zoning designation as it is under the Comprehensive Plan. Almost the entire right bank of the White River is designated by the Comprehensive Plan as Public/Private Utilities and Facilities in Segment F. However, the zoning designations for those properties are a mix of Agriculture and Light Industrial. Regardless of the zoning designations, those properties are in public ownership, with a large majority either leased for turf farming or part of the Sumner Meadows Golf Links.

Pierce County zoning designations are identical to the comprehensive plan designations in Segment JPA-1. Approximately 80 percent of JPA-1 is designated Rural-10 and 20 percent is designated Agriculture Resource Lands (Pierce County, 2008a).

Table 4.1 identifies the relative percentage of existing land uses in each planning segment based on 2009 and 2008 Pierce County Assessor land use records (City of Sumner, 2009b; Pierce County, 2008a). Table 4.1 also includes Comprehensive Plan land use and zoning designations for each segment, as well as the approximate amount of developed area within each shoreline planning segment. Impervious area is based on land cover data from NOAA (Coastal Change Analysis Program [C-CAP] / National Land Cover Database [NLCD], 2006). Finally, Table 4.1 identifies the shoreline environment designations as established by Sumner's 2004 *Shoreline Master Program* and Pierce County's 1974's *Shoreline Master Program*. See Maps 8, 9, and 10 for comprehensive plan and zoning designations, and land cover.

Table 4-1. Land Use Table

Shoreline Segment	Existing Land Use	Percent	Comprehensive Plan Land Use Designations	Percent	Zoning Designations	Percent	Approximate Impervious Area	Percent	Shoreline Environments
A	Unknown[1]	27	High Density Residential	47	High Density Residential	47	High Intensity Developed (80-100%))	36	Shoreline Residential and Urban Conservancy
	Vacant	23	Low Density Residential 1	6	Low Density Residential 1200	34	Medium Intensity Developed (50-79%)	36	
	Multi-Family Residential	29	Low Density Residential 2	13	Low Density Residential 6000	10	Low Intensity Developed (21-49%)	7	
	Low-Density Residential	13	Public/Private Utilities and Facilities	34	Low Density Residential 7200	3			
	Public Facilities/Utilities	4			Low Density Residential 8500	6			
	Agriculture	3							
B	Public Facilities/Utilities	43	General Commercial	7	Low Density Residential 1	55	High Intensity Developed (80-100%))	13	Urban Conservancy
	Other [2]	20	Low Density Residential 3	48	Low Density Residential 1200	41	Medium Intensity Developed (50-79%)	31	
	Low-Density Residential	18	Public/Private Utilities and Facilities	45	Low Density Residential 6000	1	Low Intensity Developed (21-49%)	6	
	Vacant[3]	17			Low Density Residential 8500	3			
	Transportation	2							
C	Low-Density Residential	30	General Commercial	57	General Commercial	48	High Intensity Developed (80-100%))	23	Urban and Urban Conservancy
	Commercial	22	Light Industrial	5	Light Industrial	5	Medium Intensity Developed (50-79%)	42	
	Industrial/Manufacturing	16	Low Density Residential 3	14	Low Density Residential 1	10	Low Intensity Developed (21-49%)	13	
	Park/Open Space	13	Medium Density Residential	8	Low Density Residential 6000	11			
	Vacant	11	Mixed Use Development	13	Low Density Residential 8500	1			
	Other	4	Public/Private Utilities and Facilities	3	Medium Density Residential	10			
	Government/Institution	3			Mixed Use Development	15			
	Transportation	1							
D	Industrial/Manufacturing	38	Heavy Industrial	31	Heavy Industrial	31	High Intensity Developed (80-100%))	8	Urban Conservancy
	Public Facilities/Utilities	25	Light Industrial	69	Light Industrial	69	Medium Intensity Developed (50-79%)	24	
	Park/Open Space	19					Low Intensity Developed (21-49%)	5	
	Commercial	13					Developed Open Space (0-20%)	4	
	Vacant	3							
E	Vacant	38	Heavy Industrial	3	Heavy Industrial	3	High Intensity Developed (80-100%))	11	Urban Conservancy
	Agriculture	25	Light Industrial	87	Light Industrial	97	Medium Intensity Developed (50-79%)	13	
	Industrial/Manufacturing	22	Public/Private Utilities and Facilities	10			Low Intensity Developed (21-49%)	3	
	Low-Density Residential	15					Developed Open Space (0-20%)	41	
F	Vacant	55	Light Industrial	21	Agriculture	41	High Intensity Developed (80-100%))	5	Urban Conservancy
	Park/Open Space	25	Low Density Residential 1	1	Light Industrial	54	Medium Intensity Developed (50-79%)	8	
	Industrial/Manufacturing	9	Low Density Residential 2	5	Low Density Residential 8500	5	Low Intensity Developed (21-49%)	7	
	Low-Density Residential	5	Public/Private Utilities and Facilities	73			Developed Open Space (0-20%)	21	
	Public Facilities/Utilities	5							

Shoreline Segment	Existing Land Use	Percent	Comprehensive Plan Land Use Designations	Percent	Zoning Designations	Percent	Approximate Impervious Area	Percent	Shoreline Environments
G	Industrial/Manufacturing	60	Heavy Industrial	7	Heavy Industrial	17	High Intensity Developed (80-100%))	22	Urban Conservancy
	Vacant	30	Light Industrial	75	Light Industrial	83	Medium Intensity Developed (50-79%)	34	
	Park/Open Space	6	Public/Private Utilities and Facilities	9			Low Intensity Developed (21-49%)	3	
	Low-Density Residential	4	Urban Village	9					
H	Vacant	59	Light Industrial	100	Light Industrial	100	High Intensity Developed (80-100%))	6	Rural (Pierce County)
	Industrial/Manufacturing	36					Medium Intensity Developed (50-79%)	5	
	Agriculture	5					Developed Open Space (0-20%)	4	
UGA-1	Vacant	100	Public/Private Utilities and Facilities	100	Public/Private Utilities and Facilities	100	Medium Intensity Developed (50-79%)	0.4	Rural/Residential (Pierce County)
JPA-1	Low-Density Residential	36	Agriculture Resource Land	20	Agriculture Resource Land	20	High Intensity Developed (80-100%))	6	Rural and Conservancy (Pierce County)
	Multi-Family Residential	33	Rural - Ten	80	Rural – Ten	80	Medium Intensity Developed (50-79%)	36	
	Agriculture	15					Low Intensity Developed (21-49%)	17	
	Vacant	10							
	Other	3							
	Industrial/Manufacturing	2							
	Government/Institution	1							

[1]Parcels classified as unknown by the Pierce County assessor's data are likely part of the Riverwalk condominium community.
[2] These parcels correspond to City-owned open space east of the Sumner Wastewater Treatment Plant.
[3] These parcels are under public ownership
Source: City of Sumner 2009; Pierce County 2006; Pierce County 2007; Pierce County 2008a

4.4 Water-Dependent Uses

Water-dependent uses typically include marinas, docks, piers, boating facilities, outfalls and aquaculture. The Puyallup Tribe launch boats into the White River at the Confluence Park (described in Section 4.5) as part of their fish-counting research. There are no other docks, piers, boat ramps, boating facilities or marinas within Sumner shorelines. However, water-dependent uses are located in Lake Tapps outside of the Sumner shoreline planning area.

Water in Lake Tapps is released to the Dieringer Flume via an outfall structure. Even though the Puget Sound Energy Hydropower Project at Lake Tapps ceased operation in January 2004, this outfall structure is likely still considered a water-dependent use. Cascade Water Alliance has future plans for managing Lake Tapps as a municipal water supply which could involve water dependent activities. Other water-dependent use in Sumner's shoreline planning area is the outfall associated with the City's wastewater treatment plant on the White River in Segment B. One mapped stormwater outfall is located in Segment F along the White River. One mapped sewer overflow outfall is located in Segment A along the Puyallup River (see Map 12).

4.5 Public Access Sites

Existing and potential public access sites were identified from information provided in the *Sumner Parks and Open Space Plan* (City of Sumner Board of Park Commissioners and Sumner Community Development Department, 2000) and *Sumner Trail Master Plan* (City of Sumner Community Development Department, 2008). Public access sites were also identified from City staff field reconnaissance of the White and Puyallup River.

4.5.1 Existing Public Access Sites

Existing open space within the shoreline planning area includes both public and private utilities and facilities, along with wetlands, undeveloped agricultural lands, vacant land, and the river corridors themselves. As discussed under Section 4.1, above, substantial portions of Sumner's shoreline are occupied by public/private utilities and facilities. Major parks and facilities in the shoreline planning area providing public access to the shoreline are shown in Map 13. Some public access locations have been established directly through the city's shoreline permit process as a condition of approval of the permits. Public access to Lake Tapps within the shoreline planning area is not available. Public access locations along the White and Puyallup Rivers include the following:

- **Riverside Park:** (Segment JPA-1) This 50-acre site is located on the left bank of the Puyallup River in unincorporated Pierce County. The park is currently leased to River Valley BMX Racing for seasonal motorcross bicycle races and Tacoma Disc Golf Players Association for disc golf (Pierce County, 2009b). Access to the Puyallup River dike is available.

Photograph 4-1. Riverside Park

- **Riverside Trail:** (Segments A, B, D, E and F) The Riverside Trail is the planned and partially built, non-motorized trail along the banks of the Puyallup and White Rivers from the City's northerly limits to its southerly limits. The Riverside Trail is planned to link to four major regional trails: Foothills Trail from Buckley and Orting, Puyallup River Trail from Tacoma and Puyallup, Interurban Trail from Seattle, and White River Trail from Auburn. Additional links include connections to Lakeland Hills (to Lake Tapps) and Jovita Trail at Stewart Road (currently at a conceptual stage). The trail provides access to the river in several locations. See Map 13 for planned and already-built portions of the trail and trailhead locations.

- **Girard Park/Grand Park:** (Segment A) This 0.6-acre park is located on the south side of Highway 410, east of the BNSF bridge. Freeway construction drastically limited access to this park. The park can be reached through the Rainer Manor Mobile Home Park by walking along the Puyallup River bank.

- **City-owned Open Space:** (Segment B) This 4-acre undeveloped open space owned by the City is located along the Riverside Trail that provides access to the Puyallup River.

- **Confluence Park:** (Segment B) This 1.5-acre park is located at the confluence of the White and Puyallup Rivers near the City's wastewater treatment plant. Access to the river is available at several points along the bank. It is used frequently for fishing and for boat launching by the Puyallup Tribe.

- **63rd Street East Street-End:** (Segment B) Public access in the right-of-way (ROW) of the intersection of State Street and 63rd Street East is available on the right bank of the White River.

- **Spinning Avenue Street-End:** (Segment C) Public access in the ROW of the intersection of Spinning Avenue and West Main Street is available on the right bank of the White River.

- **City-owned Open Space:** (Segment C) This 0.2-acre undeveloped open space owned by the City is located on West Main Street directly adjacent to the White River.

- **Bridge Street Bridge:** (Segment C) Access to the White River is available in the ROW of Valley Avenue East on either side of the bridge.

- **Library and Community Center:** (Segment C) This is a 3-acre site on the right bank of the White River that houses the Sumner Pierce County Library. There is a 0.8-acre "park" with picnic tables near several large trees. The property offers direct access to the White River.

Photograph 4-2. Library and Community Center

- **Fryar Avenue Bridge:** (Segment D) Access to the White River is available in the ROW of Fryar Avenue on either side of the bridge.

- **City Public Works Shops:** (Segment D) Park associated with Riverside Trail.

- **Tacoma Avenue Bridge**: (Segment D/E) Access to the White River is available in the ROW of Tacoma Avenue on either side of the bridge.

- **145th Avenue Vacated ROW:** (Segment E) Access to the White River is available in the vacated ROW of 145th Avenue north of 45th Street East.

- **24th Street Trail Bridge:** (Segment F) Access to the White River is available in the ROW of 24th Street East on either side of the pedestrian bridge.

- **Open Space south of Golf Course:** (Segment F) This 40-acre site is currently an undeveloped, City-owned property. The site is currently leased out to be farmed. A band of trees are located along the river and a large stand of cottonwood extend inland from the river at 24th. A utility and pedestrian bridge has been constructed across the White River at 24th as part of the Riverside Trail network.

- **Riverbend Park:** (Segment F) This 8-acre site is located south of the Sumner Meadows Golf Links on the left bank of the White River. It is currently an undeveloped park characterized by cottonwoods along the river, blackberry and wetland areas. The banks in some areas are shallow offering good access to the water's edge.

- **Sumner Meadows Golf Links**: (Segment F) This 165-acre golf course is located on 8th Street East northeast of the White River. It includes an 18-hole course, a driving range, and a clubhouse. The park has an additional 94 acres yet to be developed (City of Sumner, 2003).

Photograph 4-3. Sumner Meadows Golf Links

- **Stewart Road Bridge:** (Segment G/H) Access to the White River is available in the ROW of Stewart Road on either side of the bridge.

4.5.2 Planned Public Access Sites

Improvements and enhancements to existing park and open space resources identified in the *Sumner Parks and Open Space Plan* and *Sumner Trail Master Plan* include the following:

- **Riverside Park:** The Capital Improvement Plan in the Pierce County Parks, Recreation and Open Space Plan Update (Pierce County, 2008b) identified preparation of a master plan for the park as a Priority 1 (defined as projects that are needed to maintain existing level of service) and implementation of master plan improvements as a Priority 3 (defined as projects that expand the park system). The Sumner Trail Master Plan identifies the park as a good place for a trailhead for the Riverside Trail.

- **Riverside Trail:** There is an on-going effort to continue constructing the Riverside Trail throughout Sumner. Map 13 shows the portions of the trail that are planned to be built in the future. The Sumner Capital Facilities Plan (City of Sumner, 2003a) allocated $2.3 million dollars towards the design and construction of the trail. The Sumner Master Trail Plan estimated the cost of implementing two major phases of the trail system to be $4.8 million. Phase 1 would involve constructing the following trail connections:

    - **Stewart Road to the White River –** Construct trail along the relocated 8th Street Creek from White River to Stewart Road.

    - **North Side of Stewart Road –** Construct 1,600 lineal feet along the north side of Stewart Road to ensure a connection between Lakeland Hills in Auburn and the trail system in Pacific. This project is currently under construction (City of Sumner, 2009a).

    - **Confluence Trail to Bridge Street Bridge –** Construct trail from SR 410 along West Main Street to Bridge Street Bridge.

- **Girard Park/Grand Park**: *The Sumner Parks, Recreation and Open Space Plan* identifies potential use of the park as trail and trailside park. Once the Riverside Trail along the Puyallup River is extended east of the Traffic Avenue bridge, public access to this park would be dramatically improved.

- **Confluence Park**: *The Sumner Master Trail Plan* identifies the park as a good place for a trailhead for the Riverfront Trail. Boat ramp, boat trailer parking, fisherman's shelters, and restrooms would be beneficial services added to the site.

- **Open Space south of Golf Course:** The Parks, Recreation and Open Space Plan identifies two alternatives for this property: 1) develop it as an active regional park

with river access including boat launches; or 2) develop it as an extension to the golf course. Development of this property is ranked as medium priority (to be implemented over the next 20 years).

The *Sumner Trail Master Plan* identifies the site as an excellent location for a major trailhead. The park could be developed with sport fields, expanded golf course, and parking lots. The Plan recommends that the wooded area near 24th be preserved and made more accessible with footpaths. According to the Plan, since most of the area is wetland and one of the last areas of riparian woodland, it should be preserved as habitat.

The City has received funding from the Salmon Recovery Funding Board to conduct a feasibility analysis for the future construction of a setback levee for the purposes of improving floodplain connectivity and salmon habitat. The feasibility analysis is expected to encompass this 40-acre property as well as 80 acres of City-owned property to the south.

- **Riverbend Park:** The *Parks, Recreation and Open Space Plan* identifies options for this park as including river access, kite flying, softball and recreation fields, and/or interpretive center. *Sumner Trail Master Plan* identifies Riverbend Park as a site for a trailhead.

4.6 Transportation Facilities

4.6.1 Roads

Sumner's shoreline planning area contains several roads, from two-lane neighborhood collectors to arterials. The highest road density is located in the vicinity of downtown Sumner, in Segment C. Refer to Section 6 and Map 12 in Appendix A for the location of roads in each shoreline segment.

4.6.2 Bridges

There are 11 bridge crossings documented in the shoreline planning area. Table 4-2 below lists the bridge crossings, the waterbody that is crossed, and the shoreline planning segment. Also see Map 12 in Appendix A for the location of bridges in each shoreline segment.

Table 4-2. Bridge crossings located in Sumner shorelines.

Bridge	Waterbody	Shoreline Reach
BNSF railroad bridge	Puyallup River	Segment A
Traffic Avenue East bridge	Puyallup River	Boundary between Segment A and B
SR 410	White River	Boundary between Segment B and C
Bridge Street Bridge	White River	Segment C
Union Pacific railroad spur bridge	White River	Boundary between Segment C and D
Fryar Avenue bridge	White River	Segment D
Tacoma Avenue bridge	White River	Boundary between Segment D and E
24th Street pedestrian bridge	White River	Segment F
Stewart Road bridge	White River	Boundary between Segment G and H
Sumner Tapps Highway East	Lake Tapps	Segment UGA-1
Orting Highway East (SR 162)	Puyallup River	Boundary between Segment JPA-1 and A

4.7 Utilities

4.7.1 Storm Water and Sewer Outfalls

The Sumner Wastewater Treatment Plant is located at the confluence of the Puyallup and White Rivers in shoreline Segment B. Sanitary sewage is conveyed to the treatment plant by a series of collectors, as well as the 36-inch Sewage Treatment Plant interceptor. There are 5 pump stations located in the shoreline planning area; these are the 41st Pump Station (right bank, Segment E), Tacoma Pump Station (right bank, Segment E), 142nd Pump Station (left bank, Segment D), the North Pump Station (right bank, Segment D) on the White River, and the Cherry Avenue Pump Station (left bank Segment A) on the Puyallup River. The City's sewer system also contains two overflow outfalls, one in the White River on the right bank of Segment C, and the other on the left bank of the Puyallup River near the Cherry Avenue Pump Station in Segment A (City of Sumner, 1993). The wastewater treatment plant provides sanitary sewer treatment for the City of Sumner and the City of Bonney Lake. The wastewater treatment plant is a secondary treatment facility that treats an average wet weather flow of 2.62 million gallons per day with a peak hydraulic capacity of 6.56 million gallons per day. The treated effluent is discharged to the White River through an outfall.

Within the core downtown area of Sumner, generally south of Puyallup Street and west of Valley Avenue, the City's storm drainage system consists of collection by a network of pipes and direct discharge to the White and Puyallup Rivers. North of the downtown core, a series of ditches and new tight-line systems convey drainage to the White River; these ditches are maintained to a specified design flow. Salmon Creek is used for stormwater conveyance and contains several stormwater discharge outfalls (City of Sumner, 1993).

4.7.2 Other Utilities

Commercial, residential, and industrial buildings located in the shoreline planning area are served by municipal water, as well as gas and electricity (Puget Sound Energy) and telephone (Qwest). There are no major utility structures along the Puyallup River shoreline planning area. However, there are utility facilities located along the White and Lake Tapps shorelines.

Photograph 4-4. Tailrace Canal looking east at Powerhouse

Other utilities include the recently-decommissioned Dieringer Powerhouse and its associated "tailrace" or discharge canal, located west of Lake Tapps and on the east bank of Segment F in the White River. While the powerhouse is no longer used to generate electricity, water is still diverted from the White River through Lake Tapps, and discharged back into the White River at the Dieringer Powerhouse. The tailrace consists of a

constructed canal approximately 30 feet wide that discharges water to the White River. During hydropower operation, the flows discharging from Tailrace Canal were high (Table 4-3) and the flows in the White River above the Tailrace Canal were low (Table 4-4). High flows through the canal create a false attraction for salmonid species, while low flows occur in river reaches below the diversion (Kerwin, 1999). These "ramping" rates may strand juvenile and adult fish (Kerwin, 1999). Since the hydropower operations ceased in 2004, the annual average flow discharging from Tailrace Canal is significantly lower while the average flow above the Tailrace Canal is higher (Cascade Water Alliance, 2010). There have not been studies completed to determine if the post hydropower flow is low enough to deter salmonid species from entering the canal. Flows are discussed in further detail in Section 5.3.4 of this report.

Table 4-3. Monthly Average Decrease in Flow Rates (cfs) at Tailrace Canal

Year Type	Hydropower Period (1988-2002)	Post-Hydropower Period (2004-2008)	Monthly Average Decrease in flow
Average	924	115	809
Wet Year (2007/1996)	899	88	811
Dry Year (2005/2001)	681	153	528

Source: Cascade Water Alliance, 2010.

Table 4-4. Monthly Average Increase in Flow Rates (cfs) in White River above Tailrace Canal

Year Type	Hydropower Period (1988-2002)	Post-Hydropower Period (2004-2008)	Monthly Average Increase in flow
Average Year	924	1565	861
Wet Year (2007/1996)	899	1930	504
Dry Year (2005/2001)	681	981	647

Source: Cascade Water Alliance, 2010.

The Public Works shops are located in the shoreline planning area (Segment D) on the left bank of the White River at 4711 142nd Avenue East. The property is 8.35 acres in size with 5 buildings that house offices, meeting rooms, vehicle and material storage, vehicle wash and repair, sign shop, and welding and fabrication shop (City of Sumner, 2003a).

On Lake Tapps, there is a large substation located west of 167th Avenue E, just west of the section of Lake Tapps that lies within the City UGA. This substation is owned and operated by Puget Sound Energy. Overhead transmission lines cross Reach UGA-1 en route to the substation. Transmission towers are located to the east and west of open water associated with Lake Tapps.

4.8 Shoreline Modifications

4.8.1 Flood Control Structures

Both the Puyallup and White Rivers are lined through their entire length in Sumner with a system of levees and concrete revetments that were built in the early 1900s. These structures are included in the planning area of the Pierce County River Improvement Division (PCRI). According to the *Puyallup River Basin Comprehensive Flood Control Management Plan* (PCRI, 1991), levees are defined as "structures designed, constructed, and maintained as flood proof structures with three feet of freeboard (as required by FEMA) above a design flood elevation." Revetments are "flood control structures not necessarily engineered or designed to be flood proof and do not have three feet of freeboard above the 100-year flood elevation."

Photograph 4-5. Construction of levees along the north bank of the Puyallup River dated July 9, 1916 (Pierce County River Improvement Division, 1991).

The Puyallup River within Segments A, B, and JPA-1 is almost completely lined with levees, while most of the White River within Segments B through H is armored with revetments. The levees within Segments JPA-1, Segment A, and Segment B have recently been classified

as ineligible for FEMA certification. Many of these levees have less than three feet of freeboard.

Over time, vegetation has grown and obscured many of the revetments and levees within the Sumner shoreline planning area. An agreement with the Puyallup Tribe in 1995 calls for retention and encouragement of plant growth near the ordinary high water mark and/or toe of the levees and revetments. Only woody plants with a trunk diameter exceeding six inches may be removed from that zone (PCRI, 1991). Maintenance of these flood control structures by the County is currently minimal and limited to vegetation removal to maintain access, and occasionally removal of larger diseased or damaged trees.

Photograph 4-6. White River revetments

4.8.2 Docks, Piers, and Over-Water Structures

With the exception of the bridges previously described, and various powerline crossings of the White and Puyallup Rivers (see Section 6 for more detail), there are no docks, piers, or over water structures located on the Puyallup River, White River or Lake Tapps in the Sumner shoreline planning area. The existing levees and high river flows limit water access to the White and Puyallup Rivers.

4.8.3 Culverts

The Pierce County Conservation District, in cooperation with the Puyallup Tribe, has documented the location and condition of culverts throughout the Puyallup River watershed (Pierce County Conservation District, 2000). Specifically, there are no culverts on the main channels of the White or Puyallup Rivers in Sumner. However, culverts that are barriers to fish passage have been identified on several tributaries to the White and Puyallup Rivers. Tributaries with culvert barriers within 200 feet of the mainstem reaches are identified near Segment G, Segment H, south of Segment A, north of Segment F, and on the Union Pacific rail spur bridge in the vicinity of Segment D.

4.9 Historical and Cultural Resources

Historic and cultural resources are documented through a variety of sources. Official registers include the National Register of Historic Places and the Washington State Heritage Register. In 2008, the City of Sumner adopted Chapter 18.39 of the SMC (Historic Preservation) to provide for the identification, evaluation, designation and protection of designated historic resources within the boundaries of the city. This action created the Sumner Historic Register and the Sumner historic preservation commission. The City provides nomination forms for community members wishing to designate property, buildings, or districts as historic. No properties have been formally listed on the City's register since a commission has not been formed. The City is actively searching for volunteers to serve on the commission (City of Sumner website, 2009).

A search of the National Register of Historic Places and the Washington State Heritage Register for sites within the City's shoreline planning area revealed one site near JPA-1 at 7473 Riverside Road East. The Charles W. Orton house was built in 1914 in the architectural style of bungalow. The property is listed on both the National and State Registers (Washington Department of Archaeology and Historic Preservation [WDAHP], 2009).

Native American use of waterbodies throughout western Washington has been well documented. Native peoples undoubtedly used the White, Stuck and Puyallup Rivers and associated tributaries as a fishery resource. The rivers themselves could be considered a significant traditional cultural place. Although Native Americans are known to have occupied much of the Puget Sound region prior to European settlement, few archaeological resources have been found in the Sumner area, mostly due to the lack of surveys (City of Sumner, 2005). The City evaluates archaeological and historical resources on a parcel-by-parcel basis during development review.

4.10 Site Contamination

According to Department of Ecology's Facility Site database, there is one known contaminated site in the shoreline planning area (Ecology, 2010a). The Manke Lumber Company site located in Segment H on the White River is listed on the Department of Ecology's Suspected and Confirmed Contaminated Sites List for confirmed soil contamination associated with Phenolic Compounds, considered hazardous by the Environmental Protection Agency. The site is also listed for suspected groundwater, surface water, and drinking water associated with Phenolic Compounds. According to Ecology's database, remedial action to clean up the contaminated site is currently pending.

5.0 BIOLOGICAL RESOURCES AND CRITICAL AREAS

This section identifies biological resources and critical areas as defined by the State's Growth Management Act (RCW 30.70.170). Critical areas within Sumner's shoreline jurisdiction include priority habitats and species; wetlands; streams; aquifer recharge areas; landslide, erosion, seismic, and volcanic hazard areas; channel migration zones; and frequently flooded areas. Maps showing the locations of critical areas are found in Appendix A.

5.1 Priority Habitats and Species

The Washington State Department of Wildlife (WDFW) maintains a Priority Habitats and Species (PHS) list, which is a catalog of habitats and species considered to be priorities for conservation and management (WDFW, 2008b). Digital PHS data were obtained and mapped as part of the inventory process (WDFW, 2008a). Three types of priority habitats were mapped within the shoreline planning area: wetland, urban natural open space, and waterfowl concentrations (Map 5).

According to the PHS data, the portions of the White and Puyallup Rivers within the shoreline planning area provide habitat for resident cutthroat and several species of anadromous salmonids. The PHS data does not identify any priority fish species within the portion of Lake Tapps in the shoreline planning area. Table 5-1 lists the salmonid species found within the shoreline segments.

Table 5-1. Documented Priority Salmonid Species within the Shoreline Planning Segments

Stream Segment	Type of Use	Species Name
JPA-1 and A	Anadromous - Presence	Winter Steelhead Fall Chinook Pink Salmon Coho Salmon Chum Salmon Bull Trout
	Anadromous - Rearing	Fall Chinook Coho Salmon
	Anadromous - Spawning	Pink Salmon
	Resident	Cutthroat
B-G	Anadromous - Presence	Winter Steelhead Fall Chinook Spring Chinook Pink Salmon Coho Salmon Chum Salmon Bull Trout Sockeye Salmon Bull Trout
	Anadromous - Rearing	Spring Chinook Coho Salmon Pink Salmon
	Resident	Cutthroat

Source: WDFW, 2008a

As shown in Table 5-2, three of the salmonid species present within the shoreline planning area are listed as threatened under the federal Endangered Species Act (ESA), and one species is classified as a species of concern (USFWS, 2007). NMFS and USFWS have designated the White and Puyallup Rivers as critical habitat for Puget Sound ESU chinook salmon and bull trout (Federal Register, 2005 & 2010). NMFS is currently developing critical habitat designations for Puget Sound ESU steelhead. Puget Sound ESU coho salmon is listed as a "species of concern" under ESA; therefore, it has no designated critical habitat.

The PHS data set does not identify any other federally listed species within Sumner's shoreline planning areas (WDFW, 2008a).

Table 5-2. Status of Salmonid species in the White and Puyallup Rivers

Species	Federal Status
Chinook	Threatened
Chum	Not Warranted
Coho	Species of Concern
Pink	Not Warranted
Sockeye	Not Warranted
Steelhead	Threatened
Bull Trout	Threatened

Threatened: Species are likely to become endangered within the foreseeable future.

Species of Concern: Concerns regarding status and threats, but insufficient information available that indicates a need to list the species under ESA.

Not Warranted: According to NMFS, species is not warranted to be listed under ESA at this time.

5.2 Wetlands

Information on wetlands within the shoreline planning area was obtained from the National Wetland Inventory (NWI) map and a wetland inventory conducted by the City in 2006, which was subsequently revised for accuracy by ESA in 2007 (City of Sumner, 2006; ESA Adolfson, 2007). This wetland survey data is shown on Map 1.

Because the entire shoreline for both the White and Puyallup Rivers within the City limits and the urban growth area is diked, the shoreline jurisdiction is assumed to extend 200 feet landward from the top of the bank of these rivers. For the purposes of this inventory, wetlands within the floodplain beyond the dike system are assumed to be associated with the shoreline only if they fall within 200 feet of the top of bank or if a surface water connection exists between the wetland and the shoreline. Additional site-specific review will be required by future project proponents to determine the presence of any additional associated wetlands, as well as wetland categories.

The portion of Lake Tapps within the shoreline planning area is mapped as wetland in the City's wetland inventory. Table 5-3 identifies wetlands currently within the shoreline planning area for each shoreline planning segment.

Table 5-3. Wetlands Mapped within the Shoreline Study Segments

Shoreline Segment	Total Wetland Acreage	Approximate Percent Coverage
A	0	0
B	0.1	<1
C	0.9	2
D	0.3	1
E	5.5	5
F	2.4	1
G	0	0
H	20.0	86
JPA-1	0	0
UGA-1	36.5	63
TOTAL	**65.7**	**9**

According to the City of Sumner Municipal Code (Chapter 16), Category I wetlands presently require a 150-foot buffer, Category II wetlands require a 100 or 125 foot buffer (depending upon the habitat quality of the wetland), Category III wetlands require a 75-foot buffer, and Category IV wetlands require a 35-foot buffer. Wetland categories are based upon the Washington State *Wetland Rating System for Western Washington (revised*) (Hruby, 2004).

5.3 Streams

5.3.1 Water Quality

According to the Ecology water quality database, there are no reaches of the Puyallup River or portions of Lake Tapps within the study vicinity that are on the Clean Water Act 303(d) list of polluted waters (Ecology, 2008). However, several reaches of the White River are on the 303(d) list. Seven-day mean maximum temperatures of over 66 degrees F have been recorded in the reaches between RM 0.2 to 0.5, 2.5 to 4.6, and 6.5 to 9. In addition, pH values in excess of water quality standards have been recorded in the reach between RM 6.5 and 9. Just upstream of the Puyallup River confluence, the reach of the White River between RM 0.5 and 1.4 is on the 303(d) list for high fecal coliform concentrations.

Both the White and the Puyallup originate from glaciers on the slopes of Mt. Rainier Rivers and cut through a relatively steep gradient and gravelly soils in their upper reaches. Turbidity and sediment load is therefore a significant factor in these rivers, with mostly fine sediments being transported out of the upper reaches of the rivers and deposited into lower gradient reaches (Kerwin, 1999). Sediment transport has been estimated to range from 440,000 to 1,400,000 tons annually in the White River (Kerwin, 1999). Mud Mountain Dam, operated by the U.S. Army Corps of Engineers upstream of the City limits at RM 29.6, disrupts the natural delivery of sediments by impounding fine sediments during high flow and/or high load periods and discharging those same sediments for persistent and prolonged periods during lower river flows (Kerwin, 1999). This increase in sediment and turbidity may negatively affect aquatic life; however, these conditions are beyond the scope of Sumner's jurisdiction.

5.3.2 Habitat Access

No barriers to fish migration have been identified on the portions of the mainstem Puyallup and White Rivers that flow through the study area. However, at the point where water from the Dierenger Powerhouse flows into the White River in Segment F, high velocity flows attract migrating adult salmonids into the discharge channel. These flows may cause a delay in the natural upstream migration of salmonids (Muckleshoot Indian Tribe, 1996). Since the hydropower operations ceased in 2004, the annual average flow discharging from Tailrace Canal has decreased dramatically. There have not been studies completed to determine if the post-hydropower flow is low enough to deter salmonid species from entering the canal.

5.3.3 Habitat Elements

Stream habitat elements include substrate, large woody debris (LWD), pool frequency, pool quality, off channel habitat and refugia, channel complexity, and bank profile and condition. (Collins et al, 2002; NMFS, 1996; USFWS, 1998).

The shorelines of the Puyallup and White Rivers within the shoreline planning area are dominated by concrete revetments and dikes along both banks, which have straightened, confined, and simplified the river channel (Kerwin, 1999; Lower Puyallup Watershed Management Committee [LPWMC], 2004; Pierce County, 2007). Channelization and dikes have eliminated connections with side- and off-channel aquatic habitats, decreased the contribution of prey organisms to the rivers by precluding functioning riparian vegetation habitats, and precluded the recruitment of small and large wood from areas most likely to contribute this material (Kerwin, 1999). Channelization and dikes have also reduced river processes that form pools, side channels and other habitat features used by salmonids and other aquatic organisms (Kerwin, 1999).

The Mud Mountain Dam on the White River blocks wood which flows into the dam reservoir (Pierce County, 2007). Some of this wood is retained as habitat logs, but most is burned.

The removal of this wood from the White River system reduces the quantity and quality aquatic habitat downstream of the dam. While not all of this removed wood can be characterized as LWD, small wood also creates highly functional habitats and provides necessary nutrients to the river system (Kerwin, 1999).

Debris removal by private parties and municipalities in the White and Puyallup Rivers is regulated by the Hydraulic Project Approval (HPA) permit process administered by WDFW (Kerwin, 1999). While these permits typically prohibit the removal of LWD from the "wetted" river channel, it is still often removed from the channel outside the wetted area, thereby reducing the amount of LWD debris available for redistribution during future flow events.

Salmonid spawning ground surveys conducted by staff from Puyallup Tribe of Indians indicate that there is only limited spawning activity throughout the portions of the Puyallup and White Rivers in the shoreline planning area (Kerwin, 1999). Bedload transport tends to be high because of dike-induced increases in water velocities. Survival from any spawning that does occur is believed to be low due to the bedload and increased velocity scouring of egg pockets, also known as "redds" (Kerwin, 1999).

5.3.4 Flow/Hydrology

There is an extensive network of paved roadways, parking areas, roofs, and other impervious areas in the City of Sumner. Impervious surface covers over 70 percent of some of the City's shoreline segments.

Other factors outside of Sumner's jurisdiction also influence the hydrology of the rivers. Historically, the White River was permanently diverted into the Puyallup at Auburn in 1915, redirecting flows into the present-day channel. The White River added 50 percent to the annual flow in the lower Puyallup River (Williams et al., 1975). Also, flow from the White River is diverted at a diversion dam located near Buckley at RM 23.4 through Lake Tapps and discharged back into the White River at the Dieringer Canal (Pierce County, 2007). During hydropower operation, low flows in the river reaches between the diversion and the canal were measured and high flows within the canal. Since 2004, when hydropower operations ceased there have been higher flows in the White River between the diversion and the canal and lower flows in the canal (Cascade Water Alliance, 2010). Table 4.2 shows that in an average, wet, and dry year, the flows in the tailrace canal were significantly higher in the hydropower period (1988-2002), than in the post-hydropower period (2004-2008) flows. Table 4.3 shows that in an average, wet and dry year, the flows above the Tailrace Canal were lower during the hydropower period than in the post-hydropower period. Tables 5-4 and 5-5 include monthly flow data comparisons for the hydropower period and post-hydropower period above the Tailrace Canal on the White River and at the Tailrace Canal.

Table 5-4. Change in Monthly Flow Rates (cfs) in White River above Tailrace Canal

Year Type	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Average
Average	-499	-584	-912	-915	-966	-1067	-1061	-948	-1289	-868	-339	-264	-809
Wet Year (2007/1996)	-1026	-458	-538	-1376	-1082	-1245	-869	-684	-972	-897	-447	-140	-811
Dry Year (2005/2001)	-720	-362	67	-677	26	-297	-863	-1250	-1071	-577	-285	-326	-528

Source: Cascade Water Alliance, 2010

Table 5-5. Change in Monthly Flow Rates (cfs) in White River at Tailrace Canal

Year Type	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Average
Average Year	502	922	929	1451	307	1005	610	1831	1249	775	357	390	**861**
Wet Year (2007/1996)	188	1053	-1119	868	-2659	3393	732	793	1146	930	523	199	**504**
Dry Year (2005/2001)	576	777	1401	1886	311	111	382	1148	484	437	147	101	**647**

Source: Cascade Water Alliance, 2010

A hydrologic evaluation of City shorelines was not conducted for this assessment. However, for the 14-year time period from 1980 to 1993, low instream flows were recorded at the lower Puyallup River gauge, downstream of the City, an average of 35 days annually (Kerwin, 1999). In addition to the factors discussed above, low flows may be attributed to increased groundwater withdrawal through unregulated wells (5,000 gallons or less per day) and increases in impervious surfaces that lead to a decline in groundwater and base surface water flows (Kerwin, 1999).

5.3.5 Aquifer Recharge Areas

Aquifer recharge areas are defined in the City's critical area regulations (SMC 16.48) as follows:

> *Areas with the two highest DRASTIC zones which are rated 180 and above on the DRASTIC index range, as identified in Map of Groundwater Pollution Potential, Pierce County, Washington, National Water Well Association, U.S. Environmental Protection Agency; or Wellhead protection areas designated for water supply wells and springs (pursuant to WAC 246-290-135) and located within the municipal boundary of the city of Sumner.*

According to the National Water Well Association (1985), due to its predominant valley location, the entire Sumner city limits is included as a groundwater resource area. As a result, the City's entire shoreline planning area along the Puyallup and White Rivers is in a high aquifer recharge area (Segment JPA-1, Segments A-H) (see Map 3). The National Water Well Association and United States Environmental Protection Agency provide indices of the groundwater potential and susceptibility to contamination. Within the City limits (and shoreline planning area), the valley floor is rated at 180 or greater, one of the highest indices for Pierce County (City of Sumner, 1993). This index corresponds to areas of high groundwater recharge potential. A layer of coarse gravel and sand lies approximately 80 to 150 feet below the land surface in the valley and another layer occurs approximately 400 feet below the surface (Walters and Kimmel, 1968). See Map 3 for extent of aquifer recharge area in the city.

According to the City of Sumner Aquifer Recharge Area Map (City of Sumner, 2003b), the shoreline planning area is located within wellhead protection areas of the following waters supply wells and springs:

- South Well
- Elhi Spring
- County Springs
- Cemetery Well

- Sumner Springs
- Weber Springs

5.3.6 Landslide Hazard Areas

Landslide hazard areas are defined in the City's critical area regulations (SMC 16.50) as those areas subject to risk of mass movement and meeting any of the following criteria:

1. *Areas of historic land failures, including areas of unstable old and recent landslides;*
2. *Areas with all three of the following characteristics:*
    a. *Slopes steeper than 15 percent; and*
    b. *Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and*
    c. *Any signs of springs or groundwater seepage; and*
    d. *Concave slopes and swales;*
3. *Slopes that are parallel or subparallel to planes of weakness, such as bedding planes, joint systems, and fault planes, in subsurface materials;*
4. *Slopes having gradients steeper than 80 percent subject to rockfall during seismic shaking;*
5. *Areas potentially unstable as a result of rapid stream incision, stream bank erosion, and undercutting by wave action;*
6. *Any area with a slope of 15 percent or steeper and with a vertical relief of 10 or more feet. A slope is delineated by establishing the toe and top and measured by averaging the inclination over at least 10 feet of vertical relief. Qualifying slopes of 15 percent or greater to less than 25 percent shall be termed "Type II landslide hazard areas" for purposes of this chapter. Qualifying slopes of 25 percent or greater shall be termed "Type I landslide hazard areas";*
7. *Areas which have a "severe" limitation for building site development because of slope conditions, according to the U.S. Department of Agriculture's Natural Resource Conservation Service;*
8. *Slopes that contain impermeable soils (typically silt and clay) frequently interbedded with granular soils (predominantly sand and gravel);*

9. *Any area which has indications of mass wasting during the Holocene epoch (from 10,000 years ago to the present) or which is underlain by mass wastage debris of that epoch.*

For the purpose of this inventory, slopes in the shoreline planning area steeper than 15 percent are identified on Map 7. This is consistent with the SMC designations and regulations presented in SMC 16.50. Information on the presence of steep slopes was obtained from the Puget Sound LiDAR Consortium that employs laser to map topography. Steep slopes are located in all segments along the White and Puyallup Rivers and Lake Tapps.

5.3.7 Erosion Hazard Areas

Erosion hazard areas are defined as "*those areas that are identified by the presence of vegetative cover, soil texture, slope, and rainfall patterns, or human-induced changes to such characteristics, which create site conditions which are vulnerable to excessive erosion. Erosion hazard areas are those areas that are classified as having moderate to severe, severe or very severe erosion potential according to the Natural Resource Conservation Service*" (SMC 16.50). Erosion prone soils identified by the Natural Resources Conservation Service include Alderwood gravelly sandy loam (15 to 30 percent slopes), Xerochrept soils, and Kapowsin gravelly loam. None of these soil types occur within river shoreline planning areas in the City. However, Alderwood gravelly sandy loam (15 to 30 percent slopes) is mapped within segment UGA-1 (Lake Tapps). Soils mapped by the NRCS occurring within the shoreline planning area include Pilchuck fine sand, Puyallup fine sandy loam, Riverwash, Alderwood gravelly sandy loam (6 to 15 and 15 to 30 percent slopes) (Zulauf, 1979). Generally, the greatest erosion and landslide potential areas in Sumner are located along the valley sides outside of the shoreline planning area (Map 7).

5.3.8 Seismic Hazard Areas

Seismic hazard areas are defined in the City's critical area regulations (SMC 16.52) as "*areas subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, fault rupture, or soil liquefaction."* The entire shoreline planning area along the White River and Puyallup River (Segment JPA-1, Segments A-H) are located within a seismic hazard area (City of Sumner, 2003c). UGA-1 is located outside of the seismic hazard area.

5.3.9 Volcanic Hazard Areas

Volcanic hazard areas are defined in the City's critical area regulations (SMC 16.54) as *"areas within the city which show a likelihood of lahars, debris flows and related flooding associated with volcanic activity from Mt. Rainier."* The entire shoreline planning area along the White River and Puyallup River (Segment JPA-1, Segments A-H) are located within a

volcanic hazard area (City of Sumner, 2003d). UGA-1 is located outside of the volcanic hazard area.

5.4 Channel Migration Zones (CMZs)

The channel migration zones (CMZs) are typically defined as the lateral extent of likely movement along a stream reach with evidence of active stream channel movement over the past 100 years (Perkins, 1996). Channel migration refers to the abrupt (e.g. avulsion) or gradual movement of a channel within a floodplain (GeoEngineers, 2003). A Geomorphic Evaluation and CMZ analysis of the Puyallup, White, and Carbon River watershed was conducted for Pierce County by GeoEngineers (GeoEngineers, 2003). The CMZs include low, moderate and severe migration potential areas (MPAs). The severe MPAs, which are the areas regulated in unincorporated Pierce County, are shown on Map 5. Low and moderate MPAs along the Puyallup and White River within the City of Sumner are also shown on Map 5.

Channel migration in rivers, such as the Puyallup and White River, is an important source of sediment (GeoEngineers, 2003). As channels naturally migrate within the alluvial valley, erosion provides sediment to the channel. Land within the city limits broadens into a wide, relatively flat floodplain and would historically have supported movement of the river channel across much of the valley floor. Evidence of remnant oxbows exist upstream of the city limits on both rivers. However, since the late 1800s, both rivers have been incrementally confined within flood control structures such as revetments and levees. These structures have effectively removed or drastically reduced the ability of both river channels to migrate across their floodplains.

5.5 Frequently Flooded Areas

Both the Puyallup River and the White River have overtopped the existing dike system within the City limits, resulting in flooding. Major flood events recorded by the United States Geological Survey (USGS) in the Puyallup River at the Puyallup gage include events in December 1917, December 1933, January 1965, December 1977, November 1986, January 1990, November 1990, February 1996, and January 2009. The 1996 flood is the current peak flood of record for the Sumner region.

Photograph 5-1. Puyallup River flooding at 76th Street East on January 9, 2009.

Often called the base flood, the primary measure of flood potential is the 100-year flood. Mapped by the FEMA, the 100-year floodplain in Sumner fills a large portion of the valley within city limits. The floodplain is shown in Map 4 in Appendix A.

Throughout the basin, many former floodplain areas on the landward side of the dikes along the White River and Puyallup River have been converted into residential and industrial development. The loss of natural vegetation and wetlands in the Puyallup River basin has reduced the watershed's ability to store and process water in a manner that will minimize flood event duration and peaks. Because of increases in impervious surface and reduction of floodplain storage, this process results in increased peak flows, quicker peak flows, and reduced base flows (Booth, 1991; Booth and Jackson, 1997). Contributing to the increase in flood potential is the aggradation, or filling in of the river channel with sediment from upstream areas, which increases the potential for flooding. White River flows are regulated by Mud Mountain Dam (MMD) upstream of the City limits, at RM 29.6. The dam's primary function is to protect property along the lower three miles of the Puyallup River.

Along the White River, downstream of the King County–Pierce County line, the channel has the capacity to convey approximately 9,500 cubic feet per second (cfs), without overtopping the existing banks (USACE, 2009). A flow of this volume would leave no freeboard above the flood elevation along White River in this area. Puyallup River flows are presently uncontrolled. Sedimentation and encroaching vegetation within the White River has resulted in a reduction in channel capacity (the amount of water a channel can convey without causing overbank flooding) (USACE, 2009).

Several flooding "hot spots" within Sumner's City limits were identified in the *Puyallup River Basin Comprehensive Flood Control Management Plan* (PCRI, 1991). One area, Manor Mobile Home Park and adjacent apartments, was identified along the Puyallup River within Segment A. Some of the areas identified along the White River, including an area at the

mouth of 8th Street Creek in Segment F, the Dieringer Flume area in lower Segment F, and the golf course area in upper Segment F. Additionally, the area adjacent to Segment H, within the City of Pacific, is prone to significant flooding.

6.0 CONDITIONS BY INVENTORY SEGMENT

An overview of baseline inventory conditions for each of the ten inventory segments is provided below. Current land use, public access sites, critical areas, hazardous areas, shoreline modifications and restoration opportunity areas are identified for each segment. Segments are described from south to north.

6.1 SEGMENT JPA-1. Riverside Park to City Limits

Summary: Segment JPA-1 extends from approximately RM 13.3 to 12.0 along the Puyallup River. Only the left bank of the Puyallup River is being considered part of this segment. This area is located within the Sumner Joint Planning Area in unincorporated Pierce County. This segment is constrained by levees, rock groins, and rip-rap and offers limited instream habitat. Land use in Segment JPA-1 is predominantly residential. Public access is available at Riverside Park. No wetlands have been identified within the shoreline planning area.

6.1.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Existing land uses within this segment are characterized by single-family residential and manufactured homes (66 percent of shoreline planning area) interspersed with agricultural fields (15 percent of shoreline planning area). There is one site with two large warehouse buildings. The zoning is predominately Rural-10 (80 percent of shoreline planning area) with the remaining area zoned Agriculture Resource Lands (20 percent of shoreline planning area) (City of Sumner, 2009b; Pierce County, 2008a).

Several roads and bridges occur within Segment JPA-1. Riverside Road East provides access to residential properties. 76th Street East runs parallel to the Puyallup River within the shoreline planning area. Orting Highway East (SR 162) is the only bridge that crosses the Puyallup River within Segment JPA-1. It is located at the western boundary of the segment. The bridge is two travel lanes in width.

There are no major utilities or wastewater or stormwater facilities located in the shoreline planning area.

Fifty-nine percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD,

2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.1.2 Existing and Potential Public Access Sites

One existing park provides public access to the Puyallup River in Segment JPA-1 – Riverside Park. Riverside Park (a County owned park) is located in Segment JPA-1. This 50-acre site is currently leased to River Valley BMX Racing for seasonal motorcross bicycle races and Tacoma Disc Golf Players Association for disc golf (Pierce County website, 2009). 76th Street East runs parallel to the Puyallup River in this segment.

6.1.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

The priority habitat and species data (2008a) documents fall chinook, pink, coho, and chum salmon, as well as winter steelhead and Dolly Varden/bull trout as using this segment of the Puyallup River for passage. Fall Chinook and coho salmon use this segment for rearing, and pink salmon for spawning. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) does not identify any wetland habitat within this segment.

A small unnamed tributary flows into the Puyallup in Segment JPA-1. This tributary enters the Puyallup River with a culvert?

The riparian corridor consists of a 25- to100-foot wide early successional/mixed age stand dominated by cottonwood. Most of the land area within this segment is agricultural, with a significant forested portion located in the eastern portion of the reach.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.1.4 Hazardous Areas

Mapped hazard areas in Segment JPA-1 include landslide, seismic and volcanic hazard areas.

6.1.5 Shoreline Modifications

The major shoreline modifications along JPA-1 include:

- Rock groins placed to control channel migration;
- Levees and reinforced revetments placed to confine the channel and decrease the width;
- Rip-rap bank protection along channel banks;
- Agriculture development adjacent to river;
- Rural residential development adjacent to river; and
- In-channel gravel mining.

Along JPA-1 and much of the Puyallup River, the channel was partly confined in the early 1900s and almost completely confined in the early 1960s by levees and revetments (GeoEngineers, 2003). Before confinement, the channel throughout JPA-1 included laterally migrating meander bends and was highly sinuous. The confined channel in some areas decreased in width from approximately 1,100 feet in 1931 to approximately 250 ft in 1965 and migration was limited (GeoEngineers, 2003).

Prior to confinement, the gravel bars were larger and more abundant. In-channel gravel mining occurred from the 1970s to 1996. This reduced the bedload in many areas and formation and aggradation of gravel bars. Since the mining ceased, the Puyallup River may be subject to increased sediment loads. The full effect of the increased sediment loads on the channel dynamics is not known (GeoEngineers, 2003).

6.1.6 Opportunity Areas

Protection

A large, mature forest stand is located in the eastern portion of Segment JPA-1, which is documented by WDFW as valuable wildlife habitat. In addition, smaller forested patches are located adjacent to the river within this segment. Protection of these forested areas would help maintain quality habitat for sensitive species.

Restoration

There is limited opportunity to provide areas of overbank flooding and side channel habitat in this segment, given the existing levee and extensive adjacent development. In some portions of this segment, it may be feasible to setback the levee, which would increase the active channel width and subsequently enhance habitat-forming processes.

This reach has vegetation enhancements opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

6.2 SEGMENT A. Eastern City Limits to Traffic Avenue Bridge

Summary: Segment A extends from approximately RM 12.0 to RM 10.7 on the Puyallup River. This segment extends entirely along the left bank of the Puyallup River except for one small area on the right bank. This segment is constrained by dikes and reinforced revetments and offers limited instream habitat. Land use in Segment A is predominantly multi-family residential. Riparian vegetation is generally limited to a narrow strip along the river bank. No wetlands have been identified within the shoreline planning area.

6.2.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Land use in Segment A is predominately residential with Rainier Manor mobile homes, and Rivergrove and Riverwalk multi-family communities. High Density Residential is the main comprehensive plan and zoning designation (47 percent of shoreline planning area). Remaining properties are zoned Low Density Residential (53 percent of shoreline planning area) (City of Sumner, 2009b; Pierce County, 2008a).

There are several roads and bridges located within the Segment A shoreline planning area. 78th Street Court East runs parallel to the Puyallup River and provides access to two single-family houses. There are seven roadways that dead-end within the shoreline planning area which provide local access to the Riverwalk residential community. 142nd Avenue East runs parallel to the Puyallup River providing local access to the Rivergrove residential community. Several roadways provide access for the Rainier Manor mobile home park.

The Orting Highway East (SR 162) bridge serves as the eastern boundary of Segment A and Traffic Avenue bridge serves as the western boundary. Traffic Avenue bridge has three travel lanes, a middle left turn/right turn lane, and one parking shoulder lane. The BNSF Railroad bridge is also located within Segment A immediately east of Traffic Avenue. The bridge has two sets of railroad tracks.

There are no major utilities or facilities located in the shoreline planning area. There is one mapped sewer-overflow outfall east of Rainier Manor.

Seventy-eight percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.2.2 Existing and Potential Public Access Sites

The Riverside Trail is located along the Puyallup River in Segment A. Trail connections east to Orting Highway East (SR 162) and west to the Wastewater Treatment Plant are planned for development. Girard Park/Grand Park is also located in Segment A although access to the park has been limited by the construction of SR 410.

6.2.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

According to PHS data (2008a), this segment is used for passage by fall chinook, pink, coho, and chum salmon, as well as winter steelhead and Dolly Varden/bull trout. Fall Chinook and coho salmon use this segment for rearing, and pink salmon use this segment for spawning. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) does not identify any wetland habitat within this segment. Several small tributaries to the Puyallup enter Segment A from the south (Map 1).

The most significant factor in this segment is the conversion of riparian habitat to residential land use and the corresponding increase in impervious surface. Riparian vegetation in this segment is limited for 50 percent of the shoreline, with a very narrow strip of vegetation paralleling the existing residential development. An approximately 100-foot wide early successional/mixed age stand dominated by cottonwood occurs in the narrow band of land between the river and SR 410.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.2.4 Hazardous Areas

Mapped hazard areas in Segment A include landslide, seismic and volcanic hazard areas.

6.2.5 Shoreline Modifications

The primary shoreline modifications along Segment A of the Puyallup River include:

- Confinement of channel by reinforced revetments;
- Dikes;

- High-density residential development; and
- Upstream gravel mining operations.

By 1965, the entire segment was confined by reinforced revetments that restrict the river to a generally straight, northwest trending channel (GeoEngineers, 2003). There has been a large reduction in the size and distribution of gravel bars in this Segment. This may be due to the increase in channel gradient and sediment transport capacity resulting from the confinement, channel incision, and possible loss of bedload materials from the upstream gravel mining operations (GeoEngineers, 2003). Since the mining ceased, the Puyallup River may be subject to increased sediment loads. The full effect of the increased sediment loads on the channel dynamics is not known (GeoEngineers, 2003).

6.2.6 Opportunity Areas

Protection

The northern portion of Segment A contains a mature, riparian forest stand, which is likely productive wildlife habitat. Protection of this forested area could help maintain quality habitat for sensitive species.

Restoration

There is limited opportunity to provide areas of overbank flooding and side channel habitat in this segment, given the existing levee and extensive adjacent development. However, in the northern portion of the segment, adjacent to SR 410, it may be feasible to setback the levee. This would increase the active channel width and subsequently enhance habitat-forming processes.

This reach has vegetation enhancements opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

6.3 SEGMENT B. CONFLUENCE OF WHITE AND PUYALLUP RIVERS

Summary: Segment B extends from approximately RM 10.7 to RM 10.1 on the Puyallup River, and RM 0.0 to RM 0.3 on the White River. This segment is constrained by concrete slabs and revetments and offers limited instream habitat. Land use in Segment B is predominantly public utilities. SR 410 and SR 167 meet in the vicinity of this segment. Riparian vegetation generally consists of narrow bands adjacent to the rivers. Less than one-acre of wetland is located within the shoreline planning area.

6.3.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

The City of Sumner's wastewater treatment plant and associated facilities cover approximately 43 percent of this segment. Most of the remaining properties are vacant lands owned by the City of Sumner and a few single-family properties (18 percent of shoreline planning area) located on the left bank of the White River. Zoning designations are entirely composed of low-density residential in Segment B (City of Sumner, 2009b; Pierce County, 2008a).

State Street and 63rd Street East provide access to the wastewater treatment plant. Houston Road provides access to the single-family houses on the left bank of the White River.

The Traffic Avenue bridge serves as the eastern boundary of Segment B and SR 410 serves as the northern boundary. SR 410 has six travel lanes and crosses the White River in an east / west direction.

The Sumner Wastewater Treatment Plant is located in Segment B. The plant has an outfall to the White River.

Impervious surface: Fifty percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.3.2 Existing and Potential Public Access Sites

The Riverside Trail is located almost along the entire left bank of the Puyallup River and the right bank of the White River in Segment B. There is City-owned open space to the east of the treatment plant that has potential to be developed as a park. Confluence Park is located to the west of the treatment plant and is used frequently for fishing and boat launching. 63rd Street East street-end provides access to the right bank of the White River.

6.3.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

According to PHS data (2008a), this segment is used for transportation by fall chinook, spring chinook, pink, coho, chum, and sockeye salmon, as well as winter steelhead and Dolly Varden/bull trout. Spring chinook, coho, and pink salmon use this segment for rearing. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) identifies 0.1 acre of wetland habitat within Segment B, which is less than 1% of the total segment area.

The SR410 Bridge crosses the White River at the northern limit of this segment, and the Traffic Avenue Bridge crosses the Puyallup River at the eastern limit. Riparian vegetation consists of an approximately 25-to100-foot wide early successional/mixed age stand dominated by cottonwood, with an understory of non-native blackberry. Pacific willow is common along the river banks. Adjacent land use includes the City Wastewater Treatment Plant. The Plant treats mainly domestic wastewater, but also receives some manufacturing, commercial, and industrial wastewater. The outfall for the plant is on the White River approximately 400 feet upstream of the confluence with the Puyallup River.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.3.4 Hazardous Areas

Mapped hazard areas in Segment B include landslide, seismic and volcanic hazard areas.

6.3.5 Shoreline Modifications

Segment B includes the confluence of the Puyallup River and White River. There are many shoreline modifications along both rivers in this segment. The primary modifications are discussed below, by river.

Some of the modifications in the Puyallup River, Segment B, include:

- Reinforced revetments to confine the channel; and
- Upstream gravel mining operations.

Some of the modifications in the White River, Segment B, include:

- Dredging the channel and adding revetments along the entire segment; and
- Installing concrete slabs and riprap revetments.

By 1965, the Segment B along both rivers was completely confined by reinforced revetments that restrict the rivers (GeoEngineers, 2003). There has been a large reduction in the size and distribution of gravel bars in this Segment. This may be due to the increase in channel gradient and sediment transport capacity resulting from the confinement, channel incision, and possible loss of bedload materials from the upstream gravel mining operations (GeoEngineers, 2003). Since the mining ceased, the Puyallup River may be subject to increased sediment loads. The full effect of the increased sediment loads on the channel dynamics is not known (GeoEngineers, 2003).

Segment B of the White River is deeply entrenched due to the human modifications along the river, such as channelization and dredging. An example of the extreme entrenchment along the White River is that the slabs and revetments built at the water edge in the early 1900s are now approximately 6 to 10 feet above the water edge (GeoEngineers, 2003).

6.3.6 Opportunity Areas

Protection

Black cottonwood-dominated forest is the most common vegetation assemblage found throughout all of the segments and is represented in this segment. Riparian forested areas are typically productive wildlife habitats. Protection of this forested area could increase potential habitat for many sensitive species.

Restoration

City property adjacent to the City's Wastewater Treatment Facility, at the confluence of the White and Puyallup Rivers, is used informally by residents for fishing access. Adjacent to

the confluence is an informal gravel and/or dirt parking lot, which has intruded into the riparian vegetation. Denuded areas could be planted with native riparian plant species. This site could be further improved by restricting access to a smaller area through use of fencing and signs.

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings.

6.4 SEGMENT C. SR 410 BRIDGE TO UNION PACIFIC SPUR BRIDGE

Summary: Segment C extends from approximately RM 0.3 to RM 1.1 on the White River. This segment is constrained by revetments and concrete slabs and offers limited instream habitat. Land use in Segment C is a mix of residential, commercial, and industrial/manufacturing. Less than one-acre of wetland is located within the shoreline planning area.

6.4.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Land use in this segment is a mix of single-family houses (30 percent of shoreline planning area) mainly south of Main Street except for those located along Pacific Avenue on the left bank of the White River; commercial activities (22 percent of shoreline planning area) including a furniture store, auto repair services, and professional services; and industrial/manufacturing activities (16 percent of shoreline planning area) which is mainly composed of a roofing company that has warehouse and office space, and vehicle equipment parking. The City's comprehensive plan and zoning designations in Segment C indicate predominantly future general commercial and low-density and multi-family residential land uses for the area (City of Sumner, 2009b; Pierce County, 2008a).

Main Street, Spinning Avenue, and Pacific Avenue are located in the shoreline planning area and provide local access to the residences.

The SR 410 bridge serves as the southern boundary of Segment C and the Union Pacific railroad spur bridge serves as the northern boundary. The railroad spur has one set of railroad tracks that cross the White River. A third bridge located in Segment C is the Bridge Street Bridge which has two travel lanes.

Electricity lines cross the White River generally between the Bridge Street Bridge and the Union Pacific railroad spur bridge.

Seventy-eight percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.4.2 Existing and Potential Public Access Sites

Two access points associated with street right-of-way are available in Segment C: Spinning Avenue street-end and Bridge Street Bridge. There is also one parcel owned by the City that is undeveloped open space located on West Main Street. A park associated with the Library and Community Center has picnic tables and offers access to the White River. The Riverside Trail is planned to be extended on the right bank of the White River along this segment.

6.4.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

According to PHS data (2008a), this segment is used for transportation by fall chinook, spring chinook, pink, coho, chum, and sockeye salmon, as well as winter steelhead and Dolly Varden/bull trout. Spring chinook, coho, and pink salmon use this segment for rearing. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) identifies 0.9 acre of wetland habitat within Segment C, which is approximately 2% of the total segment area. In addition, Wapato Creek enters the White River within this reach (Map 1).

At certain points within this segment, land is cleared to the top of bank, leaving only a limited riparian fringe between the top of the bank and the ordinary high water mark. Some areas have only a narrow strip of riparian vegetation, approximately 10 to 40 feet wide including big leaf maple, cottonwood, and alder with an understory of snowberry. In other areas, the riparian zone is completely cleared to the river's edge. Streambank erosion was noted in several of these areas. In most areas within this segment, however, the riparian corridor consists of a 25- to100-foot wide early successional/mixed age stand dominated by cottonwood. The riparian fringe consists of willow, snowberry, and non-native blackberry.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.4.4 Hazardous Areas

Mapped hazard areas in Segment C include landslide, seismic and volcanic hazard areas.

6.4.5 Shoreline Modifications

The shoreline modifications along Segment C include:

- Dredging the channel and adding revetments along the entire segment;
- Commercial and industrial development; and
- Installing concrete slabs and riprap revetments.

Segment C of the White River was completely confined in a dredged channel by 1931. By 1965, Segment C was completely confined by reinforced revetments and levees that restrict the river (GeoEngineers, 2003). Segment C of the White River is deeply entrenched due to the human modifications along the river, such as channelization and dredging.

6.4.6 Opportunity Areas

Protection

Portions of land within the riparian zone of Segment of the White River have relatively dense cover of riparian vegetation with moderate diversity. Protection of these areas could help maintain quality habitat for sensitive species.

Restoration

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In addition, it may be feasible to setback the levee along the west bank of the White River, adjacent to Pacific Avenue. This would increase the active channel width and subsequently enhance habitat-forming processes.

This segment has significant vegetation enhancement opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

6.5 SEGMENT D. UNION PACIFIC SPUR BRIDGE TO TACOMA ROAD BRIDGE

Summary: Segment D extends from approximately RM 1.1 to RM 1.8 on the White River. This segment is constrained by revetments and concrete slabs and offers limited instream habitat. Land use in Segment D is a mix of industrial/manufacturing and public facilities/utilities. The riparian vegetation is predominantly a 25- to100-foot wide along the bank of the river. Less than one-acre of wetland is located within the shoreline planning area. Sotain Creek enters the White River within this segment.

6.5.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Existing land use is mainly a mix of industrial/manufacturing (38 percent of shoreline planning area) and public facilities/utilities (25 percent of shoreline planning area). Remaining land uses include parks/open space (19 percent of shoreline planning area) and commercial (13 percent of shoreline planning area). The comprehensive plan and zoning designations indicate that future land use would be a mix of light and heavy industrial (City of Sumner, 2009b; Pierce County, 2008a).

142nd Avenue East is the only roadway located within the shoreline planning area. It provides access to the north industrial area in Sumner.

The Union Pacific railroad spur bridge forms the southern boundary of Segment D and Tacoma Avenue bridge forms the northern boundary. Tacoma Avenue bridge has four travel lanes. Fryar Avenue bridge also crosses the White River about midway in the segment.

The Public Works shops are located on the left bank of the White River.

Forty-one percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.5.2 Existing and Potential Public Access Sites

The Riverside Trail is located on both banks of the White River near the Public Works shops forming a looped route between Fryar Avenue bridge and Tacoma Avenue bridge. The

planned extension of Riverside Trail in Segment C is proposed to continue north into Segment D along the right bank of the White River. Additional access down to the river is available as part of the street rights-of-way for Fryar Avenue bridge and Tacoma Avenue bridge.

6.5.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

Similar to other segments, fall chinook, spring chinook, pink, coho, chum, and sockeye salmon, as well as winter steelhead and Dolly Varden/bull trout all use this segment of the White River. Spring chinook, coho, and pink salmon have documented rearing. Cutthroat trout are resident.

The Sumner wetland inventory (2006) identifies 0.3 acre of wetland habitat within Segment D, which is approximately 1% of the total segment area. In addition, Sotain Creek enters the White River within this reach (Map 1).

Land is cleared to the top of the bank in some areas, with a limited riparian fringe between the top of bank and ordinary high water mark. The bank is armored with concrete debris in areas and lacks vegetation cover, limiting habitat quality. In most areas, however, the riparian corridor is predominantly a 25- to100-foot wide early successional/mixed age stand dominated by cottonwood, with an understory of non-native blackberry. Sotain Creek, a fish-bearing stream, flows into the White River in this stream segment (Map 1)

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.5.4 Hazardous Areas

Mapped hazard areas in Segment D include landslide, seismic and volcanic hazard areas.

6.5.5 Shoreline Modifications

The shoreline modifications along Segment D include:

- Dredging the channel and adding revetments along the entire segment; and
- Installing concrete slabs and riprap revetments.

Segment D of the White River was completely confined in a dredged channel by 1931. By 1965, Segment D was completely confined by reinforced revetments and levees that restrict

the river (GeoEngineers, 2003). Segment D of the White River is deeply entrenched due to the human modifications along the river, such as channelization and dredging.

6.5.6 Opportunity Areas

Restoration

The river banks within Segment D of the White River are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings.

This segment has significant vegetation enhancement opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

6.6 SEGMENT E. TACOMA ROAD BRIDGE TO PUBLIC LAND

Summary: Segment E extends from approximately RM 1.8 to RM 2.6 on the White River. This segment is constrained by concrete slabs and revetments and offers limited instream habitat. Land use in Segment E is mainly vacant lands, agricultural and industrial/manufacturing. Salmon Creek enters the White River within this segment. More than five acres of wetlands are located within the shoreline planning area.

6.6.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Land use in Segment E is a mix of vacant lands (38 percent of shoreline planning area), agriculture (25 percent of shoreline planning area), and industrial/manufacturing (22 percent of shoreline planning area) and. The industrial/manufacturing facilities are generally made up of warehousing. Additional land use includes low-density residential (15 percent of shoreline planning area). The comprehensive plan and zoning map indicate future land use to be almost entirely composed of light industrial (City of Sumner, 2009b; Pierce County, 2008a).

145th Avenue East is located within the shoreline planning area. A road has been recently constructed as part of a proposed warehouse facility on the right bank of the White River. It is two lanes in width and crosses Salmon Creek.

The Tacoma Avenue bridge forms the southern boundary of Segment E.

There are no major utilities or facilities located in the shoreline planning area.

Sixty-eight percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.6.2 Existing and Potential Public Access Sites

The Riverside Trail is located on the right bank of the White River in the southern portion of Segment E. The trail is proposed to be extended as part of a proposed warehouse facility immediately to the north of where the trail currently ends. The trail is proposed to continue northerly on the right bank. Additional public access to the river is available at the vacated right-of-way of 145th Avenue.

6.6.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment. According to PHS data (2008a), this segment is used for transportation by fall chinook, spring chinook, pink, coho, chum, and sockeye salmon, as well as winter steelhead and Dolly Varden/bull trout. Spring chinook, coho, and pink salmon use this segment for rearing. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) identifies 5.5 acres of wetland habitat within Segment E, which is approximately 5% of the total segment area.

Riparian vegetation along the river is an approximately 25- to100-foot wide early successional/mixed age stand dominated by cottonwood. Various willow species, as well as native shrubs and non-native Himalayan blackberry, line the river banks.

Salmon Creek and the associated riparian wetlands are of significance for wildlife habitat, providing water, food, and cover. Salmon Creek also serves as a wildlife corridor between the wooded east valley slopes and the White River. Salmon Creek flows year round and is a fish-bearing stream. Salmon Creek has experienced several water quality issues in the past, and a number of culvert barriers to fish passage have been identified.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.6.4 Hazardous Areas

Mapped hazard areas in Segment E include landslide, seismic and volcanic hazard areas.

6.6.5 Shoreline Modifications

The shoreline modifications along Segment E include:

- Dredging the channel and adding revetments;
- Agricultural and industrial development; and
- Installing concrete slabs and riprap revetments.

Segment E of the White River was completely confined in a dredged channel by 1931. By 1965, Segment E was completely confined by reinforced revetments and levees that restrict the river (GeoEngineers, 2003). Segment E of the White River is deeply entrenched due to the human modifications along the river, such as channelization and dredging.

6.6.6 Opportunity Areas

Restoration

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In some portions of this segment, it may be feasible to setback the existing revetments, which would increase the active channel width and subsequently enhance habitat-forming processes.

This segment has significant vegetation enhancement opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

6.7 SEGMENT F. PUBLIC LAND to 8th Street Creek

Summary: Segment F extends from approximately RM 2.6 to RM 4.2. This segment is constrained by dikes, revetments, concrete slabs, and earthen levees which limit instream habitat quality. Land use in Segment F is a mix of vacant lands and parks and open space. The riparian vegetation is 25-100 feet wide along the banks of the river. More than two acres of wetlands are located within the shoreline planning area. The tailrace from the inactive Dieringer Powerhouse and 8th Street Creek enter the White River within this segment.

6.7.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Land use is a mix of vacant lands (55 percent of the shoreline planning area) which are mainly under City ownership and leased for agricultural use and parks and open space (25 percent) most of which is the Sumner Meadows Golf Course Links. The comprehensive plan designation is predominately public/private utilities and facilities while zoning designations is generally split between agriculture and light industrial (City of Sumner, 2009b; Pierce County, 2008a).

24th Street East is a roadway on either side of the White River within the shoreline planning area that turns into a pedestrian/bicycle-only bridge as part of the Riverside Trail network. The bridge crosses over the White River. 148th Avenue East is also located within the shoreline planning area. 16th Street East dead-ends into the shoreline planning area on the left bank of the White River.

Electrical utility lines cross the White River near the southern border of the Sumner Meadows Golf Links. There is a mapped stormwater outfall located on the left bank of the river north of the Dieringer Flume.

Forty percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.7.2 Existing and Potential Public Access Sites

The Riverside Trail is located on the right bank of the White River on City-owned property, continues north and crosses the White River on the 24th Street pedestrian bridge, and extends both north along the left bank of the river and west along 24th Street East. The proposed trail alignment shows it continuing north through the Riverbend Park, across the White River to the Sumner Meadows Golf Links, and north along 8th Street Creek. Additional public access includes 24th Street trail bridge right-of-way, open space south of the golf course, Riverbend Park, and Sumner Meadows Golf Links.

6.7.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

According to PHS data (2008a), this segment is used for transportation by fall chinook, spring chinook, pink, coho, chum, and sockeye salmon, as well as winter steelhead and Dolly Varden/bull trout. Spring chinook, coho, and pink salmon use this segment for rearing. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) identifies 2.4 acres of wetland habitat within Segment F, which is approximately 1% of the total segment area. In addition, 8th Street Creek enters the White River within this segment (Map 1).

Photograph 6-1. Tailrace Canal looking west

The outfall from the Dieringer Powerhouse/Lake Tapps enters the right bank of the White River at RM 3.5 within this segment. Prior to the closure of the hydropower electric plant, high velocity flows attracted migrating adult salmonids into this discharge channel causing delays in their upstream migration. Flows have dropped significantly since 2004; however, the affect of this change on salmonids has not been documented.

Photograph 6-2. White River gravel bar

The riparian corridor consists of a 25- to100-foot wide early successional/mixed age stand dominated by cottonwood. A large gravel bar was noted in this segment. A riparian island vegetated with early successional cottonwood and willow also occurs in this segment, forming a backwater side channel along the right bank. This feature has a significant amount of woody debris and offers good edge habitat. The primary channel along the left bank of the river also contains an accumulation of large woody debris. Eighth Street Creek, a fish-bearing stream, enters the White River within this segment.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.7.4 Hazardous Areas

Mapped hazard areas in Segment F include landslide, seismic and volcanic hazard areas.

6.7.5 Shoreline Modifications

The primary shoreline modifications along Segment F include:

- Encroachment of vegetation, primarily upstream of the Dieringer Flume;
- In-channel erosion, primarily downstream of the Dieringer Flume;
- Building earthen levees composed of sand and silt; and
- Installing concrete slabs, riprap revetments, and dikes.

By 1965, Segment F was completely confined by earthen levees and riprap revetments that restrict the river to a generally straight, north trending channel (GeoEngineers, 2003). Much of the in-channel erosion along this segment is located downstream of the Dieringer Flume and is due to the flume discharge. The flume discharge generally carries no sediment and sometimes includes large flows. Segment F of the White River is deeply entrenched due to the human modifications along the river, such as channelization and dredging.

Vegetation occupies a third of the 1985 channel width in the upstream reach of Segment F, from RM 3.6 to 3.9, near the Sumner Meadows Golf Links, (USACE, 2009). The average open channel width in this reach reduced from about 200 feet in 1985 to approximately 125 feet in 2006 (USACE, 2009).

6.7.6 Opportunity Areas

Protection and Restoration

City-owned land along the length of the right bank offers opportunity for habitat preservation and restoration. This segment appears to function as significant rearing habitat for salmonids and therefore is a candidate for preservation. Riparian vegetation can be enhanced throughout this segment. The tailrace and drainage ditch offer potential surface water connections to wetland areas. Flow from the tailrace could be diverted through a separate channel through City-owned farmland, allowing the development of relatively natural meanders, and pool and riffle sequences. Diversion of water from these sources into created or enhanced wetland and stream channel areas could provide off-channel and rearing fish habitat in areas where there is adequate fish passage to the site.

Restoration

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In some portions of this segment, it may be feasible to breach or setback the existing revetments and levees, which would increase the active channel width and connect the river with portions of its historic floodplain, which could significantly enhance habitat-forming processes.

This segment has significant vegetation enhancement opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

The 24th Street Interchange Biological Opinion, described above in Section 5.3.4, included the following two conditions that pertain to the White River:

1. The City of Sumner must permanently prohibit impervious development on 30 acres of City-owned property east of the White River.
2. The City of Sumner must permanently restrict new development on 88 acres of City-owned property east of the White River to a maximum impervious coverage of 40 percent.

In addition, in the Biological Opinion USFWS recommended that nonfunctioning levees above the Dieringer Powerhouse outfall (RM 3.6) on the White River be removed or setback, in order to restore floodplain and riparian connectivity and create off channel habitat.

6.8 SEGMENT G. 8th Street Creek to Stewart Road Bridge

Summary: Segment G extends from approximately RM 4.2 to RM 5.0. This segment is constrained by dikes, concrete slabs, revetments, and earthen levees and offers limited instream habitat. Land use in Segment G is predominantly industrial/manufacturing. The riparian vegetation ranges from 25 to 100 feet in width along the river banks. No wetlands have been identified within the shoreline planning area.

6.8.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

The majority of land uses are concentrated in industrial/manufacturing (60 percent of shoreline planning area) and vacant lands (30 percent). Industrial/manufacturing businesses include a timber company and contractor services. One large vacant property located west of the Sumner Meadows Golf Links is proposed to be developed with multi-family development. Comprehensive plan and zoning designations are predominately light industrial (City of Sumner, 2009b; Pierce County, 2008a).

140th Avenue Court East is located on the right bank of the White River within the shoreline planning area. Stewart Road bridge forms the northern boundary for Segment G. The bridge has two travel lanes.

There are no major utilities or facilities located in the shoreline planning area.

Sixty percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.8.2 Existing and Potential Public Access Sites

The only form of public access currently available in Segment G is part of the Stewart Road bridge right-of-way. The Riverside Trail is proposed to cross the river on Stewart Road bridge.

6.8.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment. According to PHS data (2008a), this segment is used for transportation by fall chinook, spring chinook, pink, coho, chum, and sockeye salmon, as well as winter steelhead and Dolly Varden/bull trout. Spring chinook, coho, and pink salmon use this segment for rearing. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) does not identify any wetland habitat within this segment.

The riparian corridor in Segment G is a 25- to100-foot wide early successional/mixed age stand dominated by cottonwood. Significant habitat limiting factors in this segment include gravel removal operations and low instream flows resulting from the diversion dam located upstream at RM 23.4.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.8.4 Hazardous Areas

Mapped hazard areas in Segment G include landslide, seismic and volcanic hazard areas.

6.8.5 Shoreline Modifications

The primary shoreline modifications in Segment G include:

- Deposition of sediment;
- Encroachment of vegetation;
- Dredging the channel;
- Building earthen levees composed of sand and silt;
- Agricultural and industrial development; and
- Installing concrete slabs, riprap revetments, and dikes.

By 1965, Segment G was completely confined by earthen levees and reinforced revetments that restrict the river to a generally straight channel (GeoEngineers, 2003). Deposition of sediment in this reach is generally high, despite ongoing dredging efforts. Vegetation has encroached the river banks and the gravel bars in this reach (USACE, 2009).

6.8.6 Opportunity Areas

Protection

The riparian zone of this segment contains a relatively dense cover of riparian vegetation with moderate diversity. Protection of these areas could help maintain quality habitat for sensitive species, including salmonids.

Restoration

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In the eastern portion of this segment, it may be feasible to breach or setback the existing revetments and levee, which would increase the active channel width and connect the river with portions of its historic floodplain, which could significantly enhance habitat-forming processes.

6.9 SEGMENT H. Stewart Road Bridge to City Limits

Summary: Segment H extends from approximately RM 5.0 to RM 5.5. This segment contains a portion of White River riparian habitat, but the river channel is located outside of the City's jurisdiction. Land use in Segment H is a mix of vacant lands and industrial/manufacturing. The riparian vegetation ranges from 100 to 800 feet in width along the river banks. A large 20-acre wetland is located within the shoreline planning area.

6.9.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Land use is a mix of vacant lands (59 percent of shoreline planning area) and industrial/manufacturing (36 percent of shoreline planning area). Vacant lands generally correspond to a large wetland complex on the right bank of the White River. The industrial/manufacturing land use generally corresponds to warehousing and outdoor storage of materials. Comprehensive plan and zoning designations are entirely Light Industrial for this segment (City of Sumner, 2009b; Pierce County, 2008a).

No public roadways are located within the shoreline planning area. Stewart Road bridge forms the southern boundary of this segment.

There are no major utilities or facilities located in the shoreline planning area.

Fifteen percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.9.2 Existing and Potential Public Access Sites

The only public access opportunity available in Segment H is part of the Stewart Road bridge right-of-way. The Riverside Trail is proposed to cross the river on Stewart Road bridge.

6.9.3 Biological Resources and Critical Areas

No priority species presence is mapped in this segment (WDFW, 2008a).

The Sumner wetland inventory (2006) identifies 20.0 acres of wetland habitat within Segment H, which is approximately 86% of the total segment area.

Photograph 6-3. Wetland adjacent to White River

Segment H contains a portion of White River riparian habitat, but adjacent river channel is outside of Sumner's jurisdiction. The portion of the riparian corridor within the segment generally consists of a 25- to100-foot wide early successional/mixed age stand dominated by cottonwood.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.9.4 Hazardous Areas

Mapped hazard areas in Segment H include seismic and volcanic hazard areas.

6.9.5 Shoreline Modifications

Segment H does not contain the White River stream channel. The following are primary shoreline modifications that are adjacent to Segment H:

- Deposition of sediment;
- Encroachment of vegetation
- Dredging the channel;
- Building earthen levees composed of sand and silt;
- Agricultural and industrial development; and
- Installing concrete slabs, riprap revetments, and dikes.

By 1965, Segment H was completely confined by earthen levees and reinforced revetments that restrict the river to a generally straight, north trending channel (GeoEngineers, 2003). Deposition of sediment is extremely high, despite ongoing dredging efforts. There was approximately a 4.5 foot rise in the riverbed between 1945 and 1971 at an inactive USGS station located at RM 5, which is the downstream end of Segment H (Dunne 1986 referenced in USACE, 2009). A comparison of channel cross-sections from 1988 to 2007 at RM 5.6, which is slightly upstream of Segment H, indicates an overall deposition of 4 to 5 feet in portions of the channel (USACE, 2009). Additionally, encroachment of vegetation on gravel bars and along the banks has decreased the channel surface area. Since 1985, the channel surface area has decreased by 15 percent (USACE, 2009).

6.9.6 Opportunity Areas

Protection

The majority of land within this segment is upland and wetland habitat, with moderate diversity. Protection of the land within this segment could help maintain quality habitat for sensitive species.

6.10 SEGMENT UGA-1 Lake Tapps

Summary: Segment UGA-1 corresponds to approximately 6,700 lineal feet along the western portion of Lake Tapps located in Sumner's UGA. Lake Tapps is a human made lake that was created in the early 1900s. This segment offers about 36 acres of wetland habitat. Land use in Segment UGA-1 is entirely composed of vacant lands.

6.10.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Land use in Segment UGA-1 is entirely composed of vacant lands (100 percent of shoreline planning area). The comprehensive plan and zoning designations are entirely Public/Private Utilities and Facilities (City of Sumner, 2009b; Pierce County, 2008a).

The Sumner Tapps Highway East crosses Lake Tapps at the eastern most edge of the segment. The bridge has two travel lanes.

There is an outfall structure at Lake Tapps that releases water in Lake Tapps to the White River via the Dieringer Flume. Electricity lines cross Lake Tapps in two locations.

Segment UGA-1 has not been cleared for development and has no impervious surfaces (NOAA C-CAP/NLCD, 2006).

6.10.2 Existing and Potential Public Access Sites

There are no current or planned public access opportunities in Segment UGA-1.

6.10.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

No priority species presence is mapped in this segment (WDFW, 2008a).

The Sumner wetland inventory (2006) identifies 36.5 acres of wetland habitat within Segment UGA-1, which is approximately 63% of the total segment area.

The shoreline of Lake Tapps within this segment exhibits low levels of human disturbance, and consists primarily of mature, mixed forest.

The segment does not contain any mapped aquifer recharged areas (Map 6).

6.10.4 Hazardous Areas

Mapped hazard areas in Segment UGA-1 include landslide and erosion hazard areas.

6.10.5 Shoreline Modifications

The shoreline modifications along this segment, which is part of the Lake Tapps Reservoir and the confluence with Dieringer Flume include:

- Residential development; and
- Hydroelectric operations;

The Lake Tapps Reservoir is a human made lake that was created in the early 1900s (Cascade Water Alliance, 2010). The reservoir was created by diverting water from the White River and connecting four natural lakes by a series of earthen dikes. Prior to 2004, the reservoir levels were controlled by hydropower operations.

6.10.6 Opportunity Areas

Protection

The shoreline of Lake Tapps within this segment generally consists of mature, mixed forest and scrub-shrub wetland. There is relatively little shoreline development within this segment. Protection of the land within this segment could help maintain quality habitat for sensitive species and the overall biodiversity of the area.

7.0 DATA GAPS

The following elements are data gaps that have been identified as part this inventory:

- Daily White River flow within City of Sumner.
- The affect the change in flow rates from the Dieringer tailrace has had on fish species in the White River.

8.0 SHORELINE MANAGEMENT RECOMMENDATIONS

The following recommendations synthesize the area-specific opportunities identified in Section 6 above and provide additional shoreline management recommendations in the context of other local and regional planning activities. These recommendations are intended to inform the update to the City's shoreline master program by identifying opportunities for ecological conservation and restoration and policy issues related to future shoreline use and development.

1. The City could explore developing a community education and incentive program to identify and develop restoration opportunities on private property which support the overall goals of shoreline management.

2. For new shoreline stabilization projects, demonstration of the need for engineering approaches to shoreline stabilization could be required before approval. The use of bioengineering, alternative bank stabilization, and/or soft-shore armoring techniques could be encouraged in the City's shoreline master program.

3. The existing shoreline environment designations should be re-evaluated to ensure consistency with both the 2003 state shoreline guidelines (WAC 173-26) and the findings of this shoreline inventory report. Specifically:

    a. Reconsider the Natural and Aquatic environment designations to determine applicability;

    b. Examine the rationale of applying Urban Conservancy and Shoreline Residential per the findings of this Shoreline Inventory and Characterization report;

    c. Determine an appropriate designation to replace the Urban environment since it is not an established designation per Ecology Guidelines.

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APPENDIX A – MAP FOLIO

APPENDIX B – TABLES

Appendix A

City of Sumner Shoreline Restoration Plan Element, September 2011

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Draft

CITY OF SUMNER

Shoreline Restoration Plan Element

Prepared for:
City of Sumner

September 2011

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List of Tables

1.0 INTRODUCTION

This report supports the development of a restoration element to the City of Sumner's Shoreline Master Program (SMP). Last amended in 2004, the SMP is being updated to comply with the Shoreline Management Act (SMA) requirements (RCW 90.58), and the State's SMP guidelines (Washington Administrative Code [WAC] 173-26, Part III), which went into effect in 2003.

The SMP guidelines require that local governments develop SMP policies that promote "restoration" of impaired shoreline ecological functions and a "real and meaningful" strategy to implement restoration objectives. The City's shoreline inventory and characterization report (ESA Adolfson, 2010) identifies which shoreline ecological functions and ecosystem processes have been impaired. In updating its SMP, the City is required to identify and plan for ways to restore or enhance those functions and processes that have been impaired. In the context of the SMP, planning for shoreline restoration includes establishing goals and policies, working cooperatively with other regional entities, and supporting restoration through other regulatory and non-regulatory programs.

1.1 Regulatory Background

1.1.1 Role of Restoration under the Shoreline Management Act

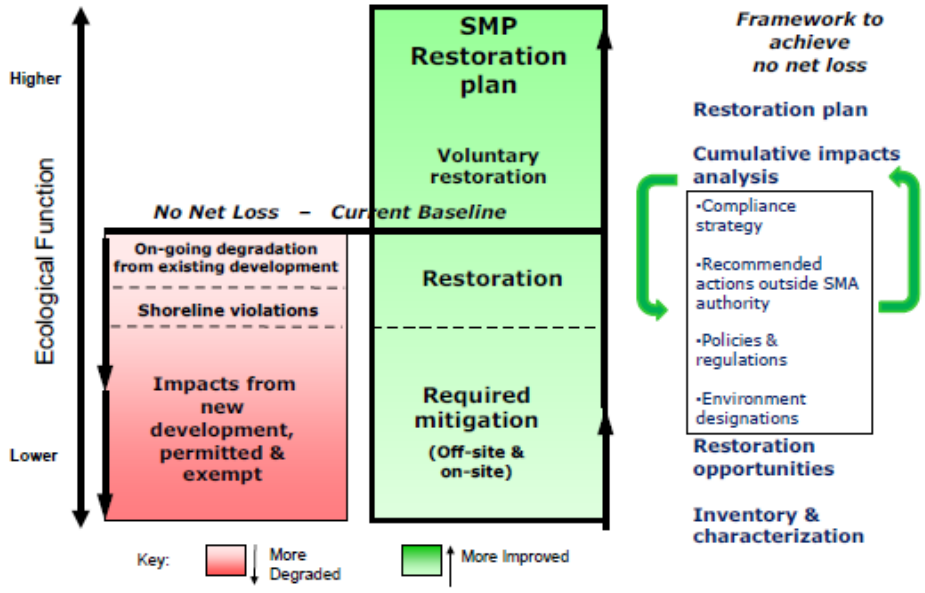
The State has directed local governments to develop SMP provisions "...to achieve overall improvements in shoreline ecological functions over time when compared to the status upon adoption of the master program." This overarching goal is accomplished primarily through two distinct objectives:

- **Protection** of existing shoreline functions through regulations and mitigation requirements to ensure "no net loss" of ecological functions from baseline environmental conditions; and

- **Restoration** of shoreline ecological functions that have been impaired from past development practices or alterations.

Figure 1 below illustrates the role of the SMP update in achieving no net loss both through mitigation and restoration.

Figure 1. Achieving No Net Loss of Ecological Function



Source: Department of Ecology

The concept of no net loss of shoreline ecological function is embedded in the SMA and in the goals, policies and governing principles of the shoreline guidelines. The State's general policy goals for shorelines of the state include the "protection and restoration of ecological functions of shoreline natural resources." This goal derives from the SMA, which states, "permitted uses in the shoreline shall be designed and conducted in a manner that minimizes insofar as practical, any resultant damage to the ecology and environment of the shoreline area." The governing principles of the guidelines further clarify that protection of shoreline ecological functions is accomplished through the following (WAC 173-26-186):

a) Meaningful understanding of the current shoreline ecological conditions;

b) Regulations and mitigation standards that ensure that permitted developments do not cause a net loss of ecological functions;

c) Regulations that ensure exempt developments in the aggregate do not result in net loss of ecological functions;

d) Goals and policies for restoring ecologically impaired shorelines;

e) Regulations and programs that fairly allocate the burden of mitigating cumulative impacts among development opportunities; and

f) Incentives or voluntary measures designed to restore and protect ecological functions.

It is important to note that the restoration planning component of the SMP is focused on voluntary mechanisms, not regulatory provisions. Restoration planning is focused on economic incentives, available funding sources, volunteer programs, and other programs that can contribute to a no net loss strategy. However, the restoration framework developed for these non-compensatory mitigation projects can also be applied to compensatory mitigation projects. In this way, all efforts to improve ecosystem functioning are coordinated, and will be designed to work together.

1.1.2 Role of Federal Regulations in Restoration

The Endangered Species Act (ESA): The federal ESA addresses the protection and recovery of federally listed species. The ESA is jointly administered by the National Oceanic and Atmospheric Administration (NOAA) Fisheries (formerly referred to as the National Marine Fisheries Service [NMFS]), and the United States Fish and Wildlife Service (USFWS). Restoration opportunities identified in this plan may benefit ESA listed species that are present in the White and Puyallup Rivers.

National Marine Fisheries Service Biological Opinion on National Flood Insurance Program (NFIP): In September 2008, a Biological Opinion issued by the NMFS determined that the effects of certain elements of the NFIP throughout Puget Sound is likely to *jeopardize* the continued existence of the following species listed under the ESA: Puget Sound Chinook salmon, Puget Sound steelhead, Hood Canal summer-run chum salmon, and Southern Resident killer whales. The Biological Opinion also determined that NFIP is likely to *adversely modify* the following ESA designated critical habitats: Puget Sound Chinook salmon, Hood Canal summer-run chum salmon, and Southern Resident killer whale critical habitats. The biological opinion provides a *reasonable and prudent alternative* which can be implemented to avoid jeopardy and adverse modification of critical habitat. In response to the Biological Opinion, the Federal Emergency Management Agency is in the process of developing guidance for NFIP participating communities, which includes the City of Sumner. The Biological Opinion establishes a 2010-2011 timeline for compliance for all NFIP participating communities within the Puget Sound Basin (NMFS, 2008).

1.2 Defining Restoration

There are numerous definitions for "restoration" in scientific and regulatory publications. Specific elements of these definitions often differ, but the core element of repairing damage to an existing, degraded ecosystem remains consistent. In the SMP context, the WAC defines "restoration" or "ecological restoration" as:

> *"…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"* (WAC 173-26-020(27)).

Using the WAC definition of restoration in regard to state shorelines, it is clear the effort should be focused on specific shoreline areas where natural ecological functions have been impaired or degraded. The emphasis in the WAC is to achieve overall improvement in existing shoreline processes or functions, if such functions are degraded or impaired. Therefore, the goal is not to restore historically natural conditions, but rather to improve on existing, degraded conditions. In this context, restoration can be broadly implemented through a combination of programmatic measures (such as surface water management, water quality improvement, public education) and site-specific projects (such as revetment replacement and/or riparian plantings). Therefore, this restoration planning element focuses on the City as a whole rather than parcel by parcel, or permit by permit.

1.3 Key Elements of Restoration Planning in the SMP Update Process

The State guidelines provide six key elements for shoreline restoration planning as part of a local jurisdiction's master program, as outlined in WAC 173-26-201(2)(f). These elements are summarized below in Table 1, and provide the organization and content for this report.

Table 1. Restoration Planning Elements

	Key elements for the shoreline restoration planning process WAC 173-26-201(2)(f)	Section in this report
1	Identify degraded areas, impaired ecological functions, and sites with potential for ecological restoration.	Assessment of Functions (Sec. 2); Restoration Opportunities (Sec. 4)
2	Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions.	Policy Development (Sec. 5)
3	Identify existing and ongoing projects and programs that are currently being implemented that are designed to contribute to local restoration goals such as capital improvement programs (CIPs) and watershed planning efforts (WRIA habitat/recovery plans).	Existing Plans and Programs (Sec. 3.2)
4	Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies including identifying prospective funding sources for those projects and programs.	Assessment of Functions (Sec. 2); Restoration Opportunities (Sec. 4)
5	Identify timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals.	Implementation (Sec. 6)
6	Provide for mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals (e.g., monitoring of restoration project sites).	Implementation (Sec. 6)

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2.0 ASSESSMENT OF FUNCTIONS

Shoreline restoration planning begins with the identification of "degraded areas" or areas with "impaired ecological functions." The assessment of existing degraded areas and/or functions relies on the *Sumner Draft Shoreline Inventory and Characterization Report* (ESA Adolfson, 2010). The City's inventory and characterization report examined riparian ecosystem processes that maintain shoreline ecological functions and identified impaired ecological functions. The findings of the inventory and characterization are summarized below.

2.1 Regional Setting

The City of Sumner is located in Pierce County, approximately 12 miles east of Tacoma and 34 miles south of Seattle at the confluence of the Puyallup and White (Stuck) Rivers in WRIA 10. A portion of Lake Tapps is located within the City's urban growth area (UGA). Both rivers and Lake Tapps are designated as shorelines of statewide significance and are the only shorelines that are addressed in the Master Program.

2.2 Physical and Ecological Processes

The City's shoreline jurisdiction is defined by the surface geology and hydrology of the valley floor of the White and Puyallup River basins, as well as their major tributaries and contributing streams. The headwaters of both the upper Puyallup and White Rivers are predominantly located within the Mt. Rainier National Park, Mount Baker-Snoqualmie National Forest, and private commercial timberlands. Both rivers originate from glaciers on Mount Rainer. The landscape has been heavily influenced by frequent flooding and periodic mudflows from Mount Rainier, which have historically covered the valley with layers of mud, silt, ash, and glacial debris. The most recent mudflow (named the Osceola mudflow) occurred in the valley about 5,600 years ago. The broad floodplains of both river systems have created a vast mosaic of fluvial materials and silts eroded from headwater sources.

The White River subbasin originates at the terminus of the Winthrop, Fryingpan and Emmons glaciers on the slopes of Mt. Rainier and drains an area of approximately 494 square miles. Flowing from its origin to the confluence with the Puyallup River,

the White River is approximately 68 miles in length. The Puyallup River begins at glaciers (North Mowich, South Mowich, Edmunds, Puyallup, and Tahoma glaciers) on the west and northwest slopes of Mount Rainier and flows north and west into Puget Sound at Commencement Bay in Tacoma. The Puyallup River watershed comprises 438 square miles. The Puyallup River flows westward for over 54 miles from Mount Rainier to its mouth in Commencement Bay.

The Puyallup River Basin was one of the earliest areas settled in the Puget Sound basin. Historically, the study area was characterized by large tracts of old-growth forests, fertile river valley soils, and abundant runs of salmon.

Urbanization and development have been limited in these areas compared to urban areas in the Puget Sound lowlands. However, both the upper Puyallup and upper White River watersheds have been affected by timber harvest and road building practices that have reduced the ability of riparian areas to provide wood and shade to the river and stream channels. These areas also continue to contribute to fine sediments from road construction and landslides in each river system. These activities continue to adversely impact natural salmonid production.

2.3 Habitat and Species

Sumner's shorelines provide important habitat for a number of fish and wildlife species. The aquatic environment of both rivers is an important riverine corridor from Mt. Rainer to the Sound. Most notably, the White and Puyallup Rivers have been designated as critical habitat for Chinook salmon and bull trout. Both species are listed as threatened under the Federal Endangered Species Act. In addition, the White and Puyallup Rivers provide habitat for other state priority fish species such as winter steelhead, pink, coho, sockeye and chum salmon, and cutthroat trout. Therefore, fish passage and rearing in smaller streams is an important function of the city's shorelines. Priority fish species have not been identified within the Lake Tapps shoreline planning area.

Modifications to the river system have resulted in reduced levels of ecosystem functioning, including hydrology, water quality, riparian habitat, sediment transport, and in-stream habitat. Changes to hydrology focus on modified flow regime due to dam construction, diversion, and urban development. River management and levees have reduced the connection between the rivers and their floodplains, changing the spatial extent of habitats, and increasing the potential for negative water quality impacts. Wood, in the form of riparian trees and in-channel wood, is generally lacking throughout the system, which negatively impacts riparian and aquatic habitats. In general, the level of modification increases moving

downstream in both river systems, and thus, results in a higher occurrence of riverine disturbances.

Important features of Sumner's shoreline environment that provide habitat include:

- Streams (fish and wildlife corridors and sources of fluvial sediments);
- Riparian zones (vegetated bars and vegetation overhanging the stream reach);
- Wetlands; and
- Aquifer recharge areas.

Aquatic and terrestrial species found in or near Sumner that utilize crucial shoreline habitat include:

- Salmonids (including listed species such as Chinook, steelhead, pink, coho, sockeye and chum salmon, cutthroat trout and bull trout);
- Resident cutthroat;
- Waterfowl and other near shore birds;
- Salamanders, frogs, amphibians; and
- Mammals: raccoons, beavers, deer.

2.4 Land Use and Public Access

According to Pierce County Assessor records (2008), current land use in Sumner's shoreline planning area is a mix of vacant, industrial/manufacturing, residential, and parks/open space uses. Lands designated vacant are currently the dominant land use, constituting 43 percent of the entire shoreline planning area. While the term "vacant" may not always accurately reflect current conditions (such as protected open space, agriculture, wetlands, or lands with development restrictions), the classification generally indicates that no structural improvements have been made or assessed for taxes on the property.

Table 2. Major Land Uses in Shoreline Planning Area

Land Use	Percent in Shoreline Planning Area
Vacant	43%
Industrial/Manufacturing	16%
Residential	14%
Open Space	11%

Industrial/manufacturing is the second most common land use (16 percent of entire shoreline planning area) focused almost entirely along the White River. Residential land uses are slightly less common (14 percent of entire shoreline planning area) and are mainly concentrated along the Puyallup River as well as segments along the White River. Designated parks and open space lands compose 11 percent of the entire shoreline planning area with the largest acreage in Segment F at the Sumner Meadows Golf Links.

Water-dependent uses within Sumner are limited to boat launches and utilities. The Puyallup Tribe launch boats into the Puyallup River at the Confluence Park as part of their fish-counting research. Water in Lake Tapps is released to the Dieringer Flume via an outfall structure. Even though the Puget Sound Energy Hydropower Project at Lake Tapps ceased operation in January 2004, this outfall structure is likely still considered a water-dependent use. There is an outfall associated with the City's wastewater treatment plant on the White River. There are two other mapped stormwater and sewer outfalls along the rivers in the City. There are no docks, piers, or marinas within Sumner shorelines.

Public access and educational opportunities are provided at approximately 19 locations in the city and its UGA. Existing open space within the shoreline planning area includes both public and private utilities and facilities along with wetlands, undeveloped agricultural lands, vacant land, and the river corridors themselves. Major parks and facilities in the shoreline planning area provide access to a wide variety of activities. Public access to Lake Tapps within the shoreline planning area is not available. Improvements and enhancements to existing park and open space resources are planned in the near future.

2.5 Shoreline Alterations

Riverine ecological processes in the Puyallup and White Rivers, through the Sumner reach, have been altered by "shoreline modifications" related to the development of flood control infrastructure. Shoreline modifications refer to structural alterations of the shoreline's natural bank, including riprap, bulkheads, docks, piers or other in-water / overwater structures. Such modifications have been used to stabilize the shoreline and prevent erosion. Both the Puyallup and White Rivers are lined through their entire length in Sumner with a system of levees and concrete revetments that were built in the early 1900s. Over time, vegetation has grown and obscured many of the revetments and levees within the Sumner shoreline planning area.

The White and Puyallup Rivers have experienced large scale alterations that have affected the functioning of these river systems. Historical channel change includes the avulsion of the White River channel to the south during a destructive flood in 1906 (Crandell, 1963). Prior to that date, the White River split into two branches on the south side of Auburn. The main branch of the river flowed northward to the Lower Green River. The smaller branch flowed southward as the Stuck River, which joined the Puyallup River. The White River was permanently diverted southward with the construction of diversion levees completed as part of a Corps of Engineers project in 1914. Changes in channel morphology have included the straightening, channelizing, installation of levees and revetments, and construction of bridges and other river crossings. These levees were typically installed more than 50 years ago, and these levees would not meet current engineering standards (King County, 2007).

This alteration initiated a series of projects intended to manage the size, location, and behavior of the Puyallup River and its tributaries (King County, 1988). Between 1908 and 1917, significant relocation, armoring, and diking of the Puyallup River was completed. Much of the work was completed under the auspices of the Inter-County River Improvement District, which was formed as an organization to share costs between King and Pierce Counties to address river issues surrounding the White River's change of alignment into the Puyallup basin (King County, 1988). After the White River was fully diverted to the Puyallup Basin, the Pierce County River Improvement District maintained levees and revetments. That maintenance is now performed by Pierce County Public Works and Utilities.

The hydrology of the White River has also been modified with the installation of the Mud Mountain Dam in 1948. The Mud Mountain Dam was installed at RM 29, primarily for flood control purposes. Mud Mountain is a 'run of the river' dam,

passing flows up to 15,000 cfs largely unchecked, and retaining higher flows (GeoEngineers, 2003).

The system of channel and flood control structures paralleling the White and Puyallup Rivers have highly modified these systems through the City and surrounding area. Both rivers are channelized and reaches of both have been historically dredged as part of flood control efforts. Gravel removal has been proposed as part of flood control efforts still occurs on reaches of the Puyallup River, including areas within and near the City (work completed by the Pierce County Department of Surface Water Management). Revetments and levees limit connectivity with remaining riparian habitat and wetland areas located within adjacent floodplains, and limit overbank conveyance and dynamic storage of flood flows (Tetra Tech, 2009).

The existing levees and high river flows limit public access to the White and Puyallup Rivers. With the exception of bridges, and various power line crossings, there are no docks, piers, or over water structures located on the Puyallup River, White River, or Lake Tapps in the Sumner shoreline planning area. There are no culverts on the main channels of the White or Puyallup Rivers. However, tributaries with culvert barriers within 200 feet of the mainstream reaches have been identified and constitute a concern for fish passage.

3.0 RESTORATION PLANNING

3.1 Restoration Framework

This restoration plan seeks to establish a basic framework for improving the quality and sustainability of Sumner's shoreline resources over time. The following SMA concepts should guide identification, evaluation and prioritization of restoration opportunities:

- Restoration or enhancement should support the overarching goal that local shoreline master programs "serve to improve the overall condition of habitat and resources within the shoreline area…"(WAC 173-26-201[2][c]); and
- Restoration should be designed to address areas where shoreline ecological functions have been impaired as a result of past development activities.

A number of local and regional planning efforts have been developed to address water resource management, water quality, and salmon habitat recovery (see Section 3.2). These existing plans and programs provide a framework of goals, policies, and in some cases, funding mechanisms. The goals, policies, and actions identified in this restoration plan should coordinate and be consistent with this broader framework of conservation and restoration work in the region.

3.2 Existing Plans and Programs

3.2.1 City of Sumner

NPDES Permit Program: The City of Sumner is a Phase II community under the state NPDES permit program. In compliance with permit requirements, for the past several years, the City has had a public education program to involve and educate the public about stormwater issues. For example, the City partners with the Pierce Conservation District Stream Team on volunteer efforts, and distributes educational materials from Puget Sound Starts Here to encourage citizens to prevent water pollution. Plans are underway to begin a rain garden installation program for city residents (City of Sumner, 2011a).

24th Street Interchange Biological Opinions: The City of Sumner and Washington State Department of Transportation (WSDOT) applied for a Corp of Engineer (COE) permit to authorize one acre of wetland fill to allow for development of the 24th Street Interchange, providing direct access from SR 167 to north Sumner. WSDOT submitted a Biological Assessment to the COE. The COE requested Endangered Species Act Section 7 formal consultation with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS).

The NMFS Biological Opinion estimated that 1,562 acres of land would be served by the interchange of which approximately 640 acres were within the FEMA designated 100-year floodplain. Around 771 acres of land served by the interchange was considered underdeveloped or vacant with no plans for development (NMFS, 2003).

The Biological Opinions issued by NMFS concluded that the proposed action is not likely to jeopardize the continued existence of Puget Sound (PS) chinook (Oncorhynchus tshawytscha) Evolutionarily Significant Unit (ESU) (NMFS, 2003). The opinion also authorized incidental take for future construction in the White River valley portion (approximately 771 acres) of the action area that might harm listed salmonids. The Biological opinion issued by USFWS concluded that the proposed action is not likely to jeopardize the Coastal/Puget Sound bull trout (USFWS, 2003). The opinions established terms and conditions which applied to the White River within the action area. In 2004, the City of Sumner adopted and updated its Trail Plan, Critical Areas Ordinance and Shoreline Master Program to address and comply with the Biological Opinions' terms and conditions. Restoration opportunities within the White River floodplain are shown within this Restoration Plan.

3.2.2 Puyallup River Watershed Council

The Puyallup River Watershed Council (PRWC), formed in 1996, includes representatives of local governments, businesses, elected officials, environmental agencies, non-profit groups and private citizens. The PRWC provides stakeholders in the watershed a forum in which to promote and implement projects that protect the environmental, economic, and cultural health of the watershed. PRWC has ten broad goals related to clean water, healthy native fish and wildlife, sustainable land use, viable agriculture and forestry, quality outdoor recreation, natural flow patterns and groundwater recharge, vegetated corridors, management of solid waste, resident education, and sustainable communities. Pierce County Public Works and Utilities provides support to the PRWC. See the following website for more information:
www.piercecountywa.org/pc/services/home/environ/water/ps/prwc/main.htm

The City of Sumner is a member of the Puyallup River Watershed Council. The Council developed a five-year action agenda to focus its efforts from 2007 – 2011. The action agenda identifies the top ten priority actions for the watershed and identifies which actions are appropriate for implementation by each member jurisdiction of the Council. For Sumner, the identified priority actions include:

- Management of Runoff from New Development – Low Impact Development and Erosion and Sediment Control on Construction Sites
- Stormwater Management – Facility Maintenance and Retrofitting
- Streamside and Riparian Planting
- Preserve and Restore Aquatic and Terrestrial Habitat
- Water Quantity Management (Flooding and Water Supply)
- Education, Outreach and Public Involvement
- Monitoring and "State of the Watershed" Assessment (PRWC, 2007).

3.2.3 Pierce County

Several County-led programs and plans address restoration opportunities and projects within the shoreline areas of Pierce County. Each of these programs and plans involves community stakeholders, the Tribes, non-governmental organizations, and other partners. Some of the major Pierce County restoration programs underway include the Pierce County Lead Entity for Salmonid Recovery in WRIA 10/12, the County's Basin Planning efforts through Public Works and Utilities, and an update to the Pierce County Rivers Flood Hazard Management Plan.

Pierce County Lead Entity for Salmonid Recovery in WRIA 10/12

The 1999 Washington Legislature created and authorized the Salmon Recovery Funding Board (SRFB) to guide spending of funds targeted for salmon recovery activities and projects. The legislation also included a ranking process that provides an opportunity for local organizations to prioritize projects from their watersheds before they are submitted to the SRFB. Pierce County serves as the "Lead Entity" for the Puyallup/White and Chambers/Clover watersheds ranking process. Projects from both watersheds are ranked together and only one list is submitted to the SRFB for consideration. Project ranking is performed by a "Citizens' Advisory Committee" (CAC) of stakeholders from both watersheds. A Technical Advisory Group (TAG) supplies the most up to date scientific data to the CAC. The CAC then prioritizes proposed salmon habitat protection and restoration projects. Once

prioritized, the Lead Entity Coordinator submits the list to the State Salmon Recovery Board for funding decisions. See the following website for more information:
www.co.pierce.wa.us/pc/services/home/environ/water/ps/leadentity.htm

Basin Planning

Basin planning is an important component of shoreline restoration in Pierce County. Pierce County Public Works and Utilities – Surface Water Management has developed basin plans for 10 areas within the County. The plans identify and prioritize projects to improve flood management, water quality, and riparian habitat. The first phase of developing a basin plan is to study the existing characteristics of the basin, such as flooding, water quality, and fisheries. This information is used to develop a prioritized list of projects and actions to reduce flood damage and improve water quality and floodplain habitat in the basin. In 2005, a basin plan for the Mid-Puyallup River was issued. Basin plans for the White River/Lake Tapps and Upper Puyallup/Carbon River basins are currently being developed.

3.2.4 Pierce County Noxious Weed Control Board

Washington State requires the control of noxious weeds through the Revised Code of Washington (RCW) Title 17, and Title 16 of the Washington Administrative Code (WAC). State law requires all landowners (private or agency) to manage weeds on their properties (RCW 17.10.140). To implement these requirements, the State established the Washington State Noxious Weed Control Board (WSNWCB) (Chapter 16-750 WAC). The State Board oversees the statewide management of noxious weeds in an effort to ultimately prevent establishment of invasive vegetation and preserve native species and habitat. The State Board identifies and classifies weeds that are of concern in the state and maintains the state noxious weed list. The State Board has determined that noxious weed control is best implemented at a local level due to the variation in ecosystems across the state. Therefore Chapter 17.10 RCW establishes Noxious Weed Control Boards for counties in the state. Pierce County Code Chapter 8.24 specifically activates the Pierce County Noxious Weed Control Board (PCNWCB). The County Board enforces the state noxious weed control regulations and refines the state noxious weed list to include species present in Pierce County. The County Board provides guidance on methods of control, and has the authority to cite property owners for failing to comply with weed control requirements.

3.2.5 Flood Hazard Management Plans and Studies

Lower Puyallup River Flood Protection Investigation

Pierce County completed the Lower Puyallup River Flood Protection Investigation in June 2009 to identify flood reduction strategies along the lower Puyallup River. The investigation was completed with regional (multi-jurisdictional) input and to meet US Army Corps of Engineers standards to allow for Federal assistance with lower Puyallup River flood control efforts (Tetra Tech, 2009). The investigation was completed under the context of updated flood maps, which extended the jurisdictional floodplain landward of many lower Puyallup levees[1]. The investigation examined existing conditions, riverine and floodplain dynamics, and potential economic implications of various flood protection alternatives for the lower Puyallup River system. The investigation presents technical information that should be considered, along with other plans, in planning and design of flood hazard management projects along the lower Puyallup system, including integrated restoration objectives. See the following website for more information: www.co.pierce.wa.us/pc/services/home/environ/water/cip/lpuyrivleveeinvest.htm

Efforts to implement strategies identified within the Investigation, as well as within other planning efforts, are ongoing. Multi-jurisdictional coordination occurs through the Puyallup River Executive Task Force. More information is available through the Task Force webpage:
www.co.pierce.wa.us/pc/services/home/environ/water/cip/pretf.htm

United States Geological Survey (USGS) Study

The USGS performed a detailed analysis of sediment transport and flood elevations in the lower reaches of the White and Puyallup Rivers (Czuba et al., 2010). This study supplemented data and analysis performed in the 1980s and evaluated the effectiveness of different river-management options including levee setbacks, gravel-bar scalping and a combination of techniques at three sites to determine which restoration technique is best suited to address flooding and aggregation. This

[1] Updated flood maps were prepared to only consider levees when certified by the US Army Corps of Engineers as meeting specific criteria for flood protection; all levees (including many along the lower Puyallup) that did not meet this criteria were not considered in preparation of updated maps. FEMA is now reconsidering policies for consideration of uncertified levees, which may result in future changes to the jurisdictional floodplain within the Puyallup and White River systems.

study concluded that both the setback levee and gravel-bar scalping could reduce high-flow water-surface elevations; however, setback levees resulted in greater local reductions in water surface elevations. River reaches with setback levees can store more water during flood events and attenuate flood peaks (Archer, 1989; Woltemade and Potter, 1994; Anderson, 2006). Even though the model results show only local reductions in water-surface elevations due to setback levees, flood-peak attenuation could reduce water-surface elevations downstream.

Pierce County Flood Hazard Management Plan

The Pierce County Rivers Flood Hazard Management Plan, under development, will replace and geographically extend the 1991 Puyallup River Basin Comprehensive Flood Control Management Plan. The actions recommended in the final plan will focus on reaches of the main stems of all major rivers within the County, including the Puyallup and White Rivers through Sumner. Recent flood events and increasing development pressure in areas within and surrounding Sumner has focused attention on flood management in Pierce County, making the timing for development of this plan ideal. The draft plan is expected to be completed in fall 2011. See the following website for more information: www.co.pierce.wa.us/pc/services/home/environ/water/wqws/floodhazmgmtplanMain.htm

King County Flood Hazard Management Plan

The King County Flood Hazard Management Plan was adopted in 2007, and provides goals, policies, management and implementation strategies, and basin-specific action plans to guide overall flood hazard management across the County. Action plans focused on floodplain and flood hazard management for the White River are relevant to Sumner. In addition, the polices included in the plan provide a framework for inter-governmental cooperation, multi-objective management, and protection of natural floodplain functions and values. The plan is available at: www.kingcounty.gov/environment/waterandland/flooding/documents/flood-hazard-management-plan.aspx

3.2.6 Dieringer Flume and Lake Tapps Studies

The Dieringer Flume is the outlet or tailrace from the former hydroelectric project on Lake Tapps. The flume discharges to the White River in Segment F of Sumner's shoreline planning area. Under a White River management agreement between the Cascade Water Alliance and Native American tribes, a tailrace study is being

developed to identify water quality and fishery issues and determine what improvements are needed at the tailrace. The purpose is to improve water quality discharged from Lake Tapps and prevent the entry, stranding, or delayed migration of salmonids in the tailrace. The parties of the agreement will work with local agencies to develop a management plan to protect the water quality of Lake Tapps by addressing stormwater discharges and septic system filtration into the lake. A water quality monitoring plan will also be developed. See the following website for more information: http://cascadewater.org/lake_tapps_agreements.php.

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4.0 RESTORATION PRIORITIES AND OPPORTUNITIES

4.1 Restoration Priorities

The top restoration priorities for Sumner include:

- Protection of remaining mature forest and intact riparian vegetation along the shoreline.
- Partnerships with Pierce County Public Works and Utilities and other regional agencies to accomplish flood management and ecosystem restoration including projects that set back levees and replace hard shoreline armoring with "soft" alternatives.
- Management of invasive plant species in riparian zones and revegetation with native trees and shrubs.
- Education and assistance to landowners to help them restore degraded shoreline areas and protect high-quality shoreline habitats.
- Continued participation in the Puyallup River Watershed Council and its restoration efforts.

4.2 Restoration Opportunities

4.2.1 Programmatic Restoration Opportunities

Certain restoration actions should be broadly and comprehensively implemented on a programmatic basis to help achieve restoration goals. The following programmatic actions are recommended for shorelines within Sumner. Opportunities to partner with other jurisdictions and organizations on programmatic efforts should also be explored.

Education and Incentives:

a) Educate property owners about proper vegetation/landscape maintenance (including preservation of native vegetation along riparian corridors) to promote shore stabilization and protect water quality.

b) Encourage low impact development practices for shoreline property owners.

c) Educate private property owners about the negative impacts of shore armoring and encourage soft shore protection where shore protection is unavoidable.

d) Encourage incentive programs for shoreline property owners, such as transfer or purchase of development rights and tax incentives for shoreline restoration and protection.

e) Where shorelines have been modified, provide incentives to encourage redevelopment activities to include salmonid habitat restoration.

River Shorelines:

a) Encourage levee setback projects to allow for channel migration on rivers and provide off-channel habitat for salmonids.

b) Remove culverts and blockages from smaller tributaries and replace with bridges to allow for fish passage and channel migration.

c) Restrict new development in the floodplain and channel migration zone.

Infrastructure:

a) Implement best management practices to control runoff from agricultural lands.

b) Retrofit stormwater systems using Low Impact Development (LID) strategies.

c) Incorporate native tree and shrubs plantings as part of planned trail expansions.

Planning and Coordination:

a) Match mitigation, including off-site and compensatory mitigation, to appropriate restoration and enhancement activities as identified in salmon recovery, watershed management plans and the SMP restoration plan.

b) Coordinate SMP restoration with salmonid recovery and watershed management plans to align with projects prioritized in salmon recovery plans.

c) Survey invasive vegetation in the shoreline and establish a control program in coordination with the Pierce County Noxious Weed Control Board.

d) Coordinate restoration efforts with the Puyallup River Watershed Council, Pierce Conservation District, and Pierce County Surface Water Management.

Flood Hazard Management Planning:

a) Assess feasibility of existing revetment / levee removal and levee setback alternatives for restoration projects within the Puyallup and White River shoreline areas.

b) Integrate restoration with flood hazard management efforts to reestablish and protect natural floodplain functions.

c) Consider downstream and upstream implications for flood stage and sediment dynamics resulting from restoration projects.

4.2.2 Site-specific Restoration Opportunities

Table 3 below summarizes protection and restoration opportunities, primarily as described in the Shoreline Inventory and Characterization Report (ESA Adolfson, 2010). Additional restoration actions are identified by the Pierce and King Counties as part of flood hazard and WRIA 10 planning efforts. In general, WRIA 10 planning efforts have concluded that the most beneficial restoration activities for the White and Puyallup Rivers would include levee setbacks, floodplain reconnection, redistribution of large woody debris salvaged from Mud Mountain Dam Reservoir, and modifications to flows at Mud Mountain Dam. King County, Pierce County and WRIA 10 have identified several projects both within and in the immediate vicinity of Sumner; these projects are also identified in Table 3. All site-specific restoration opportunities are identified on Restoration Plan Maps 1 through 10 (Appendix A).

The opportunities described here are considered to be site-specific but may cover many parcels. For example, an opportunity may be appropriate at several locations, but may be implemented on individual parcels over time. Additionally, specific opportunity areas may apply to more than one location along the shoreline. Table 3 also provides an assessment of the scale and potential length of time required to implement restoration opportunities. For each identified opportunity, the table

identifies whether the project is of a short term, medium term, or long term nature. As detailed restoration assessment and prioritization occurs consistent with this plan, the initial assessment of timelines should be re-focused to create detailed schedules and benchmarks for those actions and areas with the greatest restoration potential.

Short term (ST) (approximately 1-3 years) restoration projects include those that could be implemented by local landowners and volunteers and that would benefit the areas that are most in need. Short term restoration efforts include habitat restoration and enhancement efforts in publically owned areas of the City's shorelines. These projects could be implemented in the near term, depending on grant cycles and coordination with volunteer and community organizations.

Medium term (MT) (approximately 3-5 years) restoration projects could include those that enhance Sumner shorelines that have been designated or acquired previously. These could also be implemented where there are public access lands that are not likely to be developed in the near future.

Long term (LT) (approximately 5-10 years) restoration projects could be those that require coordination with other jurisdictions or that cover larger land areas. These projects may be more difficult to implement and would likely require more planning and permitting.

Table 3. Restoration Opportunities

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment A – Eastern City Limits to Traffic Avenue Bridge	Two levee setback projects are identified in Segment A: Sumner Setback and Riverside Drive (GeoEngineers, 2008). The **Sumner Setback** site is located along the left (south) bank of the Puyallup, primarily within unincorporated Pierce County. The **Riverside Drive** site, located at and upstream of RM 10.7, would reconnect the Puyallup River with approximately 47 acres of historic, disconnected floodplain. Restoration would improve the functions in this segment by increasing active channel width, off-channel habitat and subsequently enhance habitat-forming processes. Enhance riparian vegetation by removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Vegetation enhancement opportunities located at the eastern and western ends of the segment. Protect mature forest at western end of segment. Several small tributaries join the Puyallup in this segment. There may be opportunities to enhance riparian vegetation and in-stream habitat at these stream confluences.	Floodplain connectivity Off-channel salmonid habitat Stream shading Organic inputs Wildlife habitat	Medium	Levee setback (Sumner Setback) – LT Vegetation enhancement – ST to MT Stream confluences – ST to MT	Vegetation enhancement opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010); Levee setback opportunities identified in Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008).

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment B – Confluence of White and Puyallup Rivers	Protect and enhance riparian vegetation in north part of segment. Revegetate part of the informal fishing area on City property adjacent to the City's Wastewater Treatment Facility, at the confluence of the White and Puyallup Rivers. Restrict public fishing access to a smaller area through use of fencing and signs. Flood protection improvement alternatives to minimize flooding potential at the Wastewater Treatment Facility are being assessed by the City and Pierce County as part of its Flood Hazard Management Planning effort. This project is in preliminary design and engineering phases. The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. Levee setback projects are identified on both banks of the Puyallup River starting at and extending downstream of the confluence (RM 9.5 to RM 10.2): Golf Course Oxbow Setback (left – south – bank) and White & Puyallup Rivers Confluence (right – north – bank) (GeoEngineers, 2008). The **Golf Course Oxbow Setback** site proposes to remove approximately 4,456 linear feet of existing levee located along the left (south) bank of the Puyallup River and construct a setback levee reconnecting approximately 42.2 acres of riparian and floodplain area. The **White & Puyallup Rivers Confluence** site proposes to remove approximately 4,423 linear feet of existing levee located along the right (north) bank and construct a set-back levee and reconnect approximately 30.2 acres of riparian and floodplain area. Both projects would reconnect the Puyallup River with remnant riparian wetlands, improve flood storage, reestablish natural sediment conveyance and storage processes, and enhance instream and riparian habitat.	Stream shading Organic inputs Wildlife habitat Minimizing contamination potential Floodplain connectivity	High	Vegetation enhancement – ST to MT Flood protection for Wastewater Treatment Facility – LT Bank stabilization replacement – MT to LT Levee setback (both identified projects) – LT	Vegetation and shoreline enhancement and bank stabilization opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010); Flood protection improvement alternatives identified from Flood Hazard Management Planning (Pierce County, 2011); Levee setback opportunities identified in Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008).

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment C – SR410 Bridge to Union Pacific Spur Bridge	The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. Protect and enhance riparian vegetation throughout undeveloped portions of segment by removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings.	Off-channel salmonid habitat Stream shading Organic inputs Wildlife habitat	Medium	Bank stabilization replacement – MT to LT Vegetation enhancement – ST to MT	Vegetation and shoreline enhancement and bank stabilization opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010).
Segment D – Union Pacific Spur Bridge to Tacoma Road Bridge	Bank stabilization replacement – similar to Segment C Restore existing riparian vegetation throughout undeveloped portions of this segment. Control non-native invasive vegetation as needed. Sotain Creek joins the White River in this segment. There may be opportunities to restore riparian vegetation and in-stream habitat at the confluence.	Stream shading Organic inputs Wildlife habitat	Medium	Bank stabilization replacement – MT to LT Vegetation enhancement – ST to MT Stream confluence – ST to MT	Vegetation and shoreline enhancement and bank stabilization opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010).
Segment E – Tacoma Road Bridge to Public Land	The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In some portions of this segment, it may be feasible to restore channel and bank conditions by removing existing revetments and cutting back fill in the riparian area. This would increase the active channel width and subsequently enhance habitat-forming processes. Restore and enhance riparian vegetation along both banks of the White River by removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Enhance riparian vegetation along the lower portion of Salmon Creek. Salmon Creek joins the White River in this segment. There may be opportunities to restore riparian vegetation and in-stream habitat at the confluence.	Off-channel salmonid habitat Increased active channel width Stream shading Organic inputs Wildlife habitat	Medium	Bank stabilization replacement – MT to LT Vegetation enhancement – ST to MT Stream confluence – ST to MT	Vegetation and shoreline enhancement opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010).

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment F – Public Land to 8th Street Creek	Bank stabilization replacement – similar to Segment C Three levee setback projects are identified within this segment: Interurban-White Site, 24th Street E Pointbar, and 8th Street E Setback (GeoEngineers, 2008). For all project opportunities, existing levees that constrain the channel would be removed, with new levees constructed farther away from the main channel. The **Interurban-White** site is located south of 32nd Street East and east of 142nd Avenue East. The project would remove approx. 150 feet of existing levee and construct a setback levee reconnecting approximately 3.5 acres of riparian and floodplain area. The **24th Street E Pointbar** site is located on the left (east) bank south of the Sumner Meadows Golf Course and west of the East Valley Highway. The project would remove approximately 1,500 linear feet of existing levee and construct a setback levee reconnecting approximately 9.2 acres of riparian and floodplain area. The project, currently in planning and initial design stages by the City, would improve connectivity of the White River to off channel habitats. The **8th Street E Setback** site is also located on the left (east and north) banks of the mainstem upstream of the 24th Street project site. The project would remove approximately 4,709 linear feet of existing levee and construct a setback levee reconnecting approximately 29.4 acres of riparian and floodplain area. The project would allow for and promote channel migration and would moderately promote the creation of complex channel structure. Existing narrow riparian vegetation corridors on City owned golf course and agricultural property could be expanded with large-scale native tree and shrub plantings near the river. Continued agricultural use could be accommodated by incorporating riparian buffer strips on portions of the property. The Dieringer Flume could be restored to a meandering stream channel near the river confluence;	Floodplain connectivity Off-channel salmonid habitat Stream shading Organic inputs Wildlife habitat	High	Bank stabilization replacement – MT to LT Levee setback – LT Vegetation enhancement – ST to MT Stream confluence – ST to MT Biological opinion conditions – ST	Vegetation and shoreline enhancement opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010); Levee setback opportunities identified in Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008). Habitat preservation – Sumner Trail Master Plan (City of Sumner Community Development Department, 2008); 24th Street Interchange Biological Opinion conditions and recommendations (NMFS, 2003; USFWS, 2003).

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment F – Public Land to 8th Street Creek	flows from the flume could be diverted to create or enhance off-channel habitats. The Sumner Trail Master Plan recommends that the wooded area near 24th be preserved and made more accessible with footpaths. Since most of the area is wetland and one of the last areas of riparian woodland, according to the Plan, it should be preserved as habitat. Protect and enhance riparian vegetation throughout this segment, particularly in Riverbend Park. Control non-native plant species (e.g. Himalayan blackberry). Establish a best management practices plan for the golf course. Plan could include plantings to expand the native vegetation along the river, and measures to reduce use of chemicals. 8th Street Creek flows through the golf course and joins the White River in this segment. There may be opportunities to restore riparian vegetation and in-stream habitat at the confluence. The 24th Street Interchange Biological Opinion, described above in Section 5.3.4, included the following two conditions that pertain to the White River: 1) The City of Sumner must permanently prohibit impervious development on 30 acres of City-owned property east of the White River. 2) The City of Sumner must permanently restrict new development on 88 acres of City-owned property east of the White River to a maximum impervious coverage of 40 percent. In addition, in the Biological Opinion USFWS recommended that nonfunctioning levees above the Dieringer Powerhouse outfall (RM 3.6) on the White River be removed or setback, in order to restore floodplain and riparian connectivity and create off channel habitat.				

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment G – 8th Street Creek to Stewart Road Bridge	Bank stabilization replacement – similar to Segment C Two levee setback projects are identified: continuation of the **8th Street E Setback** site (described in Segment F) on the left (north) bank and the **Pacific Pointbar** site on the right (south) bank (GeoEngineers, 2008). The Pacific Pointbar proposed project would remove approximately 2,516 linear feet of existing levees and construct a setback levee reconnecting approximately 169 acres of riparian and floodplain area.	Floodplain connectivity Off-channel salmonid habitat Stream shading Organic inputs	Medium	Bank stabilization replacement – MT to LT Levee setback – LT	Bank stabilization replacement identified from Inventory and Characterization Report (ESA Adolfson, 2010); Levee setback opportunities identified in Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008).
Segment H – Stewart Road Bridge to City Limits	The majority of land within this segment is upland and wetland habitat, with moderate diversity. Protection of the land within this segment could help maintain quality habitat for sensitive species. The **Countyline Levee Setback Project** is identified on the left (east) bank of the White River partially within Segment H. The project crosses north into King County, extending upstream of City limits, and has been identified by floodplain restoration planning efforts for both Pierce and King Counties. The project would remove approximately 5,822 linear feet of existing levee / revetment and construct a setback levee that would reconnect approximately 84.6 acres of floodplain, riparian area springs, side-channels and wetlands located at the site. The project is in design and engineering phases, with construction anticipated between 2012 and 2013.	Wildlife habitat Stream shading Organic inputs Floodplain Connectivity	High	Land acquisition – LT Levee setback – ST	Habitat protection opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010); Levee setback opportunities identified in: Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008) and King County's Lower White River Countyline to A Street project webpage (King County, 2011).

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Upstream of City	Three levee setback projects are identified on both shorelines of the White River immediately upstream of the City: continuation of the Countyline Project (left bank) and two projects located within City of Pacific parks, both on the right (west) bank. See Segment H discussion above for details on the Countyline Project (GeoEngineers, 2008). At both the **Pacific Park Project** site (within Pierce County) and the **Pacific City Park / Lower White River Right Bank Levee Setback Project** site (within King County), the White River is confined by concrete revetments and has no functional riparian buffer. These areas are currently used as parks by the City of Pacific; however, they are contained largely within the 100-year floodplain and contain several historically active channels. The proposed projects would repair and or replace portions of damaged revetment. The project will also install logs and rocks along the toe of the slope and re-stabilize the bank face using bioengineering techniques. Levees would be setback to restore floodplain connectivity. The King County site is under preliminary alternatives analysis and planning, with construction anticipated in 2015-2016.	Wildlife habitat Stream shading Organic inputs Floodplain Connectivity	High	Levee setback – ST / MT	Levee setback opportunities identified in: Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008); King County's Lower White River Right Bank project webpage (King County, 2011).
Segment UGA-1 – Lake Tapps	The shoreline of Lake Tapps within this segment generally consists of mature, mixed forest and scrub-shrub wetland. There is relatively little shoreline development within this segment. Protection of the land within this segment could help maintain quality habitat for sensitive species and the overall biodiversity of the area.	Wildlife habitat Stream shading Organic inputs	High	Habitat protection – ST	Habitat protection identified from Inventory and Characterization Report (ESA Adolfson, 2010).

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment UGA-2 – Riverside Park to City Limits	Two levee setback projects are identified in Segment UGA-2: Riverside Drive and Riverside Park (GeoEngineers, 2008). The **Riverside Park** site is also located on the right (east) bank at RM 12.8; the site extends through Riverside Park, a historic floodplain area that is now disconnected from the mainstem. Levee setback opportunity would reconnect approximately 47 acres of floodplain, including restored connection to an unnamed tributary with remnant side channel habitat. Enhance riparian vegetation by removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Vegetation enhancement opportunities located at Riverside Park. Riparian vegetation in the western part of the segment could also be protected and enhanced.	Floodplain connectivity Off-channel salmonid habitat Stream shading Organic inputs Wildlife habitat	Medium	Levee setback (Riverside Drive / Riverside Park) – LT Vegetation enhancement – ST to MT	Vegetation enhancement opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010); Levee setback opportunities identified in Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008).

4.3 Existing Capital Improvement Projects

In addition to the opportunities described above, the City is already initiating and planning several capital improvement projects near the shoreline. These projects may provide opportunities for restoration coupled with the design and implementation of the primary capital improvement. Table 4 summarizes information from the City's current Transportation Plan (City of Sumner, 2011b) and Improvement Plan for Parks and Open Space (City of Sumner, 2003). Some of the projects shown below are also included in the Sumner Trail Master Plan (City of Sumner Community Development Department, 2008).

Table 4. Existing Capital Improvement Projects

Shoreline Segment	Project Name	Description	Funding Obtained?	Cost	Document Source	Rank
B-C	Wastewater Treatment Plant to Bridge Street Trail	State St. to Main St. Connects to trail at WWTP.	Yes	$654,000	Six Year Transportation Plan 2012-2017	Trails 6
B	Traffic Avenue	Thompson ST/WB SR 410 Ramps to the Puyallup River Bridge. Widen roadway and existing WSDOT overpass to 5-lanes. Restripe lanes and revise signal timing.	No	$11,000,000	Six Year Transportation Plan 2012-2017	Arterial 9
C-D	Bridge Street to Fryar Avenue Trail	Main St. to Puyallup St. Completes trail through town.	No	$600,000	Six Year Transportation Plan 2012-2017 Sumner Trail Master Plan	Trails 8

Shoreline Segment	Project Name	Description	Funding Obtained?	Cost	Document Source	Rank
E (Salmon Creek confluence with White River)	Salmon Creek Open Space Purchase	Portions of the riparian corridor along Salmon Creek would be purchased to create contiguous open space along the stream. The funds would be used to link areas already set aside for conservation as required mitigation for development impacts.	–	$320,000	2003-2009 Improvement Plan for Parks and Open Space	–
F	24th St. Bridge and corridor to E. Valley	Determine alignment, preliminary costs and rerun traffic model to determine when this may be needed.	No	$250,000	Six Year Transportation Plan 2012-2017	Arterial 8
F	24th Street Trail connection	Extend from the existing 24th Street Bridge (pedestrian bridge) Trail, across the #9 Ditch to the south end of the City of Sumner's property.	No	$425,000	Six Year Transportation Plan 2012-2017	Trails 7
G	River Bend Park segment (White River Trail)	Extend trail north from 16th St. across river and along golf course to trail segment along new stream.	Yes	$2,200,000	Six Year Transportation Plan 2012-2017 Sumner Trail Master Plan	Trails 5
Break between G & H	Stewart Road (8th Street) White River Bridge	This bridge would replace the existing 2-lane bridge. It will be two unequal length spans. The width will be 74 feet to accommodate 4 lanes, a sidewalk on one side and a trail crossing on the other.	No	$9,500,000	Six Year Transportation Plan 2012-2017	Arterial 3

There are no Pierce County capital improvement projects in Sumner's urban growth area or proposed urban growth area (Pierce County Department of Public Works and Utilities, 2009 and 2010). Although Pierce County CIP projects have not been identified in Sumner and its UGA, several restoration opportunities projects are in the planning or design stages and have been included in Table 3 Restoration Opportunities.

5.0 POLICY DEVELOPMENT

5.1 Existing City of Sumner Goals, Policies and Objectives

Goals, policies and objectives that relate to protection and restoration of shoreline resources are established in the Sumner Comprehensive Plan (December 2010, or as amended hereafter) under the Shoreline Master Program Element, Environmental Element and Parks and Open Space Element. Goal statements address the preservation and protection of the shoreline environment; protection of surface water quality; protection of unique, valuable and critical plant and wildlife habitat; and preservation of significant open space.

5.2 Proposed SMP Restoration Goals and Policies

Shoreline Master Program goals, policies and objectives should be consistent with and integrated into the Sumner Comprehensive Plan. As the City works through the SMP update process, the following potential goals and objectives related to shoreline restoration could be added to the Comprehensive Plan under the Shoreline Master Program Element. The goals are generally focused around four key areas: 1) coordinating with regional plans and programs, 2) opportunities focused on public property along the shorelines, 3) voluntary or incentive based and public education opportunities and 4) flood hazard management. Goals and objectives that relate to flood hazard management are generally consistent with the King County River and Floodplain Management Plan (King County, 2007). The content is organized to be consistent with the structure and organization of the Sumner Comprehensive Plan elements. Some of the objective statements below are already included in the Draft SMP (March 2011).

Goal: *To encourage cooperative restoration actions involving local, state, and federal public agencies, tribes, non-government organizations, and private landowners.*

Objective: Identify specific restoration opportunities where the City can take the lead with support from other regional entities.

Objective: Encourage establishment of wetland mitigation banks on appropriate sites that conform to state and federal guidelines.

Objective: Consideration should be made for potential adverse effects of global climate change when designing restoration and remediation projects.

Goal: *To integrate restoration efforts with capital improvement projects.*

Objective: Incorporate habitat enhancement elements into the design and implementation of public infrastructure improvement projects

Objective: Prioritize enhancement and restoration efforts at public parks and publically-owned open space lands.

Goal: *To encourage voluntary restoration as part of development proposals.*

Objective: Employ incentives and encourage actions in shorelines and critical areas that restore the ecological functions and ecosystem-wide processes of the City's shorelines.

Objective: Encourage removal of invasive vegetation and planting of native vegetation on private property.

Objective: Encourage replacement of levees and revetments with alternative shoreline stabilization materials whenever feasible.

Objective: Use this restoration framework to integrate compensatory mitigation projects into the broader restoration vision for the city.

Goal: *To educate the Sumner community on restoring shoreline habitat.*

Objective: Educate the community and encourage public involvement in the restoration of the shoreline by creating and leveraging programs, such as the NPDES Phase II stormwater requirements.

Objective: Develop a community education and incentive program to identify and develop restoration opportunities on private property which support the overall goals of shoreline management.

Objective: Establish public education materials to provide shoreline landowners technical assistance about the benefits of native vegetation plantings.

Objective: Identify areas where kiosks and interpretive signs can enhance the educational experience of users to the shoreline.

Goal: *To encourage inter-governmental coordination and cooperation with neighboring counties and cities in order to implement consistent flood hazard management objectives for the White and Puyallup Rivers.*

Objective: Continue participation in Pierce County flood hazard management planning and implementation efforts, including implementation of identified levee setback opportunities.

Objective: Continue participation in the Puyallup River Executive Task Force.

Objective: Continue to work with Pierce County to provide flood protection for critical City facilities, including the Wastewater Treatment Facility, in order to minimize potential harmful ecological impacts that could occur during flood events.

Objective: Partner with King County and neighboring cities in planning and implementation of flood hazard reduction and floodplain restoration projects to provide additional flood storage capacity within and upstream of the City and enhance natural floodplain functions.

Objective: Establish clear lines of communication with the Corps of Engineers regarding operations of Mud Mountain Dam.

Goal: *To manage the Puyallup and White Rivers, tributaries, and their associated floodplains for multiple, and sometimes competing, uses and objectives. Flood hazard management actions should support long-term flood risk reduction outcomes.*

Objective: Identify and prioritize projects that meet flood hazard reduction and ecosystem restoration objectives.

Objective: Develop public education materials that highlight the importance of the multi-objective approach to flood hazard reduction; use recent and current projects as examples to illustrate how multi-objective approaches work in practice.

Goal: *To protect flood storage, conveyance, and ecological values of floodplains, wetlands, and riparian corridors and, when feasible, to enhance or restore these ecological functions and values. Flood risk reduction strategies and projects should be coordinated on a river-reach scale with the salmon habitat recovery plans.*

Objective: Encourage replacement of levees and revetments with alternative shoreline stabilization materials where feasible.

Objective: Restore, enhance, and protect native riparian forest communities along the White and Puyallup Rivers.

Goal: *To adopt and implement policies and regulations that meet or exceed Federal and State standards.*

Objective: Adopt and implement policies and regulations contained in Floodplain Management: Higher Regulatory Standards, prepared by the Federal Emergency Management Agency, Region 10 as well as Region 10 guidance for NFIP Compliance with the Endangered Species Act (developed after the release of the 2008 Biological Opinion for the NFIP within the Puget Sound region).

Objective: Seek higher levels of Community Rating System credit for implementation of higher regulatory standards for floodplain management.

Objective: Integrate floodplain management, shoreline management, and critical areas protections into a consistent and comprehensive program that is predictable for development projects and achieves consistency with the standards of the 2008 Biological Opinion for the NFIP and subsequent FEMA Region 10 compliance guidance.

6.0 IMPLEMENTATION

6.1 Funding and Partnership Opportunities

Funding opportunities for restoration projects include both federal and state grants and legislative funds administered by state agencies. For potential projects in the City of Sumner, the greatest likelihood of obtaining funding would result from continued participation in the WRIA 10 forum and strategic partnering with Pierce County, tribes, and state and federal agencies. Targeting funding requests to address levee setback projects would fit well into the scientific and restoration plans/goals of the organizations listed below. There are also opportunities to partner with non-profit organizations that can help to secure grant funding and recruit volunteers. A few of these programs and organizations most relevant to the City of Sumner are described below.

6.1.1 State and Regional Programs

Salmon Recovery Funding Board (SRFB)

With the listing of salmonid species under the Endangered Species Act in 1999, the Legislature created the Salmon Recovery Funding Board. Composed of citizens appointed by the Governor and five state agency directors, the Board provides grant funds to protect or restore salmon habitat and assist related activities. The SRFB works closely with local watershed groups and has helped finance over 900 projects.

6.1.2 Pierce Conservation District

The Pierce Conservation District (PCD) is a non-regulatory branch of state government that works with Pierce County landowners to protect water quality, improve fish and wildlife habitat, and conserve natural resources while maintaining a sustainable agricultural community (www.piercecountycd.org/).

The PCD works with interested landowners to develop conservation plans that identify current conditions and economically viable alternatives and best management practices (BMPs) to improve productivity while protecting soil and

water quality. Some of the BMPs incorporated into conservation plans include composting, roof runoff management, pasture planting, and filter strips. In addition, the PCD collaborates with the U.S. Fish and Wildlife Service (USFWS), Washington State Department of Fish and Wildlife (WDFW), WSU Cooperative Extension, Washington State Department of Ecology (Ecology), Department of Natural Resources, and Pierce County government to provide technical assistance for landowners in the County. Major projects include animal waste management, stream bank fencing, replanting stream bank areas, pasture management, improving fish and wildlife habitat, and installation of fish ladders and road culverts.

The PCD's StreamTeam program specifically educates residents about water quality monitoring and stream restoration plantings in the area. Storm drain stenciling kits are available for check-out. See the following website for more information: www.piercecountycd.org/streamteam.html

6.1.3 Native American Tribes

Muckleshoot Tribe

The Muckleshoot Indian tribe is a descendant of the Coastal Salish tribes that have inhabited the region surrounding the White and Green Rivers. The Tribe adopted its constitution in 1936 through the Indian Reorganization Act and is a federally recognized self-governing tribal government. In the 1960s and 70s, the Tribe was involved in a struggle over tribal rights to fish salmon at all of the "usual and accustomed" fishing sites. Following the Bolt Decision, which reaffirmed the Tribe's treaty fishing rights, the tribe's Natural Resources Department has focused primarily on salmon preservation and restoration of salmon habitat. See the following website for more information: www.muckleshoot.nsn.us

Puyallup Tribe

The Puyallup Tribe was one of several tribes that signed the Treaty of Medicine Creek in 1854 with Territorial Governor Isaac Stevens. This treaty established the boundaries of the Puyallup Reservation and spelled out specific rights for tribal members such as access to traditional hunting and fishing grounds. In 1990, the Tribe formally accepted a settlement of $162 million in cash, real estate and economic development programs in exchange for giving up claims to about 18,000 acres along Commencement Bay. This resolved disputes over property titles and allowed the Port of Tacoma to develop land for shipping terminals and other industrial uses. Tribal departments such as the Environmental and Natural Resources, Fisheries and Shellfish are committed to improving water quality and

habitat for fish and wildlife. The Tribe operates hatcheries and monitors fish runs and an elk herd, and works closely with local governments on a host of environmental issues. See the following website for more information: www.puyallup-tribe.com

6.1.4 Pierce County Programs

Conservation Futures Program

Conservation Futures is a Pierce County land preservation program intended to protect open space, timber lands, wetlands, critical habitats, and farm lands within the county. This program is funded through a State authorized county property tax. Taxes collected, identified as Conservation Futures, are used to acquire land, or the rights to future development of lands, for conservation purposes. Lands identified in the Sumner SMP as future restoration or conservation sites can be nominated by the City, or an agency, for purchase through this County-sponsored program.

Open Space-Public Benefit Rating System-Tax Program

Pierce County's Public Benefit Rating System (PBRS) provides for a reduction in property taxes for lands containing various open space features, such as streams, wetlands, estuaries, wooded areas, etc. These features are scored and the number of PBRS points correlates to a percent of market value reduction during the period of continued eligibility. This program can help property owners conserve ecologically important areas while reducing their tax burden. See the following website for more information: www.co.pierce.wa.us/pc/abtus/ourorg/at/open_space.htm

6.1.5 Non-profit Organizations

Cascade Land Conservancy

Cascade Land Conservancy is a non-profit organization working to conserve land in Pierce, King, Mason, Kittitas, and Snohomish Counties. The Conservancy has led the conservation of more than 150,000 acres over the last decade including approximately 20 properties in Pierce County. The Conservancy works with landowners using tools such as land purchase or donation, conservation easements, and stewardship endowments to preserve high-quality ecosystems. See the following website for more information: www.cascadeland.org

Friends of Pierce County

Friends of Pierce County is a nonprofit organization that involves the people of Pierce County in preserving and restoring the natural environment and promotes more livable communities. The organization seeks to serve as an interactive link coordinating communities, business, government, and other entities; educate and empower communities through public outreach; direct growth of community attributes that promote a sensible and sustainable balance of environment, equity, and economics; preserve and restore the natural ecosystem; promote livable communities with linked and shared resources; and advocate for responsible and adaptive land use and transportation planning, watershed planning and natural resource management, and environmentally friendly planning, techniques, and policies. See the following website for more information:
www.friendsofpiercecounty.org/about.htm

National Fish and Wildlife Foundation

The National Fish and Wildlife Foundation (NFWF) distributes grants to non-profit organizations, local, state or federal government agencies for community-based projects that improve and restore native salmon habitat, remove barriers to fish passage, or for the acquisition of land/conservation easements on private lands where the habitat is critical to salmon species. NFWF has established local partnerships throughout Washington State through the Community Salmon Fund program to engage landowners, community groups, tribes, and businesses in stimulating smaller-scale, community-oriented habitat restoration and protection projects to aid in salmon recovery. Grants made under this program are administered by NFWF. There are currently three Community Salmon Fund partnership programs. NFWF has partnered with the Washington State Salmon Recovery Funding Board (SRFB) to administer a statewide Community Salmon Fund program that is coordinated with the individual Lead Entity groups. In addition to this SRFB Community Salmon Fund program, NFWF has partnered with both King and Pierce Counties to administer county-specific Community Salmon Fund programs in those counties. See the following website for more information:
www.nfwf.org

Pierce County Biodiversity Alliance

The Pierce County Biodiversity Alliance includes a cross-section of conservation agencies and organizations that share an interest in conserving the biodiversity of Pierce County. The Alliance includes Pierce County Planning and Land Services, Washington Department of Fish and Wildlife, University of Washington, Cooperative Fish & Wildlife Unit, Metro Parks Tacoma, National Wildlife Federation, Puyallup

River Watershed Council, Pierce County Conservation District, Crescent Valley Alliance (CVA), and Friends of the Lower White River (FLWR).

The Alliance has identified a Biodiversity Network of 16 biologically rich areas known as "biodiversity management areas" and connecting corridors that cover nearly 268,000 acres of land. The lower White River corridor is a Biodiversity Management Area (BMA) in Pierce County. Landowners in Pierce County BMAs are eligible for reduced property taxes. The Alliance has involved landowners and citizens in stewardship through rapid biological inventory (BioBlitz), data collection (NatureMapping), and community planning. See the following website for more information: www.biodiversity.wa.gov/ourbiodiversity/updatewhite_river.html

Tahoma Audubon Society

The Tahoma Audubon Society is the Pierce County chapter of the National Aubudon Society that works to conserve, restore, and steward irreplaceable natural resources throughout the Pierce County area (www.tahomaaudubon.org). Tahoma Audubon organizes community volunteers, provides public education regarding the environment, and participates in planning to protect habitats in the Pierce County and Tacoma area. Habitats important to local birds and wildlife are the focus of 2009, including: urban habitats, marine shorelines, riparian shorelines and forests, and oak woodlands and prairies.

6.1.6 Other Possible Funding Sources

a) Aquatic Lands Enhancement Account - WA Department of Natural Resources
b) Aquatic Lands Restoration Funding - WA Department of Natural Resources
c) Bring Back the Natives - National Fish and Wildlife Foundation
d) Coastal Protection Account - WA Department of Ecology
e) Community-Based Restoration Program - NOAA
f) City Fish Passage Barrier, Stormwater and Habitat Restoration Grant Program - WA Department of Transportation
g) Embrace-A-Stream - Trout Unlimited
h) Estuary and Salmon Restoration Program (ESRP) - Puget Sound Nearshore Ecosystem Restoration Project
i) Five-Star Restoration Program - Environmental Protection Agency
j) Habitat Conservation - U.S. Fish and Wildlife Service Coastal Program
k) Landowner Incentive Program - Washington Department of Fish and Wildlife

l) Matching Aid to Restore States Habitat (MARSH) - Ducks Unlimited

m) Non-point Source Implementation Grant (319) Program, Centennial Clean Water Fund, and State Revolving Loan Fund - Environmental Protection Agency, WA State Department of Ecology

n) Pacific Grassroots Salmon Initiative - National Fish & Wildlife Foundation

o) Partners for Fish and Wildlife - U.S. Fish & Wildlife Service

p) Puget Sound Program - U.S. Fish & Wildlife Service

q) Puget Sound Wetland Restoration Program - Washington State Department of Ecology

r) Section 206: Aquatic Ecosystem Restoration Program - U.S. Army Corps of Engineers

s) Transportation Equity Act for the 21st Century (TEA-21) - Washington Department of Transportation

t) Washington State Ecosystems Conservation Program - U.S. Fish and Wildlife Service

u) Washington Wildlife Recreation Program - Interagency Committee for Outdoor Recreation

v) Wetland Protection, Restoration, and Stewardship Discretionary Funding - Environmental Protection Agency

6.2 Approach for Public Outreach

Public education and involvement in restoration efforts is essential when implementing programmatic and site-specific opportunities located on privately-owned property. As part of this SMP update, a brochure has been developed for public dissemination that describes appropriate methods for removing invasive vegetation and replanting with native trees, shrubs, and groundcover along a river bank. The brochure will be available at the permit counter and can be provided to property-owners that have properties fronting the White or Puyallup Rivers.

The City could also consider using the public education and outreach requirement of the City's National Pollutant Discharge Elimination System (NPDES) Phase 2 Municipal Stormwater Permit to reach out to the Sumner community. The NPDES permit requires an education program be put into place that is aimed at residents, businesses, industries, elected officials, policy makers, and planning staff. The goal of the program is to reduce or eliminate behaviors that cause or contribute to

adverse stormwater impacts. The following are subject areas required to be in the program which could relate to the protection and restoration of shoreline areas:

- Impacts from impervious surfaces
- Source control BMPs and environmental stewardship actions and opportunities in the areas of pet waste, vehicle maintenance, landscaping and buffers.
- BMPs for use and storage of pesticides and fertilizers.
- Low Impact Development techniques, including site design, pervious paving, retention of forests and mature trees.

When preparing the program that addresses these subject areas, the City could incorporate information that relates to shoreline restoration, specifically as it relates to improving water quality. Public outreach for subject areas that do not relate to stormwater impacts would have to be conducted outside the NPDES program. However, the approach used for the NPDES program could be similarly applied and implemented to ensure efficient use of City staff resources.

6.3 Timelines, Benchmarks, and Strategies for Effectiveness

In the context of the SMP update, restoration planning is a long-term effort. As stated earlier, the SMP guidelines include the general goal that local master programs "include planning elements that, when implemented, serve to improve the overall condition of habitat and resources within the shoreline area" (WAC 173-26-201(c)). The guidelines for restoration planning state that local programs should "…appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals" (WAC 173-26-201(2)(f)).

As a long-range policy plan, it is difficult to establish meaningful timelines and measurable benchmarks in the SMP by which to evaluate the effectiveness of restoration planning or actions. Nonetheless, the legislature has provided an overall timeframe for future amendments to the SMP. In 2011, Substitute House Bill 1478 amended the Shoreline Management Act (RCW 90.58.080) to establish an amendment schedule for all jurisdictions in the state. Once the City of Sumner updates its SMP, the City is required to review, and amend if necessary, its SMP once every eight years (RCW 90.58.080(4)). During this review period, the City could document progress toward achieving shoreline restoration goals. The review could include:

- Re-evaluating adopted restoration goals, objectives, and policies;
- Summarizing both planning efforts (including application for and securing grant funds) and on-the-ground actions undertaken in the interim to meet those goals; and
- Revising the SMP restoration planning element to reflect changes in priorities or objectives.

Another mechanism that may serve to establish timelines and benchmarks would be establishment of a shoreline restoration program organized like or integrated with the City's capital improvement program (CIP). Similar to an infrastructure CIP, a shoreline restoration CIP would be evaluated and updated regularly. The shoreline CIP would be focused on site-specific projects and could be funded through grants or a fee-in-lieu program developed as part of the shoreline permitting process. Further, other CIP projects, such as stormwater facility improvements, could be evaluated to determine if their design could advance shoreline restoration goals.

6.4 Constraints to Implementation

There are a number of potential complicating factors between the development of a city-wide shoreline restoration plan and on-the-ground implementation of its programs and projects. Some of these challenges are briefly summarized below:

a) Lack of funding: Designing, carrying out, and monitoring the success of restoration efforts can be an expensive undertaking, particularly at larger (e.g., watershed or reach) scales. In general, funding for restoration is limited and competition for funds extensive.

b) Landowner participation: Restoration opportunities which are located on private property can be more challenging to implement than opportunities located on public property. The property owners would need to be interested in working with the City since restoration is not a regulatory requirement. Property owners would need to fund and complete the projects on their own, or if public funding were available the City would have to negotiate with the private property owners to purchase the property or an easement on the property to accomplish the project. Such voluntary interest may not occur until shoreline landowners are educated on the benefits of restoration projects or meaningful incentives are established.

c) Urban Growth Area: Restoration opportunities which are located in the UGA pose a challenge to the City since it has no authority with those properties. When pursuing a restoration project the City would need to coordinate with

Pierce County on the permitting process. Another option would be to wait until properties in the UGA are annexed into the city before implementing a project.

d) Project permitting: Obtaining necessary permits from local, state, and federal regulatory agencies can require substantial time and effort. Although encouraged and allowed by the SMP, complicated restoration projects may take a year or more to permit.

e) Climate change: Rising temperatures and water levels have the potential to dramatically alter Sumner's shoreline jurisdiction, processes, and functions over time. Depending on the scale of change and time period over which changes occur, restoration priorities could shift substantially within a relatively short period of time. Future restoration should be designed to consider future water elevations in shoreline areas of Sumner.

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APPENDIX A

Restoration Plan Figures

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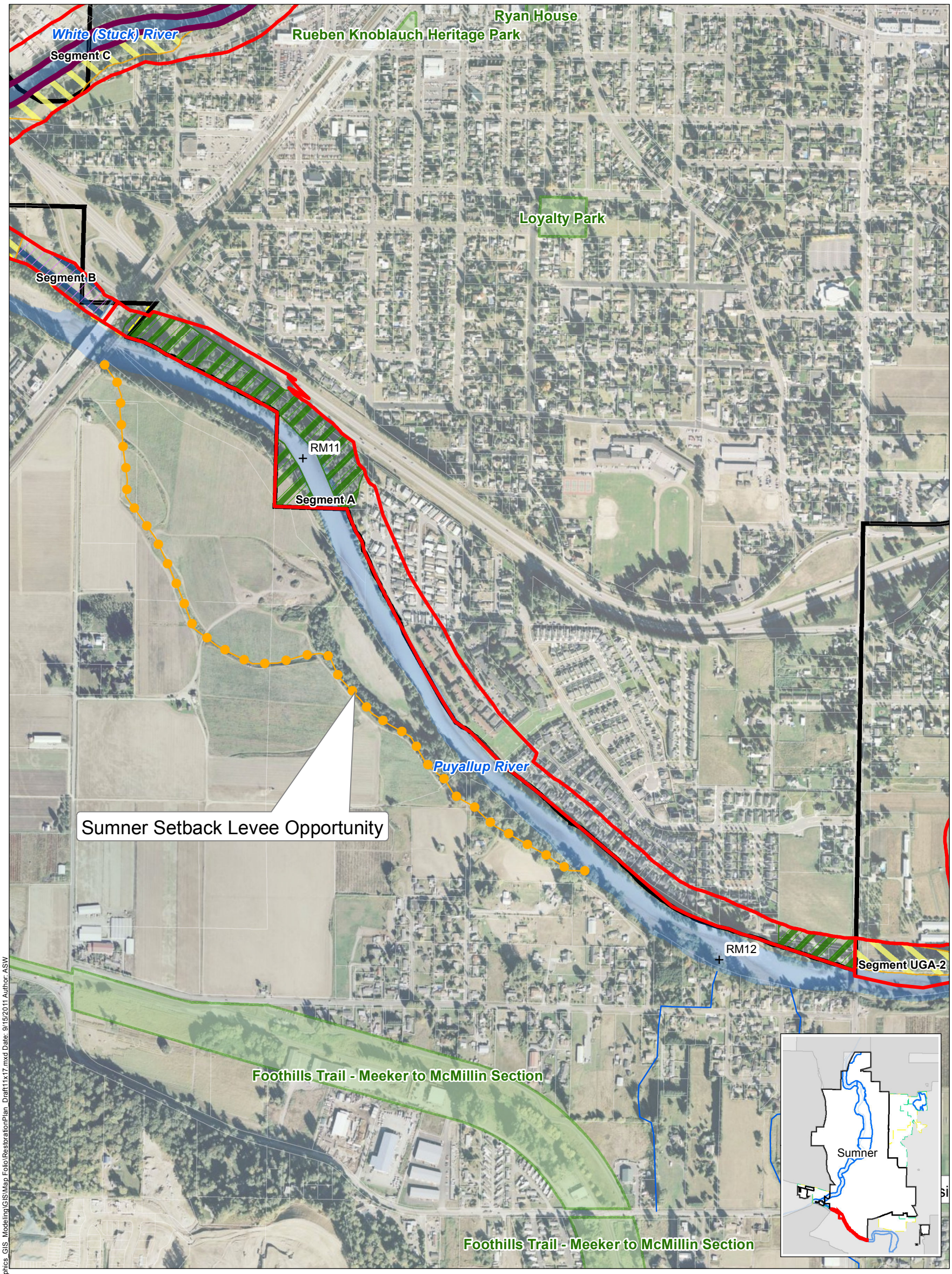

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SUMNER

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Feet

Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
- Streams

This figure depicts potential opportunities for restoration that have been identified by a variety of sources for shorelines in the City of Sumner. Restoration opportunities shown on private properties would occur only through voluntary efforts or in coordination and cooperation with property owners, tribes, state and federal agencies.

CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 1
Potential Restoration Opportunities
Segment A

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.

White & Puyallup Rivers Confluence
Levee Setback Opportunity

Segment C

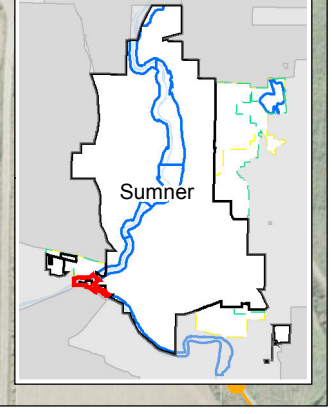
White (Stuck) River

Segment B

Puyallup River

Segment A

Golf Course Oxbow Levee Setback Opportunity



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Riparian Vegetation

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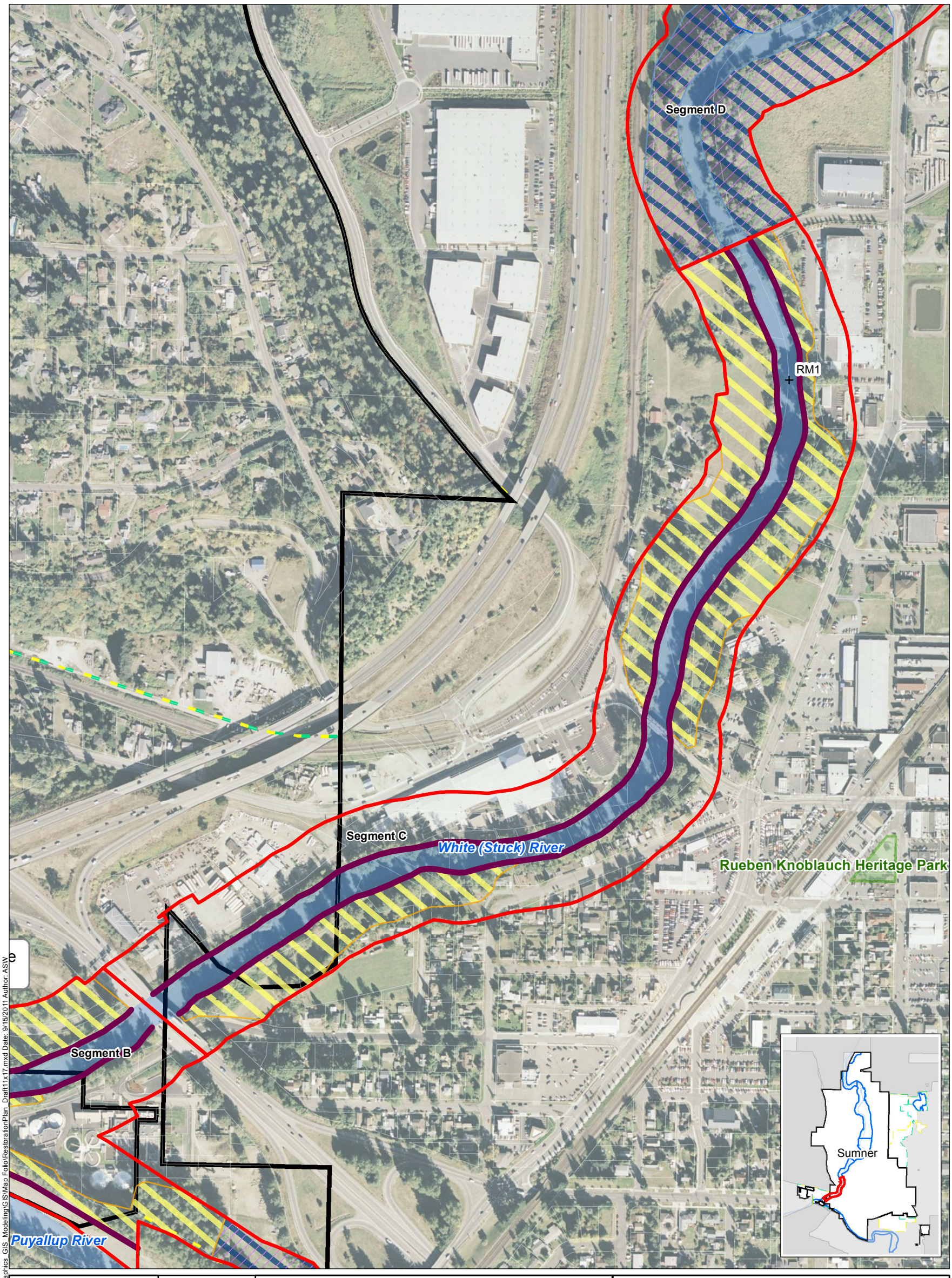
CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 2
Potential Restoration Opportunities
Segment B

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.



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Legend

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Riparian Vegetation

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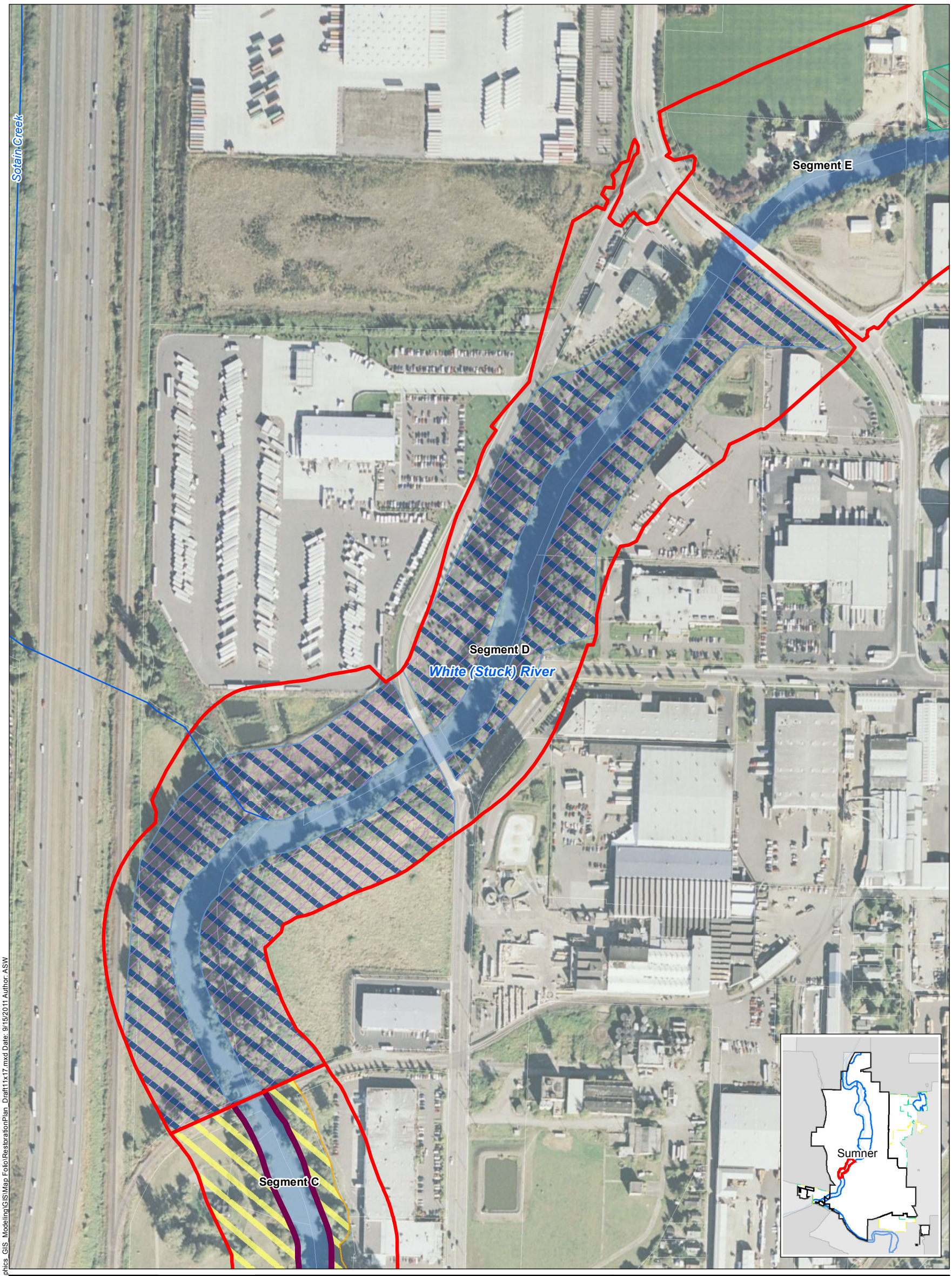
CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 3
Potential Restoration Opportunities
Segment C

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.



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SUMNER

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Legend

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Riparian Vegetation

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- Restore and Enhance
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CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
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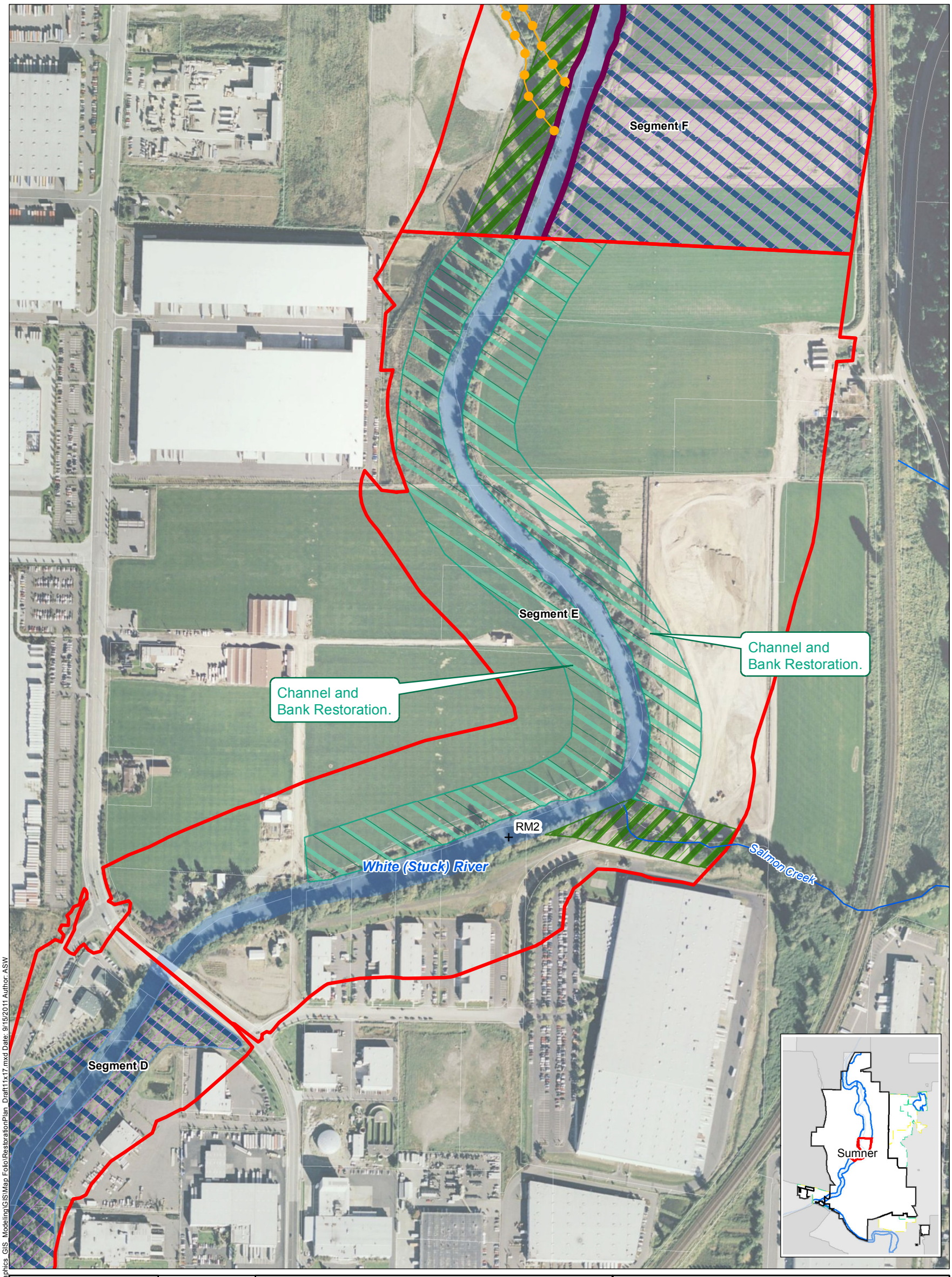
MAP 4
Potential Restoration Opportunities
Segment D

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.



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Legend

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Riparian Vegetation

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- Restore and Enhance
- Protect and Enhance

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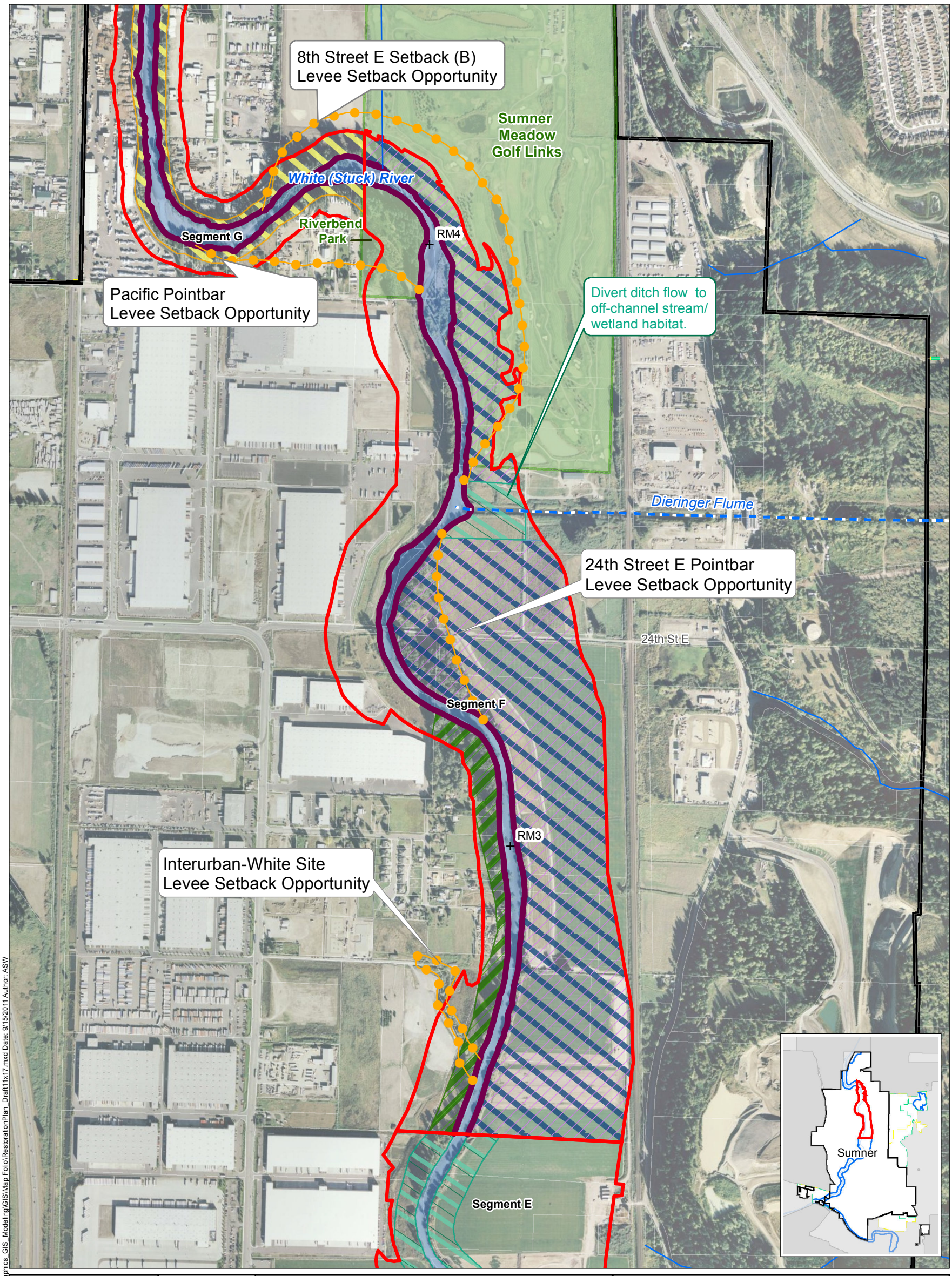
CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 5
Potential Restoration Opportunities
Segment E

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.



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Legend

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Riparian Vegetation

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- Restore
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CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
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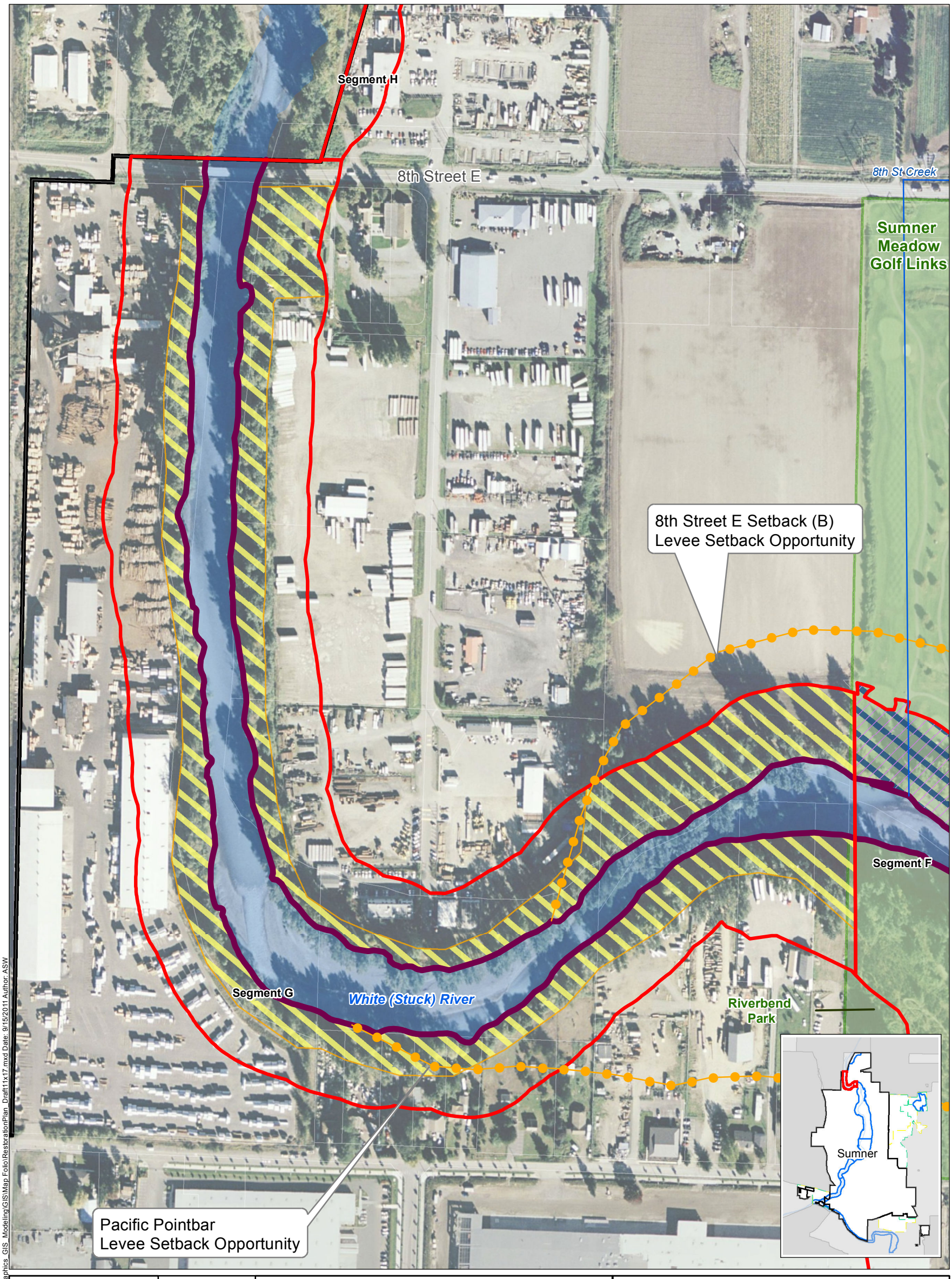
MAP 6
Potential Restoration Opportunities
Segment F

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.



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Legend

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- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
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- Protect and Enhance

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- Sumner UGA
- Proposed Sumner UGA
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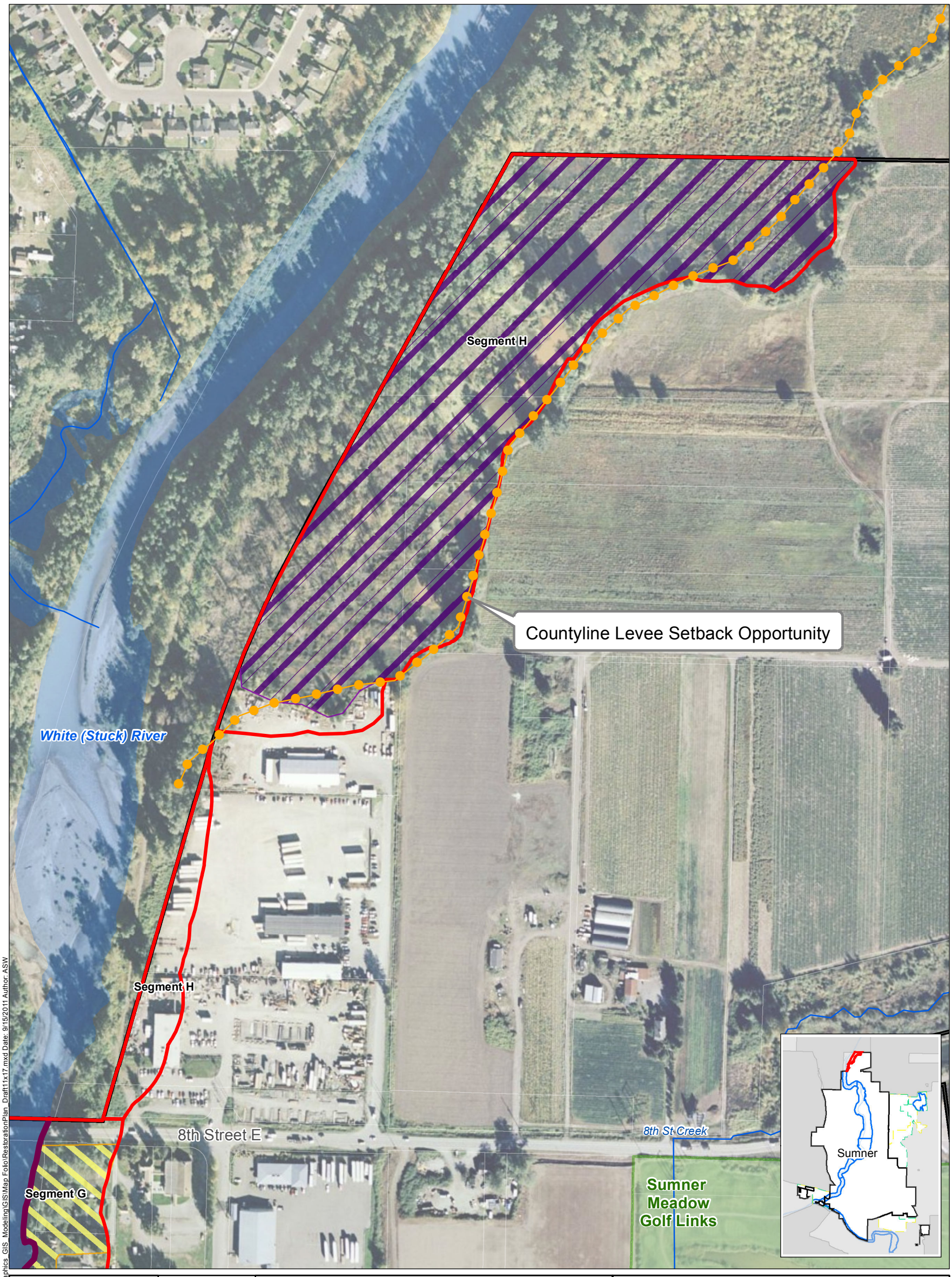
This figure depicts potential opportunities for restoration that have been identified by a variety of sources for shorelines in the City of Sumner. Restoration opportunities shown on private properties would occur only through voluntary efforts or in coordination and cooperation with property owners, tribes, state and federal agencies.

CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 7
Potential Restoration Opportunities
Segment G

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.



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SUMNER

ESA

N

0 140

Feet

Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

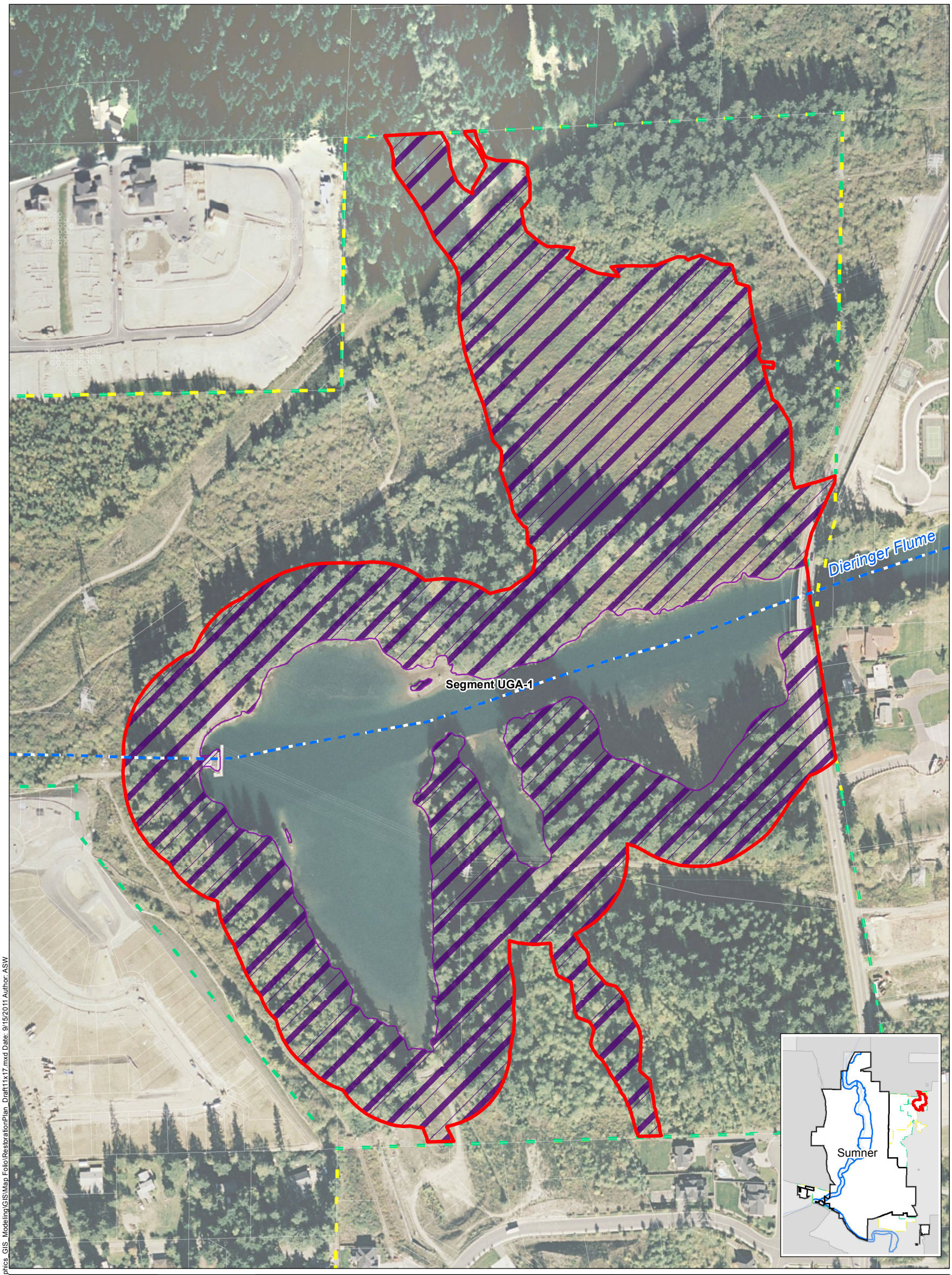
- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
- Streams

This figure depicts potential opportunities for restoration that have been identified by a variety of sources for shorelines in the City of Sumner. Restoration opportunities shown on private properties would occur only through voluntary efforts or in coordination and cooperation with property owners, tribes, state and federal agencies.

CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 8
Potential Restoration Opportunities
Segment H

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.



Path: G:\ENVIR IMPACTS\2009 Projects\209439 SumnerSMP\05 Graphics GIS Modeling\GIS\Map Folio\RestorationPlan_Draft11x17.mxd Date: 9/15/2011 Author: ASW

SUMNER

ESA

N

0 120

Feet

Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

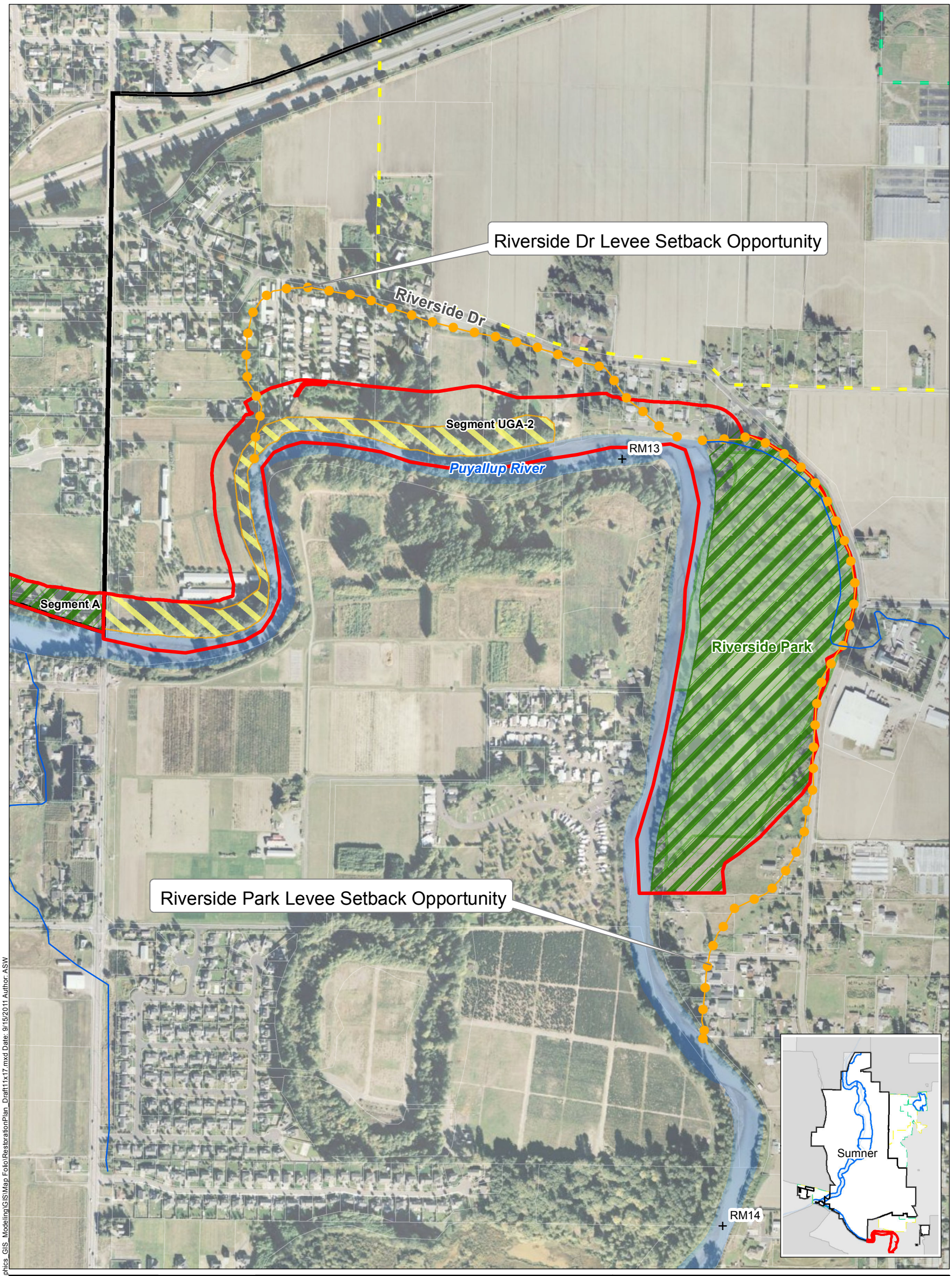
- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
- Streams

This figure depicts potential opportunities for restoration that have been identified by a variety of sources for shorelines in the City of Sumner. Restoration opportunities shown on private properties would occur only through voluntary efforts or in coordination and cooperation with property owners, tribes, state and federal agencies.

CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 9
Potential Restoration Opportunities
Segment UGA-1

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.



Path: G:\ENVIR IMPACTS\2009 Projects\209439 SumnerSMP\05 Graphics GIS Modeling\GIS\Map Folio\RestorationPlan_Draft11x17.mxd Date: 9/15/2011 Author: ASW

SUMNER

ESA

N

0 280

Feet

Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
- Streams

This figure depicts potential opportunities for restoration that have been identified by a variety of sources for shorelines in the City of Sumner. Restoration opportunities shown on private properties would occur only through voluntary efforts or in coordination and cooperation with property owners, tribes, state and federal agencies.

CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 10
Potential Restoration Opportunities
Segment UGA-2

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.

ORDINANCE NO. 2497
CITY OF SUMNER, WASHINGTON

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SUMNER, WASHINGTON, ADOPTING THE 2012 CITY OF SUMNER SHORELINES MASTER PROGRAM.

WHEREAS, pursuant to the laws of the State, the City of Sumner must periodically update its Shoreline Master Program (SMP); and

WHEREAS, during 2011 and 2012, the City worked with citizens, agencies and subject matter experts to update the previous SMP; and

WHEREAS, the draft 2012 SMP update was reviewed by the Sumner Planning Commission on May 10, 2012 and recommended for adoption by the City Council; and

WHEREAS, on August 6, 2012, the Sumner Council conducted a public hearing and voted to approve Ordinance No. 2399, giving preliminary approval to the 2012 SMP update; and

WHEREAS, the Washington State Department of Ecology (DOE) subsequently reviewed the SMP update as required by law and subsequently adopted the update into the Washington Administrative Code (WAC) also as provided by law; and

WHEREAS, final approval must now be provided; and

WHEREAS, staff has made minor changes to the SMC update as recommended by DOE and as adopted into the WAC; and

WHEREAS, to; 1) simplify to the Sumner Municipal Code; 2) simplify use of the SMP; 3) simplify the process of making future revisions and updates of the SMP; and 4) reduce the potential for inadvertent creation of contradictions between the SMC and SMP, staff recommends that the specific content of the SMP be removed from Title 16 of Sumner Municipal Code and replaced by references to the SMP document.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF SUMNER, WASHINGTON, DO ORDAIN AS FOLLOWS:

Section 1. Chapter 16.08 SMC is hereby amended to read as follows.

16.08 General Provisions

Sections:

16.08.010 Title. The ordinance codified in this division may be known and may be cited as the "Sumner shoreline master program regulations."

16.08.020 Purpose. This division is intended to comply with the Shoreline Management Act of 1971 (the Act).

16.08.030 Applicability of regulations. The shoreline master program regulations are applicable to the shoreline, extending 200 feet from the high water mark of the White (Stuck) and Puyallup Rivers and their associated wetlands.

16.08.040 Adoption of shoreline master program. The shoreline master program update, dated June, 2012, is adopted as the shoreline master program for the city.

16.08.050 Relation of municipal code to the shoreline master program. Title 16, Division II and applicable sections of chapter 18.56 SMC codify the regulations and procedures set forth in the shoreline master program. Where there is a conflict between the requirements of the Sumner Municipal Code and the shoreline master program, the shoreline master program shall prevail.

16.08.060 Amendments to the shoreline master program. The U.S. Fish and Wildlife Service and the National Marine Fisheries Service shall receive early and continual notice of any amendments to the shoreline master program.

Section 2. Chapter 16.12 SMC is hereby amended in its entirety to read as follows:

16.12 DEFINITIONS. Definitions applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 3. Chapter 16.14 SMC is hereby amended in its entirety to read as follows:

16.14 SHORELINE ENVIRONMENT DESIGNATIONS. Shoreline designations applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 4. Chapter 16.16 SMC is hereby amended in its entirety to read as follows:

Chapter 16.16 GENERAL REGULATIONS. General Regulations applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 5. Chapter 16.20 SMC is hereby amended in its entirety to read as follows:

Chapter 16.20 SPECIFIC USE REGULATIONS. Specific Use Regulations applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 6. Chapter 16.24 SMC is hereby amended in its entirety to read as follows:

Chapter 16.24 SUBSTANTIAL DEVELOPMENT PERMITS. Substantial Development Permits procedures applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 7. Chapter 16.28 SMC is hereby amended in its entirety to read as follows:

Chapter 16.28 VARIANCES. Variance procedures applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 8. Chapter 16.30 SMC is hereby amended in its entirety to read as follows:

Chapter 16.30 CONDITIONAL USE. Conditional Use Permit procedures applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 9. Chapter 16.32 SMC is hereby amended in its entirety to read as follows:

Chapter 16.32 NONCONFORMING DEVELOPMENTS AND USES. Nonconforming Developments and Uses procedures applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 10. Chapter 16.36 SMC is hereby amended in its entirety to read as follows:

Chapter 16.36 ENFORCEMENT. Enforcement procedures applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted

Section 11. **Severability - Construction**. If any section, subsection, paragraph, sentence, clause, or phrase of this ordinance is declared unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of this ordinance. If the provisions of this ordinance are found to be inconsistent with other provisions of the Sumner Municipal Code, this ordinance is deemed to control.

Section 12. **Effective Date**. This Ordinance shall become effective five days from and after its passage, approval, and publication as provided by law.

Passed by the City Council and approved by the Mayor of the City of Sumner, Washington, at a regular meeting thereof this 6th day of October, 2014.

Mayor David L. Enslow

ATTEST:

City Clerk Terri Berry, MMC

APPROVED AS TO FORM:

City Attorney Brett C. Vinson

First Reading: ***10/06/14***
Date Adopted: ***10/06/14***
Date of Publication: ***10/09/14***
Effective Date: ***10/14/14***

****
*** FAX MULTI TX REPORT ***
****

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DEPT. ID		
PGS.	1	
TX INCOMPLETE	-----	
TRANSACTION OK	913608250824	BL/Sumner Courier Herald
	92538631848	Fire Department
	92538630650	Sumner Library
ERROR	-----	

ORDINANCE NO. 2496
CITY OF SUMNER, WASHINGTON

AN ORDINANCE OF THE CITY OF SUMNER, WASHINGTON, PROVIDING FOR THE ISSUANCE AND SALE OF A BOND ANTICIPATION NOTE FOR THE PURPOSE OF PROVIDING INTERIM FINANCING FOR IMPROVEMENTS WITHIN THE 136TH/VALENTINE CONSOLIDATED LOCAL IMPROVEMENT DISTRICT IN THE AGGREGATE PRINCIPAL AMOUNT OF $4,700,000; PROVIDING THE DATE, FORM, TERMS AND MATURITY OF SAID NOTE; PROVIDING THE METHOD OF REPAYMENT OR REFINANCING FOR THE NOTE AT MATURITY; AND APPROVING THE SALE OF SUCH NOTE.

City Clerk Terri Berry, MMC
Dated this 7th day of October, 2014

The full text of Ordinance No. 2496 will be provided upon request
Date of Publication: Thursday, October 9, 2014

ORDINANCE NO. 2497
CITY OF SUMNER, WASHINGTON

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SUMNER, WASHINGTON, ADOPTING THE 2012 CITY OF SUMNER SHORELINES MASTER PROGRAM.

City Clerk Terri Berry, MMC
Dated this 7th day of October, 2014

The full text of Ordinance No. 2497 will be provided upon request
Date of Publication: Thursday, October 9, 2014

Terri Berry

From: TAC-Bastin, Laura <laura.bastin@thenewstribune.com>
Sent: Tuesday, October 07, 2014 8:59 AM
To: Terri Berry
Subject: LEGAL # 1328488
Attachments: OrderConf.pdf

Here is your notice, set for the 10/9 News Tribune. The cost is $170.57; the affidavit will be sent after publication. Thank you again!

THE NEWS TRIBUNE

[thenewstribune.com]

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Customer
CITY OF SUMNER

Customer Account
257804

Customer Address
1104 MAPLE ST, ,
SUMNER WA 98390-1407 USA

Customer Phone
253-863-8300

Sales Rep.
lbastin@thenewstribune.com

Order Taker
lbastin@thenewstribune.com

Payor Customer
CITY OF SUMNER

Payor Account
257804

Payor Address
1104 MAPLE ST, ,
SUMNER WA 98390-1407 USA

Payor Phone
253-863-8300

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PO Number	Payment Method	Blind Box
ORDS 2496-7		

Tear Sheets	Proofs	Affidavits
0	0	1

Net Amount	Tax Amount	Total Amount
$170.57	$0.00	$170.57

Payment Amt	Amount Due
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TAC-upsell.thenewstribune.com:Online: 0300 - Legals Classified 10/9/2014 ORDINANCE NO. 2496 CITY OF SUMNER, WASHINGTON AN ORD	1	$36.61

Terri Berry

From: Terri Berry
Sent: Tuesday, October 07, 2014 8:43 AM
To: (gmcclel@co.pierce.wa.us); Andrew Fickes; Art Sphar; Axel Lindstrom (savik7 @gmail.com); Barbara Ford; Brian Cunningham; Brian Haines; Carmen Palmer; Cathy Pashon; Connie Ota; Courtney Flora; Dale Loseth; Dawn - Loren Combs (dck@vsilawgroup.com); Earle Stuard (es4271@gmail.com); Eric Mendenhall; Hans Hechtman (Hans_Hechtman@cable.comcast.com); Jeff Steffens; Jeremiah Lafranca - MBA (gam@mbapierce.com); Jerry Thorson (jthorson@eastpiercefire.org); Jim Merritt; Joe Fessler (JoeF@ci.sumner.wa.us); Joe Gerace; Joe Gerace2; John Galle; John Humphries; John McDonald (jmcdonald@eastpiercefire.org); Kari Plog; Katharine Rode; Kathy Hayden (dkhayden@q.com); Leroy Goff; Martha Humphries; Randy Hynek-Home; Sarah Gillispie; Sarah Wehmann; Shelly Schlumpf (shelly@puyallupsumnerchamber.com); Sumner Library Contact (lheyerdahl@piercecountylibrary.org); Susan Atkinson; Teresa Cozad; Tiffany Spier; Tribune Tips; Tricia Jarbeaux (tjarbea@co.pierce.wa.us)
Subject: Ordinances 2496 & 2497 Passed

ORDINANCE NO. 2496
CITY OF SUMNER, WASHINGTON

AN ORDINANCE OF THE CITY OF SUMNER, WASHINGTON, PROVIDING FOR THE ISSUANCE AND SALE OF A BOND ANTICIPATION NOTE FOR THE PURPOSE OF PROVIDING INTERIM FINANCING FOR IMPROVEMENTS WITHIN THE 136TH/VALENTINE CONSOLIDATED LOCAL IMPROVEMENT DISTRICT IN THE AGGREGATE PRINCIPAL AMOUNT OF $4,700,000; PROVIDING THE DATE, FORM, TERMS AND MATURITY OF SAID NOTE; PROVIDING THE METHOD OF REPAYMENT OR REFINANCING FOR THE NOTE AT MATURITY; AND APPROVING THE SALE OF SUCH NOTE.

City Clerk Terri Berry, MMC
Dated this 7th day of October, 2014

The full text of Ordinance No. 2496 will be provided upon request
Date of Publication: Thursday, October 9, 2014

ORDINANCE NO. 2497
CITY OF SUMNER, WASHINGTON

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SUMNER, WASHINGTON, ADOPTING THE 2012 CITY OF SUMNER SHORELINES MASTER PROGRAM.

City Clerk Terri Berry, MMC
Dated this 7th day of October, 2014

The full text of Ordinance No. 2497 will be provided upon request
Date of Publication: Thursday, October 9, 2014

City Clerk Terri Berry, MMC
City of Sumner
1104 Maple Street
Sumner, WA 98390

ORDINANCE NO. 2496
CITY OF SUMNER, WASHINGTON

AN ORDINANCE OF THE CITY OF SUMNER, WASHINGTON, PROVIDING FOR THE ISSUANCE AND SALE OF A BOND ANTICIPATION NOTE FOR THE PURPOSE OF PROVIDING INTERIM FINANCING FOR IMPROVEMENTS WITHIN THE 136TH/VALENTINE CONSOLIDATED LOCAL IMPROVEMENT DISTRICT IN THE AGGREGATE PRINCIPAL AMOUNT OF $4,700,000; PROVIDING THE DATE, FORM, TERMS AND MATURITY OF SAID NOTE; PROVIDING THE METHOD OF REPAYMENT OR REFINANCING FOR THE NOTE AT MATURITY; AND APPROVING THE SALE OF SUCH NOTE.

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THE NEWS TRIBUNE
[thenewstribune.com]

AFFIDAVIT OF PUBLICATION

Account #	Ad Number	Identification	PO	Amount	Cols	Lines
257804	0001305170	NOTICE OF PUBLIC HEARING NOTICE IS	MTG 10/6	$145.60	1	21

Attention: TERRI BERRY

CITY OF SUMNER
1104 MAPLE ST
SUMNER, WA 983901407

NOTICE OF PUBLIC HEARING
NOTICE IS HEREBY GIVEN that the City of Sumner City Council has fixed the 6th day of October, 2014, at 7:00 PM in Sumner City Council Chambers, located at 1104 Maple Street, Sumner, WA, as the time and place for a public hearing to consider an ordinance amending Title 16 of Sumner Municipal Code placing the previously adopted 2012 Shorelines Master Program into the Code.
Any persons desiring to submit written comments concerning this application may submit written comments or requests to the City of Sumner, Attn: Eric Mendenhall, 1104 Maple Street, Suite 250, Sumner, WA 98390. Written comments may be submitted prior to the hearing by 5:00 p.m., the 6th day of October, 2014 or at the public hearing.
Please call the Community Development Department at 253.299.5526 for any questions regarding the above application.
PUBLISHED: 09/27/14
POSTED: 09/26/14

KATIE CALHOUN, being duly sworn, deposes and says: That she is the Principal Clerk of The News Tribune, a daily newspaper printed and published in Tacoma, Pierce County, State of Washington, and having a general circulation therein, and which said newspaper has been continuously and uninterruptedly published in said County during a period of six months prior to the first publication of the notice, a copy of which is attached hereto: that said notice was published in The News Tribune, as amended, for:

1 Insertions

Beginning issue of: 09/27/2014

Ending issue of: 09/27/2014

K. Calhoun

(Principal Clerk)

Subscribed and sworn on this 29th day of September in the year of 2014 before me, a Notary Public, personally appeared before me Katie Calhoun known or identified to me to be the person whose name subscribed to the within instrument, and being by first duly sworn, declared that the statements therein are true, and acknowledged to me that she executed the same.

JOSHUA NICOLE WARD
NOTARY PUBLIC
STATE OF WASHINGTON
03-15-18

Notary Public in and for the state of Washington, residing in Pierce County
1950 S. State St, Tacoma, WA 98405

SUMNER SHORELINE MASTER PROGRAM UPDATE

Draft Shoreline Inventory and Characterization Report
Grant Agreement No. G1000024, Tasks 2.1, 2.2, 2.3

Prepared for: **June 2010**

City of Sumner

ESA Adolfson

TABLE OF CONTENTS

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1.0 INTRODUCTION

1.1 Background and Purpose

The purpose of this report is to conduct a baseline inventory of existing natural and built conditions in the City of Sumner's shoreline jurisdiction to provide a basis for the update of the City's Shoreline Master Program (SMP). Adolfson prepared an original shoreline inventory and characterization report for the City in 2002. Shortly thereafter, in 2003, the Washington State Legislature passed Substitute Senate Bill (SSB) 6012, which established timelines for all cities and counties to amend their local SMPs consistent with the Shoreline Management Act (SMA), Revised Code of Washington (RCW) 90.58 and its updated implementing guidelines, Washington Administrative Code (WAC) 173-26. The WAC 173-26 is commonly referred to as the 2003 shoreline guidelines.

The City of Sumner is required to prepare a comprehensive update to its SMP by the end of 2011.The City's first step towards this comprehensive SMP update is revising the 2002 shoreline inventory report to update technical information that has changed or been made available since, and to be consistent with the current 2003 shoreline guidelines. The report provides:

- Analysis and characterization of ecosystem-wide processes that affect the City's shorelines;
- Analysis and characterization of shoreline functions;
- Opportunities for protection, restoration, public access and shoreline use; and
- Shoreline management recommendations and policy options for consideration in subsequent phases of the SMP update.

The inventory and characterization documents current shoreline conditions and provides a basis for updating the City's SMP goals, policies, and regulations. This report will help the City establish a baseline of conditions, evaluate functions and values of resources in its shoreline jurisdiction, and explore opportunities for conservation and restoration of ecological functions.

Washington State Department of Ecology (Ecology) has provided state grant funds to assist the City in its comprehensive SMP update, including the completion of this report. The Ecology grant (No. G1000024) to the City is provided through the State General Fund. Recommendations outlined in Chapter 7 of the SMP Handbook provided by Ecology in draft form (August 2009) have been consulted related to the components of a complete inventory and characterization report (Ecology, 2010b).

1.2 Report Organization

This report is divided into six main sections. After Section 1.0, which provides background and introductory information, Section 2.0 describes the methods and data sources used to analyze the Sumner shorelines. Section 3.0 presents an ecosystem wide characterization, which includes historic land use along the City's regulated shorelines, watershed conditions, climate change, and a characterization of the shorelines' floodplains. Section 4.0 describes land and shoreline use patterns along the shorelines. Section 5.0 focuses on biological resources, and critical and hazard areas. Section 6.0 provides a segment-by-segment analysis of shoreline conditions and identifies restoration opportunities.

Also accompanying this report are several maps that identify the City's shoreline planning area; identify shoreline planning segments; and document various biological, land use, and physical elements. Maps are referred to throughout the document and are contained in Appendix A. Appendix B contains additional floodplain characterization data in table format.

Throughout this report the terms "left bank" and "right bank" are used. Right bank refers to the river bank which, when one is facing upstream, is to one's right. Similarly, left bank refers to that bank to the left when one is facing upstream[1].

1.3 Regulatory Overview

1.3.1 Shoreline Management Act and Shoreline Guidelines

Washington's Shoreline Management Act (SMA) was passed by the State Legislature in 1971 and adopted by the public in a referendum. The SMA 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 SMA 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 SMA is also intended to provide for appropriate shoreline use by encouraging land uses that enhance and conserve shoreline functions and values.

The primary responsibility for administering the SMA is assigned to local governments through the mechanism of local shoreline master programs, adopted under guidelines established by Ecology. The guidelines (WAC 173-26) establish goals and policies that are

[1] "Upstream" of the White River extends generally to the north from where it joins the Puyallup River. "Upstream" on the Puyallup River generally extends to the south and east.

implemented through use 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 managed over time.

1.3.1.1 Shoreline Master Program Update

The SMA is implemented through the development of local SMPs, which establish a system to classify shoreline areas into specific "environment designations." The purpose of the shoreline environment designation system is to provide a uniform basis for applying policies and use regulations within distinctly different shoreline areas. In a regulatory context, shoreline environment designations provide the governing policy and regulations that apply to land within the SMP jurisdiction. Portions of individual parcels that are outside SMP jurisdiction are governed by zoning and other applicable land use regulations. Generally, environment designations should be based on existing and planned development patterns, biological and physical capabilities and limitations of the shoreline, and a community's vision or objectives for its future development. Under the city's existing SMP (adopted in 2004) three shoreline environments are established: Urban, Shoreline Residential, and Urban Conservancy.

Refer to the existing SMP for additional information on the existing goals, policies, and environment designations (City of Sumner, 2004). Shoreline properties within the City's UGA are regulated under the Pierce County SMP, until such properties are annexed and the City's SMP is amended.

1.3.1.2 Shoreline Jurisdiction

Under the SMA, the shoreline jurisdiction includes waters that have been designated as "shorelines of statewide significance" or "shorelines of the state." These designations were established in 1972, and are described in Washington Administrative Code (WAC) 173-18.

- "Shorelines of statewide significance" are generally described as including portions of Puget Sound and other marine water bodies, rivers west of the Cascade range that have a mean annual flow of 1000 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 fresh water lakes with a surface area of 1,000 acres or more.

- "Shorelines of the state" are generally described as all marine shorelines and shorelines of all other streams or rivers having a mean annual flow of 20 cfs or greater and lakes with a surface area greater than 20 acres.

In Sumner, the designated shorelines of the state are the Puyallup River, White (Stuck) River[2], and Lake Tapps that fall within the Sumner city limits and urban growth area (UGA) (Map 1 in Appendix A). Both rivers and the lake are also designated as shorelines of statewide significance.

This report will also include a portion of the Puyallup River in Sumner's joint planning area (JPA) in unincorporated Pierce County. The study area boundary is bordered by the city limits and the Orting Highway (SR 162) on the west; city limits and SR 410 on the north; and extending east and south along the Puyallup River to the boundaries of Pierce County's Riverside County Park. This area is considered an area of special interest which may be considered for inclusion in the City's UGA sometime during the SMP update.

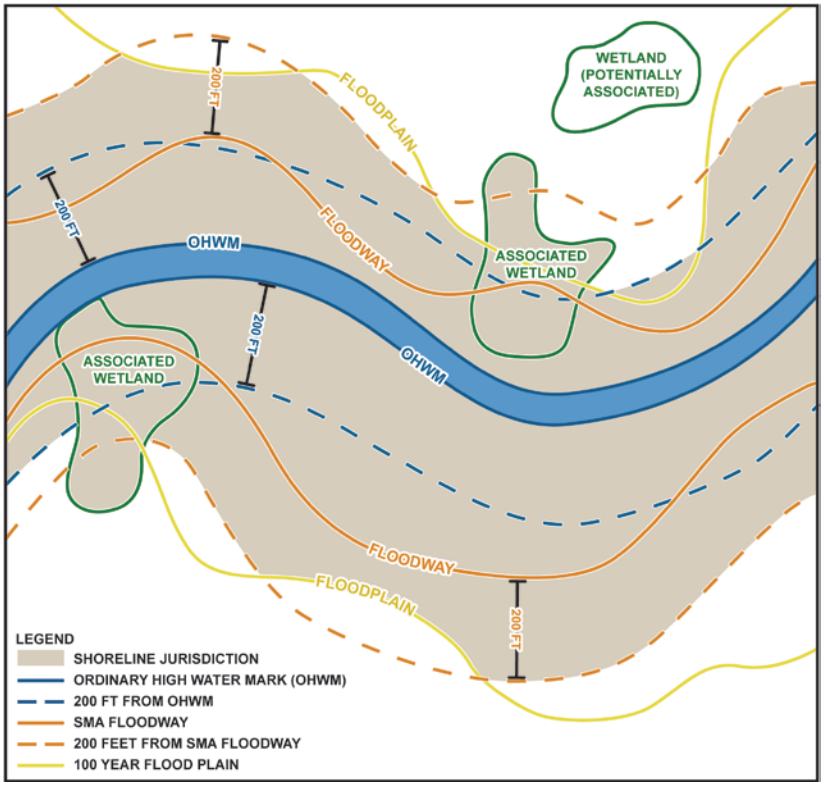
Unless otherwise stated, generalized references to the city or the city's shoreline jurisdiction include shorelines in the UGA and the study area boundary as described above.

The shoreline jurisdiction under SMA also includes "shorelands" adjacent to shorelines of the state. "Shorelands" or "shoreland areas" means those lands extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark (OHWM); floodways and contiguous floodplain areas landward 200 feet from such floodways; and all wetlands and river deltas associated with such streams, lakes, and tidal waters (see Figure 1-1).

"Associated wetlands" means those wetlands, that are in proximity to and either influence or are influenced by tidal waters or a lake or stream subject to the SMA (WAC 173-22-030 (1)). These are typically identified as wetlands that physically extend into the shoreline jurisdiction, or wetlands that are functionally related to the shoreline jurisdiction through surface water connection and/or other factors.

[2] Throughout this inventory, the terms "White (Stuck) River" and "White River" are used interchangeably to refer to that portion of this river system located in Sumner. In 1914, the White River was permanently diverted into the former channel of the Stuck River.

Figure 1-1. Graphic Depiction of the SMA Shoreline Jurisdiction Limits



The Puyallup River is located within Sumner's joint planning area from its southernmost point at approximately River Mile (RM) 13.3 downstream to its confluence with the White River at approximately RM 10.7, west of downtown Sumner. Downstream of Sumner's shoreline jurisdiction, the Puyallup River drains into Commencement Bay in Puget Sound. The White River is located within Sumner's city limits and urban growth area from approximately RM 5.5 at the northern border of the City's urban growth area downstream to its confluence with the Puyallup River at RM 0.3. Approximately 7,000 lineal feet of the northwestern portion of Lake Tapps is located within Sumner's UGA boundaries.

1.3.2 Existing Plans, Programs and Regulations

A variety of other regulatory programs, plans, and policies work in concert with the City's SMP to manage shoreline resources and regulate development near the shoreline. The City's Comprehensive Plan establishes the general land use pattern and vision of growth the City has adopted for areas both inside and outside the shoreline jurisdiction. The Growth Management Act provides that SMP goals and policies are integrated as an element of the Comprehensive Plan (RCW 36.70A.480). As such, SMP goals and policies should be consistent with general goals and policies for land use, environment, and other elements

contained in the Comprehensive Plan, and vice versa. Various sections of the City's municipal code are relevant to shoreline management, such as zoning, flood damage prevention, and stormwater management. The City's development standards and use regulations for environmentally critical areas are particularly relevant to the City's SMP. Designated environmentally critical areas are found throughout the City's shoreline jurisdiction, including streams, wetlands, aquifer recharge areas, wildlife habitat areas and flood hazard areas.

1.3.2.1 Comprehensive Plan, Zoning and Other City Regulations

City of Sumner Comprehensive Plan – The City of Sumner *Comprehensive Plan*, adopted in 2005, outlines general growth management goals over the next 20 years. The Plan includes goals and policies for shoreline management, land use, and the environment (City of Sumner, 2005). Amendments to the Comprehensive Plan are currently underway and are likely to be adopted by the end of 2010. Eleven "land use categories" are described in the Plan. These categories serve as the basis for more detailed zoning code designations. Land use categories include:

- *Residential*: Residential protection, low density residential, medium density residential, and high density residential
- *Commercial*: Agriculture, general commercial, interchange commercial, neighborhood commercial, central business district, mixed use development, and urban village
- *Manufacturing*: Light manufacturing and heavy manufacturing

The *Comprehensive Plan* references policies established in other adopted Sumner planning documents, including the City's Parks and Open Space Plan, Comprehensive Transportation Plan, Water System Plan, Stormwater Comprehensive Plan, and Sewer Collection System Comprehensive Plan.

Land use designations are relevant to this shoreline characterization report as they establish the general land use patterns and vision of growth the City has adopted for areas both inside and outside the shoreline planning area. Comprehensive Plan designations are shown on Map 8.

Sumner Municipal Code, Title 18: Zoning – Title 18 of the *Sumner Municipal Code* (SMC) establishes zoning districts in the city (City of Sumner, 2009c). These districts, which follow land use designations established in the City *Comprehensive Plan*, include eight residential zones, four mixed residential/commercial zones, a commercial-only zone, two manufacturing/industrial zones, and an agricultural zone. Zoning is shown on Map 9.

Sumner Municipal Code, Chapter 16.04 (State Environment Policy Act) and Division III, Chapters 16.40-16.58 (Natural Resource Lands and Critical Areas) – Chapter 16.04

of the SMC provides guidance to project applicants that require State Environmental Policy Act (SEPA) environmental review. Division III of the SMC (Chapters 16.40-16.58) establishes development standards, construction techniques, and permitted uses in critical areas and/or their buffers (wetlands, streams, wildlife habitat areas, aquifer recharge areas, landslide and erosion hazard areas, seismic hazard areas, volcanic hazard areas, and flood hazard areas) to protect these areas from adverse impacts. Division III also establishes protections for agricultural lands and regulatory standards for surface mining on mineral resource lands.

1.3.2.2 State and Federal Regulations

A number of state and federal agencies may have jurisdiction over land or development activities in the City's shoreline jurisdiction. Local development proposals most commonly trigger requirements for state or federal permits when they impact wetlands or streams; potentially affect fish and wildlife listed under the federal Endangered Species Act (ESA); result in over one acre of clearing and grading; or affect the floodplain or floodway. As with local requirements, state and federal regulations may apply throughout the city, but regulated resources are common within the City's shoreline jurisdiction. The state and federal regulations affecting shoreline-related resources include, but are not limited to:

- Endangered Species Act (ESA): The federal ESA addresses the protection and recovery of federally listed species. The ESA is jointly administered by the National Oceanic and Atmospheric Administration (NOAA) Fisheries (formerly referred to as the National Marine Fisheries Service [NMFS]), and the United States Fish and Wildlife Service (USFWS).

- Clean Water Act (CWA): The federal CWA requires states to set standards for the protection of water quality for various parameters, and it regulates excavation and dredging in waters of the U.S., including wetlands. Certain activities affecting wetlands in the City's shoreline jurisdiction or work in the adjacent rivers may require a permit from the U.S. Army Corps of Engineers and/or Ecology under Section 404 and Section 401 of the CWA, respectively.

- Hydraulic Project Approval (HPA): The Washington Department of Fish and Wildlife (WDFW) regulates activities that use, divert, obstruct, or change the natural flow of the beds or banks of waters of the state and may affect fish habitat. Projects in the shoreline jurisdiction requiring construction below the ordinary high water mark of rivers and lakes in the City could require an HPA from WDFW. Projects creating new impervious surface that could substantially increase stormwater runoff to waters of the state may also require approval.

- National Pollution Discharge and Elimination System (NPDES): Ecology regulates activities that result in wastewater discharges to surface water from industrial facilities or municipal wastewater treatment plants. NPDES permits are also required for stormwater discharges from industrial facilities, construction sites of

one or more acres, and municipal stormwater systems that serve populations of 100,000 or more.

1.3.2.3 National Marine Fisheries Service Biological Opinion on National Flood Insurance Program

The National Flood Insurance Program (NFIP) of the Federal Emergency Management Agency (FEMA) released draft Federal Insurance Rate Maps (DFIRM) that revised the extent of the White River and Puyallup River floodplain. The revised maps indicate a larger 100-year floodplain area than the maps that are currently in effect. Since the DFIRM maps have not been adopted by FEMA the 1987 maps remain in effect from a regulatory standpoint, based on City code.

In September 2008, a Biological Opinion issued by the National Marine Fisheries Service (NMFS) determined that the effects of certain elements of the NFIP throughout Puget Sound is likely to jeopardize the continued existence of the following species listed under the ESA: Puget Sound Chinook salmon, Puget Sound steelhead, Hood Canal summer-run chum salmon, and Southern Resident killer whales. The Biological Opinion also determined that NFIP is likely to adversely modify the following ESA designated critical habitats: Puget Sound Chinook salmon, Hood Canal summer-run chum salmon, and Southern Resident killer whale critical habitats. The biological opinion provides a reasonable and prudent alternative which can be implemented to avoid jeopardy and adverse modification of critical habitat. In response to the Biological Opinion, FEMA is in the process of developing guidance for NFIP participating communities, which includes the City of Sumner. The Biological Opinion establishes a 2010-2011 timeline for compliance for all NFIP participating communities within the Puget Sound Basin (NMFS, 2008).

1.3.3 Limitations Established by 24th Street Interchange Biological Opinions

The City of Sumner and WSDOT applied for a Corp of Engineer (COE) permit to authorize one acre of wetland fill to allow for development of the 24th Street Interchange, providing direct access from SR 410 to north Sumner. WSDOT submitted a Biological Assessment to the COE. The COE requested Endangered Species Act Section 7 formal consultation with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service. Both agencies issued a Biological Opinion in 2003.

The Biological opinions issued by NMFS concluded that the proposed action is not likely to jeopardize the continued existence of Puget Sound (PS) chinook (*Oncorhynchus tshawytscha*) Evolutionarily Significant Unit (ESU) (NMFS, 2003). The Biological opinion issued by USFWS concluded that the proposed action is not likely to jeopardize the Coastal/Puget Sound bull trout (USFWS, 2003). The opinions established terms and conditions including the following which applied to the White River within the *action area*:

1. Establish and maintain in perpetuity a 200-foot buffer along the White River.

2. The City's proposed trail will incorporate the following features and/or measures:

    a. The trail will be placed on only one side of the White River.

    b. The trail will be no larger than 16 feet wide, including two-foot gravel shoulders, and be placed on the furthest landward edge of the buffer.

    c. If and where placement of the trail on the furthest landward edge of the buffer cannot be achieved, the trail must not be placed any closer than 100 feet from the White River.

    d. On the City owned lots on the east bank of the White River, and wherever possible, the trail will be placed outside the 200-foot buffer.

    e. Access from the trail to White River, should be granted no more than every 300 feet.

    f. The width of the water access trails should not exceed 36 inches.

In response, the City of Sumner incorporated the terms and conditions listed above into the 2003 Shoreline Master Program.

2.0 METHODS AND DATA INVENTORY

2.1.1 Data Sources

The Ecology 2003 shoreline guidelines state that shoreline inventory and characterizations to support local SMP amendments should be based on "best available scientific and technical information." Inventories should use existing sources of information that are both relevant and reasonably available (WAC 173-26-201(3)(c)). Aside from reconnaissance-level field visits completed as part of the 2002 Inventory, no new field-based data collection efforts were performed to develop the summaries and characterization included in this document.

This report incorporates and builds on past work the City of Sumner has undertaken relevant to it's SMPs. Key sources of information include city planning documents and technical studies (including comprehensive plans and basin plans), and watershed planning documents for WRIA 10 (Puyallup/White River). Mapping information and other studies from state agencies (including Washington Department of Fish and Wildlife, Department of Ecology, and Department of Natural Resources) were also used. To analyze spatial patterns and visually display data, numerous cartographic resources were consulted and used in ArcGIS (ArcMap 9.3).

A complete list of technical and scientific references is included in Section 9 of this report. The map folio prepared for this SMP update is provided in Appendix A.

2.1.2 Determining Planning Area Boundary and Study Segments

For the purposes of this inventory and characterization report, the study boundary for the City of Sumner is shown on Map 1 and referred to throughout this report as the "shoreline planning area." In general, it includes:

- The regulated waterbody, including submerged lands lying waterward of the ordinary high water mark (OHWM);
- 200 feet of adjacent upland extending from the mapped edge of the approximate OHWM or floodway, whichever is further landward; and
- Any bordering, neighboring, or contiguous mapped wetlands.

For the purposes of this study, the City's shoreline planning area was organized into ten distinct segments or "reaches" (Segments A through H; UGA-1; JPA-1) based broadly on the

physical distinction along the shoreline, the level of ecological functions provided by each segment, as well as existing land uses and zoning. Shoreline Study Segments are described in Table 2-1 and depicted on Map 1.

Table 2-1. Sumner Shoreline Study Segments

Location	Segment	Description	Approximate Length (miles)	River Mile
Puyallup River	**A**	City limits at Orting Highway (SR 162) to Traffic Avenue bridge; Rivergrove and Rainier Manor communities	1.35	12.0 to 10.7
Confluence – Puyallup and White Rivers	**B**	Traffic Avenue bridge to SR 410 bridge; Sumner Wastewater Treatment Plant, Confluence of White and Puyallup Rivers	0.79	10.7 (Puyallup) to 0.3 (White)
White River	**C**	SR 410 bridge to Union Pacific spur bridge; Downtown Sumner	0.86	0.3 to 1.1
White River	**D**	Union Pacific spur bridge to Tacoma Road Bridge; heavy industrial facilities	0.63	1.1 to 1.8
White River	**E**	Tacoma Road Bridge to City-owned property on right bank; industrial warehouses	0.85	1.8 to 2.6
White River	**F**	City-owned property to 8th Street Creek; farm land and Sumner Meadows Golf Links on right bank; industrial warehouses on left bank	1.64	2.6 to 4.2
White River	**G**	8th Street Creek to Stewart Road bridge; industrial facilities	0.74	4.2 to 5.0
White River	**H**	Stewart Road bridge to northern city limits; large wetland complex	0.56	5.0 to 5.5
Lake Tapps	**UGA-1**	Portion of Lake Tapps within Sumner's UGA	1.28	n/a
Puyallup River	**JPA-1**	Left Bank in Joint Planning Area beginning at southernmost tip of Riverside Park to city limits at Orting Highway (SR 162)	1.32	13.3 to 12.0
		TOTAL	10.02	

3.0 ECOSYSTEM WIDE CHARACTERIZATION

3.1 Historic Land Use and Watershed Conditions

Historically, the surface geology of the valley floor in Sumner has been determined by frequent flooding of the White and Puyallup Rivers. Periodic mudflows from Mount Rainier have historically covered the valley with layers of mud, silt, ash, and glacial debris. The most recent mudflow (named the Osceola mudflow) occurred in the valley about 5,600 years ago.

Sumner lies within the Puyallup-White River Water Resource Inventory Area (WRIA 10). This watershed includes both the White River and its major tributaries and the Puyallup River to its mouth at Commencement Bay in Tacoma (see Map 2). Both rivers originate from glaciers on Mount Rainier. Most of WRIA 10 lies within Pierce County with a portion that extends north into King County, Washington.

The White River subbasin originates at the terminus of the Winthrop, Fryingpan and Emmons glaciers on the slopes of Mt. Rainier and drains an area of approximately 494 square miles (Williams, 1975). Flowing from its origin to the confluence with the Puyallup River, the White River is approximately 68 miles in length.

The Puyallup River Basin was one of the earliest areas settled in the Puget Sound basin. Historically, the study area was characterized by large tracts of old-growth forests, fertile river valley soils, and abundant runs of salmon (Kerwin, 1999). Homesteads and settlements began appearing as early as 1850.

The headwaters of both the upper Puyallup and White Rivers are predominantly located within the Mt. Rainier National Park, Mount Baker-Snoqualmie National Forest and private commercial timberlands. Urbanization and development have been limited in these areas compared to urban areas in the Puget Sound lowlands. However, both the upper Puyallup and upper White River watersheds have been affected by timber harvest and road building practices that have reduced the ability of riparian areas to provide wood and shade to the rivers and stream channels. These areas also continue to contribute to fine sediments from road construction and landslides in each river system. These activities continue to adversely impact natural salmonid production (Kerwin, 1999).

The historic Puyallup River Basin was characterized by frequent seasonal flooding across an extensive river floodplain, which supported a complex network of wetlands and habitats for fish and wildlife. In addition, the river's mouth at Commencement Bay occupied an extensive tidal flat and wetland estuary delta. Urbanization and an extensive system of flood control structures such as dams, levees, and culverts, have radically altered much of the Puyallup River and its tributaries. The estuary delta at the mouth of the Puyallup River has

been almost completely replaced with the facilities of the Port of Tacoma, with less than 5% of the original estuarine habitat remaining.

Early in the 1900's the majority of the White River flow was naturally directed north into the Green and Duwamish Rivers. A small overflow channel, called the Stuck River, flowed south from the vicinity of Auburn into the Puyallup River at Sumner. A rain-on-snow event triggered a significant flood event on November 14, 1906, creating a debris dam in the White River and directing the entire flow into the Stuck River. The former White River channel into the Green River went dry as a part of this event (Stein, 2001). A permanent diversion wall was constructed at Auburn in 1915; as a result, the White River remains a tributary of the Puyallup today.

Photograph 3-1. Drift barrier to permanently divert White River at the upper end of the old Stuck Creek Channel, dated November 18, 1922 (Pierce County River Improvement District).

Formed in 1907, the Pierce County River Improvement District began straightening the Puyallup River and constructing levees as part of an overall flood control project for the Puyallup valley in the vicinity of Sumner. Channel straightening and levee construction resulted in a loss of floodplain wetlands and off-channel habitats.

Photograph 3-2. Marion drag line and dredging along the Puyallup River during channel straightening dated October 11, 1916 (Pierce County River Improvement District, 1991).

There are three major dams affecting flow on the rivers in Sumner: 1) Electron Dam, a hydroelectric dam operated by Puget Sound Energy on the Puyallup River, 2) Lake Tapps Hydroelectric Project, a diversion dam to Lake Tapps and 3) Mud Mountain Dam, a flood control dam on the White River. Mud Mountain Dam, constructed in the early 1940s, regulates flood events by holding back surface water from heavy rains and snow melt in the reservoir, and then releasing it slowly back to the White River. Salmon are blocked from passage at the Lake Tapps diversion dam (Shared Salmon Strategy, 2006).

As part of flood control efforts in the valley, river channels and embankments have been generally kept clear of debris such as gravel bars, large trees, logjams, and other woody debris. These modifications have radically altered the natural character of the rivers. River widths have been generally reduced and channel migration zones eliminated. Water now fills nearly all of the land between river banks, instead of the historic pattern of braided meanders and wetlands.

The chronology of events presented in Table 3-1 includes events and impacts resulting from settlement and water body modifications between 1792 and 2009.

Table 3-1. Puyallup River Basin Chronology of Events

Date	Event	Impacts
1792	First European description of the Puyallup River mouth	Initial description of attributes of Commencement Bay as a possible port
1850	Donation Land Claim Law	Encouraged settlement of Oregon and Washington
1851	Initial European settlers arrive in vicinity of Tacoma	Land clearing and farming begins
1852	Pierce County organized	First citizen based government formed
1852	First commercial lumber mill constructed	Timber harvest begins
1853	First railroad surveys conducted	First mapping attempts of historical habitat
1854	Medicine Creek Treaty signed	Large tracts of land are given up by the Puyallup and Muckleshoot Tribes
1858	Laws permitting draining passed Coal discovered in upper Carbon River subbasin	Wetlands drainage begins. Mining was initiated in 1873.
1870	Irrigation of agricultural lands begins	Water withdrawals from surface waters
1873	First railroad into Puyallup River valley	Allows easy access into and out of Tacoma
1874	Initial railroad construction across Commencement Bay tidal marshes	First filling of tidal marshes and tideflats in Commencement Bay
1883	First report of RR bridge across White River	Railroad is constructed east/west in the then White/Green river valley
1890s	Tacoma Land Co. began dredging of western channel of Puyallup River	Significant loss of estuarine environment and function in Commencement Bay
1899	Mt. Rainier National Park established	Headwaters of Puyallup and White rivers preserved
1903	Electron Power Project construction started. Began operation in 1904	26 miles of spawning and rearing habitat lost and 10 miles of mainstem river habitat impacted due to reduced flows
1906	Flood event (probably a 100-year flood event)	Log jam on White River diverts White into Stuck River and Puyallup River basin
1907	Washington State Legislature grants county governments authority to do flood protection work	Pierce County River Improvement District (PCRI) formed and channelization efforts begin between White River and Puyallup River mouth
1908	Channel realignment, bank stabilization and diking projects started in Puyallup, Carbon and White Rivers	Instream habitat losses associated with each project
1911	Debris barrier constructed in White River upstream of the 1906 diversion; Lake Tapps Reservoir and associated hydroelectric facilities were built by Puget Sound Energy	Removed large woody debris from portions of the White and lower Puyallup Rivers; Diverted water from RM 3.6 to RM 24.3 on the White River

Date	Event	Impacts
1913	State Legislation passed permitting Inter-County River Improvement District to be formed in 1914	Pierce and King counties work together to perform flood control projects
1914	Concrete Diversion constructed at Auburn permanently diverting White River into Stuck River	Increased Puyallup River flows by approximately 50 percent at confluence with White River
1917	Puyallup River Relocation Project complete	Channel relocation, diking alterations to salt/freshwater mixing, erosion and changes to the estuarine environment -- 1,800 acres of tidal marsh lost
1930s	Work on St. Paul, Wapato (Blair) and Hylebos waterways	Estimated 570 acres of mudflats and 121 acres of salt marsh filled
1933	Maximum discharge recorded at the USGS Gage Station on the Puyallup River at Puyallup	Major driver behind the 1936 authorization under the Flood Control Act for levee improvements and the construction of Mud Mountain Dam on the White River
1939	Mud Mountain Dam construction begins; completed in 1948	Barrier to anadromous fish migration
1946	Army Corps of Engineers' channelization and diking projects	Lower three (3) river miles of Puyallup River diked
1940s – 1970s	Major logging activities in the upper watershed	Logging road construction and impacts watersheds to riparian buffers and habitat
1950s	Construction of residential housing began along Lake Tapps Reservoir shoreline	Increase in impervious surfaces adjacent to Lake Tapps
By 1970s	Major channelization projects completed	45 miles of three rivers in basin had been channelized (14.7 miles of dikes with concrete armoring, 57.3 miles of dikes and river banks with rock riprap)
1974	County gravel removal projects started	Rivers maintained by lowering of riverbed instead of raising heights of dikes
1988	Puyallup Land Claims Settlement	Major property ownership issues settled
1996	Largest flood event since 1933	Flood levels at tops of levees, Mud Mountain Dam may have prevented overtopping
1999	Puget Sound Chinook Listed as Threatened under the federal Endangered Species Act	Chinook present in White and Puyallup Rivers
2004	White River Hydroelectric Project at Lake Tapps Reservoir ceased operation	Hydroelectric power from Lake Tapps Reservoir ceased
2008	Puyallup River flooded	Flood levels overtopped levees leading to evacuations and property damage.

Date	Event	Impacts
2009	Puyallup and White Rivers flooded	Flood levels overtopped levees leading to evacuations and property damage. Mud Mountain Dam may have prevented overtopping.
2009	On December 18, Cascade Water Alliance purchased the Hydroelectric Project	Cascade Water Alliance is proposing to utilize the Lake Tapps Reservoir as a water supply

(Source: Kerwin, 1999; Pierce County, 2009a; Cascade Water Alliance, 2010)

3.2 Climate Change

Many changes in global climate have been documented over the last century. Various reports published in recent years indicate that there is an overall warming climate trend. The nature and causes of these changes has been comprehensively documented in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 2007). In 2009, a detailed report on climate change in the United States was published by the United States Global Change Research Program (USGCRP, 2009). The USGCRP report includes a brief analysis of the Northwest part of the United States. The Climate Impact Group (CIG) at the University of Washington (CIG, 2009) has developed climate models specifically focused on Puget Sound and published reports about possible climate impacts in Puget Sound. The possible climate impacts outlined in the 2009 report by the CIG include:

- Continued warming on the order of 0.2 - 1.0 ºF through 2050. The rate of change after the 2050s depends increasingly on the choice of greenhouse gas emissions scenarios.
- Possible decrease in summer precipitation and increase in winter precipitation with little change in the annual mean.
- Decrease in April 1 snowpack of 30 percent by the 2020s to 65 percent in the 2080s.

These factors have the potential to influence the functioning of Puget Sound ecosystems. Warmer temperatures will influence the nature and geographic extent of the snowpack that feeds the higher elevation streams. Warmer temperatures could also result in higher summer water temperatures, having the potential to negatively impact several water quality parameters. Additional precipitation, and a broadened rain-on-snow area, has the potential to influence flow regimes.

One of the anticipated effects of climate change in the Pacific Northwest is sea-level rise. Sea-level rise will likely change coastal processes and habitats, if water elevations increase as predicted. A recent study has been published by the National Wildlife Federation (NWF) on sea-level rise and coastal habitats in the Pacific Northwest (NWF, 2007). This study evaluated the Puget Sound, southwestern Washington, and northwestern Oregon coasts specifically, and identified 11 different sites within the Puget Sound for sea-level modeling. The model used a range of sea-level rise scenarios as predicted by the IPCC from 3.0 inches

increase in global sea levels by 2025 to a 27.3 inches increase to 2100. Sea-level rise within this range is anticipated to affect coastal habitats and fish and wildlife dependent upon the coastal areas of the Puget Sound. Mote et al. (2008) recently calculated sea-level rise projections specific to the Puget Sound region. Three estimates were reported based on greenhouse gas emissions scenarios. These new scenarios report rise in sea level ranging from 3 to 22 inches by 2050, and from 6 to 50 inches by 2100.

The Puyallup delta in Tacoma is already developed and protected by dikes and levees. Therefore, sea-level rise in Commencement Bay is likely to cause a loss of marine beaches at the mouth of the Puyallup, but not likely to impact riparian habitats or wetlands (since so few remain) (NWF, 2007). Sumner is located inland and may not be directly affected by sea level rise, but could be affected by changes in river flow regime due to climate change.

3.3 Watershed Conditions

NMFS (NMFS, 1996) and USFWS (NMFS and USFWS, 1998) define "not properly functioning" watershed conditions by the presence of many valley bottom roads, the disturbance of greater than 15 percent of a watershed, and fragmented riparian conditions. Beyond this threshold, watershed conditions can be expected to continue to degrade. In the Puyallup watershed, future land development is expected to continue, increasing peak flows within the White and Puyallup Rivers and exacerbating existing erosion, sedimentation, and water quality problems. In addition, due to past and ongoing urbanization, Sumner and its surroundings contain many valley bottom roads. These factors have resulted in a "not properly functioning" watershed condition. Section 6 includes details related to watershed conditions for each shoreline segment within the City of Sumner's shoreline planning area.

3.4 Floodplain Characterization

The 100-year (one percent annual chance) floodplain for Sumner and surrounding areas has been mapped by Federal Emergency Management Agency (FEMA) (Map 4) and released as draft Federal Insurance Rate Maps (DFIRM). Flooding along the Puyallup River and the White River is primarily due to high streamflow during winter months. Sumner is located in a low-lying area that includes a relatively wide floodplain for the majority of the SMP area (Map 3). The floodplain is partially confined in many areas by levees and concrete revetments. Section 5.5 includes a discussion of frequently flooded areas. Section 6 includes floodplain characterization, including modifications, for each shoreline segment within the City of Sumner's shoreline planning area.

The entire floodplain is not regulated under the SMP regulations for the City of Sumner, but is an essential part of the ecosystem characterization. The addition of additional impervious area and development within the designated floodplain may result in increases in water surface elevations and extent of flooding during a large flood event, such as a 100-year flood.

The 100-year floodplain designated by FEMA extends significantly farther than the Sumner SMP segments in many locations along the White River and Puyallup River (Map 4). Table 3-2 indicates the differences in acreage of floodplain area.

Table 3-2. Acres in Floodplain both inside and outside shoreline planning segments

Waterbody	Floodplain in Shoreline Planning Area Segments (acres)	Floodplain outside of Shoreline Planning Area Segments (acres)	Total Floodplain (acres)
Puyallup River	130	68	198
White River	425	587	1,012

The 100-year floodplain outside of the segments includes an additional 65 acres of developed area along the Puyallup River and 377 acres along the White River (Table 3-3). See Appendix B (graphs B-1 and B-2 for a more detailed breakdown of land cover).

Table 3-3. Summary of existing land cover outside of the segments

Type of Land Cover	Puyallup River Floodplain		White River Floodplain	
	Area (Acres)	Area (%)	Area (Acres)	Area (%)
Developed (0-100% Impervious Surfaces)	65	95	377	64
Agriculture (Cultivated, Pasture/Hay, Grass)	1	1	187	32
Vegetated (Forest, Shrubs, and Wetlands)	3	4	23	4
Total	**69**	**100**	**586**	**100**

The approximate impervious area percentages for the entire floodplain are significantly higher than in the floodplain within the segments along the Puyallup River and the White River (Table 3-4).

Table 3-4. Summary of approximate impervious area percentages

Water Body	Land Use (impervious percentage)	Floodplain within segment (percent)	Floodplain outside of segment (percent)	Entire Floodplain (percent)
Puyallup River	High Intensity Developed (80-100%)	1	4	2
	Medium Intensity Developed (50-79%)	12	39	21
	Low Intensity Developed (21-49%)	31	48	37
	Developed Open Space (0-20%)	13	4	10
	Total Impervious Area (0-100%)	**57**	**95**	**70**
White River	High Intensity Developed (80-100%)	3	25	16
	Medium Intensity Developed (50-79%)	9	16	13
	Low Intensity Developed (21-49%)	15	13	14
	Developed Open Space (0-20%)	5	10	8
	Total Impervious Area (0-100%)	**32**	**64**	**51**

Existing land use designations do not differ as dramatically between the floodplain area and the floodplain within shoreline segments. See Appendix B (Graphs B-3 and B-4) for graphs comparing existing land use designations.

- Existing land use within the Puyallup River floodplain within the segments is mainly a mix of low-density residential (36 percent) and multi-family residential (34 percent). Existing land use within the entire Puyallup River floodplain is similar with a slightly lower amount of low-density residential (29 percent) and higher amount of multi-family residential (36 percent).

- Existing land use within the White River floodplain within the segments is a mix of vacant lands (42 percent), industrial/manufacturing (23 percent) and low-density residential (15 percent). Existing land use within the entire White River floodplain is composed of less vacant lands (35 percent) and higher amount of industrial/manufacturing (31 percent).

Existing zoning designations are generally similar both within shoreline segments and within the entire floodplain. See Appendix B (Graphs B-5 and B-6) for graphs comparing zoning designations.

- Zoning designations within the *Puyallup River floodplain within the segments* is a mix of low-density residential (41 percent) and high-density residential (30 percent). Zoning designations within the entire Puyallup River floodplain are focused slightly less on low-density residential 1200 (36 percent) and more on high-density residential (33 percent). Pierce County zoning in Segment JPA-1 is almost identical when comparing the entire floodplain and the floodplain with the shoreline segment.

- Zoning designations within the White River floodplain within the segments are a mix of light industrial (69 percent) and agriculture (21 percent). Zoning designations within the entire *White River floodplain* is almost identical with a mix of light industrial (66 percent) and agriculture (19 percent).

There is a higher amount of documented wetland area in the White River floodplain within shoreline segments (7 percent) than within the entire White River (3 percent). The Puyallup River floodplain does not contain any documented wetland area. See Appendix B (Graphs B-7 and B-8) for graphs comparing wetland areas.

4.0 LAND AND SHORELINE USE PATTERNS

The City of Sumner, located approximately 12 miles east of Tacoma and 34 miles south of Seattle, encompasses an area of approximately 7.5 square miles. The city's UGA is approximately 1.3 square miles. The City is predominantly located on the valley floor of the Puyallup and White River valleys. As of 2009, the City's population was approximately 9,085. Over the recent past, the city has experienced a rapid growth rate, and a portion of this development has occurred in the shoreline areas of the White and Puyallup Rivers.

4.1 Existing Land Use

According to Pierce County Assessor records (City of Sumner, 2009b; Pierce County, 2008a), current land use in Sumner's shoreline planning area is a mix of vacant, industrial / manufacturing, residential, and parks/open space uses. Designated vacant lands are currently the dominant land use (43 percent of entire shoreline planning area) focused mainly in Segments F and UGA-1. While the term "vacant" may not always accurately reflect current conditions (such as protected open space, agriculture, wetlands, or lands with development restrictions), the classification generally indicates that no structural improvements have been made or assessed for taxes on the property.

Industrial/manufacturing is the second most common land use (16 percent of entire shoreline planning area) focused almost entirely along the White River, mainly in Segments E and G. Residential land uses are less common (14 percent of entire shoreline planning area) and mainly concentrated along the Puyallup River as well as Segments E and F on the White River. Designated parks and open space lands compose 11 percent of entire shoreline planning area with the largest acreage in Segment F (City of Sumner, 2009b; Pierce County, 2008a).

4.2 Comprehensive Plan

According to Sumner's *Comprehensive Plan* (City of Sumner, 2005), the city contains a variety of designated land uses, ranging from heavy industrial to residential (Map 8). The predominant comprehensive land use designation in the shoreline planning area within Sumner's city limits and UGA boundaries is Public/Private Utilities and Facilities (44 percent). Light Industrial is the second most common comprehensive plan designation (39 percent). Similar to existing land uses, residential land use designations are less common (10 percent) and are mainly located along the Puyallup River and Segment C on the White River. Remaining land use designations are almost evenly divided among General Commercial (4 percent) and Heavy Industrial (3 percent) (City of Sumner, 2009b).

The purpose of the Public/Private Utilities and Facilities comprehensive plan designation is

> *To identify lands utilized to provide public and private utilities, facilities, and services. Allowable uses include parks, schools, medical facilities, non-profit service uses/organizations, public and private utilities, and government buildings (City of Sumner, 2005).*

The types of uses the Light Industrial comprehensive plan designation allows for are described below:

> *Principle uses include light manufacturing (particularly assembling and manufacturing of products from previously prepared material), office, warehouse/distribution, and packaging plants. Secondary uses include service retail, restaurant, government, agricultural activities, and utilities subject to compatibility criteria (City of Sumner, 2005).*

Almost all properties designated Public/Private Utilities and Facilities within Sumner city limits are under City ownership. Most of the remaining properties similarly designated are under Puget Sound Energy ownership in the UGA-1 segment.

Pierce County's *Comprehensive Plan* (Pierce County, 1994) designates the shoreline planning area within JPA-1 since that area is located outside Sumner's city limits and UGA. Approximately 80 percent of JPA-1 is designated Rural-10 and 20 percent is designated Agriculture Resource Lands (Pierce County, 2006). The intent of the Rural-10 comprehensive land use designation is to allow for a basic density of 1 dwelling unit per 10 acres. Preservation of open space and clustering of units is encouraged through density bonuses (Pierce County, 1994).

4.3 Zoning Designations

The City's zoning designations generally follow land use designations from the City's comprehensive plan, discussed above (Map 9). Light Industrial is the most common zoning designation within Sumner's city limits and UGA (54 percent). Agriculture is the second most common zoning designation (15 percent). Residential zoning designations are the third most common (13 percent) and Public/Private Utilities and Facilities are the fourth (10 percent). Remaining zoning designations are almost evenly divided between Heavy Industrial (4 percent) and General Commercial (3 percent) (City of Sumner, 2009b).

The major difference between the Comprehensive Plan designations and zoning designations is that Public/Private Utilities and Facilities is not as prevalent a zoning designation as it is under the Comprehensive Plan. Almost the entire right bank of the White River is designated by the Comprehensive Plan as Public/Private Utilities and Facilities in Segment F. However, the zoning designations for those properties are a mix of Agriculture and Light Industrial. Regardless of the zoning designations, those properties are in public ownership, with a large majority either leased for turf farming or part of the Sumner Meadows Golf Links.

Pierce County zoning designations are identical to the comprehensive plan designations in Segment JPA-1. Approximately 80 percent of JPA-1 is designated Rural-10 and 20 percent is designated Agriculture Resource Lands (Pierce County, 2008a).

Table 4.1 identifies the relative percentage of existing land uses in each planning segment based on 2009 and 2008 Pierce County Assessor land use records (City of Sumner, 2009b; Pierce County, 2008a). Table 4.1 also includes Comprehensive Plan land use and zoning designations for each segment, as well as the approximate amount of developed area within each shoreline planning segment. Impervious area is based on land cover data from NOAA (Coastal Change Analysis Program [C-CAP] / National Land Cover Database [NLCD], 2006). Finally, Table 4.1 identifies the shoreline environment designations as established by Sumner's 2004 *Shoreline Master Program* and Pierce County's 1974's *Shoreline Master Program*. See Maps 8, 9, and 10 for comprehensive plan and zoning designations, and land cover.

Table 4-1. Land Use Table

Shoreline Segment	Existing Land Use	Percent	Comprehensive Plan Land Use Designations	Percent	Zoning Designations	Percent	Approximate Impervious Area	Percent	Shoreline Environments
A	Unknown[1]	27	High Density Residential	47	High Density Residential	47	High Intensity Developed (80-100%))	36	Shoreline Residential and Urban Conservancy
	Vacant	23	Low Density Residential 1	6	Low Density Residential 1200	34	Medium Intensity Developed (50-79%)	36	
	Multi-Family Residential	29	Low Density Residential 2	13	Low Density Residential 6000	10	Low Intensity Developed (21-49%)	7	
	Low-Density Residential	13	Public/Private Utilities and Facilities	34	Low Density Residential 7200	3			
	Public Facilities/Utilities	4			Low Density Residential 8500	6			
	Agriculture	3							
B	Public Facilities/Utilities	43	General Commercial	7	Low Density Residential 1	55	High Intensity Developed (80-100%))	13	Urban Conservancy
	Other [2]	20	Low Density Residential 3	48	Low Density Residential 1200	41	Medium Intensity Developed (50-79%)	31	
	Low-Density Residential	18	Public/Private Utilities and Facilities	45	Low Density Residential 6000	1	Low Intensity Developed (21-49%)	6	
	Vacant[3]	17			Low Density Residential 8500	3			
	Transportation	2							
C	Low-Density Residential	30	General Commercial	57	General Commercial	48	High Intensity Developed (80-100%))	23	Urban and Urban Conservancy
	Commercial	22	Light Industrial	5	Light Industrial	5	Medium Intensity Developed (50-79%)	42	
	Industrial/Manufacturing	16	Low Density Residential 3	14	Low Density Residential 1	10	Low Intensity Developed (21-49%)	13	
	Park/Open Space	13	Medium Density Residential	8	Low Density Residential 6000	11			
	Vacant	11	Mixed Use Development	13	Low Density Residential 8500	1			
	Other	4	Public/Private Utilities and Facilities	3	Medium Density Residential	10			
	Government/Institution	3			Mixed Use Development	15			
	Transportation	1							
D	Industrial/Manufacturing	38	Heavy Industrial	31	Heavy Industrial	31	High Intensity Developed (80-100%))	8	Urban Conservancy
	Public Facilities/Utilities	25	Light Industrial	69	Light Industrial	69	Medium Intensity Developed (50-79%)	24	
	Park/Open Space	19					Low Intensity Developed (21-49%)	5	
	Commercial	13					Developed Open Space (0-20%)	4	
	Vacant	3							
E	Vacant	38	Heavy Industrial	3	Heavy Industrial	3	High Intensity Developed (80-100%))	11	Urban Conservancy
	Agriculture	25	Light Industrial	87	Light Industrial	97	Medium Intensity Developed (50-79%)	13	
	Industrial/Manufacturing	22	Public/Private Utilities and Facilities	10			Low Intensity Developed (21-49%)	3	
	Low-Density Residential	15					Developed Open Space (0-20%)	41	
F	Vacant	55	Light Industrial	21	Agriculture	41	High Intensity Developed (80-100%))	5	Urban Conservancy
	Park/Open Space	25	Low Density Residential 1	1	Light Industrial	54	Medium Intensity Developed (50-79%)	8	
	Industrial/Manufacturing	9	Low Density Residential 2	5	Low Density Residential 8500	5	Low Intensity Developed (21-49%)	7	
	Low-Density Residential	5	Public/Private Utilities and Facilities	73			Developed Open Space (0-20%)	21	
	Public Facilities/Utilities	5							

Shoreline Segment	Existing Land Use	Percent	Comprehensive Plan Land Use Designations	Percent	Zoning Designations	Percent	Approximate Impervious Area	Percent	Shoreline Environments
G	Industrial/Manufacturing	60	Heavy Industrial	7	Heavy Industrial	17	High Intensity Developed (80-100%))	22	Urban Conservancy
	Vacant	30	Light Industrial	75	Light Industrial	83	Medium Intensity Developed (50-79%)	34	
	Park/Open Space	6	Public/Private Utilities and Facilities	9			Low Intensity Developed (21-49%)	3	
	Low-Density Residential	4	Urban Village	9					
H	Vacant	59	Light Industrial	100	Light Industrial	100	High Intensity Developed (80-100%))	6	Rural (Pierce County)
	Industrial/Manufacturing	36					Medium Intensity Developed (50-79%)	5	
	Agriculture	5					Developed Open Space (0-20%)	4	
UGA-1	Vacant	100	Public/Private Utilities and Facilities	100	Public/Private Utilities and Facilities	100	Medium Intensity Developed (50-79%)	0.4	Rural/Residential (Pierce County)
JPA-1	Low-Density Residential	36	Agriculture Resource Land	20	Agriculture Resource Land	20	High Intensity Developed (80-100%))	6	Rural and Conservancy (Pierce County)
	Multi-Family Residential	33	Rural - Ten	80	Rural – Ten	80	Medium Intensity Developed (50-79%)	36	
	Agriculture	15					Low Intensity Developed (21-49%)	17	
	Vacant	10							
	Other	3							
	Industrial/Manufacturing	2							
	Government/Institution	1							

[1]Parcels classified as unknown by the Pierce County assessor's data are likely part of the Riverwalk condominium community.
[2] These parcels correspond to City-owned open space east of the Sumner Wastewater Treatment Plant.
[3] These parcels are under public ownership
Source: City of Sumner 2009; Pierce County 2006; Pierce County 2007; Pierce County 2008a

4.4 Water-Dependent Uses

Water-dependent uses typically include marinas, docks, piers, boating facilities, outfalls and aquaculture. The Puyallup Tribe launch boats into the White River at the Confluence Park (described in Section 4.5) as part of their fish-counting research. There are no other docks, piers, boat ramps, boating facilities or marinas within Sumner shorelines. However, water-dependent uses are located in Lake Tapps outside of the Sumner shoreline planning area.

Water in Lake Tapps is released to the Dieringer Flume via an outfall structure. Even though the Puget Sound Energy Hydropower Project at Lake Tapps ceased operation in January 2004, this outfall structure is likely still considered a water-dependent use. Cascade Water Alliance has future plans for managing Lake Tapps as a municipal water supply which could involve water dependent activities. Other water-dependent use in Sumner's shoreline planning area is the outfall associated with the City's wastewater treatment plant on the White River in Segment B. One mapped stormwater outfall is located in Segment F along the White River. One mapped sewer overflow outfall is located in Segment A along the Puyallup River (see Map 12).

4.5 Public Access Sites

Existing and potential public access sites were identified from information provided in the *Sumner Parks and Open Space Plan* (City of Sumner Board of Park Commissioners and Sumner Community Development Department, 2000) and *Sumner Trail Master Plan* (City of Sumner Community Development Department, 2008). Public access sites were also identified from City staff field reconnaissance of the White and Puyallup River.

4.5.1 Existing Public Access Sites

Existing open space within the shoreline planning area includes both public and private utilities and facilities, along with wetlands, undeveloped agricultural lands, vacant land, and the river corridors themselves. As discussed under Section 4.1, above, substantial portions of Sumner's shoreline are occupied by public/private utilities and facilities. Major parks and facilities in the shoreline planning area providing public access to the shoreline are shown in Map 13. Some public access locations have been established directly through the city's shoreline permit process as a condition of approval of the permits. Public access to Lake Tapps within the shoreline planning area is not available. Public access locations along the White and Puyallup Rivers include the following:

- **Riverside Park:** (Segment JPA-1) This 50-acre site is located on the left bank of the Puyallup River in unincorporated Pierce County. The park is currently leased to River Valley BMX Racing for seasonal motorcross bicycle races and Tacoma Disc Golf Players Association for disc golf (Pierce County, 2009b). Access to the Puyallup River dike is available.

Photograph 4-1. Riverside Park

- **Riverside Trail:** (Segments A, B, D, E and F) The Riverside Trail is the planned and partially built, non-motorized trail along the banks of the Puyallup and White Rivers from the City's northerly limits to its southerly limits. The Riverside Trail is planned to link to four major regional trails: Foothills Trail from Buckley and Orting, Puyallup River Trail from Tacoma and Puyallup, Interurban Trail from Seattle, and White River Trail from Auburn. Additional links include connections to Lakeland Hills (to Lake Tapps) and Jovita Trail at Stewart Road (currently at a conceptual stage). The trail provides access to the river in several locations. See Map 13 for planned and already-built portions of the trail and trailhead locations.

- **Girard Park/Grand Park:** (Segment A) This 0.6-acre park is located on the south side of Highway 410, east of the BNSF bridge. Freeway construction drastically limited access to this park. The park can be reached through the Rainer Manor Mobile Home Park by walking along the Puyallup River bank.

- **City-owned Open Space:** (Segment B) This 4-acre undeveloped open space owned by the City is located along the Riverside Trail that provides access to the Puyallup River.

- **Confluence Park:** (Segment B) This 1.5-acre park is located at the confluence of the White and Puyallup Rivers near the City's wastewater treatment plant. Access to the river is available at several points along the bank. It is used frequently for fishing and for boat launching by the Puyallup Tribe.

- **63rd Street East Street-End:** (Segment B) Public access in the right-of-way (ROW) of the intersection of State Street and 63rd Street East is available on the right bank of the White River.

- **Spinning Avenue Street-End:** (Segment C) Public access in the ROW of the intersection of Spinning Avenue and West Main Street is available on the right bank of the White River.

- **City-owned Open Space:** (Segment C) This 0.2-acre undeveloped open space owned by the City is located on West Main Street directly adjacent to the White River.

- **Bridge Street Bridge:** (Segment C) Access to the White River is available in the ROW of Valley Avenue East on either side of the bridge.

- **Library and Community Center:** (Segment C) This is a 3-acre site on the right bank of the White River that houses the Sumner Pierce County Library. There is a 0.8-acre "park" with picnic tables near several large trees. The property offers direct access to the White River.

Photograph 4-2. Library and Community Center

- **Fryar Avenue Bridge:** (Segment D) Access to the White River is available in the ROW of Fryar Avenue on either side of the bridge.

- **City Public Works Shops:** (Segment D) Park associated with Riverside Trail.

- **Tacoma Avenue Bridge**: (Segment D/E) Access to the White River is available in the ROW of Tacoma Avenue on either side of the bridge.

- **145th Avenue Vacated ROW:** (Segment E) Access to the White River is available in the vacated ROW of 145th Avenue north of 45th Street East.

- **24th Street Trail Bridge:** (Segment F) Access to the White River is available in the ROW of 24th Street East on either side of the pedestrian bridge.

- **Open Space south of Golf Course:** (Segment F) This 40-acre site is currently an undeveloped, City-owned property. The site is currently leased out to be farmed. A band of trees are located along the river and a large stand of cottonwood extend inland from the river at 24th. A utility and pedestrian bridge has been constructed across the White River at 24th as part of the Riverside Trail network.

- **Riverbend Park:** (Segment F) This 8-acre site is located south of the Sumner Meadows Golf Links on the left bank of the White River. It is currently an undeveloped park characterized by cottonwoods along the river, blackberry and wetland areas. The banks in some areas are shallow offering good access to the water's edge.

- **Sumner Meadows Golf Links**: (Segment F) This 165-acre golf course is located on 8th Street East northeast of the White River. It includes an 18-hole course, a driving range, and a clubhouse. The park has an additional 94 acres yet to be developed (City of Sumner, 2003).

Photograph 4-3. Sumner Meadows Golf Links

- **Stewart Road Bridge:** (Segment G/H) Access to the White River is available in the ROW of Stewart Road on either side of the bridge.

4.5.2 Planned Public Access Sites

Improvements and enhancements to existing park and open space resources identified in the *Sumner Parks and Open Space Plan* and *Sumner Trail Master Plan* include the following:

- **Riverside Park:** The Capital Improvement Plan in the Pierce County Parks, Recreation and Open Space Plan Update (Pierce County, 2008b) identified preparation of a master plan for the park as a Priority 1 (defined as projects that are needed to maintain existing level of service) and implementation of master plan improvements as a Priority 3 (defined as projects that expand the park system). The Sumner Trail Master Plan identifies the park as a good place for a trailhead for the Riverside Trail.

- **Riverside Trail:** There is an on-going effort to continue constructing the Riverside Trail throughout Sumner. Map 13 shows the portions of the trail that are planned to be built in the future. The Sumner Capital Facilities Plan (City of Sumner, 2003a) allocated $2.3 million dollars towards the design and construction of the trail. The Sumner Master Trail Plan estimated the cost of implementing two major phases of the trail system to be $4.8 million. Phase 1 would involve constructing the following trail connections:

    - **Stewart Road to the White River –** Construct trail along the relocated 8th Street Creek from White River to Stewart Road.

    - **North Side of Stewart Road –** Construct 1,600 lineal feet along the north side of Stewart Road to ensure a connection between Lakeland Hills in Auburn and the trail system in Pacific. This project is currently under construction (City of Sumner, 2009a).

    - **Confluence Trail to Bridge Street Bridge –** Construct trail from SR 410 along West Main Street to Bridge Street Bridge.

- **Girard Park/Grand Park**: *The Sumner Parks, Recreation and Open Space Plan* identifies potential use of the park as trail and trailside park. Once the Riverside Trail along the Puyallup River is extended east of the Traffic Avenue bridge, public access to this park would be dramatically improved.

- **Confluence Park**: *The Sumner Master Trail Plan* identifies the park as a good place for a trailhead for the Riverfront Trail. Boat ramp, boat trailer parking, fisherman's shelters, and restrooms would be beneficial services added to the site.

- **Open Space south of Golf Course:** The Parks, Recreation and Open Space Plan identifies two alternatives for this property: 1) develop it as an active regional park

with river access including boat launches; or 2) develop it as an extension to the golf course. Development of this property is ranked as medium priority (to be implemented over the next 20 years).

The *Sumner Trail Master Plan* identifies the site as an excellent location for a major trailhead. The park could be developed with sport fields, expanded golf course, and parking lots. The Plan recommends that the wooded area near 24th be preserved and made more accessible with footpaths. According to the Plan, since most of the area is wetland and one of the last areas of riparian woodland, it should be preserved as habitat.

The City has received funding from the Salmon Recovery Funding Board to conduct a feasibility analysis for the future construction of a setback levee for the purposes of improving floodplain connectivity and salmon habitat. The feasibility analysis is expected to encompass this 40-acre property as well as 80 acres of City-owned property to the south.

- **Riverbend Park:** The *Parks, Recreation and Open Space Plan* identifies options for this park as including river access, kite flying, softball and recreation fields, and/or interpretive center. *Sumner Trail Master Plan* identifies Riverbend Park as a site for a trailhead.

4.6 Transportation Facilities

4.6.1 Roads

Sumner's shoreline planning area contains several roads, from two-lane neighborhood collectors to arterials. The highest road density is located in the vicinity of downtown Sumner, in Segment C. Refer to Section 6 and Map 12 in Appendix A for the location of roads in each shoreline segment.

4.6.2 Bridges

There are 11 bridge crossings documented in the shoreline planning area. Table 4-2 below lists the bridge crossings, the waterbody that is crossed, and the shoreline planning segment. Also see Map 12 in Appendix A for the location of bridges in each shoreline segment.

Table 4-2. Bridge crossings located in Sumner shorelines.

Bridge	Waterbody	Shoreline Reach
BNSF railroad bridge	Puyallup River	Segment A
Traffic Avenue East bridge	Puyallup River	Boundary between Segment A and B
SR 410	White River	Boundary between Segment B and C
Bridge Street Bridge	White River	Segment C
Union Pacific railroad spur bridge	White River	Boundary between Segment C and D
Fryar Avenue bridge	White River	Segment D
Tacoma Avenue bridge	White River	Boundary between Segment D and E
24th Street pedestrian bridge	White River	Segment F
Stewart Road bridge	White River	Boundary between Segment G and H
Sumner Tapps Highway East	Lake Tapps	Segment UGA-1
Orting Highway East (SR 162)	Puyallup River	Boundary between Segment JPA-1 and A

4.7 Utilities

4.7.1 Storm Water and Sewer Outfalls

The Sumner Wastewater Treatment Plant is located at the confluence of the Puyallup and White Rivers in shoreline Segment B. Sanitary sewage is conveyed to the treatment plant by a series of collectors, as well as the 36-inch Sewage Treatment Plant interceptor. There are 5 pump stations located in the shoreline planning area; these are the 41st Pump Station (right bank, Segment E), Tacoma Pump Station (right bank, Segment E), 142nd Pump Station (left bank, Segment D), the North Pump Station (right bank, Segment D) on the White River, and the Cherry Avenue Pump Station (left bank Segment A) on the Puyallup River. The City's sewer system also contains two overflow outfalls, one in the White River on the right bank of Segment C, and the other on the left bank of the Puyallup River near the Cherry Avenue Pump Station in Segment A (City of Sumner, 1993). The wastewater treatment plant provides sanitary sewer treatment for the City of Sumner and the City of Bonney Lake. The wastewater treatment plant is a secondary treatment facility that treats an average wet weather flow of 2.62 million gallons per day with a peak hydraulic capacity of 6.56 million gallons per day. The treated effluent is discharged to the White River through an outfall.

Within the core downtown area of Sumner, generally south of Puyallup Street and west of Valley Avenue, the City's storm drainage system consists of collection by a network of pipes and direct discharge to the White and Puyallup Rivers. North of the downtown core, a series of ditches and new tight-line systems convey drainage to the White River; these ditches are maintained to a specified design flow. Salmon Creek is used for stormwater conveyance and contains several stormwater discharge outfalls (City of Sumner, 1993).

4.7.2 Other Utilities

Commercial, residential, and industrial buildings located in the shoreline planning area are served by municipal water, as well as gas and electricity (Puget Sound Energy) and telephone (Qwest). There are no major utility structures along the Puyallup River shoreline planning area. However, there are utility facilities located along the White and Lake Tapps shorelines.

Photograph 4-4. Tailrace Canal looking east at Powerhouse

Other utilities include the recently-decommissioned Dieringer Powerhouse and its associated "tailrace" or discharge canal, located west of Lake Tapps and on the east bank of Segment F in the White River. While the powerhouse is no longer used to generate electricity, water is still diverted from the White River through Lake Tapps, and discharged back into the White River at the Dieringer Powerhouse. The tailrace consists of a

constructed canal approximately 30 feet wide that discharges water to the White River. During hydropower operation, the flows discharging from Tailrace Canal were high (Table 4-3) and the flows in the White River above the Tailrace Canal were low (Table 4-4). High flows through the canal create a false attraction for salmonid species, while low flows occur in river reaches below the diversion (Kerwin, 1999). These "ramping" rates may strand juvenile and adult fish (Kerwin, 1999). Since the hydropower operations ceased in 2004, the annual average flow discharging from Tailrace Canal is significantly lower while the average flow above the Tailrace Canal is higher (Cascade Water Alliance, 2010). There have not been studies completed to determine if the post hydropower flow is low enough to deter salmonid species from entering the canal. Flows are discussed in further detail in Section 5.3.4 of this report.

Table 4-3. Monthly Average Decrease in Flow Rates (cfs) at Tailrace Canal

Year Type	Hydropower Period (1988-2002)	Post-Hydropower Period (2004-2008)	Monthly Average Decrease in flow
Average	924	115	809
Wet Year (2007/1996)	899	88	811
Dry Year (2005/2001)	681	153	528

Source: Cascade Water Alliance, 2010.

Table 4-4. Monthly Average Increase in Flow Rates (cfs) in White River above Tailrace Canal

Year Type	Hydropower Period (1988-2002)	Post-Hydropower Period (2004-2008)	Monthly Average Increase in flow
Average Year	924	1565	861
Wet Year (2007/1996)	899	1930	504
Dry Year (2005/2001)	681	981	647

Source: Cascade Water Alliance, 2010.

The Public Works shops are located in the shoreline planning area (Segment D) on the left bank of the White River at 4711 142nd Avenue East. The property is 8.35 acres in size with 5 buildings that house offices, meeting rooms, vehicle and material storage, vehicle wash and repair, sign shop, and welding and fabrication shop (City of Sumner, 2003a).

On Lake Tapps, there is a large substation located west of 167th Avenue E, just west of the section of Lake Tapps that lies within the City UGA. This substation is owned and operated by Puget Sound Energy. Overhead transmission lines cross Reach UGA-1 en route to the substation. Transmission towers are located to the east and west of open water associated with Lake Tapps.

4.8 Shoreline Modifications

4.8.1 Flood Control Structures

Both the Puyallup and White Rivers are lined through their entire length in Sumner with a system of levees and concrete revetments that were built in the early 1900s. These structures are included in the planning area of the Pierce County River Improvement Division (PCRI). According to the *Puyallup River Basin Comprehensive Flood Control Management Plan* (PCRI, 1991), levees are defined as "structures designed, constructed, and maintained as flood proof structures with three feet of freeboard (as required by FEMA) above a design flood elevation." Revetments are "flood control structures not necessarily engineered or designed to be flood proof and do not have three feet of freeboard above the 100-year flood elevation."

Photograph 4-5. Construction of levees along the north bank of the Puyallup River dated July 9, 1916 (Pierce County River Improvement Division, 1991).

The Puyallup River within Segments A, B, and JPA-1 is almost completely lined with levees, while most of the White River within Segments B through H is armored with revetments. The levees within Segments JPA-1, Segment A, and Segment B have recently been classified

as ineligible for FEMA certification. Many of these levees have less than three feet of freeboard.

Over time, vegetation has grown and obscured many of the revetments and levees within the Sumner shoreline planning area. An agreement with the Puyallup Tribe in 1995 calls for retention and encouragement of plant growth near the ordinary high water mark and/or toe of the levees and revetments. Only woody plants with a trunk diameter exceeding six inches may be removed from that zone (PCRI, 1991). Maintenance of these flood control structures by the County is currently minimal and limited to vegetation removal to maintain access, and occasionally removal of larger diseased or damaged trees.

Photograph 4-6. White River revetments

4.8.2 Docks, Piers, and Over-Water Structures

With the exception of the bridges previously described, and various powerline crossings of the White and Puyallup Rivers (see Section 6 for more detail), there are no docks, piers, or over water structures located on the Puyallup River, White River or Lake Tapps in the Sumner shoreline planning area. The existing levees and high river flows limit water access to the White and Puyallup Rivers.

4.8.3 Culverts

The Pierce County Conservation District, in cooperation with the Puyallup Tribe, has documented the location and condition of culverts throughout the Puyallup River watershed (Pierce County Conservation District, 2000). Specifically, there are no culverts on the main channels of the White or Puyallup Rivers in Sumner. However, culverts that are barriers to fish passage have been identified on several tributaries to the White and Puyallup Rivers. Tributaries with culvert barriers within 200 feet of the mainstem reaches are identified near Segment G, Segment H, south of Segment A, north of Segment F, and on the Union Pacific rail spur bridge in the vicinity of Segment D.

4.9 Historical and Cultural Resources

Historic and cultural resources are documented through a variety of sources. Official registers include the National Register of Historic Places and the Washington State Heritage Register. In 2008, the City of Sumner adopted Chapter 18.39 of the SMC (Historic Preservation) to provide for the identification, evaluation, designation and protection of designated historic resources within the boundaries of the city. This action created the Sumner Historic Register and the Sumner historic preservation commission. The City provides nomination forms for community members wishing to designate property, buildings, or districts as historic. No properties have been formally listed on the City's register since a commission has not been formed. The City is actively searching for volunteers to serve on the commission (City of Sumner website, 2009).

A search of the National Register of Historic Places and the Washington State Heritage Register for sites within the City's shoreline planning area revealed one site near JPA-1 at 7473 Riverside Road East. The Charles W. Orton house was built in 1914 in the architectural style of bungalow. The property is listed on both the National and State Registers (Washington Department of Archaeology and Historic Preservation [WDAHP], 2009).

Native American use of waterbodies throughout western Washington has been well documented. Native peoples undoubtedly used the White, Stuck and Puyallup Rivers and associated tributaries as a fishery resource. The rivers themselves could be considered a significant traditional cultural place. Although Native Americans are known to have occupied much of the Puget Sound region prior to European settlement, few archaeological resources have been found in the Sumner area, mostly due to the lack of surveys (City of Sumner, 2005). The City evaluates archaeological and historical resources on a parcel-by-parcel basis during development review.

4.10 Site Contamination

According to Department of Ecology's Facility Site database, there is one known contaminated site in the shoreline planning area (Ecology, 2010a). The Manke Lumber Company site located in Segment H on the White River is listed on the Department of Ecology's Suspected and Confirmed Contaminated Sites List for confirmed soil contamination associated with Phenolic Compounds, considered hazardous by the Environmental Protection Agency. The site is also listed for suspected groundwater, surface water, and drinking water associated with Phenolic Compounds. According to Ecology's database, remedial action to clean up the contaminated site is currently pending.

5.0 BIOLOGICAL RESOURCES AND CRITICAL AREAS

This section identifies biological resources and critical areas as defined by the State's Growth Management Act (RCW 30.70.170). Critical areas within Sumner's shoreline jurisdiction include priority habitats and species; wetlands; streams; aquifer recharge areas; landslide, erosion, seismic, and volcanic hazard areas; channel migration zones; and frequently flooded areas. Maps showing the locations of critical areas are found in Appendix A.

5.1 Priority Habitats and Species

The Washington State Department of Wildlife (WDFW) maintains a Priority Habitats and Species (PHS) list, which is a catalog of habitats and species considered to be priorities for conservation and management (WDFW, 2008b). Digital PHS data were obtained and mapped as part of the inventory process (WDFW, 2008a). Three types of priority habitats were mapped within the shoreline planning area: wetland, urban natural open space, and waterfowl concentrations (Map 5).

According to the PHS data, the portions of the White and Puyallup Rivers within the shoreline planning area provide habitat for resident cutthroat and several species of anadromous salmonids. The PHS data does not identify any priority fish species within the portion of Lake Tapps in the shoreline planning area. Table 5-1 lists the salmonid species found within the shoreline segments.

Table 5-1. Documented Priority Salmonid Species within the Shoreline Planning Segments

Stream Segment	Type of Use	Species Name
JPA-1 and A	Anadromous - Presence	Winter Steelhead Fall Chinook Pink Salmon Coho Salmon Chum Salmon Bull Trout
	Anadromous - Rearing	Fall Chinook Coho Salmon
	Anadromous - Spawning	Pink Salmon
	Resident	Cutthroat
B-G	Anadromous - Presence	Winter Steelhead Fall Chinook Spring Chinook Pink Salmon Coho Salmon Chum Salmon Bull Trout Sockeye Salmon Bull Trout
	Anadromous - Rearing	Spring Chinook Coho Salmon Pink Salmon
	Resident	Cutthroat

Source: WDFW, 2008a

As shown in Table 5-2, three of the salmonid species present within the shoreline planning area are listed as threatened under the federal Endangered Species Act (ESA), and one species is classified as a species of concern (USFWS, 2007). NMFS and USFWS have designated the White and Puyallup Rivers as critical habitat for Puget Sound ESU chinook salmon and bull trout (Federal Register, 2005 & 2010). NMFS is currently developing critical habitat designations for Puget Sound ESU steelhead. Puget Sound ESU coho salmon is listed as a "species of concern" under ESA; therefore, it has no designated critical habitat.

The PHS data set does not identify any other federally listed species within Sumner's shoreline planning areas (WDFW, 2008a).

Table 5-2. Status of Salmonid species in the White and Puyallup Rivers

Species	Federal Status
Chinook	Threatened
Chum	Not Warranted
Coho	Species of Concern
Pink	Not Warranted
Sockeye	Not Warranted
Steelhead	Threatened
Bull Trout	Threatened

Threatened: Species are likely to become endangered within the foreseeable future.

Species of Concern: Concerns regarding status and threats, but insufficient information available that indicates a need to list the species under ESA.

Not Warranted: According to NMFS, species is not warranted to be listed under ESA at this time.

5.2 Wetlands

Information on wetlands within the shoreline planning area was obtained from the National Wetland Inventory (NWI) map and a wetland inventory conducted by the City in 2006, which was subsequently revised for accuracy by ESA in 2007 (City of Sumner, 2006; ESA Adolfson, 2007). This wetland survey data is shown on Map 1.

Because the entire shoreline for both the White and Puyallup Rivers within the City limits and the urban growth area is diked, the shoreline jurisdiction is assumed to extend 200 feet landward from the top of the bank of these rivers. For the purposes of this inventory, wetlands within the floodplain beyond the dike system are assumed to be associated with the shoreline only if they fall within 200 feet of the top of bank or if a surface water connection exists between the wetland and the shoreline. Additional site-specific review will be required by future project proponents to determine the presence of any additional associated wetlands, as well as wetland categories.

The portion of Lake Tapps within the shoreline planning area is mapped as wetland in the City's wetland inventory. Table 5-3 identifies wetlands currently within the shoreline planning area for each shoreline planning segment.

Table 5-3. Wetlands Mapped within the Shoreline Study Segments

Shoreline Segment	Total Wetland Acreage	Approximate Percent Coverage
A	0	0
B	0.1	<1
C	0.9	2
D	0.3	1
E	5.5	5
F	2.4	1
G	0	0
H	20.0	86
JPA-1	0	0
UGA-1	36.5	63
TOTAL	**65.7**	**9**

According to the City of Sumner Municipal Code (Chapter 16), Category I wetlands presently require a 150-foot buffer, Category II wetlands require a 100 or 125 foot buffer (depending upon the habitat quality of the wetland), Category III wetlands require a 75-foot buffer, and Category IV wetlands require a 35-foot buffer. Wetland categories are based upon the Washington State *Wetland Rating System for Western Washington (revised*) (Hruby, 2004).

5.3 Streams

5.3.1 Water Quality

According to the Ecology water quality database, there are no reaches of the Puyallup River or portions of Lake Tapps within the study vicinity that are on the Clean Water Act 303(d) list of polluted waters (Ecology, 2008). However, several reaches of the White River are on the 303(d) list. Seven-day mean maximum temperatures of over 66 degrees F have been recorded in the reaches between RM 0.2 to 0.5, 2.5 to 4.6, and 6.5 to 9. In addition, pH values in excess of water quality standards have been recorded in the reach between RM 6.5 and 9. Just upstream of the Puyallup River confluence, the reach of the White River between RM 0.5 and 1.4 is on the 303(d) list for high fecal coliform concentrations.

Both the White and the Puyallup originate from glaciers on the slopes of Mt. Rainier Rivers and cut through a relatively steep gradient and gravelly soils in their upper reaches. Turbidity and sediment load is therefore a significant factor in these rivers, with mostly fine sediments being transported out of the upper reaches of the rivers and deposited into lower gradient reaches (Kerwin, 1999). Sediment transport has been estimated to range from 440,000 to 1,400,000 tons annually in the White River (Kerwin, 1999). Mud Mountain Dam, operated by the U.S. Army Corps of Engineers upstream of the City limits at RM 29.6, disrupts the natural delivery of sediments by impounding fine sediments during high flow and/or high load periods and discharging those same sediments for persistent and prolonged periods during lower river flows (Kerwin, 1999). This increase in sediment and turbidity may negatively affect aquatic life; however, these conditions are beyond the scope of Sumner's jurisdiction.

5.3.2 Habitat Access

No barriers to fish migration have been identified on the portions of the mainstem Puyallup and White Rivers that flow through the study area. However, at the point where water from the Dierenger Powerhouse flows into the White River in Segment F, high velocity flows attract migrating adult salmonids into the discharge channel. These flows may cause a delay in the natural upstream migration of salmonids (Muckleshoot Indian Tribe, 1996). Since the hydropower operations ceased in 2004, the annual average flow discharging from Tailrace Canal has decreased dramatically. There have not been studies completed to determine if the post-hydropower flow is low enough to deter salmonid species from entering the canal.

5.3.3 Habitat Elements

Stream habitat elements include substrate, large woody debris (LWD), pool frequency, pool quality, off channel habitat and refugia, channel complexity, and bank profile and condition. (Collins et al, 2002; NMFS, 1996; USFWS, 1998).

The shorelines of the Puyallup and White Rivers within the shoreline planning area are dominated by concrete revetments and dikes along both banks, which have straightened, confined, and simplified the river channel (Kerwin, 1999; Lower Puyallup Watershed Management Committee [LPWMC], 2004; Pierce County, 2007). Channelization and dikes have eliminated connections with side- and off-channel aquatic habitats, decreased the contribution of prey organisms to the rivers by precluding functioning riparian vegetation habitats, and precluded the recruitment of small and large wood from areas most likely to contribute this material (Kerwin, 1999). Channelization and dikes have also reduced river processes that form pools, side channels and other habitat features used by salmonids and other aquatic organisms (Kerwin, 1999).

The Mud Mountain Dam on the White River blocks wood which flows into the dam reservoir (Pierce County, 2007). Some of this wood is retained as habitat logs, but most is burned.

The removal of this wood from the White River system reduces the quantity and quality aquatic habitat downstream of the dam. While not all of this removed wood can be characterized as LWD, small wood also creates highly functional habitats and provides necessary nutrients to the river system (Kerwin, 1999).

Debris removal by private parties and municipalities in the White and Puyallup Rivers is regulated by the Hydraulic Project Approval (HPA) permit process administered by WDFW (Kerwin, 1999). While these permits typically prohibit the removal of LWD from the "wetted" river channel, it is still often removed from the channel outside the wetted area, thereby reducing the amount of LWD debris available for redistribution during future flow events.

Salmonid spawning ground surveys conducted by staff from Puyallup Tribe of Indians indicate that there is only limited spawning activity throughout the portions of the Puyallup and White Rivers in the shoreline planning area (Kerwin, 1999). Bedload transport tends to be high because of dike-induced increases in water velocities. Survival from any spawning that does occur is believed to be low due to the bedload and increased velocity scouring of egg pockets, also known as "redds" (Kerwin, 1999).

5.3.4 Flow/Hydrology

There is an extensive network of paved roadways, parking areas, roofs, and other impervious areas in the City of Sumner. Impervious surface covers over 70 percent of some of the City's shoreline segments.

Other factors outside of Sumner's jurisdiction also influence the hydrology of the rivers. Historically, the White River was permanently diverted into the Puyallup at Auburn in 1915, redirecting flows into the present-day channel. The White River added 50 percent to the annual flow in the lower Puyallup River (Williams et al., 1975). Also, flow from the White River is diverted at a diversion dam located near Buckley at RM 23.4 through Lake Tapps and discharged back into the White River at the Dieringer Canal (Pierce County, 2007). During hydropower operation, low flows in the river reaches between the diversion and the canal were measured and high flows within the canal. Since 2004, when hydropower operations ceased there have been higher flows in the White River between the diversion and the canal and lower flows in the canal (Cascade Water Alliance, 2010). Table 4.2 shows that in an average, wet, and dry year, the flows in the tailrace canal were significantly higher in the hydropower period (1988-2002), than in the post-hydropower period (2004-2008) flows. Table 4.3 shows that in an average, wet and dry year, the flows above the Tailrace Canal were lower during the hydropower period than in the post-hydropower period. Tables 5-4 and 5-5 include monthly flow data comparisons for the hydropower period and post-hydropower period above the Tailrace Canal on the White River and at the Tailrace Canal.

Table 5-4. Change in Monthly Flow Rates (cfs) in White River above Tailrace Canal

Year Type	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Average
Average	-499	-584	-912	-915	-966	-1067	-1061	-948	-1289	-868	-339	-264	-809
Wet Year (2007/1996)	-1026	-458	-538	-1376	-1082	-1245	-869	-684	-972	-897	-447	-140	-811
Dry Year (2005/2001)	-720	-362	67	-677	26	-297	-863	-1250	-1071	-577	-285	-326	-528

Source: Cascade Water Alliance, 2010

Table 5-5. Change in Monthly Flow Rates (cfs) in White River at Tailrace Canal

Year Type	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Average
Average Year	502	922	929	1451	307	1005	610	1831	1249	775	357	390	**861**
Wet Year (2007/1996)	188	1053	-1119	868	-2659	3393	732	793	1146	930	523	199	**504**
Dry Year (2005/2001)	576	777	1401	1886	311	111	382	1148	484	437	147	101	**647**

Source: Cascade Water Alliance, 2010

A hydrologic evaluation of City shorelines was not conducted for this assessment. However, for the 14-year time period from 1980 to 1993, low instream flows were recorded at the lower Puyallup River gauge, downstream of the City, an average of 35 days annually (Kerwin, 1999). In addition to the factors discussed above, low flows may be attributed to increased groundwater withdrawal through unregulated wells (5,000 gallons or less per day) and increases in impervious surfaces that lead to a decline in groundwater and base surface water flows (Kerwin, 1999).

5.3.5 Aquifer Recharge Areas

Aquifer recharge areas are defined in the City's critical area regulations (SMC 16.48) as follows:

> *Areas with the two highest DRASTIC zones which are rated 180 and above on the DRASTIC index range, as identified in Map of Groundwater Pollution Potential, Pierce County, Washington, National Water Well Association, U.S. Environmental Protection Agency; or Wellhead protection areas designated for water supply wells and springs (pursuant to WAC 246-290-135) and located within the municipal boundary of the city of Sumner.*

According to the National Water Well Association (1985), due to its predominant valley location, the entire Sumner city limits is included as a groundwater resource area. As a result, the City's entire shoreline planning area along the Puyallup and White Rivers is in a high aquifer recharge area (Segment JPA-1, Segments A-H) (see Map 3). The National Water Well Association and United States Environmental Protection Agency provide indices of the groundwater potential and susceptibility to contamination. Within the City limits (and shoreline planning area), the valley floor is rated at 180 or greater, one of the highest indices for Pierce County (City of Sumner, 1993). This index corresponds to areas of high groundwater recharge potential. A layer of coarse gravel and sand lies approximately 80 to 150 feet below the land surface in the valley and another layer occurs approximately 400 feet below the surface (Walters and Kimmel, 1968). See Map 3 for extent of aquifer recharge area in the city.

According to the City of Sumner Aquifer Recharge Area Map (City of Sumner, 2003b), the shoreline planning area is located within wellhead protection areas of the following waters supply wells and springs:

- South Well
- Elhi Spring
- County Springs
- Cemetery Well

- Sumner Springs
- Weber Springs

5.3.6 Landslide Hazard Areas

Landslide hazard areas are defined in the City's critical area regulations (SMC 16.50) as those areas subject to risk of mass movement and meeting any of the following criteria:

1. *Areas of historic land failures, including areas of unstable old and recent landslides;*
2. *Areas with all three of the following characteristics:*
    a. *Slopes steeper than 15 percent; and*
    b. *Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and*
    c. *Any signs of springs or groundwater seepage; and*
    d. *Concave slopes and swales;*
3. *Slopes that are parallel or subparallel to planes of weakness, such as bedding planes, joint systems, and fault planes, in subsurface materials;*
4. *Slopes having gradients steeper than 80 percent subject to rockfall during seismic shaking;*
5. *Areas potentially unstable as a result of rapid stream incision, stream bank erosion, and undercutting by wave action;*
6. *Any area with a slope of 15 percent or steeper and with a vertical relief of 10 or more feet. A slope is delineated by establishing the toe and top and measured by averaging the inclination over at least 10 feet of vertical relief. Qualifying slopes of 15 percent or greater to less than 25 percent shall be termed "Type II landslide hazard areas" for purposes of this chapter. Qualifying slopes of 25 percent or greater shall be termed "Type I landslide hazard areas";*
7. *Areas which have a "severe" limitation for building site development because of slope conditions, according to the U.S. Department of Agriculture's Natural Resource Conservation Service;*
8. *Slopes that contain impermeable soils (typically silt and clay) frequently interbedded with granular soils (predominantly sand and gravel);*

9. *Any area which has indications of mass wasting during the Holocene epoch (from 10,000 years ago to the present) or which is underlain by mass wastage debris of that epoch.*

For the purpose of this inventory, slopes in the shoreline planning area steeper than 15 percent are identified on Map 7. This is consistent with the SMC designations and regulations presented in SMC 16.50. Information on the presence of steep slopes was obtained from the Puget Sound LiDAR Consortium that employs laser to map topography. Steep slopes are located in all segments along the White and Puyallup Rivers and Lake Tapps.

5.3.7 Erosion Hazard Areas

Erosion hazard areas are defined as "*those areas that are identified by the presence of vegetative cover, soil texture, slope, and rainfall patterns, or human-induced changes to such characteristics, which create site conditions which are vulnerable to excessive erosion. Erosion hazard areas are those areas that are classified as having moderate to severe, severe or very severe erosion potential according to the Natural Resource Conservation Service*" (SMC 16.50). Erosion prone soils identified by the Natural Resources Conservation Service include Alderwood gravelly sandy loam (15 to 30 percent slopes), Xerochrept soils, and Kapowsin gravelly loam. None of these soil types occur within river shoreline planning areas in the City. However, Alderwood gravelly sandy loam (15 to 30 percent slopes) is mapped within segment UGA-1 (Lake Tapps). Soils mapped by the NRCS occurring within the shoreline planning area include Pilchuck fine sand, Puyallup fine sandy loam, Riverwash, Alderwood gravelly sandy loam (6 to 15 and 15 to 30 percent slopes) (Zulauf, 1979). Generally, the greatest erosion and landslide potential areas in Sumner are located along the valley sides outside of the shoreline planning area (Map 7).

5.3.8 Seismic Hazard Areas

Seismic hazard areas are defined in the City's critical area regulations (SMC 16.52) as "*areas subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, fault rupture, or soil liquefaction."* The entire shoreline planning area along the White River and Puyallup River (Segment JPA-1, Segments A-H) are located within a seismic hazard area (City of Sumner, 2003c). UGA-1 is located outside of the seismic hazard area.

5.3.9 Volcanic Hazard Areas

Volcanic hazard areas are defined in the City's critical area regulations (SMC 16.54) as *"areas within the city which show a likelihood of lahars, debris flows and related flooding associated with volcanic activity from Mt. Rainier."* The entire shoreline planning area along the White River and Puyallup River (Segment JPA-1, Segments A-H) are located within a

volcanic hazard area (City of Sumner, 2003d). UGA-1 is located outside of the volcanic hazard area.

5.4 Channel Migration Zones (CMZs)

The channel migration zones (CMZs) are typically defined as the lateral extent of likely movement along a stream reach with evidence of active stream channel movement over the past 100 years (Perkins, 1996). Channel migration refers to the abrupt (e.g. avulsion) or gradual movement of a channel within a floodplain (GeoEngineers, 2003). A Geomorphic Evaluation and CMZ analysis of the Puyallup, White, and Carbon River watershed was conducted for Pierce County by GeoEngineers (GeoEngineers, 2003). The CMZs include low, moderate and severe migration potential areas (MPAs). The severe MPAs, which are the areas regulated in unincorporated Pierce County, are shown on Map 5. Low and moderate MPAs along the Puyallup and White River within the City of Sumner are also shown on Map 5.

Channel migration in rivers, such as the Puyallup and White River, is an important source of sediment (GeoEngineers, 2003). As channels naturally migrate within the alluvial valley, erosion provides sediment to the channel. Land within the city limits broadens into a wide, relatively flat floodplain and would historically have supported movement of the river channel across much of the valley floor. Evidence of remnant oxbows exist upstream of the city limits on both rivers. However, since the late 1800s, both rivers have been incrementally confined within flood control structures such as revetments and levees. These structures have effectively removed or drastically reduced the ability of both river channels to migrate across their floodplains.

5.5 Frequently Flooded Areas

Both the Puyallup River and the White River have overtopped the existing dike system within the City limits, resulting in flooding. Major flood events recorded by the United States Geological Survey (USGS) in the Puyallup River at the Puyallup gage include events in December 1917, December 1933, January 1965, December 1977, November 1986, January 1990, November 1990, February 1996, and January 2009. The 1996 flood is the current peak flood of record for the Sumner region.

Photograph 5-1. Puyallup River flooding at 76th Street East on January 9, 2009.

Often called the base flood, the primary measure of flood potential is the 100-year flood. Mapped by the FEMA, the 100-year floodplain in Sumner fills a large portion of the valley within city limits. The floodplain is shown in Map 4 in Appendix A.

Throughout the basin, many former floodplain areas on the landward side of the dikes along the White River and Puyallup River have been converted into residential and industrial development. The loss of natural vegetation and wetlands in the Puyallup River basin has reduced the watershed's ability to store and process water in a manner that will minimize flood event duration and peaks. Because of increases in impervious surface and reduction of floodplain storage, this process results in increased peak flows, quicker peak flows, and reduced base flows (Booth, 1991; Booth and Jackson, 1997). Contributing to the increase in flood potential is the aggradation, or filling in of the river channel with sediment from upstream areas, which increases the potential for flooding. White River flows are regulated by Mud Mountain Dam (MMD) upstream of the City limits, at RM 29.6. The dam's primary function is to protect property along the lower three miles of the Puyallup River.

Along the White River, downstream of the King County–Pierce County line, the channel has the capacity to convey approximately 9,500 cubic feet per second (cfs), without overtopping the existing banks (USACE, 2009). A flow of this volume would leave no freeboard above the flood elevation along White River in this area. Puyallup River flows are presently uncontrolled. Sedimentation and encroaching vegetation within the White River has resulted in a reduction in channel capacity (the amount of water a channel can convey without causing overbank flooding) (USACE, 2009).

Several flooding "hot spots" within Sumner's City limits were identified in the *Puyallup River Basin Comprehensive Flood Control Management Plan* (PCRI, 1991). One area, Manor Mobile Home Park and adjacent apartments, was identified along the Puyallup River within Segment A. Some of the areas identified along the White River, including an area at the

mouth of 8th Street Creek in Segment F, the Dieringer Flume area in lower Segment F, and the golf course area in upper Segment F. Additionally, the area adjacent to Segment H, within the City of Pacific, is prone to significant flooding.

6.0 CONDITIONS BY INVENTORY SEGMENT

An overview of baseline inventory conditions for each of the ten inventory segments is provided below. Current land use, public access sites, critical areas, hazardous areas, shoreline modifications and restoration opportunity areas are identified for each segment. Segments are described from south to north.

6.1 SEGMENT JPA-1. Riverside Park to City Limits

Summary: Segment JPA-1 extends from approximately RM 13.3 to 12.0 along the Puyallup River. Only the left bank of the Puyallup River is being considered part of this segment. This area is located within the Sumner Joint Planning Area in unincorporated Pierce County. This segment is constrained by levees, rock groins, and rip-rap and offers limited instream habitat. Land use in Segment JPA-1 is predominantly residential. Public access is available at Riverside Park. No wetlands have been identified within the shoreline planning area.

6.1.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Existing land uses within this segment are characterized by single-family residential and manufactured homes (66 percent of shoreline planning area) interspersed with agricultural fields (15 percent of shoreline planning area). There is one site with two large warehouse buildings. The zoning is predominately Rural-10 (80 percent of shoreline planning area) with the remaining area zoned Agriculture Resource Lands (20 percent of shoreline planning area) (City of Sumner, 2009b; Pierce County, 2008a).

Several roads and bridges occur within Segment JPA-1. Riverside Road East provides access to residential properties. 76th Street East runs parallel to the Puyallup River within the shoreline planning area. Orting Highway East (SR 162) is the only bridge that crosses the Puyallup River within Segment JPA-1. It is located at the western boundary of the segment. The bridge is two travel lanes in width.

There are no major utilities or wastewater or stormwater facilities located in the shoreline planning area.

Fifty-nine percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD,

2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.1.2 Existing and Potential Public Access Sites

One existing park provides public access to the Puyallup River in Segment JPA-1 – Riverside Park. Riverside Park (a County owned park) is located in Segment JPA-1. This 50-acre site is currently leased to River Valley BMX Racing for seasonal motorcross bicycle races and Tacoma Disc Golf Players Association for disc golf (Pierce County website, 2009). 76th Street East runs parallel to the Puyallup River in this segment.

6.1.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

The priority habitat and species data (2008a) documents fall chinook, pink, coho, and chum salmon, as well as winter steelhead and Dolly Varden/bull trout as using this segment of the Puyallup River for passage. Fall Chinook and coho salmon use this segment for rearing, and pink salmon for spawning. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) does not identify any wetland habitat within this segment.

A small unnamed tributary flows into the Puyallup in Segment JPA-1. This tributary enters the Puyallup River with a culvert?

The riparian corridor consists of a 25- to100-foot wide early successional/mixed age stand dominated by cottonwood. Most of the land area within this segment is agricultural, with a significant forested portion located in the eastern portion of the reach.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.1.4 Hazardous Areas

Mapped hazard areas in Segment JPA-1 include landslide, seismic and volcanic hazard areas.

6.1.5 Shoreline Modifications

The major shoreline modifications along JPA-1 include:

- Rock groins placed to control channel migration;
- Levees and reinforced revetments placed to confine the channel and decrease the width;
- Rip-rap bank protection along channel banks;
- Agriculture development adjacent to river;
- Rural residential development adjacent to river; and
- In-channel gravel mining.

Along JPA-1 and much of the Puyallup River, the channel was partly confined in the early 1900s and almost completely confined in the early 1960s by levees and revetments (GeoEngineers, 2003). Before confinement, the channel throughout JPA-1 included laterally migrating meander bends and was highly sinuous. The confined channel in some areas decreased in width from approximately 1,100 feet in 1931 to approximately 250 ft in 1965 and migration was limited (GeoEngineers, 2003).

Prior to confinement, the gravel bars were larger and more abundant. In-channel gravel mining occurred from the 1970s to 1996. This reduced the bedload in many areas and formation and aggradation of gravel bars. Since the mining ceased, the Puyallup River may be subject to increased sediment loads. The full effect of the increased sediment loads on the channel dynamics is not known (GeoEngineers, 2003).

6.1.6 Opportunity Areas

Protection

A large, mature forest stand is located in the eastern portion of Segment JPA-1, which is documented by WDFW as valuable wildlife habitat. In addition, smaller forested patches are located adjacent to the river within this segment. Protection of these forested areas would help maintain quality habitat for sensitive species.

Restoration

There is limited opportunity to provide areas of overbank flooding and side channel habitat in this segment, given the existing levee and extensive adjacent development. In some portions of this segment, it may be feasible to setback the levee, which would increase the active channel width and subsequently enhance habitat-forming processes.

This reach has vegetation enhancements opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

6.2 SEGMENT A. Eastern City Limits to Traffic Avenue Bridge

Summary: Segment A extends from approximately RM 12.0 to RM 10.7 on the Puyallup River. This segment extends entirely along the left bank of the Puyallup River except for one small area on the right bank. This segment is constrained by dikes and reinforced revetments and offers limited instream habitat. Land use in Segment A is predominantly multi-family residential. Riparian vegetation is generally limited to a narrow strip along the river bank. No wetlands have been identified within the shoreline planning area.

6.2.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Land use in Segment A is predominately residential with Rainier Manor mobile homes, and Rivergrove and Riverwalk multi-family communities. High Density Residential is the main comprehensive plan and zoning designation (47 percent of shoreline planning area). Remaining properties are zoned Low Density Residential (53 percent of shoreline planning area) (City of Sumner, 2009b; Pierce County, 2008a).

There are several roads and bridges located within the Segment A shoreline planning area. 78th Street Court East runs parallel to the Puyallup River and provides access to two single-family houses. There are seven roadways that dead-end within the shoreline planning area which provide local access to the Riverwalk residential community. 142nd Avenue East runs parallel to the Puyallup River providing local access to the Rivergrove residential community. Several roadways provide access for the Rainier Manor mobile home park.

The Orting Highway East (SR 162) bridge serves as the eastern boundary of Segment A and Traffic Avenue bridge serves as the western boundary. Traffic Avenue bridge has three travel lanes, a middle left turn/right turn lane, and one parking shoulder lane. The BNSF Railroad bridge is also located within Segment A immediately east of Traffic Avenue. The bridge has two sets of railroad tracks.

There are no major utilities or facilities located in the shoreline planning area. There is one mapped sewer-overflow outfall east of Rainier Manor.

Seventy-eight percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.2.2 Existing and Potential Public Access Sites

The Riverside Trail is located along the Puyallup River in Segment A. Trail connections east to Orting Highway East (SR 162) and west to the Wastewater Treatment Plant are planned for development. Girard Park/Grand Park is also located in Segment A although access to the park has been limited by the construction of SR 410.

6.2.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

According to PHS data (2008a), this segment is used for passage by fall chinook, pink, coho, and chum salmon, as well as winter steelhead and Dolly Varden/bull trout. Fall Chinook and coho salmon use this segment for rearing, and pink salmon use this segment for spawning. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) does not identify any wetland habitat within this segment. Several small tributaries to the Puyallup enter Segment A from the south (Map 1).

The most significant factor in this segment is the conversion of riparian habitat to residential land use and the corresponding increase in impervious surface. Riparian vegetation in this segment is limited for 50 percent of the shoreline, with a very narrow strip of vegetation paralleling the existing residential development. An approximately 100-foot wide early successional/mixed age stand dominated by cottonwood occurs in the narrow band of land between the river and SR 410.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.2.4 Hazardous Areas

Mapped hazard areas in Segment A include landslide, seismic and volcanic hazard areas.

6.2.5 Shoreline Modifications

The primary shoreline modifications along Segment A of the Puyallup River include:

- Confinement of channel by reinforced revetments;
- Dikes;

- High-density residential development; and
- Upstream gravel mining operations.

By 1965, the entire segment was confined by reinforced revetments that restrict the river to a generally straight, northwest trending channel (GeoEngineers, 2003). There has been a large reduction in the size and distribution of gravel bars in this Segment. This may be due to the increase in channel gradient and sediment transport capacity resulting from the confinement, channel incision, and possible loss of bedload materials from the upstream gravel mining operations (GeoEngineers, 2003). Since the mining ceased, the Puyallup River may be subject to increased sediment loads. The full effect of the increased sediment loads on the channel dynamics is not known (GeoEngineers, 2003).

6.2.6 Opportunity Areas

Protection

The northern portion of Segment A contains a mature, riparian forest stand, which is likely productive wildlife habitat. Protection of this forested area could help maintain quality habitat for sensitive species.

Restoration

There is limited opportunity to provide areas of overbank flooding and side channel habitat in this segment, given the existing levee and extensive adjacent development. However, in the northern portion of the segment, adjacent to SR 410, it may be feasible to setback the levee. This would increase the active channel width and subsequently enhance habitat-forming processes.

This reach has vegetation enhancements opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

6.3 SEGMENT B. CONFLUENCE OF WHITE AND PUYALLUP RIVERS

Summary: Segment B extends from approximately RM 10.7 to RM 10.1 on the Puyallup River, and RM 0.0 to RM 0.3 on the White River. This segment is constrained by concrete slabs and revetments and offers limited instream habitat. Land use in Segment B is predominantly public utilities. SR 410 and SR 167 meet in the vicinity of this segment. Riparian vegetation generally consists of narrow bands adjacent to the rivers. Less than one-acre of wetland is located within the shoreline planning area.

6.3.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

The City of Sumner's wastewater treatment plant and associated facilities cover approximately 43 percent of this segment. Most of the remaining properties are vacant lands owned by the City of Sumner and a few single-family properties (18 percent of shoreline planning area) located on the left bank of the White River. Zoning designations are entirely composed of low-density residential in Segment B (City of Sumner, 2009b; Pierce County, 2008a).

State Street and 63rd Street East provide access to the wastewater treatment plant. Houston Road provides access to the single-family houses on the left bank of the White River.

The Traffic Avenue bridge serves as the eastern boundary of Segment B and SR 410 serves as the northern boundary. SR 410 has six travel lanes and crosses the White River in an east / west direction.

The Sumner Wastewater Treatment Plant is located in Segment B. The plant has an outfall to the White River.

Impervious surface: Fifty percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.3.2 Existing and Potential Public Access Sites

The Riverside Trail is located almost along the entire left bank of the Puyallup River and the right bank of the White River in Segment B. There is City-owned open space to the east of the treatment plant that has potential to be developed as a park. Confluence Park is located to the west of the treatment plant and is used frequently for fishing and boat launching. 63rd Street East street-end provides access to the right bank of the White River.

6.3.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

According to PHS data (2008a), this segment is used for transportation by fall chinook, spring chinook, pink, coho, chum, and sockeye salmon, as well as winter steelhead and Dolly Varden/bull trout. Spring chinook, coho, and pink salmon use this segment for rearing. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) identifies 0.1 acre of wetland habitat within Segment B, which is less than 1% of the total segment area.

The SR410 Bridge crosses the White River at the northern limit of this segment, and the Traffic Avenue Bridge crosses the Puyallup River at the eastern limit. Riparian vegetation consists of an approximately 25-to100-foot wide early successional/mixed age stand dominated by cottonwood, with an understory of non-native blackberry. Pacific willow is common along the river banks. Adjacent land use includes the City Wastewater Treatment Plant. The Plant treats mainly domestic wastewater, but also receives some manufacturing, commercial, and industrial wastewater. The outfall for the plant is on the White River approximately 400 feet upstream of the confluence with the Puyallup River.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.3.4 Hazardous Areas

Mapped hazard areas in Segment B include landslide, seismic and volcanic hazard areas.

6.3.5 Shoreline Modifications

Segment B includes the confluence of the Puyallup River and White River. There are many shoreline modifications along both rivers in this segment. The primary modifications are discussed below, by river.

Some of the modifications in the Puyallup River, Segment B, include:

- Reinforced revetments to confine the channel; and
- Upstream gravel mining operations.

Some of the modifications in the White River, Segment B, include:

- Dredging the channel and adding revetments along the entire segment; and
- Installing concrete slabs and riprap revetments.

By 1965, the Segment B along both rivers was completely confined by reinforced revetments that restrict the rivers (GeoEngineers, 2003). There has been a large reduction in the size and distribution of gravel bars in this Segment. This may be due to the increase in channel gradient and sediment transport capacity resulting from the confinement, channel incision, and possible loss of bedload materials from the upstream gravel mining operations (GeoEngineers, 2003). Since the mining ceased, the Puyallup River may be subject to increased sediment loads. The full effect of the increased sediment loads on the channel dynamics is not known (GeoEngineers, 2003).

Segment B of the White River is deeply entrenched due to the human modifications along the river, such as channelization and dredging. An example of the extreme entrenchment along the White River is that the slabs and revetments built at the water edge in the early 1900s are now approximately 6 to 10 feet above the water edge (GeoEngineers, 2003).

6.3.6 Opportunity Areas

Protection

Black cottonwood-dominated forest is the most common vegetation assemblage found throughout all of the segments and is represented in this segment. Riparian forested areas are typically productive wildlife habitats. Protection of this forested area could increase potential habitat for many sensitive species.

Restoration

City property adjacent to the City's Wastewater Treatment Facility, at the confluence of the White and Puyallup Rivers, is used informally by residents for fishing access. Adjacent to

the confluence is an informal gravel and/or dirt parking lot, which has intruded into the riparian vegetation. Denuded areas could be planted with native riparian plant species. This site could be further improved by restricting access to a smaller area through use of fencing and signs.

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings.

6.4 SEGMENT C. SR 410 BRIDGE TO UNION PACIFIC SPUR BRIDGE

Summary: Segment C extends from approximately RM 0.3 to RM 1.1 on the White River. This segment is constrained by revetments and concrete slabs and offers limited instream habitat. Land use in Segment C is a mix of residential, commercial, and industrial/manufacturing. Less than one-acre of wetland is located within the shoreline planning area.

6.4.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Land use in this segment is a mix of single-family houses (30 percent of shoreline planning area) mainly south of Main Street except for those located along Pacific Avenue on the left bank of the White River; commercial activities (22 percent of shoreline planning area) including a furniture store, auto repair services, and professional services; and industrial/manufacturing activities (16 percent of shoreline planning area) which is mainly composed of a roofing company that has warehouse and office space, and vehicle equipment parking. The City's comprehensive plan and zoning designations in Segment C indicate predominantly future general commercial and low-density and multi-family residential land uses for the area (City of Sumner, 2009b; Pierce County, 2008a).

Main Street, Spinning Avenue, and Pacific Avenue are located in the shoreline planning area and provide local access to the residences.

The SR 410 bridge serves as the southern boundary of Segment C and the Union Pacific railroad spur bridge serves as the northern boundary. The railroad spur has one set of railroad tracks that cross the White River. A third bridge located in Segment C is the Bridge Street Bridge which has two travel lanes.

Electricity lines cross the White River generally between the Bridge Street Bridge and the Union Pacific railroad spur bridge.

Seventy-eight percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.4.2 Existing and Potential Public Access Sites

Two access points associated with street right-of-way are available in Segment C: Spinning Avenue street-end and Bridge Street Bridge. There is also one parcel owned by the City that is undeveloped open space located on West Main Street. A park associated with the Library and Community Center has picnic tables and offers access to the White River. The Riverside Trail is planned to be extended on the right bank of the White River along this segment.

6.4.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

According to PHS data (2008a), this segment is used for transportation by fall chinook, spring chinook, pink, coho, chum, and sockeye salmon, as well as winter steelhead and Dolly Varden/bull trout. Spring chinook, coho, and pink salmon use this segment for rearing. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) identifies 0.9 acre of wetland habitat within Segment C, which is approximately 2% of the total segment area. In addition, Wapato Creek enters the White River within this reach (Map 1).

At certain points within this segment, land is cleared to the top of bank, leaving only a limited riparian fringe between the top of the bank and the ordinary high water mark. Some areas have only a narrow strip of riparian vegetation, approximately 10 to 40 feet wide including big leaf maple, cottonwood, and alder with an understory of snowberry. In other areas, the riparian zone is completely cleared to the river's edge. Streambank erosion was noted in several of these areas. In most areas within this segment, however, the riparian corridor consists of a 25- to100-foot wide early successional/mixed age stand dominated by cottonwood. The riparian fringe consists of willow, snowberry, and non-native blackberry.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.4.4 Hazardous Areas

Mapped hazard areas in Segment C include landslide, seismic and volcanic hazard areas.

6.4.5 Shoreline Modifications

The shoreline modifications along Segment C include:

- Dredging the channel and adding revetments along the entire segment;
- Commercial and industrial development; and
- Installing concrete slabs and riprap revetments.

Segment C of the White River was completely confined in a dredged channel by 1931. By 1965, Segment C was completely confined by reinforced revetments and levees that restrict the river (GeoEngineers, 2003). Segment C of the White River is deeply entrenched due to the human modifications along the river, such as channelization and dredging.

6.4.6 Opportunity Areas

Protection

Portions of land within the riparian zone of Segment of the White River have relatively dense cover of riparian vegetation with moderate diversity. Protection of these areas could help maintain quality habitat for sensitive species.

Restoration

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In addition, it may be feasible to setback the levee along the west bank of the White River, adjacent to Pacific Avenue. This would increase the active channel width and subsequently enhance habitat-forming processes.

This segment has significant vegetation enhancement opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

6.5 SEGMENT D. UNION PACIFIC SPUR BRIDGE TO TACOMA ROAD BRIDGE

Summary: Segment D extends from approximately RM 1.1 to RM 1.8 on the White River. This segment is constrained by revetments and concrete slabs and offers limited instream habitat. Land use in Segment D is a mix of industrial/manufacturing and public facilities/utilities. The riparian vegetation is predominantly a 25- to100-foot wide along the bank of the river. Less than one-acre of wetland is located within the shoreline planning area. Sotain Creek enters the White River within this segment.

6.5.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Existing land use is mainly a mix of industrial/manufacturing (38 percent of shoreline planning area) and public facilities/utilities (25 percent of shoreline planning area). Remaining land uses include parks/open space (19 percent of shoreline planning area) and commercial (13 percent of shoreline planning area). The comprehensive plan and zoning designations indicate that future land use would be a mix of light and heavy industrial (City of Sumner, 2009b; Pierce County, 2008a).

142nd Avenue East is the only roadway located within the shoreline planning area. It provides access to the north industrial area in Sumner.

The Union Pacific railroad spur bridge forms the southern boundary of Segment D and Tacoma Avenue bridge forms the northern boundary. Tacoma Avenue bridge has four travel lanes. Fryar Avenue bridge also crosses the White River about midway in the segment.

The Public Works shops are located on the left bank of the White River.

Forty-one percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.5.2 Existing and Potential Public Access Sites

The Riverside Trail is located on both banks of the White River near the Public Works shops forming a looped route between Fryar Avenue bridge and Tacoma Avenue bridge. The

planned extension of Riverside Trail in Segment C is proposed to continue north into Segment D along the right bank of the White River. Additional access down to the river is available as part of the street rights-of-way for Fryar Avenue bridge and Tacoma Avenue bridge.

6.5.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

Similar to other segments, fall chinook, spring chinook, pink, coho, chum, and sockeye salmon, as well as winter steelhead and Dolly Varden/bull trout all use this segment of the White River. Spring chinook, coho, and pink salmon have documented rearing. Cutthroat trout are resident.

The Sumner wetland inventory (2006) identifies 0.3 acre of wetland habitat within Segment D, which is approximately 1% of the total segment area. In addition, Sotain Creek enters the White River within this reach (Map 1).

Land is cleared to the top of the bank in some areas, with a limited riparian fringe between the top of bank and ordinary high water mark. The bank is armored with concrete debris in areas and lacks vegetation cover, limiting habitat quality. In most areas, however, the riparian corridor is predominantly a 25- to100-foot wide early successional/mixed age stand dominated by cottonwood, with an understory of non-native blackberry. Sotain Creek, a fish-bearing stream, flows into the White River in this stream segment (Map 1)

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.5.4 Hazardous Areas

Mapped hazard areas in Segment D include landslide, seismic and volcanic hazard areas.

6.5.5 Shoreline Modifications

The shoreline modifications along Segment D include:

- Dredging the channel and adding revetments along the entire segment; and
- Installing concrete slabs and riprap revetments.

Segment D of the White River was completely confined in a dredged channel by 1931. By 1965, Segment D was completely confined by reinforced revetments and levees that restrict

the river (GeoEngineers, 2003). Segment D of the White River is deeply entrenched due to the human modifications along the river, such as channelization and dredging.

6.5.6 Opportunity Areas

Restoration

The river banks within Segment D of the White River are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings.

This segment has significant vegetation enhancement opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

6.6 SEGMENT E. TACOMA ROAD BRIDGE TO PUBLIC LAND

Summary: Segment E extends from approximately RM 1.8 to RM 2.6 on the White River. This segment is constrained by concrete slabs and revetments and offers limited instream habitat. Land use in Segment E is mainly vacant lands, agricultural and industrial/manufacturing. Salmon Creek enters the White River within this segment. More than five acres of wetlands are located within the shoreline planning area.

6.6.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Land use in Segment E is a mix of vacant lands (38 percent of shoreline planning area), agriculture (25 percent of shoreline planning area), and industrial/manufacturing (22 percent of shoreline planning area) and. The industrial/manufacturing facilities are generally made up of warehousing. Additional land use includes low-density residential (15 percent of shoreline planning area). The comprehensive plan and zoning map indicate future land use to be almost entirely composed of light industrial (City of Sumner, 2009b; Pierce County, 2008a).

145th Avenue East is located within the shoreline planning area. A road has been recently constructed as part of a proposed warehouse facility on the right bank of the White River. It is two lanes in width and crosses Salmon Creek.

The Tacoma Avenue bridge forms the southern boundary of Segment E.

There are no major utilities or facilities located in the shoreline planning area.

Sixty-eight percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.6.2 Existing and Potential Public Access Sites

The Riverside Trail is located on the right bank of the White River in the southern portion of Segment E. The trail is proposed to be extended as part of a proposed warehouse facility immediately to the north of where the trail currently ends. The trail is proposed to continue northerly on the right bank. Additional public access to the river is available at the vacated right-of-way of 145th Avenue.

6.6.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment. According to PHS data (2008a), this segment is used for transportation by fall chinook, spring chinook, pink, coho, chum, and sockeye salmon, as well as winter steelhead and Dolly Varden/bull trout. Spring chinook, coho, and pink salmon use this segment for rearing. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) identifies 5.5 acres of wetland habitat within Segment E, which is approximately 5% of the total segment area.

Riparian vegetation along the river is an approximately 25- to100-foot wide early successional/mixed age stand dominated by cottonwood. Various willow species, as well as native shrubs and non-native Himalayan blackberry, line the river banks.

Salmon Creek and the associated riparian wetlands are of significance for wildlife habitat, providing water, food, and cover. Salmon Creek also serves as a wildlife corridor between the wooded east valley slopes and the White River. Salmon Creek flows year round and is a fish-bearing stream. Salmon Creek has experienced several water quality issues in the past, and a number of culvert barriers to fish passage have been identified.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.6.4 Hazardous Areas

Mapped hazard areas in Segment E include landslide, seismic and volcanic hazard areas.

6.6.5 Shoreline Modifications

The shoreline modifications along Segment E include:

- Dredging the channel and adding revetments;
- Agricultural and industrial development; and
- Installing concrete slabs and riprap revetments.

Segment E of the White River was completely confined in a dredged channel by 1931. By 1965, Segment E was completely confined by reinforced revetments and levees that restrict the river (GeoEngineers, 2003). Segment E of the White River is deeply entrenched due to the human modifications along the river, such as channelization and dredging.

6.6.6 Opportunity Areas

Restoration

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In some portions of this segment, it may be feasible to setback the existing revetments, which would increase the active channel width and subsequently enhance habitat-forming processes.

This segment has significant vegetation enhancement opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

6.7 SEGMENT F. PUBLIC LAND to 8th Street Creek

Summary: Segment F extends from approximately RM 2.6 to RM 4.2. This segment is constrained by dikes, revetments, concrete slabs, and earthen levees which limit instream habitat quality. Land use in Segment F is a mix of vacant lands and parks and open space. The riparian vegetation is 25-100 feet wide along the banks of the river. More than two acres of wetlands are located within the shoreline planning area. The tailrace from the inactive Dieringer Powerhouse and 8th Street Creek enter the White River within this segment.

6.7.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Land use is a mix of vacant lands (55 percent of the shoreline planning area) which are mainly under City ownership and leased for agricultural use and parks and open space (25 percent) most of which is the Sumner Meadows Golf Course Links. The comprehensive plan designation is predominately public/private utilities and facilities while zoning designations is generally split between agriculture and light industrial (City of Sumner, 2009b; Pierce County, 2008a).

24th Street East is a roadway on either side of the White River within the shoreline planning area that turns into a pedestrian/bicycle-only bridge as part of the Riverside Trail network. The bridge crosses over the White River. 148th Avenue East is also located within the shoreline planning area. 16th Street East dead-ends into the shoreline planning area on the left bank of the White River.

Electrical utility lines cross the White River near the southern border of the Sumner Meadows Golf Links. There is a mapped stormwater outfall located on the left bank of the river north of the Dieringer Flume.

Forty percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.7.2 Existing and Potential Public Access Sites

The Riverside Trail is located on the right bank of the White River on City-owned property, continues north and crosses the White River on the 24th Street pedestrian bridge, and extends both north along the left bank of the river and west along 24th Street East. The proposed trail alignment shows it continuing north through the Riverbend Park, across the White River to the Sumner Meadows Golf Links, and north along 8th Street Creek. Additional public access includes 24th Street trail bridge right-of-way, open space south of the golf course, Riverbend Park, and Sumner Meadows Golf Links.

6.7.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

According to PHS data (2008a), this segment is used for transportation by fall chinook, spring chinook, pink, coho, chum, and sockeye salmon, as well as winter steelhead and Dolly Varden/bull trout. Spring chinook, coho, and pink salmon use this segment for rearing. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) identifies 2.4 acres of wetland habitat within Segment F, which is approximately 1% of the total segment area. In addition, 8th Street Creek enters the White River within this segment (Map 1).

Photograph 6-1. Tailrace Canal looking west

The outfall from the Dieringer Powerhouse/Lake Tapps enters the right bank of the White River at RM 3.5 within this segment. Prior to the closure of the hydropower electric plant, high velocity flows attracted migrating adult salmonids into this discharge channel causing delays in their upstream migration. Flows have dropped significantly since 2004; however, the affect of this change on salmonids has not been documented.

Photograph 6-2. White River gravel bar

The riparian corridor consists of a 25- to100-foot wide early successional/mixed age stand dominated by cottonwood. A large gravel bar was noted in this segment. A riparian island vegetated with early successional cottonwood and willow also occurs in this segment, forming a backwater side channel along the right bank. This feature has a significant amount of woody debris and offers good edge habitat. The primary channel along the left bank of the river also contains an accumulation of large woody debris. Eighth Street Creek, a fish-bearing stream, enters the White River within this segment.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.7.4 Hazardous Areas

Mapped hazard areas in Segment F include landslide, seismic and volcanic hazard areas.

6.7.5 Shoreline Modifications

The primary shoreline modifications along Segment F include:

- Encroachment of vegetation, primarily upstream of the Dieringer Flume;
- In-channel erosion, primarily downstream of the Dieringer Flume;
- Building earthen levees composed of sand and silt; and
- Installing concrete slabs, riprap revetments, and dikes.

By 1965, Segment F was completely confined by earthen levees and riprap revetments that restrict the river to a generally straight, north trending channel (GeoEngineers, 2003). Much of the in-channel erosion along this segment is located downstream of the Dieringer Flume and is due to the flume discharge. The flume discharge generally carries no sediment and sometimes includes large flows. Segment F of the White River is deeply entrenched due to the human modifications along the river, such as channelization and dredging.

Vegetation occupies a third of the 1985 channel width in the upstream reach of Segment F, from RM 3.6 to 3.9, near the Sumner Meadows Golf Links, (USACE, 2009). The average open channel width in this reach reduced from about 200 feet in 1985 to approximately 125 feet in 2006 (USACE, 2009).

6.7.6 Opportunity Areas

Protection and Restoration

City-owned land along the length of the right bank offers opportunity for habitat preservation and restoration. This segment appears to function as significant rearing habitat for salmonids and therefore is a candidate for preservation. Riparian vegetation can be enhanced throughout this segment. The tailrace and drainage ditch offer potential surface water connections to wetland areas. Flow from the tailrace could be diverted through a separate channel through City-owned farmland, allowing the development of relatively natural meanders, and pool and riffle sequences. Diversion of water from these sources into created or enhanced wetland and stream channel areas could provide off-channel and rearing fish habitat in areas where there is adequate fish passage to the site.

Restoration

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In some portions of this segment, it may be feasible to breach or setback the existing revetments and levees, which would increase the active channel width and connect the river with portions of its historic floodplain, which could significantly enhance habitat-forming processes.

This segment has significant vegetation enhancement opportunities, which consist of removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Plantings along the river bank would provide additional "over water" vegetation, provide increased protection from predation for fish species, increase habitat for birds, and input organic material to the river.

The 24th Street Interchange Biological Opinion, described above in Section 5.3.4, included the following two conditions that pertain to the White River:

1. The City of Sumner must permanently prohibit impervious development on 30 acres of City-owned property east of the White River.
2. The City of Sumner must permanently restrict new development on 88 acres of City-owned property east of the White River to a maximum impervious coverage of 40 percent.

In addition, in the Biological Opinion USFWS recommended that nonfunctioning levees above the Dieringer Powerhouse outfall (RM 3.6) on the White River be removed or setback, in order to restore floodplain and riparian connectivity and create off channel habitat.

6.8 SEGMENT G. 8th Street Creek to Stewart Road Bridge

Summary: Segment G extends from approximately RM 4.2 to RM 5.0. This segment is constrained by dikes, concrete slabs, revetments, and earthen levees and offers limited instream habitat. Land use in Segment G is predominantly industrial/manufacturing. The riparian vegetation ranges from 25 to 100 feet in width along the river banks. No wetlands have been identified within the shoreline planning area.

6.8.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

The majority of land uses are concentrated in industrial/manufacturing (60 percent of shoreline planning area) and vacant lands (30 percent). Industrial/manufacturing businesses include a timber company and contractor services. One large vacant property located west of the Sumner Meadows Golf Links is proposed to be developed with multi-family development. Comprehensive plan and zoning designations are predominately light industrial (City of Sumner, 2009b; Pierce County, 2008a).

140th Avenue Court East is located on the right bank of the White River within the shoreline planning area. Stewart Road bridge forms the northern boundary for Segment G. The bridge has two travel lanes.

There are no major utilities or facilities located in the shoreline planning area.

Sixty percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.8.2 Existing and Potential Public Access Sites

The only form of public access currently available in Segment G is part of the Stewart Road bridge right-of-way. The Riverside Trail is proposed to cross the river on Stewart Road bridge.

6.8.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment. According to PHS data (2008a), this segment is used for transportation by fall chinook, spring chinook, pink, coho, chum, and sockeye salmon, as well as winter steelhead and Dolly Varden/bull trout. Spring chinook, coho, and pink salmon use this segment for rearing. Cutthroat trout are resident in this segment.

The Sumner wetland inventory (2006) does not identify any wetland habitat within this segment.

The riparian corridor in Segment G is a 25- to100-foot wide early successional/mixed age stand dominated by cottonwood. Significant habitat limiting factors in this segment include gravel removal operations and low instream flows resulting from the diversion dam located upstream at RM 23.4.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.8.4 Hazardous Areas

Mapped hazard areas in Segment G include landslide, seismic and volcanic hazard areas.

6.8.5 Shoreline Modifications

The primary shoreline modifications in Segment G include:

- Deposition of sediment;
- Encroachment of vegetation;
- Dredging the channel;
- Building earthen levees composed of sand and silt;
- Agricultural and industrial development; and
- Installing concrete slabs, riprap revetments, and dikes.

By 1965, Segment G was completely confined by earthen levees and reinforced revetments that restrict the river to a generally straight channel (GeoEngineers, 2003). Deposition of sediment in this reach is generally high, despite ongoing dredging efforts. Vegetation has encroached the river banks and the gravel bars in this reach (USACE, 2009).

6.8.6 Opportunity Areas

Protection

The riparian zone of this segment contains a relatively dense cover of riparian vegetation with moderate diversity. Protection of these areas could help maintain quality habitat for sensitive species, including salmonids.

Restoration

The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In the eastern portion of this segment, it may be feasible to breach or setback the existing revetments and levee, which would increase the active channel width and connect the river with portions of its historic floodplain, which could significantly enhance habitat-forming processes.

6.9 SEGMENT H. Stewart Road Bridge to City Limits

Summary: Segment H extends from approximately RM 5.0 to RM 5.5. This segment contains a portion of White River riparian habitat, but the river channel is located outside of the City's jurisdiction. Land use in Segment H is a mix of vacant lands and industrial/manufacturing. The riparian vegetation ranges from 100 to 800 feet in width along the river banks. A large 20-acre wetland is located within the shoreline planning area.

6.9.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Land use is a mix of vacant lands (59 percent of shoreline planning area) and industrial/manufacturing (36 percent of shoreline planning area). Vacant lands generally correspond to a large wetland complex on the right bank of the White River. The industrial/manufacturing land use generally corresponds to warehousing and outdoor storage of materials. Comprehensive plan and zoning designations are entirely Light Industrial for this segment (City of Sumner, 2009b; Pierce County, 2008a).

No public roadways are located within the shoreline planning area. Stewart Road bridge forms the southern boundary of this segment.

There are no major utilities or facilities located in the shoreline planning area.

Fifteen percent of the shoreline planning area has been cleared of vegetation and developed with a certain amount of impervious surface (0-100%) (NOAA C-CAP/NLCD, 2006). See Table 4.1 for more detailed data that categorizes impervious surface into 4 levels of impervious surface intensity.

6.9.2 Existing and Potential Public Access Sites

The only public access opportunity available in Segment H is part of the Stewart Road bridge right-of-way. The Riverside Trail is proposed to cross the river on Stewart Road bridge.

6.9.3 Biological Resources and Critical Areas

No priority species presence is mapped in this segment (WDFW, 2008a).

The Sumner wetland inventory (2006) identifies 20.0 acres of wetland habitat within Segment H, which is approximately 86% of the total segment area.

Photograph 6-3. Wetland adjacent to White River

Segment H contains a portion of White River riparian habitat, but adjacent river channel is outside of Sumner's jurisdiction. The portion of the riparian corridor within the segment generally consists of a 25- to100-foot wide early successional/mixed age stand dominated by cottonwood.

The entire shoreline segment is mapped as an aquifer recharge area (Map 6).

6.9.4 Hazardous Areas

Mapped hazard areas in Segment H include seismic and volcanic hazard areas.

6.9.5 Shoreline Modifications

Segment H does not contain the White River stream channel. The following are primary shoreline modifications that are adjacent to Segment H:

- Deposition of sediment;
- Encroachment of vegetation
- Dredging the channel;
- Building earthen levees composed of sand and silt;
- Agricultural and industrial development; and
- Installing concrete slabs, riprap revetments, and dikes.

By 1965, Segment H was completely confined by earthen levees and reinforced revetments that restrict the river to a generally straight, north trending channel (GeoEngineers, 2003). Deposition of sediment is extremely high, despite ongoing dredging efforts. There was approximately a 4.5 foot rise in the riverbed between 1945 and 1971 at an inactive USGS station located at RM 5, which is the downstream end of Segment H (Dunne 1986 referenced in USACE, 2009). A comparison of channel cross-sections from 1988 to 2007 at RM 5.6, which is slightly upstream of Segment H, indicates an overall deposition of 4 to 5 feet in portions of the channel (USACE, 2009). Additionally, encroachment of vegetation on gravel bars and along the banks has decreased the channel surface area. Since 1985, the channel surface area has decreased by 15 percent (USACE, 2009).

6.9.6 Opportunity Areas

Protection

The majority of land within this segment is upland and wetland habitat, with moderate diversity. Protection of the land within this segment could help maintain quality habitat for sensitive species.

6.10 SEGMENT UGA-1 Lake Tapps

Summary: Segment UGA-1 corresponds to approximately 6,700 lineal feet along the western portion of Lake Tapps located in Sumner's UGA. Lake Tapps is a human made lake that was created in the early 1900s. This segment offers about 36 acres of wetland habitat. Land use in Segment UGA-1 is entirely composed of vacant lands.

6.10.1 Land Use Patterns

Land use patterns described below include: existing land uses, transportation facilities, utility crossings and utility facilities, and impervious surface areas.

Land use in Segment UGA-1 is entirely composed of vacant lands (100 percent of shoreline planning area). The comprehensive plan and zoning designations are entirely Public/Private Utilities and Facilities (City of Sumner, 2009b; Pierce County, 2008a).

The Sumner Tapps Highway East crosses Lake Tapps at the eastern most edge of the segment. The bridge has two travel lanes.

There is an outfall structure at Lake Tapps that releases water in Lake Tapps to the White River via the Dieringer Flume. Electricity lines cross Lake Tapps in two locations.

Segment UGA-1 has not been cleared for development and has no impervious surfaces (NOAA C-CAP/NLCD, 2006).

6.10.2 Existing and Potential Public Access Sites

There are no current or planned public access opportunities in Segment UGA-1.

6.10.3 Biological Resources and Critical Areas

This section describes biological resources including priority habitat and species, wetlands, streams and riparian zones within the river segment.

No priority species presence is mapped in this segment (WDFW, 2008a).

The Sumner wetland inventory (2006) identifies 36.5 acres of wetland habitat within Segment UGA-1, which is approximately 63% of the total segment area.

The shoreline of Lake Tapps within this segment exhibits low levels of human disturbance, and consists primarily of mature, mixed forest.

The segment does not contain any mapped aquifer recharged areas (Map 6).

6.10.4 Hazardous Areas

Mapped hazard areas in Segment UGA-1 include landslide and erosion hazard areas.

6.10.5 Shoreline Modifications

The shoreline modifications along this segment, which is part of the Lake Tapps Reservoir and the confluence with Dieringer Flume include:

- Residential development; and
- Hydroelectric operations;

The Lake Tapps Reservoir is a human made lake that was created in the early 1900s (Cascade Water Alliance, 2010). The reservoir was created by diverting water from the White River and connecting four natural lakes by a series of earthen dikes. Prior to 2004, the reservoir levels were controlled by hydropower operations.

6.10.6 Opportunity Areas

Protection

The shoreline of Lake Tapps within this segment generally consists of mature, mixed forest and scrub-shrub wetland. There is relatively little shoreline development within this segment. Protection of the land within this segment could help maintain quality habitat for sensitive species and the overall biodiversity of the area.

7.0 DATA GAPS

The following elements are data gaps that have been identified as part this inventory:

- Daily White River flow within City of Sumner.
- The affect the change in flow rates from the Dieringer tailrace has had on fish species in the White River.

8.0 SHORELINE MANAGEMENT RECOMMENDATIONS

The following recommendations synthesize the area-specific opportunities identified in Section 6 above and provide additional shoreline management recommendations in the context of other local and regional planning activities. These recommendations are intended to inform the update to the City's shoreline master program by identifying opportunities for ecological conservation and restoration and policy issues related to future shoreline use and development.

1. The City could explore developing a community education and incentive program to identify and develop restoration opportunities on private property which support the overall goals of shoreline management.

2. For new shoreline stabilization projects, demonstration of the need for engineering approaches to shoreline stabilization could be required before approval. The use of bioengineering, alternative bank stabilization, and/or soft-shore armoring techniques could be encouraged in the City's shoreline master program.

3. The existing shoreline environment designations should be re-evaluated to ensure consistency with both the 2003 state shoreline guidelines (WAC 173-26) and the findings of this shoreline inventory report. Specifically:

    a. Reconsider the Natural and Aquatic environment designations to determine applicability;

    b. Examine the rationale of applying Urban Conservancy and Shoreline Residential per the findings of this Shoreline Inventory and Characterization report;

    c. Determine an appropriate designation to replace the Urban environment since it is not an established designation per Ecology Guidelines.

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APPENDIX A – MAP FOLIO

APPENDIX B – TABLES

Draft

CITY OF SUMNER

Shoreline Restoration Plan Element

Prepared for:
City of Sumner

September 2011

ESA

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1.0 INTRODUCTION

This report supports the development of a restoration element to the City of Sumner's Shoreline Master Program (SMP). Last amended in 2004, the SMP is being updated to comply with the Shoreline Management Act (SMA) requirements (RCW 90.58), and the State's SMP guidelines (Washington Administrative Code [WAC] 173-26, Part III), which went into effect in 2003.

The SMP guidelines require that local governments develop SMP policies that promote "restoration" of impaired shoreline ecological functions and a "real and meaningful" strategy to implement restoration objectives. The City's shoreline inventory and characterization report (ESA Adolfson, 2010) identifies which shoreline ecological functions and ecosystem processes have been impaired. In updating its SMP, the City is required to identify and plan for ways to restore or enhance those functions and processes that have been impaired. In the context of the SMP, planning for shoreline restoration includes establishing goals and policies, working cooperatively with other regional entities, and supporting restoration through other regulatory and non-regulatory programs.

1.1 Regulatory Background

1.1.1 Role of Restoration under the Shoreline Management Act

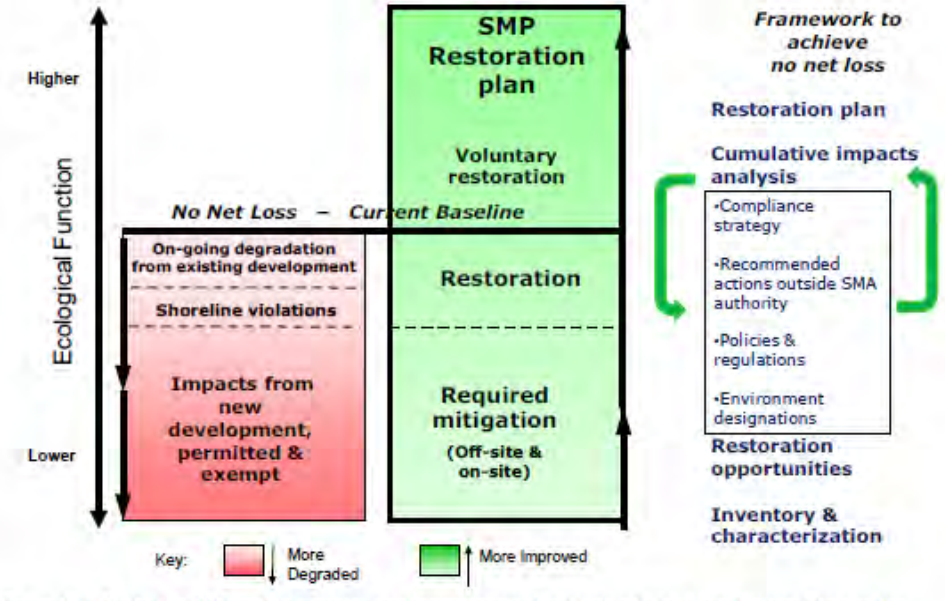
The State has directed local governments to develop SMP provisions "...to achieve overall improvements in shoreline ecological functions over time when compared to the status upon adoption of the master program." This overarching goal is accomplished primarily through two distinct objectives:

- **Protection** of existing shoreline functions through regulations and mitigation requirements to ensure "no net loss" of ecological functions from baseline environmental conditions; and

- **Restoration** of shoreline ecological functions that have been impaired from past development practices or alterations.

Figure 1 below illustrates the role of the SMP update in achieving no net loss both through mitigation and restoration.

Figure 1. Achieving No Net Loss of Ecological Function



Source: Department of Ecology

The concept of no net loss of shoreline ecological function is embedded in the SMA and in the goals, policies and governing principles of the shoreline guidelines. The State's general policy goals for shorelines of the state include the "protection and restoration of ecological functions of shoreline natural resources." This goal derives from the SMA, which states, "permitted uses in the shoreline shall be designed and conducted in a manner that minimizes insofar as practical, any resultant damage to the ecology and environment of the shoreline area." The governing principles of the guidelines further clarify that protection of shoreline ecological functions is accomplished through the following (WAC 173-26-186):

a) Meaningful understanding of the current shoreline ecological conditions;

b) Regulations and mitigation standards that ensure that permitted developments do not cause a net loss of ecological functions;

c) Regulations that ensure exempt developments in the aggregate do not result in net loss of ecological functions;

d) Goals and policies for restoring ecologically impaired shorelines;

e) Regulations and programs that fairly allocate the burden of mitigating cumulative impacts among development opportunities; and

f) Incentives or voluntary measures designed to restore and protect ecological functions.

It is important to note that the restoration planning component of the SMP is focused on voluntary mechanisms, not regulatory provisions. Restoration planning is focused on economic incentives, available funding sources, volunteer programs, and other programs that can contribute to a no net loss strategy. However, the restoration framework developed for these non-compensatory mitigation projects can also be applied to compensatory mitigation projects. In this way, all efforts to improve ecosystem functioning are coordinated, and will be designed to work together.

1.1.2 Role of Federal Regulations in Restoration

The Endangered Species Act (ESA): The federal ESA addresses the protection and recovery of federally listed species. The ESA is jointly administered by the National Oceanic and Atmospheric Administration (NOAA) Fisheries (formerly referred to as the National Marine Fisheries Service [NMFS]), and the United States Fish and Wildlife Service (USFWS). Restoration opportunities identified in this plan may benefit ESA listed species that are present in the White and Puyallup Rivers.

National Marine Fisheries Service Biological Opinion on National Flood Insurance Program (NFIP): In September 2008, a Biological Opinion issued by the NMFS determined that the effects of certain elements of the NFIP throughout Puget Sound is likely to *jeopardize* the continued existence of the following species listed under the ESA: Puget Sound Chinook salmon, Puget Sound steelhead, Hood Canal summer-run chum salmon, and Southern Resident killer whales. The Biological Opinion also determined that NFIP is likely to *adversely modify* the following ESA designated critical habitats: Puget Sound Chinook salmon, Hood Canal summer-run chum salmon, and Southern Resident killer whale critical habitats. The biological opinion provides a *reasonable and prudent alternative* which can be implemented to avoid jeopardy and adverse modification of critical habitat. In response to the Biological Opinion, the Federal Emergency Management Agency is in the process of developing guidance for NFIP participating communities, which includes the City of Sumner. The Biological Opinion establishes a 2010-2011 timeline for compliance for all NFIP participating communities within the Puget Sound Basin (NMFS, 2008).

1.2 Defining Restoration

There are numerous definitions for "restoration" in scientific and regulatory publications. Specific elements of these definitions often differ, but the core element of repairing damage to an existing, degraded ecosystem remains consistent. In the SMP context, the WAC defines "restoration" or "ecological restoration" as:

> *"…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"* (WAC 173-26-020(27)).

Using the WAC definition of restoration in regard to state shorelines, it is clear the effort should be focused on specific shoreline areas where natural ecological functions have been impaired or degraded. The emphasis in the WAC is to achieve overall improvement in existing shoreline processes or functions, if such functions are degraded or impaired. Therefore, the goal is not to restore historically natural conditions, but rather to improve on existing, degraded conditions. In this context, restoration can be broadly implemented through a combination of programmatic measures (such as surface water management, water quality improvement, public education) and site-specific projects (such as revetment replacement and/or riparian plantings). Therefore, this restoration planning element focuses on the City as a whole rather than parcel by parcel, or permit by permit.

1.3 Key Elements of Restoration Planning in the SMP Update Process

The State guidelines provide six key elements for shoreline restoration planning as part of a local jurisdiction's master program, as outlined in WAC 173-26-201(2)(f). These elements are summarized below in Table 1, and provide the organization and content for this report.

Table 1. Restoration Planning Elements

	Key elements for the shoreline restoration planning process WAC 173-26-201(2)(f)	Section in this report
1	Identify degraded areas, impaired ecological functions, and sites with potential for ecological restoration.	Assessment of Functions (Sec. 2); Restoration Opportunities (Sec. 4)
2	Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions.	Policy Development (Sec. 5)
3	Identify existing and ongoing projects and programs that are currently being implemented that are designed to contribute to local restoration goals such as capital improvement programs (CIPs) and watershed planning efforts (WRIA habitat/recovery plans).	Existing Plans and Programs (Sec. 3.2)
4	Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies including identifying prospective funding sources for those projects and programs.	Assessment of Functions (Sec. 2); Restoration Opportunities (Sec. 4)
5	Identify timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals.	Implementation (Sec. 6)
6	Provide for mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals (e.g., monitoring of restoration project sites).	Implementation (Sec. 6)

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2.0 ASSESSMENT OF FUNCTIONS

Shoreline restoration planning begins with the identification of "degraded areas" or areas with "impaired ecological functions." The assessment of existing degraded areas and/or functions relies on the *Sumner Draft Shoreline Inventory and Characterization Report* (ESA Adolfson, 2010). The City's inventory and characterization report examined riparian ecosystem processes that maintain shoreline ecological functions and identified impaired ecological functions. The findings of the inventory and characterization are summarized below.

2.1 Regional Setting

The City of Sumner is located in Pierce County, approximately 12 miles east of Tacoma and 34 miles south of Seattle at the confluence of the Puyallup and White (Stuck) Rivers in WRIA 10. A portion of Lake Tapps is located within the City's urban growth area (UGA). Both rivers and Lake Tapps are designated as shorelines of statewide significance and are the only shorelines that are addressed in the Master Program.

2.2 Physical and Ecological Processes

The City's shoreline jurisdiction is defined by the surface geology and hydrology of the valley floor of the White and Puyallup River basins, as well as their major tributaries and contributing streams. The headwaters of both the upper Puyallup and White Rivers are predominantly located within the Mt. Rainier National Park, Mount Baker-Snoqualmie National Forest, and private commercial timberlands. Both rivers originate from glaciers on Mount Rainer. The landscape has been heavily influenced by frequent flooding and periodic mudflows from Mount Rainier, which have historically covered the valley with layers of mud, silt, ash, and glacial debris. The most recent mudflow (named the Osceola mudflow) occurred in the valley about 5,600 years ago. The broad floodplains of both river systems have created a vast mosaic of fluvial materials and silts eroded from headwater sources.

The White River subbasin originates at the terminus of the Winthrop, Fryingpan and Emmons glaciers on the slopes of Mt. Rainier and drains an area of approximately 494 square miles. Flowing from its origin to the confluence with the Puyallup River,

the White River is approximately 68 miles in length. The Puyallup River begins at glaciers (North Mowich, South Mowich, Edmunds, Puyallup, and Tahoma glaciers) on the west and northwest slopes of Mount Rainier and flows north and west into Puget Sound at Commencement Bay in Tacoma. The Puyallup River watershed comprises 438 square miles. The Puyallup River flows westward for over 54 miles from Mount Rainier to its mouth in Commencement Bay.

The Puyallup River Basin was one of the earliest areas settled in the Puget Sound basin. Historically, the study area was characterized by large tracts of old-growth forests, fertile river valley soils, and abundant runs of salmon.

Urbanization and development have been limited in these areas compared to urban areas in the Puget Sound lowlands. However, both the upper Puyallup and upper White River watersheds have been affected by timber harvest and road building practices that have reduced the ability of riparian areas to provide wood and shade to the river and stream channels. These areas also continue to contribute to fine sediments from road construction and landslides in each river system. These activities continue to adversely impact natural salmonid production.

2.3 Habitat and Species

Sumner's shorelines provide important habitat for a number of fish and wildlife species. The aquatic environment of both rivers is an important riverine corridor from Mt. Rainer to the Sound. Most notably, the White and Puyallup Rivers have been designated as critical habitat for Chinook salmon and bull trout. Both species are listed as threatened under the Federal Endangered Species Act. In addition, the White and Puyallup Rivers provide habitat for other state priority fish species such as winter steelhead, pink, coho, sockeye and chum salmon, and cutthroat trout. Therefore, fish passage and rearing in smaller streams is an important function of the city's shorelines. Priority fish species have not been identified within the Lake Tapps shoreline planning area.

Modifications to the river system have resulted in reduced levels of ecosystem functioning, including hydrology, water quality, riparian habitat, sediment transport, and in-stream habitat. Changes to hydrology focus on modified flow regime due to dam construction, diversion, and urban development. River management and levees have reduced the connection between the rivers and their floodplains, changing the spatial extent of habitats, and increasing the potential for negative water quality impacts. Wood, in the form of riparian trees and in-channel wood, is generally lacking throughout the system, which negatively impacts riparian and aquatic habitats. In general, the level of modification increases moving

downstream in both river systems, and thus, results in a higher occurrence of riverine disturbances.

Important features of Sumner's shoreline environment that provide habitat include:

- Streams (fish and wildlife corridors and sources of fluvial sediments);
- Riparian zones (vegetated bars and vegetation overhanging the stream reach);
- Wetlands; and
- Aquifer recharge areas.

Aquatic and terrestrial species found in or near Sumner that utilize crucial shoreline habitat include:

- Salmonids (including listed species such as Chinook, steelhead, pink, coho, sockeye and chum salmon, cutthroat trout and bull trout);
- Resident cutthroat;
- Waterfowl and other near shore birds;
- Salamanders, frogs, amphibians; and
- Mammals: raccoons, beavers, deer.

2.4 Land Use and Public Access

According to Pierce County Assessor records (2008), current land use in Sumner's shoreline planning area is a mix of vacant, industrial/manufacturing, residential, and parks/open space uses. Lands designated vacant are currently the dominant land use, constituting 43 percent of the entire shoreline planning area. While the term "vacant" may not always accurately reflect current conditions (such as protected open space, agriculture, wetlands, or lands with development restrictions), the classification generally indicates that no structural improvements have been made or assessed for taxes on the property.

Table 2. Major Land Uses in Shoreline Planning Area

Land Use	Percent in Shoreline Planning Area
Vacant	43%
Industrial/Manufacturing	16%
Residential	14%
Open Space	11%

Industrial/manufacturing is the second most common land use (16 percent of entire shoreline planning area) focused almost entirely along the White River. Residential land uses are slightly less common (14 percent of entire shoreline planning area) and are mainly concentrated along the Puyallup River as well as segments along the White River. Designated parks and open space lands compose 11 percent of the entire shoreline planning area with the largest acreage in Segment F at the Sumner Meadows Golf Links.

Water-dependent uses within Sumner are limited to boat launches and utilities. The Puyallup Tribe launch boats into the Puyallup River at the Confluence Park as part of their fish-counting research. Water in Lake Tapps is released to the Dieringer Flume via an outfall structure. Even though the Puget Sound Energy Hydropower Project at Lake Tapps ceased operation in January 2004, this outfall structure is likely still considered a water-dependent use. There is an outfall associated with the City's wastewater treatment plant on the White River. There are two other mapped stormwater and sewer outfalls along the rivers in the City. There are no docks, piers, or marinas within Sumner shorelines.

Public access and educational opportunities are provided at approximately 19 locations in the city and its UGA. Existing open space within the shoreline planning area includes both public and private utilities and facilities along with wetlands, undeveloped agricultural lands, vacant land, and the river corridors themselves. Major parks and facilities in the shoreline planning area provide access to a wide variety of activities. Public access to Lake Tapps within the shoreline planning area is not available. Improvements and enhancements to existing park and open space resources are planned in the near future.

2.5 Shoreline Alterations

Riverine ecological processes in the Puyallup and White Rivers, through the Sumner reach, have been altered by "shoreline modifications" related to the development of flood control infrastructure. Shoreline modifications refer to structural alterations of the shoreline's natural bank, including riprap, bulkheads, docks, piers or other in-water / overwater structures. Such modifications have been used to stabilize the shoreline and prevent erosion. Both the Puyallup and White Rivers are lined through their entire length in Sumner with a system of levees and concrete revetments that were built in the early 1900s. Over time, vegetation has grown and obscured many of the revetments and levees within the Sumner shoreline planning area.

The White and Puyallup Rivers have experienced large scale alterations that have affected the functioning of these river systems. Historical channel change includes the avulsion of the White River channel to the south during a destructive flood in 1906 (Crandell, 1963). Prior to that date, the White River split into two branches on the south side of Auburn. The main branch of the river flowed northward to the Lower Green River. The smaller branch flowed southward as the Stuck River, which joined the Puyallup River. The White River was permanently diverted southward with the construction of diversion levees completed as part of a Corps of Engineers project in 1914. Changes in channel morphology have included the straightening, channelizing, installation of levees and revetments, and construction of bridges and other river crossings. These levees were typically installed more than 50 years ago, and these levees would not meet current engineering standards (King County, 2007).

This alteration initiated a series of projects intended to manage the size, location, and behavior of the Puyallup River and its tributaries (King County, 1988). Between 1908 and 1917, significant relocation, armoring, and diking of the Puyallup River was completed. Much of the work was completed under the auspices of the Inter-County River Improvement District, which was formed as an organization to share costs between King and Pierce Counties to address river issues surrounding the White River's change of alignment into the Puyallup basin (King County, 1988). After the White River was fully diverted to the Puyallup Basin, the Pierce County River Improvement District maintained levees and revetments. That maintenance is now performed by Pierce County Public Works and Utilities.

The hydrology of the White River has also been modified with the installation of the Mud Mountain Dam in 1948. The Mud Mountain Dam was installed at RM 29, primarily for flood control purposes. Mud Mountain is a 'run of the river' dam,

passing flows up to 15,000 cfs largely unchecked, and retaining higher flows (GeoEngineers, 2003).

The system of channel and flood control structures paralleling the White and Puyallup Rivers have highly modified these systems through the City and surrounding area. Both rivers are channelized and reaches of both have been historically dredged as part of flood control efforts. Gravel removal has been proposed as part of flood control efforts still occurs on reaches of the Puyallup River, including areas within and near the City (work completed by the Pierce County Department of Surface Water Management). Revetments and levees limit connectivity with remaining riparian habitat and wetland areas located within adjacent floodplains, and limit overbank conveyance and dynamic storage of flood flows (Tetra Tech, 2009).

The existing levees and high river flows limit public access to the White and Puyallup Rivers. With the exception of bridges, and various power line crossings, there are no docks, piers, or over water structures located on the Puyallup River, White River, or Lake Tapps in the Sumner shoreline planning area. There are no culverts on the main channels of the White or Puyallup Rivers. However, tributaries with culvert barriers within 200 feet of the mainstream reaches have been identified and constitute a concern for fish passage.

3.0 RESTORATION PLANNING

3.1 Restoration Framework

This restoration plan seeks to establish a basic framework for improving the quality and sustainability of Sumner's shoreline resources over time. The following SMA concepts should guide identification, evaluation and prioritization of restoration opportunities:

- Restoration or enhancement should support the overarching goal that local shoreline master programs "serve to improve the overall condition of habitat and resources within the shoreline area…"(WAC 173-26-201[2][c]); and
- Restoration should be designed to address areas where shoreline ecological functions have been impaired as a result of past development activities.

A number of local and regional planning efforts have been developed to address water resource management, water quality, and salmon habitat recovery (see Section 3.2). These existing plans and programs provide a framework of goals, policies, and in some cases, funding mechanisms. The goals, policies, and actions identified in this restoration plan should coordinate and be consistent with this broader framework of conservation and restoration work in the region.

3.2 Existing Plans and Programs

3.2.1 City of Sumner

NPDES Permit Program: The City of Sumner is a Phase II community under the state NPDES permit program. In compliance with permit requirements, for the past several years, the City has had a public education program to involve and educate the public about stormwater issues. For example, the City partners with the Pierce Conservation District Stream Team on volunteer efforts, and distributes educational materials from Puget Sound Starts Here to encourage citizens to prevent water pollution. Plans are underway to begin a rain garden installation program for city residents (City of Sumner, 2011a).

24th Street Interchange Biological Opinions: The City of Sumner and Washington State Department of Transportation (WSDOT) applied for a Corp of Engineer (COE) permit to authorize one acre of wetland fill to allow for development of the 24th Street Interchange, providing direct access from SR 167 to north Sumner. WSDOT submitted a Biological Assessment to the COE. The COE requested Endangered Species Act Section 7 formal consultation with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS).

The NMFS Biological Opinion estimated that 1,562 acres of land would be served by the interchange of which approximately 640 acres were within the FEMA designated 100-year floodplain. Around 771 acres of land served by the interchange was considered underdeveloped or vacant with no plans for development (NMFS, 2003).

The Biological Opinions issued by NMFS concluded that the proposed action is not likely to jeopardize the continued existence of Puget Sound (PS) chinook (Oncorhynchus tshawytscha) Evolutionarily Significant Unit (ESU) (NMFS, 2003). The opinion also authorized incidental take for future construction in the White River valley portion (approximately 771 acres) of the action area that might harm listed salmonids. The Biological opinion issued by USFWS concluded that the proposed action is not likely to jeopardize the Coastal/Puget Sound bull trout (USFWS, 2003). The opinions established terms and conditions which applied to the White River within the action area. In 2004, the City of Sumner adopted and updated its Trail Plan, Critical Areas Ordinance and Shoreline Master Program to address and comply with the Biological Opinions' terms and conditions. Restoration opportunities within the White River floodplain are shown within this Restoration Plan.

3.2.2 Puyallup River Watershed Council

The Puyallup River Watershed Council (PRWC), formed in 1996, includes representatives of local governments, businesses, elected officials, environmental agencies, non-profit groups and private citizens. The PRWC provides stakeholders in the watershed a forum in which to promote and implement projects that protect the environmental, economic, and cultural health of the watershed. PRWC has ten broad goals related to clean water, healthy native fish and wildlife, sustainable land use, viable agriculture and forestry, quality outdoor recreation, natural flow patterns and groundwater recharge, vegetated corridors, management of solid waste, resident education, and sustainable communities. Pierce County Public Works and Utilities provides support to the PRWC. See the following website for more information:
www.piercecountywa.org/pc/services/home/environ/water/ps/prwc/main.htm

The City of Sumner is a member of the Puyallup River Watershed Council. The Council developed a five-year action agenda to focus its efforts from 2007 – 2011. The action agenda identifies the top ten priority actions for the watershed and identifies which actions are appropriate for implementation by each member jurisdiction of the Council. For Sumner, the identified priority actions include:

- Management of Runoff from New Development – Low Impact Development and Erosion and Sediment Control on Construction Sites
- Stormwater Management – Facility Maintenance and Retrofitting
- Streamside and Riparian Planting
- Preserve and Restore Aquatic and Terrestrial Habitat
- Water Quantity Management (Flooding and Water Supply)
- Education, Outreach and Public Involvement
- Monitoring and "State of the Watershed" Assessment (PRWC, 2007).

3.2.3 Pierce County

Several County-led programs and plans address restoration opportunities and projects within the shoreline areas of Pierce County. Each of these programs and plans involves community stakeholders, the Tribes, non-governmental organizations, and other partners. Some of the major Pierce County restoration programs underway include the Pierce County Lead Entity for Salmonid Recovery in WRIA 10/12, the County's Basin Planning efforts through Public Works and Utilities, and an update to the Pierce County Rivers Flood Hazard Management Plan.

Pierce County Lead Entity for Salmonid Recovery in WRIA 10/12

The 1999 Washington Legislature created and authorized the Salmon Recovery Funding Board (SRFB) to guide spending of funds targeted for salmon recovery activities and projects. The legislation also included a ranking process that provides an opportunity for local organizations to prioritize projects from their watersheds before they are submitted to the SRFB. Pierce County serves as the "Lead Entity" for the Puyallup/White and Chambers/Clover watersheds ranking process. Projects from both watersheds are ranked together and only one list is submitted to the SRFB for consideration. Project ranking is performed by a "Citizens' Advisory Committee" (CAC) of stakeholders from both watersheds. A Technical Advisory Group (TAG) supplies the most up to date scientific data to the CAC. The CAC then prioritizes proposed salmon habitat protection and restoration projects. Once

prioritized, the Lead Entity Coordinator submits the list to the State Salmon Recovery Board for funding decisions. See the following website for more information:
www.co.pierce.wa.us/pc/services/home/environ/water/ps/leadentity.htm

Basin Planning

Basin planning is an important component of shoreline restoration in Pierce County. Pierce County Public Works and Utilities – Surface Water Management has developed basin plans for 10 areas within the County. The plans identify and prioritize projects to improve flood management, water quality, and riparian habitat. The first phase of developing a basin plan is to study the existing characteristics of the basin, such as flooding, water quality, and fisheries. This information is used to develop a prioritized list of projects and actions to reduce flood damage and improve water quality and floodplain habitat in the basin. In 2005, a basin plan for the Mid-Puyallup River was issued. Basin plans for the White River/Lake Tapps and Upper Puyallup/Carbon River basins are currently being developed.

3.2.4 Pierce County Noxious Weed Control Board

Washington State requires the control of noxious weeds through the Revised Code of Washington (RCW) Title 17, and Title 16 of the Washington Administrative Code (WAC). State law requires all landowners (private or agency) to manage weeds on their properties (RCW 17.10.140). To implement these requirements, the State established the Washington State Noxious Weed Control Board (WSNWCB) (Chapter 16-750 WAC). The State Board oversees the statewide management of noxious weeds in an effort to ultimately prevent establishment of invasive vegetation and preserve native species and habitat. The State Board identifies and classifies weeds that are of concern in the state and maintains the state noxious weed list. The State Board has determined that noxious weed control is best implemented at a local level due to the variation in ecosystems across the state. Therefore Chapter 17.10 RCW establishes Noxious Weed Control Boards for counties in the state. Pierce County Code Chapter 8.24 specifically activates the Pierce County Noxious Weed Control Board (PCNWCB). The County Board enforces the state noxious weed control regulations and refines the state noxious weed list to include species present in Pierce County. The County Board provides guidance on methods of control, and has the authority to cite property owners for failing to comply with weed control requirements.

3.2.5 Flood Hazard Management Plans and Studies

Lower Puyallup River Flood Protection Investigation

Pierce County completed the Lower Puyallup River Flood Protection Investigation in June 2009 to identify flood reduction strategies along the lower Puyallup River. The investigation was completed with regional (multi-jurisdictional) input and to meet US Army Corps of Engineers standards to allow for Federal assistance with lower Puyallup River flood control efforts (Tetra Tech, 2009). The investigation was completed under the context of updated flood maps, which extended the jurisdictional floodplain landward of many lower Puyallup levees[1]. The investigation examined existing conditions, riverine and floodplain dynamics, and potential economic implications of various flood protection alternatives for the lower Puyallup River system. The investigation presents technical information that should be considered, along with other plans, in planning and design of flood hazard management projects along the lower Puyallup system, including integrated restoration objectives. See the following website for more information: www.co.pierce.wa.us/pc/services/home/environ/water/cip/lpuyrivleveeinvest.htm

Efforts to implement strategies identified within the Investigation, as well as within other planning efforts, are ongoing. Multi-jurisdictional coordination occurs through the Puyallup River Executive Task Force. More information is available through the Task Force webpage:
www.co.pierce.wa.us/pc/services/home/environ/water/cip/pretf.htm

United States Geological Survey (USGS) Study

The USGS performed a detailed analysis of sediment transport and flood elevations in the lower reaches of the White and Puyallup Rivers (Czuba et al., 2010). This study supplemented data and analysis performed in the 1980s and evaluated the effectiveness of different river-management options including levee setbacks, gravel-bar scalping and a combination of techniques at three sites to determine which restoration technique is best suited to address flooding and aggregation. This

[1] Updated flood maps were prepared to only consider levees when certified by the US Army Corps of Engineers as meeting specific criteria for flood protection; all levees (including many along the lower Puyallup) that did not meet this criteria were not considered in preparation of updated maps. FEMA is now reconsidering policies for consideration of uncertified levees, which may result in future changes to the jurisdictional floodplain within the Puyallup and White River systems.

study concluded that both the setback levee and gravel-bar scalping could reduce high-flow water-surface elevations; however, setback levees resulted in greater local reductions in water surface elevations. River reaches with setback levees can store more water during flood events and attenuate flood peaks (Archer, 1989; Woltemade and Potter, 1994; Anderson, 2006). Even though the model results show only local reductions in water-surface elevations due to setback levees, flood-peak attenuation could reduce water-surface elevations downstream.

Pierce County Flood Hazard Management Plan

The Pierce County Rivers Flood Hazard Management Plan, under development, will replace and geographically extend the 1991 Puyallup River Basin Comprehensive Flood Control Management Plan. The actions recommended in the final plan will focus on reaches of the main stems of all major rivers within the County, including the Puyallup and White Rivers through Sumner. Recent flood events and increasing development pressure in areas within and surrounding Sumner has focused attention on flood management in Pierce County, making the timing for development of this plan ideal. The draft plan is expected to be completed in fall 2011. See the following website for more information: www.co.pierce.wa.us/pc/services/home/environ/water/wqws/floodhazmgmtplanMain.htm

King County Flood Hazard Management Plan

The King County Flood Hazard Management Plan was adopted in 2007, and provides goals, policies, management and implementation strategies, and basin-specific action plans to guide overall flood hazard management across the County. Action plans focused on floodplain and flood hazard management for the White River are relevant to Sumner. In addition, the polices included in the plan provide a framework for inter-governmental cooperation, multi-objective management, and protection of natural floodplain functions and values. The plan is available at: www.kingcounty.gov/environment/waterandland/flooding/documents/flood-hazard-management-plan.aspx

3.2.6 Dieringer Flume and Lake Tapps Studies

The Dieringer Flume is the outlet or tailrace from the former hydroelectric project on Lake Tapps. The flume discharges to the White River in Segment F of Sumner's shoreline planning area. Under a White River management agreement between the Cascade Water Alliance and Native American tribes, a tailrace study is being

developed to identify water quality and fishery issues and determine what improvements are needed at the tailrace. The purpose is to improve water quality discharged from Lake Tapps and prevent the entry, stranding, or delayed migration of salmonids in the tailrace. The parties of the agreement will work with local agencies to develop a management plan to protect the water quality of Lake Tapps by addressing stormwater discharges and septic system filtration into the lake. A water quality monitoring plan will also be developed. See the following website for more information: http://cascadewater.org/lake_tapps_agreements.php.

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4.0 RESTORATION PRIORITIES AND OPPORTUNITIES

4.1 Restoration Priorities

The top restoration priorities for Sumner include:

- Protection of remaining mature forest and intact riparian vegetation along the shoreline.
- Partnerships with Pierce County Public Works and Utilities and other regional agencies to accomplish flood management and ecosystem restoration including projects that set back levees and replace hard shoreline armoring with "soft" alternatives.
- Management of invasive plant species in riparian zones and revegetation with native trees and shrubs.
- Education and assistance to landowners to help them restore degraded shoreline areas and protect high-quality shoreline habitats.
- Continued participation in the Puyallup River Watershed Council and its restoration efforts.

4.2 Restoration Opportunities

4.2.1 Programmatic Restoration Opportunities

Certain restoration actions should be broadly and comprehensively implemented on a programmatic basis to help achieve restoration goals. The following programmatic actions are recommended for shorelines within Sumner. Opportunities to partner with other jurisdictions and organizations on programmatic efforts should also be explored.

Education and Incentives:

a) Educate property owners about proper vegetation/landscape maintenance (including preservation of native vegetation along riparian corridors) to promote shore stabilization and protect water quality.

b) Encourage low impact development practices for shoreline property owners.

c) Educate private property owners about the negative impacts of shore armoring and encourage soft shore protection where shore protection is unavoidable.

d) Encourage incentive programs for shoreline property owners, such as transfer or purchase of development rights and tax incentives for shoreline restoration and protection.

e) Where shorelines have been modified, provide incentives to encourage redevelopment activities to include salmonid habitat restoration.

River Shorelines:

a) Encourage levee setback projects to allow for channel migration on rivers and provide off-channel habitat for salmonids.

b) Remove culverts and blockages from smaller tributaries and replace with bridges to allow for fish passage and channel migration.

c) Restrict new development in the floodplain and channel migration zone.

Infrastructure:

a) Implement best management practices to control runoff from agricultural lands.

b) Retrofit stormwater systems using Low Impact Development (LID) strategies.

c) Incorporate native tree and shrubs plantings as part of planned trail expansions.

Planning and Coordination:

a) Match mitigation, including off-site and compensatory mitigation, to appropriate restoration and enhancement activities as identified in salmon recovery, watershed management plans and the SMP restoration plan.

b) Coordinate SMP restoration with salmonid recovery and watershed management plans to align with projects prioritized in salmon recovery plans.

c) Survey invasive vegetation in the shoreline and establish a control program in coordination with the Pierce County Noxious Weed Control Board.

d) Coordinate restoration efforts with the Puyallup River Watershed Council, Pierce Conservation District, and Pierce County Surface Water Management.

Flood Hazard Management Planning:

a) Assess feasibility of existing revetment / levee removal and levee setback alternatives for restoration projects within the Puyallup and White River shoreline areas.

b) Integrate restoration with flood hazard management efforts to reestablish and protect natural floodplain functions.

c) Consider downstream and upstream implications for flood stage and sediment dynamics resulting from restoration projects.

4.2.2 Site-specific Restoration Opportunities

Table 3 below summarizes protection and restoration opportunities, primarily as described in the Shoreline Inventory and Characterization Report (ESA Adolfson, 2010). Additional restoration actions are identified by the Pierce and King Counties as part of flood hazard and WRIA 10 planning efforts. In general, WRIA 10 planning efforts have concluded that the most beneficial restoration activities for the White and Puyallup Rivers would include levee setbacks, floodplain reconnection, redistribution of large woody debris salvaged from Mud Mountain Dam Reservoir, and modifications to flows at Mud Mountain Dam. King County, Pierce County and WRIA 10 have identified several projects both within and in the immediate vicinity of Sumner; these projects are also identified in Table 3. All site-specific restoration opportunities are identified on Restoration Plan Maps 1 through 10 (Appendix A).

The opportunities described here are considered to be site-specific but may cover many parcels. For example, an opportunity may be appropriate at several locations, but may be implemented on individual parcels over time. Additionally, specific opportunity areas may apply to more than one location along the shoreline. Table 3 also provides an assessment of the scale and potential length of time required to implement restoration opportunities. For each identified opportunity, the table

identifies whether the project is of a short term, medium term, or long term nature. As detailed restoration assessment and prioritization occurs consistent with this plan, the initial assessment of timelines should be re-focused to create detailed schedules and benchmarks for those actions and areas with the greatest restoration potential.

Short term (ST) (approximately 1-3 years) restoration projects include those that could be implemented by local landowners and volunteers and that would benefit the areas that are most in need. Short term restoration efforts include habitat restoration and enhancement efforts in publically owned areas of the City's shorelines. These projects could be implemented in the near term, depending on grant cycles and coordination with volunteer and community organizations.

Medium term (MT) (approximately 3-5 years) restoration projects could include those that enhance Sumner shorelines that have been designated or acquired previously. These could also be implemented where there are public access lands that are not likely to be developed in the near future.

Long term (LT) (approximately 5-10 years) restoration projects could be those that require coordination with other jurisdictions or that cover larger land areas. These projects may be more difficult to implement and would likely require more planning and permitting.

Table 3. Restoration Opportunities

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment A – Eastern City Limits to Traffic Avenue Bridge	Two levee setback projects are identified in Segment A: Sumner Setback and Riverside Drive (GeoEngineers, 2008). The **Sumner Setback** site is located along the left (south) bank of the Puyallup, primarily within unincorporated Pierce County. The **Riverside Drive** site, located at and upstream of RM 10.7, would reconnect the Puyallup River with approximately 47 acres of historic, disconnected floodplain. Restoration would improve the functions in this segment by increasing active channel width, off-channel habitat and subsequently enhance habitat-forming processes. Enhance riparian vegetation by removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Vegetation enhancement opportunities located at the eastern and western ends of the segment. Protect mature forest at western end of segment. Several small tributaries join the Puyallup in this segment. There may be opportunities to enhance riparian vegetation and in-stream habitat at these stream confluences.	Floodplain connectivity Off-channel salmonid habitat Stream shading Organic inputs Wildlife habitat	Medium	Levee setback (Sumner Setback) – LT Vegetation enhancement – ST to MT Stream confluences – ST to MT	Vegetation enhancement opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010); Levee setback opportunities identified in Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008).

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment B – Confluence of White and Puyallup Rivers	Protect and enhance riparian vegetation in north part of segment. Revegetate part of the informal fishing area on City property adjacent to the City's Wastewater Treatment Facility, at the confluence of the White and Puyallup Rivers. Restrict public fishing access to a smaller area through use of fencing and signs. Flood protection improvement alternatives to minimize flooding potential at the Wastewater Treatment Facility are being assessed by the City and Pierce County as part of its Flood Hazard Management Planning effort. This project is in preliminary design and engineering phases. The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. Levee setback projects are identified on both banks of the Puyallup River starting at and extending downstream of the confluence (RM 9.5 to RM 10.2): Golf Course Oxbow Setback (left – south – bank) and White & Puyallup Rivers Confluence (right – north – bank) (GeoEngineers, 2008). The **Golf Course Oxbow Setback** site proposes to remove approximately 4,456 linear feet of existing levee located along the left (south) bank of the Puyallup River and construct a setback levee reconnecting approximately 42.2 acres of riparian and floodplain area. The **White & Puyallup Rivers Confluence** site proposes to remove approximately 4,423 linear feet of existing levee located along the right (north) bank and construct a set-back levee and reconnect approximately 30.2 acres of riparian and floodplain area. Both projects would reconnect the Puyallup River with remnant riparian wetlands, improve flood storage, reestablish natural sediment conveyance and storage processes, and enhance instream and riparian habitat.	Stream shading Organic inputs Wildlife habitat Minimizing contamination potential Floodplain connectivity	High	Vegetation enhancement – ST to MT Flood protection for Wastewater Treatment Facility – LT Bank stabilization replacement – MT to LT Levee setback (both identified projects) – LT	Vegetation and shoreline enhancement and bank stabilization opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010); Flood protection improvement alternatives identified from Flood Hazard Management Planning (Pierce County, 2011); Levee setback opportunities identified in Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008).

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment C – SR410 Bridge to Union Pacific Spur Bridge	The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. Protect and enhance riparian vegetation throughout undeveloped portions of segment by removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings.	Off-channel salmonid habitat Stream shading Organic inputs Wildlife habitat	Medium	Bank stabilization replacement – MT to LT Vegetation enhancement – ST to MT	Vegetation and shoreline enhancement and bank stabilization opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010).
Segment D – Union Pacific Spur Bridge to Tacoma Road Bridge	Bank stabilization replacement – similar to Segment C Restore existing riparian vegetation throughout undeveloped portions of this segment. Control non-native invasive vegetation as needed. Sotain Creek joins the White River in this segment. There may be opportunities to restore riparian vegetation and in-stream habitat at the confluence.	Stream shading Organic inputs Wildlife habitat	Medium	Bank stabilization replacement – MT to LT Vegetation enhancement – ST to MT Stream confluence – ST to MT	Vegetation and shoreline enhancement and bank stabilization opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010).
Segment E – Tacoma Road Bridge to Public Land	The river banks within this segment are armored with riprap and concrete. These materials could be replaced with bank stabilization materials that would enhance fish and wildlife habitat, such as large woody debris and native plantings. In some portions of this segment, it may be feasible to restore channel and bank conditions by removing existing revetments and cutting back fill in the riparian area. This would increase the active channel width and subsequently enhance habitat-forming processes. Restore and enhance riparian vegetation along both banks of the White River by removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Enhance riparian vegetation along the lower portion of Salmon Creek. Salmon Creek joins the White River in this segment. There may be opportunities to restore riparian vegetation and in-stream habitat at the confluence.	Off-channel salmonid habitat Increased active channel width Stream shading Organic inputs Wildlife habitat	Medium	Bank stabilization replacement – MT to LT Vegetation enhancement – ST to MT Stream confluence – ST to MT	Vegetation and shoreline enhancement opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010).

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment F – Public Land to 8th Street Creek	Bank stabilization replacement – similar to Segment C Three levee setback projects are identified within this segment: Interurban-White Site, 24th Street E Pointbar, and 8th Street E Setback (GeoEngineers, 2008). For all project opportunities, existing levees that constrain the channel would be removed, with new levees constructed farther away from the main channel. The **Interurban-White** site is located south of 32nd Street East and east of 142nd Avenue East. The project would remove approx. 150 feet of existing levee and construct a setback levee reconnecting approximately 3.5 acres of riparian and floodplain area. The **24th Street E Pointbar** site is located on the left (east) bank south of the Sumner Meadows Golf Course and west of the East Valley Highway. The project would remove approximately 1,500 linear feet of existing levee and construct a setback levee reconnecting approximately 9.2 acres of riparian and floodplain area. The project, currently in planning and initial design stages by the City, would improve connectivity of the White River to off channel habitats. The **8th Street E Setback** site is also located on the left (east and north) banks of the mainstem upstream of the 24th Street project site. The project would remove approximately 4,709 linear feet of existing levee and construct a setback levee reconnecting approximately 29.4 acres of riparian and floodplain area. The project would allow for and promote channel migration and would moderately promote the creation of complex channel structure. Existing narrow riparian vegetation corridors on City owned golf course and agricultural property could be expanded with large-scale native tree and shrub plantings near the river. Continued agricultural use could be accommodated by incorporating riparian buffer strips on portions of the property. The Dieringer Flume could be restored to a meandering stream channel near the river confluence;	Floodplain connectivity Off-channel salmonid habitat Stream shading Organic inputs Wildlife habitat	High	Bank stabilization replacement – MT to LT Levee setback – LT Vegetation enhancement – ST to MT Stream confluence – ST to MT Biological opinion conditions – ST	Vegetation and shoreline enhancement opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010); Levee setback opportunities identified in Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008). Habitat preservation – Sumner Trail Master Plan (City of Sumner Community Development Department, 2008); 24th Street Interchange Biological Opinion conditions and recommendations (NMFS, 2003; USFWS, 2003).

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment F – Public Land to 8th Street Creek	flows from the flume could be diverted to create or enhance off-channel habitats. The Sumner Trail Master Plan recommends that the wooded area near 24th be preserved and made more accessible with footpaths. Since most of the area is wetland and one of the last areas of riparian woodland, according to the Plan, it should be preserved as habitat. Protect and enhance riparian vegetation throughout this segment, particularly in Riverbend Park. Control non-native plant species (e.g. Himalayan blackberry). Establish a best management practices plan for the golf course. Plan could include plantings to expand the native vegetation along the river, and measures to reduce use of chemicals. 8th Street Creek flows through the golf course and joins the White River in this segment. There may be opportunities to restore riparian vegetation and in-stream habitat at the confluence. The 24th Street Interchange Biological Opinion, described above in Section 5.3.4, included the following two conditions that pertain to the White River: 1) The City of Sumner must permanently prohibit impervious development on 30 acres of City-owned property east of the White River. 2) The City of Sumner must permanently restrict new development on 88 acres of City-owned property east of the White River to a maximum impervious coverage of 40 percent. In addition, in the Biological Opinion USFWS recommended that nonfunctioning levees above the Dieringer Powerhouse outfall (RM 3.6) on the White River be removed or setback, in order to restore floodplain and riparian connectivity and create off channel habitat.				

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment G – 8th Street Creek to Stewart Road Bridge	Bank stabilization replacement – similar to Segment C Two levee setback projects are identified: continuation of the **8th Street E Setback** site (described in Segment F) on the left (north) bank and the **Pacific Pointbar** site on the right (south) bank (GeoEngineers, 2008). The Pacific Pointbar proposed project would remove approximately 2,516 linear feet of existing levees and construct a setback levee reconnecting approximately 169 acres of riparian and floodplain area.	Floodplain connectivity Off-channel salmonid habitat Stream shading Organic inputs	Medium	Bank stabilization replacement – MT to LT Levee setback – LT	Bank stabilization replacement identified from Inventory and Characterization Report (ESA Adolfson, 2010); Levee setback opportunities identified in Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008).
Segment H – Stewart Road Bridge to City Limits	The majority of land within this segment is upland and wetland habitat, with moderate diversity. Protection of the land within this segment could help maintain quality habitat for sensitive species. The **Countyline Levee Setback Project** is identified on the left (east) bank of the White River partially within Segment H. The project crosses north into King County, extending upstream of City limits, and has been identified by floodplain restoration planning efforts for both Pierce and King Counties. The project would remove approximately 5,822 linear feet of existing levee / revetment and construct a setback levee that would reconnect approximately 84.6 acres of floodplain, riparian area springs, side-channels and wetlands located at the site. The project is in design and engineering phases, with construction anticipated between 2012 and 2013.	Wildlife habitat Stream shading Organic inputs Floodplain Connectivity	High	Land acquisition – LT Levee setback – ST	Habitat protection opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010); Levee setback opportunities identified in: Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008) and King County's Lower White River Countyline to A Street project webpage (King County, 2011).

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Upstream of City	Three levee setback projects are identified on both shorelines of the White River immediately upstream of the City: continuation of the Countyline Project (left bank) and two projects located within City of Pacific parks, both on the right (west) bank. See Segment H discussion above for details on the Countyline Project (GeoEngineers, 2008). At both the **Pacific Park Project** site (within Pierce County) and the **Pacific City Park / Lower White River Right Bank Levee Setback Project** site (within King County), the White River is confined by concrete revetments and has no functional riparian buffer. These areas are currently used as parks by the City of Pacific; however, they are contained largely within the 100-year floodplain and contain several historically active channels. The proposed projects would repair and or replace portions of damaged revetment. The project will also install logs and rocks along the toe of the slope and re-stabilize the bank face using bioengineering techniques. Levees would be setback to restore floodplain connectivity. The King County site is under preliminary alternatives analysis and planning, with construction anticipated in 2015-2016.	Wildlife habitat Stream shading Organic inputs Floodplain Connectivity	High	Levee setback – ST / MT	Levee setback opportunities identified in: Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008); King County's Lower White River Right Bank project webpage (King County, 2011).
Segment UGA-1 – Lake Tapps	The shoreline of Lake Tapps within this segment generally consists of mature, mixed forest and scrub-shrub wetland. There is relatively little shoreline development within this segment. Protection of the land within this segment could help maintain quality habitat for sensitive species and the overall biodiversity of the area.	Wildlife habitat Stream shading Organic inputs	High	Habitat protection – ST	Habitat protection identified from Inventory and Characterization Report (ESA Adolfson, 2010).

Planning Segment	Restoration Opportunity	Ecological Functions / Processes Addressed	Preliminary Ranking	Timeline	Restoration Opportunity - Information Source
Segment UGA-2 – Riverside Park to City Limits	Two levee setback projects are identified in Segment UGA-2: Riverside Drive and Riverside Park (GeoEngineers, 2008). The **Riverside Park** site is also located on the right (east) bank at RM 12.8; the site extends through Riverside Park, a historic floodplain area that is now disconnected from the mainstem. Levee setback opportunity would reconnect approximately 47 acres of floodplain, including restored connection to an unnamed tributary with remnant side channel habitat. Enhance riparian vegetation by removing non-native plant species (e.g. Himalayan blackberry), and installing native plantings. Vegetation enhancement opportunities located at Riverside Park. Riparian vegetation in the western part of the segment could also be protected and enhanced.	Floodplain connectivity Off-channel salmonid habitat Stream shading Organic inputs Wildlife habitat	Medium	Levee setback (Riverside Drive / Riverside Park) – LT Vegetation enhancement – ST to MT	Vegetation enhancement opportunities identified from Inventory and Characterization Report (ESA Adolfson, 2010); Levee setback opportunities identified in Levee Setback Feasibility Analysis – Puyallup River Watershed (GeoEngineers, 2008).

4.3 Existing Capital Improvement Projects

In addition to the opportunities described above, the City is already initiating and planning several capital improvement projects near the shoreline. These projects may provide opportunities for restoration coupled with the design and implementation of the primary capital improvement. Table 4 summarizes information from the City's current Transportation Plan (City of Sumner, 2011b) and Improvement Plan for Parks and Open Space (City of Sumner, 2003). Some of the projects shown below are also included in the Sumner Trail Master Plan (City of Sumner Community Development Department, 2008).

Table 4. Existing Capital Improvement Projects

Shoreline Segment	Project Name	Description	Funding Obtained?	Cost	Document Source	Rank
B-C	Wastewater Treatment Plant to Bridge Street Trail	State St. to Main St. Connects to trail at WWTP.	Yes	$654,000	Six Year Transportation Plan 2012-2017	Trails 6
B	Traffic Avenue	Thompson ST/WB SR 410 Ramps to the Puyallup River Bridge. Widen roadway and existing WSDOT overpass to 5-lanes. Restripe lanes and revise signal timing.	No	$11,000,000	Six Year Transportation Plan 2012-2017	Arterial 9
C-D	Bridge Street to Fryar Avenue Trail	Main St. to Puyallup St. Completes trail through town.	No	$600,000	Six Year Transportation Plan 2012-2017 Sumner Trail Master Plan	Trails 8

Shoreline Segment	Project Name	Description	Funding Obtained?	Cost	Document Source	Rank
E (Salmon Creek confluence with White River)	Salmon Creek Open Space Purchase	Portions of the riparian corridor along Salmon Creek would be purchased to create contiguous open space along the stream. The funds would be used to link areas already set aside for conservation as required mitigation for development impacts.	–	$320,000	2003-2009 Improvement Plan for Parks and Open Space	–
F	24th St. Bridge and corridor to E. Valley	Determine alignment, preliminary costs and rerun traffic model to determine when this may be needed.	No	$250,000	Six Year Transportation Plan 2012-2017	Arterial 8
F	24th Street Trail connection	Extend from the existing 24th Street Bridge (pedestrian bridge) Trail, across the #9 Ditch to the south end of the City of Sumner's property.	No	$425,000	Six Year Transportation Plan 2012-2017	Trails 7
G	River Bend Park segment (White River Trail)	Extend trail north from 16th St. across river and along golf course to trail segment along new stream.	Yes	$2,200,000	Six Year Transportation Plan 2012-2017 Sumner Trail Master Plan	Trails 5
Break between G & H	Stewart Road (8th Street) White River Bridge	This bridge would replace the existing 2-lane bridge. It will be two unequal length spans. The width will be 74 feet to accommodate 4 lanes, a sidewalk on one side and a trail crossing on the other.	No	$9,500,000	Six Year Transportation Plan 2012-2017	Arterial 3

There are no Pierce County capital improvement projects in Sumner's urban growth area or proposed urban growth area (Pierce County Department of Public Works and Utilities, 2009 and 2010). Although Pierce County CIP projects have not been identified in Sumner and its UGA, several restoration opportunities projects are in the planning or design stages and have been included in Table 3 Restoration Opportunities.

5.0 POLICY DEVELOPMENT

5.1 Existing City of Sumner Goals, Policies and Objectives

Goals, policies and objectives that relate to protection and restoration of shoreline resources are established in the Sumner Comprehensive Plan (December 2010, or as amended hereafter) under the Shoreline Master Program Element, Environmental Element and Parks and Open Space Element. Goal statements address the preservation and protection of the shoreline environment; protection of surface water quality; protection of unique, valuable and critical plant and wildlife habitat; and preservation of significant open space.

5.2 Proposed SMP Restoration Goals and Policies

Shoreline Master Program goals, policies and objectives should be consistent with and integrated into the Sumner Comprehensive Plan. As the City works through the SMP update process, the following potential goals and objectives related to shoreline restoration could be added to the Comprehensive Plan under the Shoreline Master Program Element. The goals are generally focused around four key areas: 1) coordinating with regional plans and programs, 2) opportunities focused on public property along the shorelines, 3) voluntary or incentive based and public education opportunities and 4) flood hazard management. Goals and objectives that relate to flood hazard management are generally consistent with the King County River and Floodplain Management Plan (King County, 2007). The content is organized to be consistent with the structure and organization of the Sumner Comprehensive Plan elements. Some of the objective statements below are already included in the Draft SMP (March 2011).

Goal: *To encourage cooperative restoration actions involving local, state, and federal public agencies, tribes, non-government organizations, and private landowners.*

Objective: Identify specific restoration opportunities where the City can take the lead with support from other regional entities.

Objective: Encourage establishment of wetland mitigation banks on appropriate sites that conform to state and federal guidelines.

Objective: Consideration should be made for potential adverse effects of global climate change when designing restoration and remediation projects.

Goal: *To integrate restoration efforts with capital improvement projects.*

Objective: Incorporate habitat enhancement elements into the design and implementation of public infrastructure improvement projects

Objective: Prioritize enhancement and restoration efforts at public parks and publically-owned open space lands.

Goal: *To encourage voluntary restoration as part of development proposals.*

Objective: Employ incentives and encourage actions in shorelines and critical areas that restore the ecological functions and ecosystem-wide processes of the City's shorelines.

Objective: Encourage removal of invasive vegetation and planting of native vegetation on private property.

Objective: Encourage replacement of levees and revetments with alternative shoreline stabilization materials whenever feasible.

Objective: Use this restoration framework to integrate compensatory mitigation projects into the broader restoration vision for the city.

Goal: *To educate the Sumner community on restoring shoreline habitat.*

Objective: Educate the community and encourage public involvement in the restoration of the shoreline by creating and leveraging programs, such as the NPDES Phase II stormwater requirements.

Objective: Develop a community education and incentive program to identify and develop restoration opportunities on private property which support the overall goals of shoreline management.

Objective: Establish public education materials to provide shoreline landowners technical assistance about the benefits of native vegetation plantings.

Objective: Identify areas where kiosks and interpretive signs can enhance the educational experience of users to the shoreline.

Goal: *To encourage inter-governmental coordination and cooperation with neighboring counties and cities in order to implement consistent flood hazard management objectives for the White and Puyallup Rivers.*

Objective: Continue participation in Pierce County flood hazard management planning and implementation efforts, including implementation of identified levee setback opportunities.

Objective: Continue participation in the Puyallup River Executive Task Force.

Objective: Continue to work with Pierce County to provide flood protection for critical City facilities, including the Wastewater Treatment Facility, in order to minimize potential harmful ecological impacts that could occur during flood events.

Objective: Partner with King County and neighboring cities in planning and implementation of flood hazard reduction and floodplain restoration projects to provide additional flood storage capacity within and upstream of the City and enhance natural floodplain functions.

Objective: Establish clear lines of communication with the Corps of Engineers regarding operations of Mud Mountain Dam.

Goal: *To manage the Puyallup and White Rivers, tributaries, and their associated floodplains for multiple, and sometimes competing, uses and objectives. Flood hazard management actions should support long-term flood risk reduction outcomes.*

Objective: Identify and prioritize projects that meet flood hazard reduction and ecosystem restoration objectives.

Objective: Develop public education materials that highlight the importance of the multi-objective approach to flood hazard reduction; use recent and current projects as examples to illustrate how multi-objective approaches work in practice.

Goal: *To protect flood storage, conveyance, and ecological values of floodplains, wetlands, and riparian corridors and, when feasible, to enhance or restore these ecological functions and values. Flood risk reduction strategies and projects should be coordinated on a river-reach scale with the salmon habitat recovery plans.*

Objective: Encourage replacement of levees and revetments with alternative shoreline stabilization materials where feasible.

Objective: Restore, enhance, and protect native riparian forest communities along the White and Puyallup Rivers.

Goal: *To adopt and implement policies and regulations that meet or exceed Federal and State standards.*

Objective: Adopt and implement policies and regulations contained in Floodplain Management: Higher Regulatory Standards, prepared by the Federal Emergency Management Agency, Region 10 as well as Region 10 guidance for NFIP Compliance with the Endangered Species Act (developed after the release of the 2008 Biological Opinion for the NFIP within the Puget Sound region).

Objective: Seek higher levels of Community Rating System credit for implementation of higher regulatory standards for floodplain management.

Objective: Integrate floodplain management, shoreline management, and critical areas protections into a consistent and comprehensive program that is predictable for development projects and achieves consistency with the standards of the 2008 Biological Opinion for the NFIP and subsequent FEMA Region 10 compliance guidance.

6.0 IMPLEMENTATION

6.1 Funding and Partnership Opportunities

Funding opportunities for restoration projects include both federal and state grants and legislative funds administered by state agencies. For potential projects in the City of Sumner, the greatest likelihood of obtaining funding would result from continued participation in the WRIA 10 forum and strategic partnering with Pierce County, tribes, and state and federal agencies. Targeting funding requests to address levee setback projects would fit well into the scientific and restoration plans/goals of the organizations listed below. There are also opportunities to partner with non-profit organizations that can help to secure grant funding and recruit volunteers. A few of these programs and organizations most relevant to the City of Sumner are described below.

6.1.1 State and Regional Programs

Salmon Recovery Funding Board (SRFB)

With the listing of salmonid species under the Endangered Species Act in 1999, the Legislature created the Salmon Recovery Funding Board. Composed of citizens appointed by the Governor and five state agency directors, the Board provides grant funds to protect or restore salmon habitat and assist related activities. The SRFB works closely with local watershed groups and has helped finance over 900 projects.

6.1.2 Pierce Conservation District

The Pierce Conservation District (PCD) is a non-regulatory branch of state government that works with Pierce County landowners to protect water quality, improve fish and wildlife habitat, and conserve natural resources while maintaining a sustainable agricultural community (www.piercecountycd.org/).

The PCD works with interested landowners to develop conservation plans that identify current conditions and economically viable alternatives and best management practices (BMPs) to improve productivity while protecting soil and

water quality. Some of the BMPs incorporated into conservation plans include composting, roof runoff management, pasture planting, and filter strips. In addition, the PCD collaborates with the U.S. Fish and Wildlife Service (USFWS), Washington State Department of Fish and Wildlife (WDFW), WSU Cooperative Extension, Washington State Department of Ecology (Ecology), Department of Natural Resources, and Pierce County government to provide technical assistance for landowners in the County. Major projects include animal waste management, stream bank fencing, replanting stream bank areas, pasture management, improving fish and wildlife habitat, and installation of fish ladders and road culverts.

The PCD's StreamTeam program specifically educates residents about water quality monitoring and stream restoration plantings in the area. Storm drain stenciling kits are available for check-out. See the following website for more information: www.piercecountycd.org/streamteam.html

6.1.3 Native American Tribes

Muckleshoot Tribe

The Muckleshoot Indian tribe is a descendant of the Coastal Salish tribes that have inhabited the region surrounding the White and Green Rivers. The Tribe adopted its constitution in 1936 through the Indian Reorganization Act and is a federally recognized self-governing tribal government. In the 1960s and 70s, the Tribe was involved in a struggle over tribal rights to fish salmon at all of the "usual and accustomed" fishing sites. Following the Bolt Decision, which reaffirmed the Tribe's treaty fishing rights, the tribe's Natural Resources Department has focused primarily on salmon preservation and restoration of salmon habitat. See the following website for more information: www.muckleshoot.nsn.us

Puyallup Tribe

The Puyallup Tribe was one of several tribes that signed the Treaty of Medicine Creek in 1854 with Territorial Governor Isaac Stevens. This treaty established the boundaries of the Puyallup Reservation and spelled out specific rights for tribal members such as access to traditional hunting and fishing grounds. In 1990, the Tribe formally accepted a settlement of $162 million in cash, real estate and economic development programs in exchange for giving up claims to about 18,000 acres along Commencement Bay. This resolved disputes over property titles and allowed the Port of Tacoma to develop land for shipping terminals and other industrial uses. Tribal departments such as the Environmental and Natural Resources, Fisheries and Shellfish are committed to improving water quality and

habitat for fish and wildlife. The Tribe operates hatcheries and monitors fish runs and an elk herd, and works closely with local governments on a host of environmental issues. See the following website for more information: www.puyallup-tribe.com

6.1.4 Pierce County Programs

Conservation Futures Program

Conservation Futures is a Pierce County land preservation program intended to protect open space, timber lands, wetlands, critical habitats, and farm lands within the county. This program is funded through a State authorized county property tax. Taxes collected, identified as Conservation Futures, are used to acquire land, or the rights to future development of lands, for conservation purposes. Lands identified in the Sumner SMP as future restoration or conservation sites can be nominated by the City, or an agency, for purchase through this County-sponsored program.

Open Space-Public Benefit Rating System-Tax Program

Pierce County's Public Benefit Rating System (PBRS) provides for a reduction in property taxes for lands containing various open space features, such as streams, wetlands, estuaries, wooded areas, etc. These features are scored and the number of PBRS points correlates to a percent of market value reduction during the period of continued eligibility. This program can help property owners conserve ecologically important areas while reducing their tax burden. See the following website for more information: www.co.pierce.wa.us/pc/abtus/ourorg/at/open_space.htm

6.1.5 Non-profit Organizations

Cascade Land Conservancy

Cascade Land Conservancy is a non-profit organization working to conserve land in Pierce, King, Mason, Kittitas, and Snohomish Counties. The Conservancy has led the conservation of more than 150,000 acres over the last decade including approximately 20 properties in Pierce County. The Conservancy works with landowners using tools such as land purchase or donation, conservation easements, and stewardship endowments to preserve high-quality ecosystems. See the following website for more information: www.cascadeland.org

Friends of Pierce County

Friends of Pierce County is a nonprofit organization that involves the people of Pierce County in preserving and restoring the natural environment and promotes more livable communities. The organization seeks to serve as an interactive link coordinating communities, business, government, and other entities; educate and empower communities through public outreach; direct growth of community attributes that promote a sensible and sustainable balance of environment, equity, and economics; preserve and restore the natural ecosystem; promote livable communities with linked and shared resources; and advocate for responsible and adaptive land use and transportation planning, watershed planning and natural resource management, and environmentally friendly planning, techniques, and policies. See the following website for more information: www.friendsofpiercecounty.org/about.htm

National Fish and Wildlife Foundation

The National Fish and Wildlife Foundation (NFWF) distributes grants to non-profit organizations, local, state or federal government agencies for community-based projects that improve and restore native salmon habitat, remove barriers to fish passage, or for the acquisition of land/conservation easements on private lands where the habitat is critical to salmon species. NFWF has established local partnerships throughout Washington State through the Community Salmon Fund program to engage landowners, community groups, tribes, and businesses in stimulating smaller-scale, community-oriented habitat restoration and protection projects to aid in salmon recovery. Grants made under this program are administered by NFWF. There are currently three Community Salmon Fund partnership programs. NFWF has partnered with the Washington State Salmon Recovery Funding Board (SRFB) to administer a statewide Community Salmon Fund program that is coordinated with the individual Lead Entity groups. In addition to this SRFB Community Salmon Fund program, NFWF has partnered with both King and Pierce Counties to administer county-specific Community Salmon Fund programs in those counties. See the following website for more information: www.nfwf.org

Pierce County Biodiversity Alliance

The Pierce County Biodiversity Alliance includes a cross-section of conservation agencies and organizations that share an interest in conserving the biodiversity of Pierce County. The Alliance includes Pierce County Planning and Land Services, Washington Department of Fish and Wildlife, University of Washington, Cooperative Fish & Wildlife Unit, Metro Parks Tacoma, National Wildlife Federation, Puyallup

River Watershed Council, Pierce County Conservation District, Crescent Valley Alliance (CVA), and Friends of the Lower White River (FLWR).

The Alliance has identified a Biodiversity Network of 16 biologically rich areas known as "biodiversity management areas" and connecting corridors that cover nearly 268,000 acres of land. The lower White River corridor is a Biodiversity Management Area (BMA) in Pierce County. Landowners in Pierce County BMAs are eligible for reduced property taxes. The Alliance has involved landowners and citizens in stewardship through rapid biological inventory (BioBlitz), data collection (NatureMapping), and community planning. See the following website for more information: www.biodiversity.wa.gov/ourbiodiversity/updatewhite_river.html

Tahoma Audubon Society

The Tahoma Audubon Society is the Pierce County chapter of the National Aubudon Society that works to conserve, restore, and steward irreplaceable natural resources throughout the Pierce County area (www.tahomaaudubon.org). Tahoma Audubon organizes community volunteers, provides public education regarding the environment, and participates in planning to protect habitats in the Pierce County and Tacoma area. Habitats important to local birds and wildlife are the focus of 2009, including: urban habitats, marine shorelines, riparian shorelines and forests, and oak woodlands and prairies.

6.1.6 Other Possible Funding Sources

a) Aquatic Lands Enhancement Account - WA Department of Natural Resources
b) Aquatic Lands Restoration Funding - WA Department of Natural Resources
c) Bring Back the Natives - National Fish and Wildlife Foundation
d) Coastal Protection Account - WA Department of Ecology
e) Community-Based Restoration Program - NOAA
f) City Fish Passage Barrier, Stormwater and Habitat Restoration Grant Program - WA Department of Transportation
g) Embrace-A-Stream - Trout Unlimited
h) Estuary and Salmon Restoration Program (ESRP) - Puget Sound Nearshore Ecosystem Restoration Project
i) Five-Star Restoration Program - Environmental Protection Agency
j) Habitat Conservation - U.S. Fish and Wildlife Service Coastal Program
k) Landowner Incentive Program - Washington Department of Fish and Wildlife

l) Matching Aid to Restore States Habitat (MARSH) - Ducks Unlimited

m) Non-point Source Implementation Grant (319) Program, Centennial Clean Water Fund, and State Revolving Loan Fund - Environmental Protection Agency, WA State Department of Ecology

n) Pacific Grassroots Salmon Initiative - National Fish & Wildlife Foundation

o) Partners for Fish and Wildlife - U.S. Fish & Wildlife Service

p) Puget Sound Program - U.S. Fish & Wildlife Service

q) Puget Sound Wetland Restoration Program - Washington State Department of Ecology

r) Section 206: Aquatic Ecosystem Restoration Program - U.S. Army Corps of Engineers

s) Transportation Equity Act for the 21st Century (TEA-21) - Washington Department of Transportation

t) Washington State Ecosystems Conservation Program - U.S. Fish and Wildlife Service

u) Washington Wildlife Recreation Program - Interagency Committee for Outdoor Recreation

v) Wetland Protection, Restoration, and Stewardship Discretionary Funding - Environmental Protection Agency

6.2 Approach for Public Outreach

Public education and involvement in restoration efforts is essential when implementing programmatic and site-specific opportunities located on privately-owned property. As part of this SMP update, a brochure has been developed for public dissemination that describes appropriate methods for removing invasive vegetation and replanting with native trees, shrubs, and groundcover along a river bank. The brochure will be available at the permit counter and can be provided to property-owners that have properties fronting the White or Puyallup Rivers.

The City could also consider using the public education and outreach requirement of the City's National Pollutant Discharge Elimination System (NPDES) Phase 2 Municipal Stormwater Permit to reach out to the Sumner community. The NPDES permit requires an education program be put into place that is aimed at residents, businesses, industries, elected officials, policy makers, and planning staff. The goal of the program is to reduce or eliminate behaviors that cause or contribute to

adverse stormwater impacts. The following are subject areas required to be in the program which could relate to the protection and restoration of shoreline areas:

- Impacts from impervious surfaces
- Source control BMPs and environmental stewardship actions and opportunities in the areas of pet waste, vehicle maintenance, landscaping and buffers.
- BMPs for use and storage of pesticides and fertilizers.
- Low Impact Development techniques, including site design, pervious paving, retention of forests and mature trees.

When preparing the program that addresses these subject areas, the City could incorporate information that relates to shoreline restoration, specifically as it relates to improving water quality. Public outreach for subject areas that do not relate to stormwater impacts would have to be conducted outside the NPDES program. However, the approach used for the NPDES program could be similarly applied and implemented to ensure efficient use of City staff resources.

6.3 Timelines, Benchmarks, and Strategies for Effectiveness

In the context of the SMP update, restoration planning is a long-term effort. As stated earlier, the SMP guidelines include the general goal that local master programs "include planning elements that, when implemented, serve to improve the overall condition of habitat and resources within the shoreline area" (WAC 173-26-201(c)). The guidelines for restoration planning state that local programs should "…appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals" (WAC 173-26-201(2)(f)).

As a long-range policy plan, it is difficult to establish meaningful timelines and measurable benchmarks in the SMP by which to evaluate the effectiveness of restoration planning or actions. Nonetheless, the legislature has provided an overall timeframe for future amendments to the SMP. In 2011, Substitute House Bill 1478 amended the Shoreline Management Act (RCW 90.58.080) to establish an amendment schedule for all jurisdictions in the state. Once the City of Sumner updates its SMP, the City is required to review, and amend if necessary, its SMP once every eight years (RCW 90.58.080(4)). During this review period, the City could document progress toward achieving shoreline restoration goals. The review could include:

- Re-evaluating adopted restoration goals, objectives, and policies;
- Summarizing both planning efforts (including application for and securing grant funds) and on-the-ground actions undertaken in the interim to meet those goals; and
- Revising the SMP restoration planning element to reflect changes in priorities or objectives.

Another mechanism that may serve to establish timelines and benchmarks would be establishment of a shoreline restoration program organized like or integrated with the City's capital improvement program (CIP). Similar to an infrastructure CIP, a shoreline restoration CIP would be evaluated and updated regularly. The shoreline CIP would be focused on site-specific projects and could be funded through grants or a fee-in-lieu program developed as part of the shoreline permitting process. Further, other CIP projects, such as stormwater facility improvements, could be evaluated to determine if their design could advance shoreline restoration goals.

6.4 Constraints to Implementation

There are a number of potential complicating factors between the development of a city-wide shoreline restoration plan and on-the-ground implementation of its programs and projects. Some of these challenges are briefly summarized below:

a) Lack of funding: Designing, carrying out, and monitoring the success of restoration efforts can be an expensive undertaking, particularly at larger (e.g., watershed or reach) scales. In general, funding for restoration is limited and competition for funds extensive.

b) Landowner participation: Restoration opportunities which are located on private property can be more challenging to implement than opportunities located on public property. The property owners would need to be interested in working with the City since restoration is not a regulatory requirement. Property owners would need to fund and complete the projects on their own, or if public funding were available the City would have to negotiate with the private property owners to purchase the property or an easement on the property to accomplish the project. Such voluntary interest may not occur until shoreline landowners are educated on the benefits of restoration projects or meaningful incentives are established.

c) Urban Growth Area: Restoration opportunities which are located in the UGA pose a challenge to the City since it has no authority with those properties. When pursuing a restoration project the City would need to coordinate with

Pierce County on the permitting process. Another option would be to wait until properties in the UGA are annexed into the city before implementing a project.

d) Project permitting: Obtaining necessary permits from local, state, and federal regulatory agencies can require substantial time and effort. Although encouraged and allowed by the SMP, complicated restoration projects may take a year or more to permit.

e) Climate change: Rising temperatures and water levels have the potential to dramatically alter Sumner's shoreline jurisdiction, processes, and functions over time. Depending on the scale of change and time period over which changes occur, restoration priorities could shift substantially within a relatively short period of time. Future restoration should be designed to consider future water elevations in shoreline areas of Sumner.

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APPENDIX A

Restoration Plan Figures

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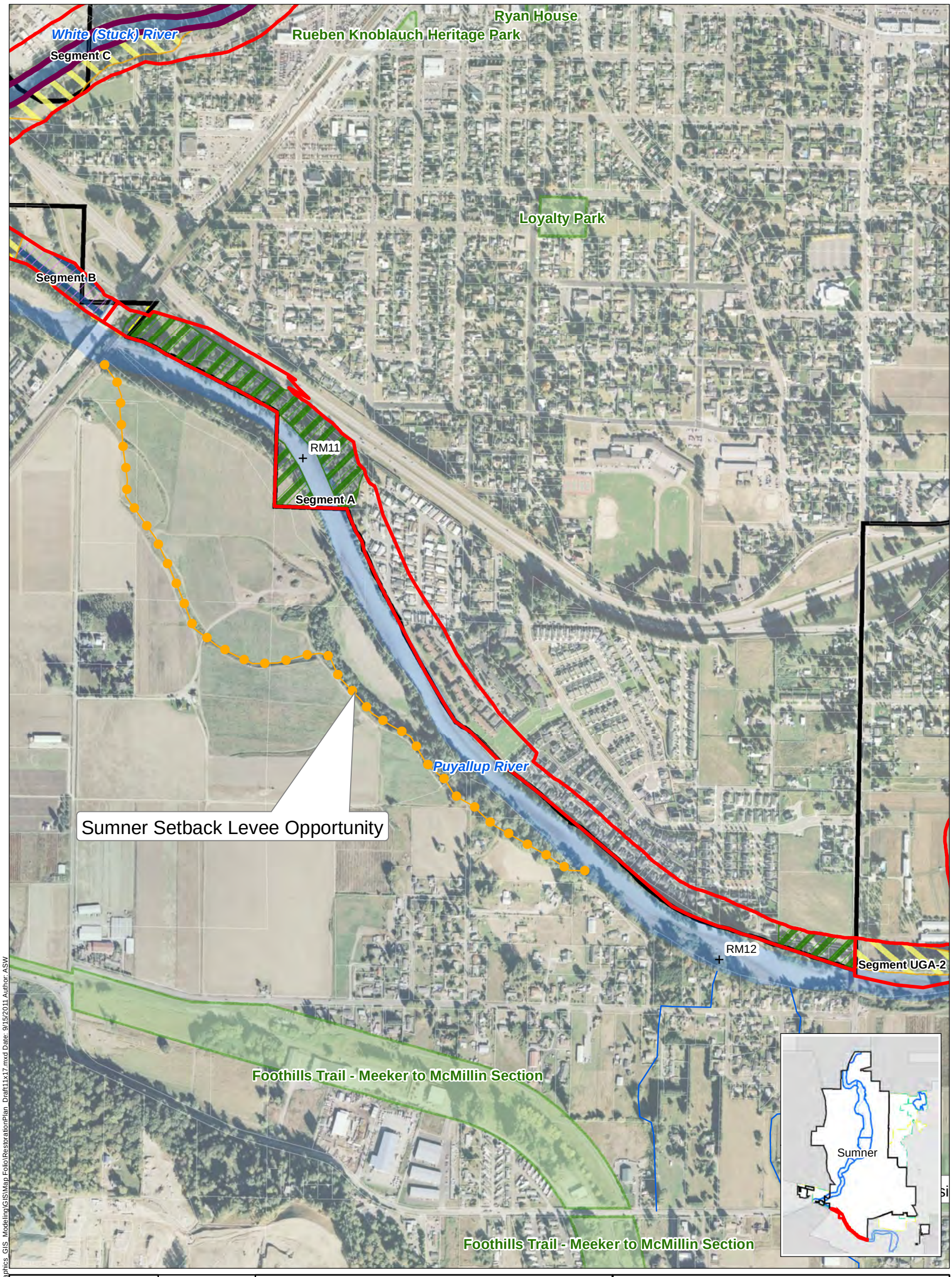

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SUMNER

ESA

N

0 340

Feet

Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
- Streams

This figure depicts potential opportunities for restoration that have been identified by a variety of sources for shorelines in the City of Sumner. Restoration opportunities shown on private properties would occur only through voluntary efforts or in coordination and cooperation with property owners, tribes, state and federal agencies.

CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 1
Potential Restoration Opportunities
Segment A

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.

White & Puyallup Rivers Confluence
Levee Setback Opportunity

Segment C

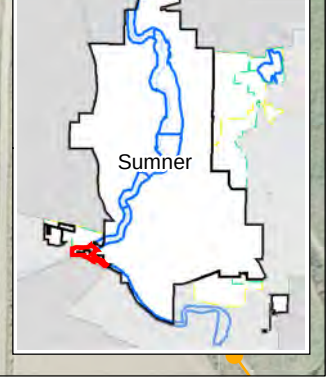
White (Stuck) River

Segment B

Puyallup River

Segment A

Golf Course Oxbow Levee Setback Opportunity



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SUMNER

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Feet

Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
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CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
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MAP 2
Potential Restoration Opportunities
Segment B

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.

Segment D

RM1

Segment C

White (Stuck) River

Rueben Knoblauch Heritage Park

Segment B

Puyallup River

Sumner

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SUMNER

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Feet

Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
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CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
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MAP 3
Potential Restoration Opportunities
Segment C

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.

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SUMNER

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Feet

Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
- Streams

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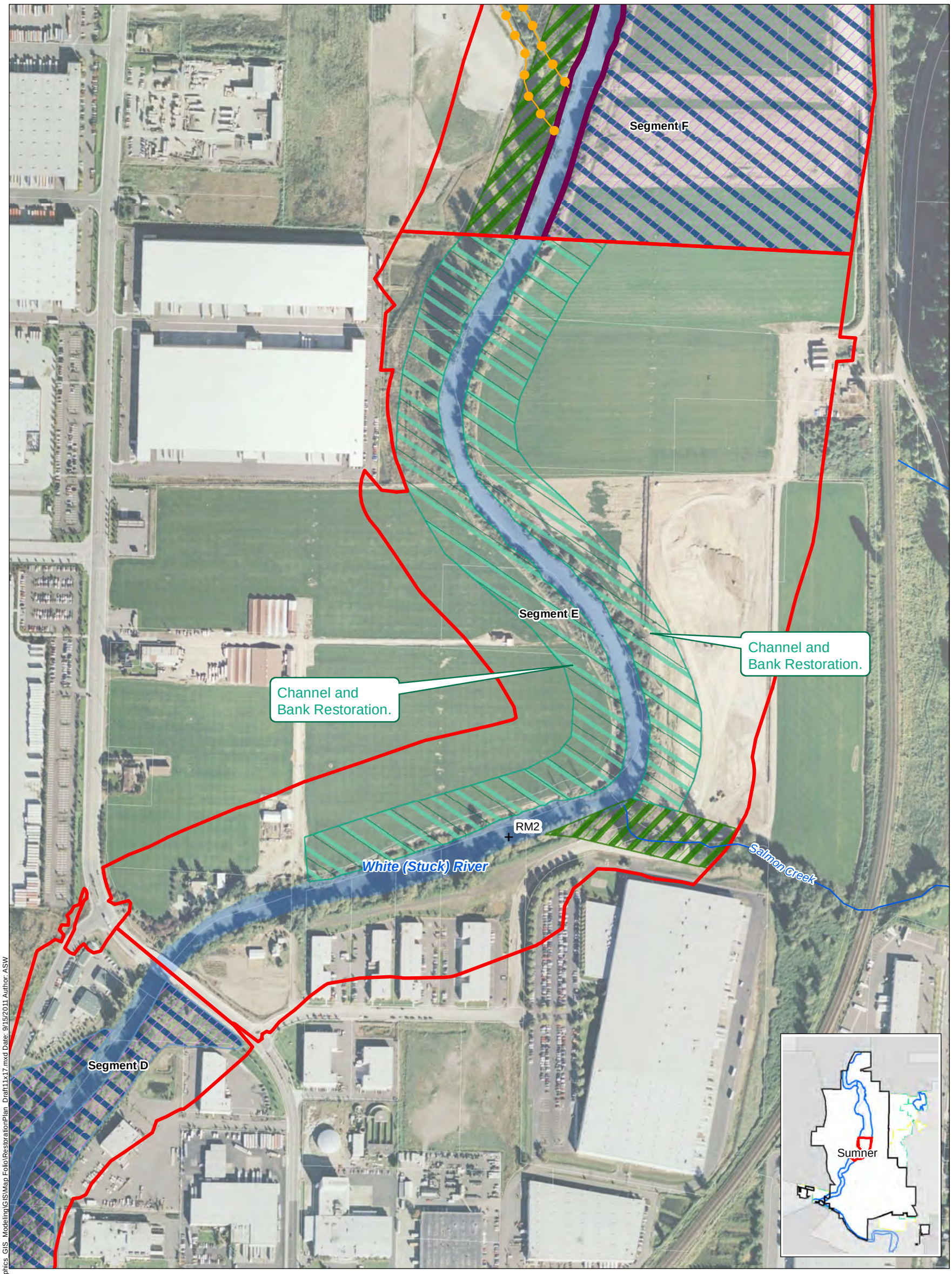
CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 4
Potential Restoration Opportunities
Segment D

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.



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SUMNER

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Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
- Streams

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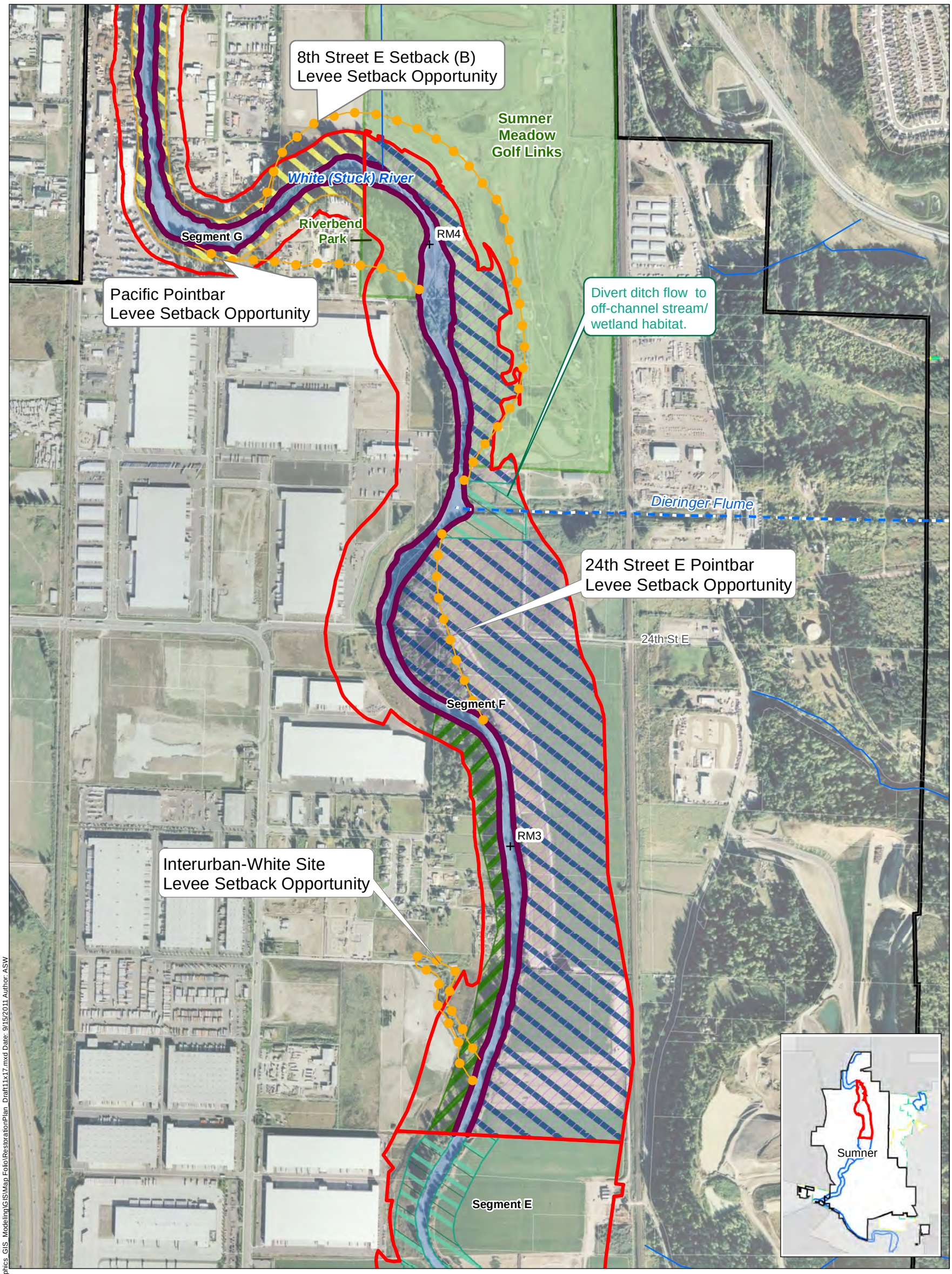
CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 5
Potential Restoration Opportunities
Segment E

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.



SUMNER

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Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
- Streams

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CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
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MAP 6
Potential Restoration Opportunities
Segment F

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.

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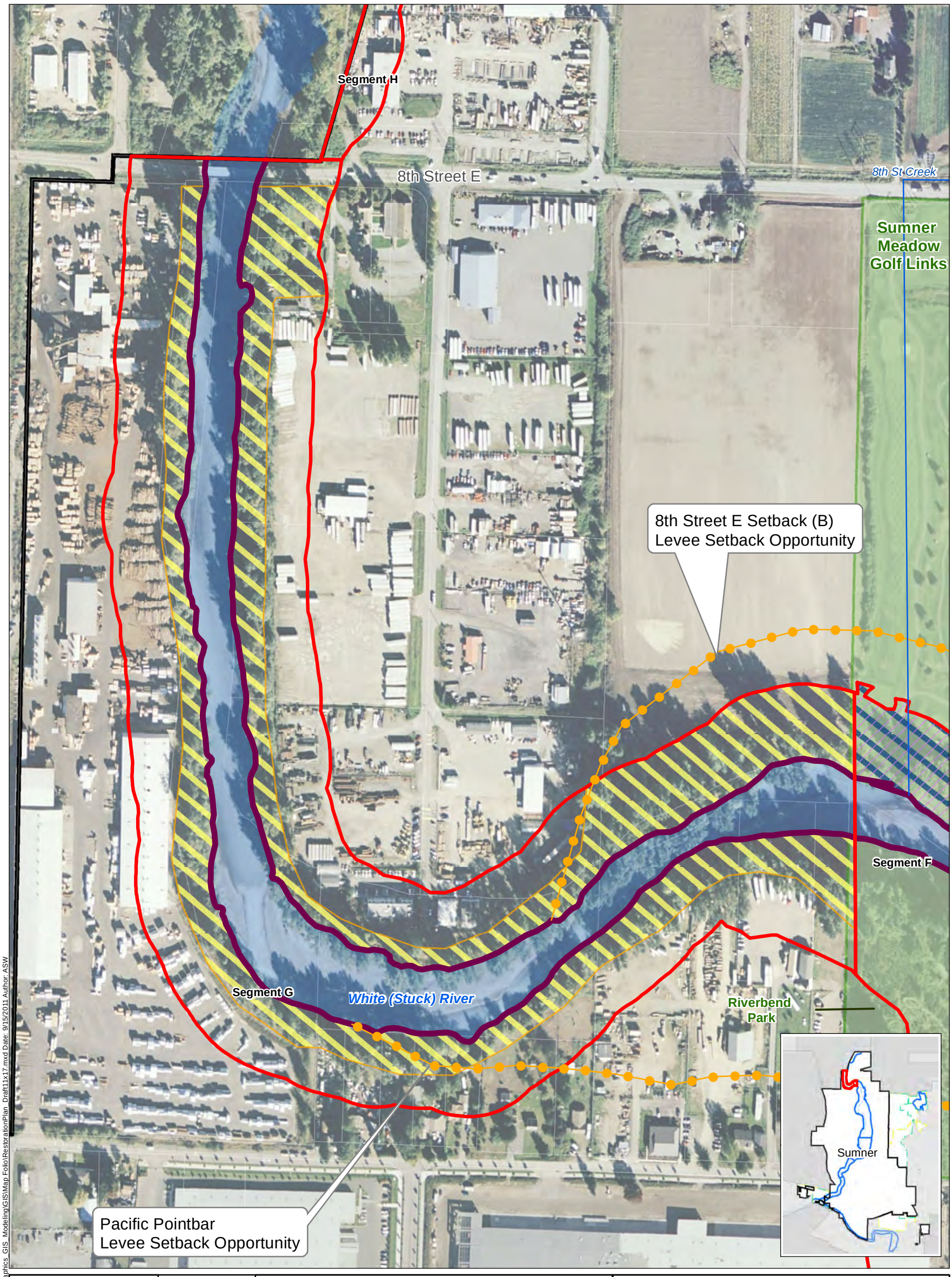

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SUMNER

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Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
- Streams

This figure depicts potential opportunities for restoration that have been identified by a variety of sources for shorelines in the City of Sumner. Restoration opportunities shown on private properties would occur only through voluntary efforts or in coordination and cooperation with property owners, tribes, state and federal agencies.

CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 7
Potential Restoration Opportunities
Segment G

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.

Segment H

Countyline Levee Setback Opportunity

White (Stuck) River

Segment H

8th Street E

8th St Creek

Segment G

Sumner Meadow Golf Links

Sumner

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SUMNER

ESA

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0 140

Feet

Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

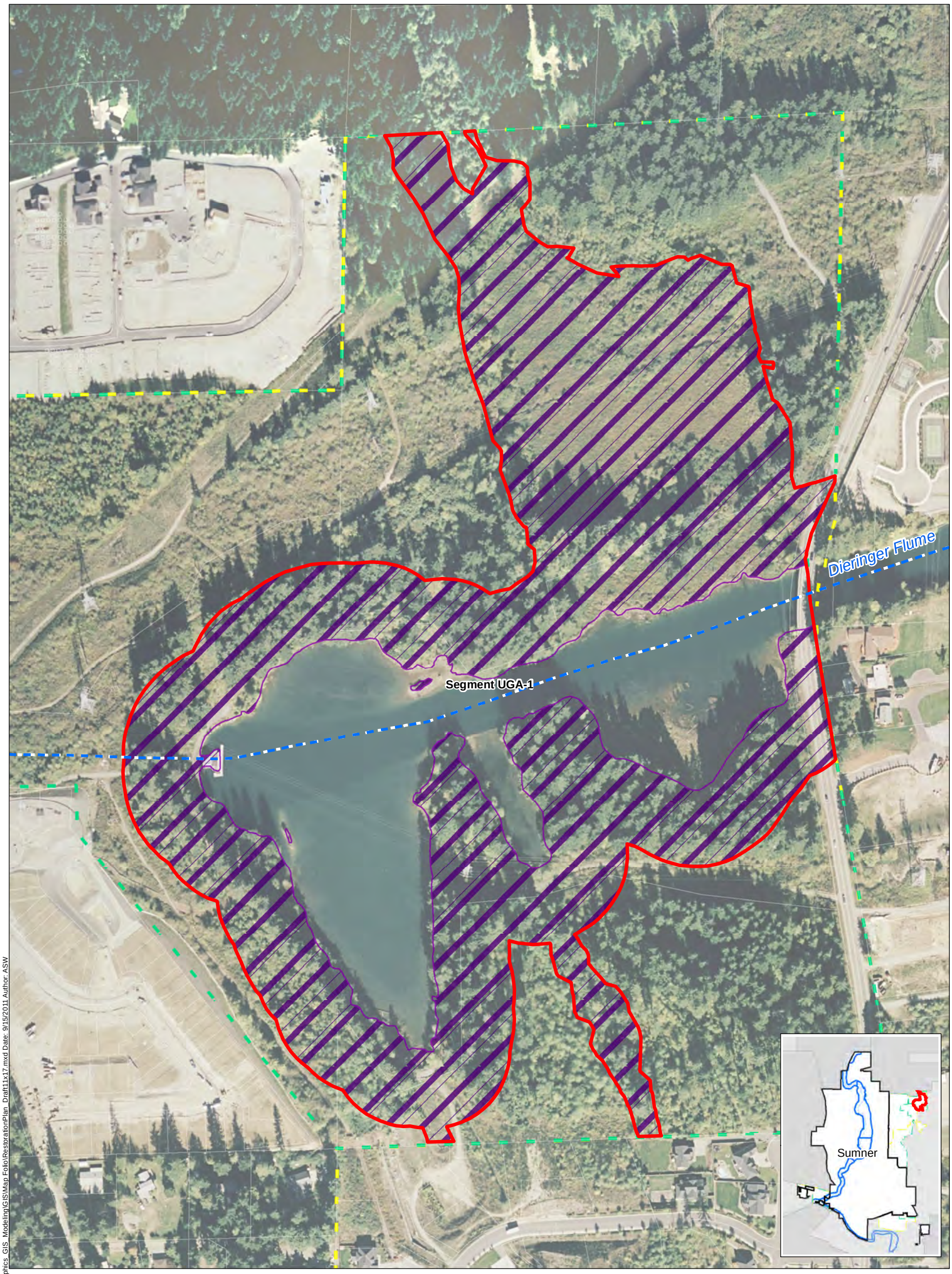
- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
- Streams

This figure depicts potential opportunities for restoration that have been identified by a variety of sources for shorelines in the City of Sumner. Restoration opportunities shown on private properties would occur only through voluntary efforts or in coordination and cooperation with property owners, tribes, state and federal agencies.

CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 8
Potential Restoration Opportunities
Segment H

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.



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SUMNER

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Feet

Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

- Shoreline Planning Area
- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
- Streams

This figure depicts potential opportunities for restoration that have been identified by a variety of sources for shorelines in the City of Sumner. Restoration opportunities shown on private properties would occur only through voluntary efforts or in coordination and cooperation with property owners, tribes, state and federal agencies.

CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 9
Potential Restoration Opportunities
Segment UGA-1

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.

Riverside Dr Levee Setback Opportunity

Riverside Dr

Segment UGA-2

RM13

Puyallup River

Segment A

Riverside Park

Riverside Park Levee Setback Opportunity

RM14

Sumner

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SUMNER

ESA

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Feet

Legend

- Levee Setback Opportunity Conceptual Allignment (GeoEngineers, 2008)
- Replace Riprap with Soft Bank Stablization

Riparian Vegetation

- Enhance
- Restore
- Protect
- Restore and Enhance
- Protect and Enhance

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- Parks and Open Space
- Sumner City Limits
- Sumner UGA
- Proposed Sumner UGA
- Streams

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CITY OF SUMNER
SHORELINE MASTER PROGRAM UPDATE
RESTORATION PLAN
DRAFT

MAP 10
Potential Restoration Opportunities
Segment UGA-2

SOURCE: ESA, 2011; City of Sumner, 2007, 2008; Pierce County, 2008; USGS, 2007;GeoEngineers, 2008.

ORDINANCE NO. 2497
CITY OF SUMNER, WASHINGTON

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SUMNER, WASHINGTON, ADOPTING THE 2012 CITY OF SUMNER SHORELINES MASTER PROGRAM.

WHEREAS, pursuant to the laws of the State, the City of Sumner must periodically update its Shoreline Master Program (SMP); and

WHEREAS, during 2011 and 2012, the City worked with citizens, agencies and subject matter experts to update the previous SMP; and

WHEREAS, the draft 2012 SMP update was reviewed by the Sumner Planning Commission on May 10, 2012 and recommended for adoption by the City Council; and

WHEREAS, on August 6, 2012, the Sumner Council conducted a public hearing and voted to approve Ordinance No. 2399, giving preliminary approval to the 2012 SMP update; and

WHEREAS, the Washington State Department of Ecology (DOE) subsequently reviewed the SMP update as required by law and subsequently adopted the update into the Washington Administrative Code (WAC) also as provided by law; and

WHEREAS, final approval must now be provided; and

WHEREAS, staff has made minor changes to the SMC update as recommended by DOE and as adopted into the WAC; and

WHEREAS, to; 1) simplify to the Sumner Municipal Code; 2) simplify use of the SMP; 3) simplify the process of making future revisions and updates of the SMP; and 4) reduce the potential for inadvertent creation of contradictions between the SMC and SMP, staff recommends that the specific content of the SMP be removed from Title 16 of Sumner Municipal Code and replaced by references to the SMP document.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF SUMNER, WASHINGTON, DO ORDAIN AS FOLLOWS:

Section 1. Chapter 16.08 SMC is hereby amended to read as follows.

16.08 General Provisions

Sections:

16.08.010 Title. The ordinance codified in this division may be known and may be cited as the "Sumner shoreline master program regulations."

16.08.020 Purpose. This division is intended to comply with the Shoreline Management Act of 1971 (the Act).

16.08.030 Applicability of regulations. The shoreline master program regulations are applicable to the shoreline, extending 200 feet from the high water mark of the White (Stuck) and Puyallup Rivers and their associated wetlands.

16.08.040 Adoption of shoreline master program. The shoreline master program update, dated June, 2012, is adopted as the shoreline master program for the city.

16.08.050 Relation of municipal code to the shoreline master program. Title 16, Division II and applicable sections of chapter 18.56 SMC codify the regulations and procedures set forth in the shoreline master program. Where there is a conflict between the requirements of the Sumner Municipal Code and the shoreline master program, the shoreline master program shall prevail.

16.08.060 Amendments to the shoreline master program. The U.S. Fish and Wildlife Service and the National Marine Fisheries Service shall receive early and continual notice of any amendments to the shoreline master program.

Section 2. Chapter 16.12 SMC is hereby amended in its entirety to read as follows:

16.12 DEFINITIONS. Definitions applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 3. Chapter 16.14 SMC is hereby amended in its entirety to read as follows:

16.14 SHORELINE ENVIRONMENT DESIGNATIONS. Shoreline designations applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 4. Chapter 16.16 SMC is hereby amended in its entirety to read as follows:

Chapter 16.16 GENERAL REGULATIONS. General Regulations applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 5. Chapter 16.20 SMC is hereby amended in its entirety to read as follows:

Chapter 16.20 SPECIFIC USE REGULATIONS. Specific Use Regulations applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 6. Chapter 16.24 SMC is hereby amended in its entirety to read as follows:

Chapter 16.24 SUBSTANTIAL DEVELOPMENT PERMITS. Substantial Development Permits procedures applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 7. Chapter 16.28 SMC is hereby amended in its entirety to read as follows:

Chapter 16.28 VARIANCES. Variance procedures applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 8. Chapter 16.30 SMC is hereby amended in its entirety to read as follows:

Chapter 16.30 CONDITIONAL USE. Conditional Use Permit procedures applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 9. Chapter 16.32 SMC is hereby amended in its entirety to read as follows:

Chapter 16.32 NONCONFORMING DEVELOPMENTS AND USES. Nonconforming Developments and Uses procedures applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted.

Section 10. Chapter 16.36 SMC is hereby amended in its entirety to read as follows:

Chapter 16.36 ENFORCEMENT. Enforcement procedures applicable in the shorelines area are as per City of Sumner Shoreline Master Program as currently adopted

Section 11. **Severability - Construction**. If any section, subsection, paragraph, sentence, clause, or phrase of this ordinance is declared unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of this ordinance. If the provisions of this ordinance are found to be inconsistent with other provisions of the Sumner Municipal Code, this ordinance is deemed to control.

Section 12. **Effective Date**. This Ordinance shall become effective five days from and after its passage, approval, and publication as provided by law.

Passed by the City Council and approved by the Mayor of the City of Sumner, Washington, at a regular meeting thereof this 6th day of October, 2014.

Mayor David L. Enslow

ATTEST:

City Clerk Terri Berry, MMC

APPROVED AS TO FORM:

City Attorney Brett C. Vinson

First Reading: ***10/06/14***
Date Adopted: ***10/06/14***
Date of Publication: ***10/09/14***
Effective Date: ***10/14/14***

****
*** FAX MULTI TX REPORT ***
****

JOB NO.	2465	
DEPT. ID		
PGS.	1	
TX INCOMPLETE	-----	
TRANSACTION OK	913608250824	BL/Sumner Courier Herald
	92538631848	Fire Department
	92538630650	Sumner Library
ERROR	-----	

ORDINANCE NO. 2496
CITY OF SUMNER, WASHINGTON

AN ORDINANCE OF THE CITY OF SUMNER, WASHINGTON, PROVIDING FOR THE ISSUANCE AND SALE OF A BOND ANTICIPATION NOTE FOR THE PURPOSE OF PROVIDING INTERIM FINANCING FOR IMPROVEMENTS WITHIN THE 136TH/VALENTINE CONSOLIDATED LOCAL IMPROVEMENT DISTRICT IN THE AGGREGATE PRINCIPAL AMOUNT OF $4,700,000; PROVIDING THE DATE, FORM, TERMS AND MATURITY OF SAID NOTE; PROVIDING THE METHOD OF REPAYMENT OR REFINANCING FOR THE NOTE AT MATURITY; AND APPROVING THE SALE OF SUCH NOTE.

City Clerk Terri Berry, MMC
Dated this 7th day of October, 2014

The full text of Ordinance No. 2496 will be provided upon request
Date of Publication: Thursday, October 9, 2014

ORDINANCE NO. 2497
CITY OF SUMNER, WASHINGTON

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SUMNER, WASHINGTON, ADOPTING THE 2012 CITY OF SUMNER SHORELINES MASTER PROGRAM.

City Clerk Terri Berry, MMC
Dated this 7th day of October, 2014

The full text of Ordinance No. 2497 will be provided upon request
Date of Publication: Thursday, October 9, 2014

Terri Berry

From: TAC-Bastin, Laura <laura.bastin@thenewstribune.com>
Sent: Tuesday, October 07, 2014 8:59 AM
To: Terri Berry
Subject: LEGAL # 1328488
Attachments: OrderConf.pdf

Here is your notice, set for the 10/9 News Tribune. The cost is $170.57; the affidavit will be sent after publication. Thank you again!

THE NEWS TRIBUNE

[thenewstribune.com]

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CITY OF SUMNER

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Payor Customer
CITY OF SUMNER

Payor Account
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Payor Address
1104 MAPLE ST, ,
SUMNER WA 98390-1407 USA

Payor Phone
253-863-8300

ORDINANCE NO. 2496
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City Clerk Terri Berry, MMC
Dated this 6th day of October, 2014
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$170.57	$0.00	$170.57

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TAC-NT-News Tribune:Print: 0300 - Legals Classified 10/9/2014 ORDINANCE NO. 2496 CITY OF SUMNER, WASHINGTON AN ORD	1	$133.96
TAC-upsell.thenewstribune.com:Online: 0300 - Legals Classified 10/9/2014 ORDINANCE NO. 2496 CITY OF SUMNER, WASHINGTON AN ORD	1	$36.61

Terri Berry

From: Terri Berry
Sent: Tuesday, October 07, 2014 8:43 AM
To: (gmcclel@co.pierce.wa.us); Andrew Fickes; Art Sphar; Axel Lindstrom (savik7 @gmail.com); Barbara Ford; Brian Cunningham; Brian Haines; Carmen Palmer; Cathy Pashon; Connie Ota; Courtney Flora; Dale Loseth; Dawn - Loren Combs (dck@vsilawgroup.com); Earle Stuard (es4271@gmail.com); Eric Mendenhall; Hans Hechtman (Hans_Hechtman@cable.comcast.com); Jeff Steffens; Jeremiah Lafranca - MBA (gam@mbapierce.com); Jerry Thorson (jthorson@eastpiercefire.org); Jim Merritt; Joe Fessler (JoeF@ci.sumner.wa.us); Joe Gerace; Joe Gerace2; John Galle; John Humphries; John McDonald (jmcdonald@eastpiercefire.org); Kari Plog; Katharine Rode; Kathy Hayden (dkhayden@q.com); Leroy Goff; Martha Humphries; Randy Hynek-Home; Sarah Gillispie; Sarah Wehmann; Shelly Schlumpf (shelly@puyallupsumnerchamber.com); Sumner Library Contact (lheyerdahl@piercecountylibrary.org); Susan Atkinson; Teresa Cozad; Tiffany Spier; Tribune Tips; Tricia Jarbeaux (tjarbea@co.pierce.wa.us)
Subject: Ordinances 2496 & 2497 Passed

ORDINANCE NO. 2496
CITY OF SUMNER, WASHINGTON

AN ORDINANCE OF THE CITY OF SUMNER, WASHINGTON, PROVIDING FOR THE ISSUANCE AND SALE OF A BOND ANTICIPATION NOTE FOR THE PURPOSE OF PROVIDING INTERIM FINANCING FOR IMPROVEMENTS WITHIN THE 136TH/VALENTINE CONSOLIDATED LOCAL IMPROVEMENT DISTRICT IN THE AGGREGATE PRINCIPAL AMOUNT OF $4,700,000; PROVIDING THE DATE, FORM, TERMS AND MATURITY OF SAID NOTE; PROVIDING THE METHOD OF REPAYMENT OR REFINANCING FOR THE NOTE AT MATURITY; AND APPROVING THE SALE OF SUCH NOTE.

City Clerk Terri Berry, MMC
Dated this 7th day of October, 2014

The full text of Ordinance No. 2496 will be provided upon request
Date of Publication: Thursday, October 9, 2014

ORDINANCE NO. 2497
CITY OF SUMNER, WASHINGTON

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SUMNER, WASHINGTON, ADOPTING THE 2012 CITY OF SUMNER SHORELINES MASTER PROGRAM.

City Clerk Terri Berry, MMC
Dated this 7th day of October, 2014

The full text of Ordinance No. 2497 will be provided upon request
Date of Publication: Thursday, October 9, 2014

City Clerk Terri Berry, MMC
City of Sumner
1104 Maple Street
Sumner, WA 98390

ORDINANCE NO. 2496
CITY OF SUMNER, WASHINGTON

AN ORDINANCE OF THE CITY OF SUMNER, WASHINGTON, PROVIDING FOR THE ISSUANCE AND SALE OF A BOND ANTICIPATION NOTE FOR THE PURPOSE OF PROVIDING INTERIM FINANCING FOR IMPROVEMENTS WITHIN THE 136TH/VALENTINE CONSOLIDATED LOCAL IMPROVEMENT DISTRICT IN THE AGGREGATE PRINCIPAL AMOUNT OF $4,700,000; PROVIDING THE DATE, FORM, TERMS AND MATURITY OF SAID NOTE; PROVIDING THE METHOD OF REPAYMENT OR REFINANCING FOR THE NOTE AT MATURITY; AND APPROVING THE SALE OF SUCH NOTE.

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Date of Publication: Thursday, October 9, 2014

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THE NEWS TRIBUNE
[thenewstribune.com]

AFFIDAVIT OF PUBLICATION

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257804	0001305170	NOTICE OF PUBLIC HEARING NOTICE IS	MTG 10/6	$145.60	1	21

Attention: TERRI BERRY

CITY OF SUMNER
1104 MAPLE ST
SUMNER, WA 983901407

NOTICE OF PUBLIC HEARING
NOTICE IS HEREBY GIVEN that the City of Sumner City Council has fixed the 6th day of October, 2014, at 7:00 PM in Sumner City Council Chambers, located at 1104 Maple Street, Sumner, WA, as the time and place for a public hearing to consider an ordinance amending Title 16 of Sumner Municipal Code placing the previously adopted 2012 Shorelines Master Program into the Code.
Any persons desiring to submit written comments concerning this application may submit written comments or requests to the City of Sumner, Attn: Eric Mendenhall, 1104 Maple Street, Suite 250, Sumner, WA 98390. Written comments may be submitted prior to the hearing by 5:00 p.m., the 6th day of October, 2014 or at the public hearing.
Please call the Community Development Department at 253.299.5526 for any questions regarding the above application.
PUBLISHED: 09/27/14
POSTED: 09/26/14

KATIE CALHOUN, being duly sworn, deposes and says: That she is the Principal Clerk of The News Tribune, a daily newspaper printed and published in Tacoma, Pierce County, State of Washington, and having a general circulation therein, and which said newspaper has been continuously and uninterruptedly published in said County during a period of six months prior to the first publication of the notice, a copy of which is attached hereto: that said notice was published in The News Tribune, as amended, for:

1 Insertions

Beginning issue of: 09/27/2014

Ending issue of: 09/27/2014

K. Calhoun

(Principal Clerk)

Subscribed and sworn on this 29th day of September in the year of 2014 before me, a Notary Public, personally appeared before me Katie Calhoun known or identified to me to be the person whose name subscribed to the within instrument, and being by first duly sworn, declared that the statements therein are true, and acknowledged to me that she executed the same.

JOSHUA NICOLE WARD
NOTARY PUBLIC
STATE OF WASHINGTON
03-15-18

Notary Public in and for the state of Washington, residing in Pierce County
1950 S. State St, Tacoma, WA 98405