

## **CHAPTER 1 INTRODUCTION**

### **1.1 Background and Purpose**

Island County is conducting a comprehensive update of its Shoreline Master Program (SMP). The SMP was last updated by the County in 1998 with approval from the Department of Ecology (Ecology) in 2001. In recent years, several species that depend on shorelines have been listed as threatened or endangered species, concern about public access to shorelines has grown, and there have been economic and demographic changes that were not foreseen in the late 1990s, all of which contribute to the need to update the SMP. This update is funded by grant from Washington State through the Department of Ecology (Agreement No. 110007). Per the requirements of the grant, the County is required to amend their local SMP consistent with the Shoreline Management Act (SMA), Revised Code of Washington (RCW) 90.58, and its implementing guidelines approved by the legislature in 2003, Washington Administrative Code (WAC) 173-26. Island County is scheduled to adopt their updated SMP by December 2012.

The SMA was passed in 1971 in response to a growing concern among residents of the state that serious and permanent damage was being done to shorelines of the state by development that did not consider the public interest in a healthy shoreline environment. 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. The SMA encourages public access to public shorelines, and use of the shoreline and provision for water-dependent uses, as well as land uses like single family development that can be compatible with preserving and enhancing shoreline ecological 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 a framework for developing or updating an SMP, including standards for use and modifications in the shoreline. Each 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 County’s shoreline area will be managed over time.

The first step in the update is to develop a vision for the future of the shoreline, a process that begins with outreach to the community and a review of County goals and plans. This inventory and characterization report is also an early step that provides the baseline for planning and measuring the progress of the SMP in achieving the vision for protection of ecological functions. The report addresses ecosystem-wide processes (also referred to as watershed or landscape processes), shoreline ecological functions, and existing and planned land uses. This information will be used in determining shoreline environment designations, and in developing goals, policies, and regulations for shoreline management. During the SMP update this information will also help in assessing potential cumulative impacts of shoreline development, and preparing a restoration plan.

This report was prepared by ESA in collaboration with Island County’s Planning and Community Development Department, and Coastal Geologic Services.

## 1.2 Report Organization

The information in this report is divided into nine chapters as shown in Table 1-1.

**Table 1-1. Report Organization**

<b>Section Title</b>	<b>Contents</b>
Chapter 1 Introduction	Purpose and organization of this report and description of the shoreline planning area
Chapter 2 Methods and Data Inventory	Methods and approach used for this inventory and characterization
Chapter 3 Ecosystem Profile	Profile of the ecosystems within the County at the watershed or landscape scale
Chapter 4 Land Use Analysis	Trends and future demand of shoreline land use, and potential land use conflicts
Chapter 5 West Whidbey Island Shoreline	Shoreline reach scale inventory for the outer (western) coast of Whidbey Island
Chapter 6 East Whidbey / Camano Island Shorelines	Shoreline reach scale inventory for the inner (eastern) coast of Whidbey Island and the coast of Camano Island
Chapter 7 Freshwater Lakes	Shoreline reach scale inventory for the freshwater lakes
Chapter 8 Shoreline Analysis Summary	Major issues and recommendations that should be addressed in the SMP update
Chapter 9 References	List of references used for this document
Appendix A	Map folio illustrating the shoreline planning area and various biological, land uses, and physical elements
Appendix B	GIS data sources used in development of the inventory and map folio
Appendix C	Watershed Characterization for Island County prepared by Washington State Department of Ecology
Appendix D	Reach-scale analysis matrices
Appendix E	Glossary of terms used in this report
Appendix F	Existing Shoreline Plans, Programs and Regulations
Appendix G	Methods, approach, and primary data sources used for this inventory and characterization
Appendix H	Island County Restoration and Conservation Potentials

### **1.3 Shoreline Jurisdiction and Planning Area Boundary**

The shoreline planning area for Island County is shown on Figure 1-1, and is the approximate area subject to shoreline jurisdiction. A larger version of the shoreline planning area map is found at the end of the map folio in Appendix A, maps J-1 through J-5. It consists of approximately 196 miles of marine shorelines and 11 miles of lake shorelines. Marine shorelines include the two major islands of Whidbey and Camano, and seven small islands, most of which are undeveloped and/or unoccupied. The marine shorelines of Island County are located within the north Puget Sound and at the eastern end of the Strait of Juan de Fuca. Collectively, these marine waters are part of the Salish Sea, which also includes the Strait of Georgia to the north of Island County, extending into British Columbia. The County's shoreline jurisdiction excludes the cities of Oak Harbor, Coupeville and Langley. Island County does not have any streams with sufficient flow (20 cubic feet per second of mean annual flow) to be within the shoreline jurisdiction.

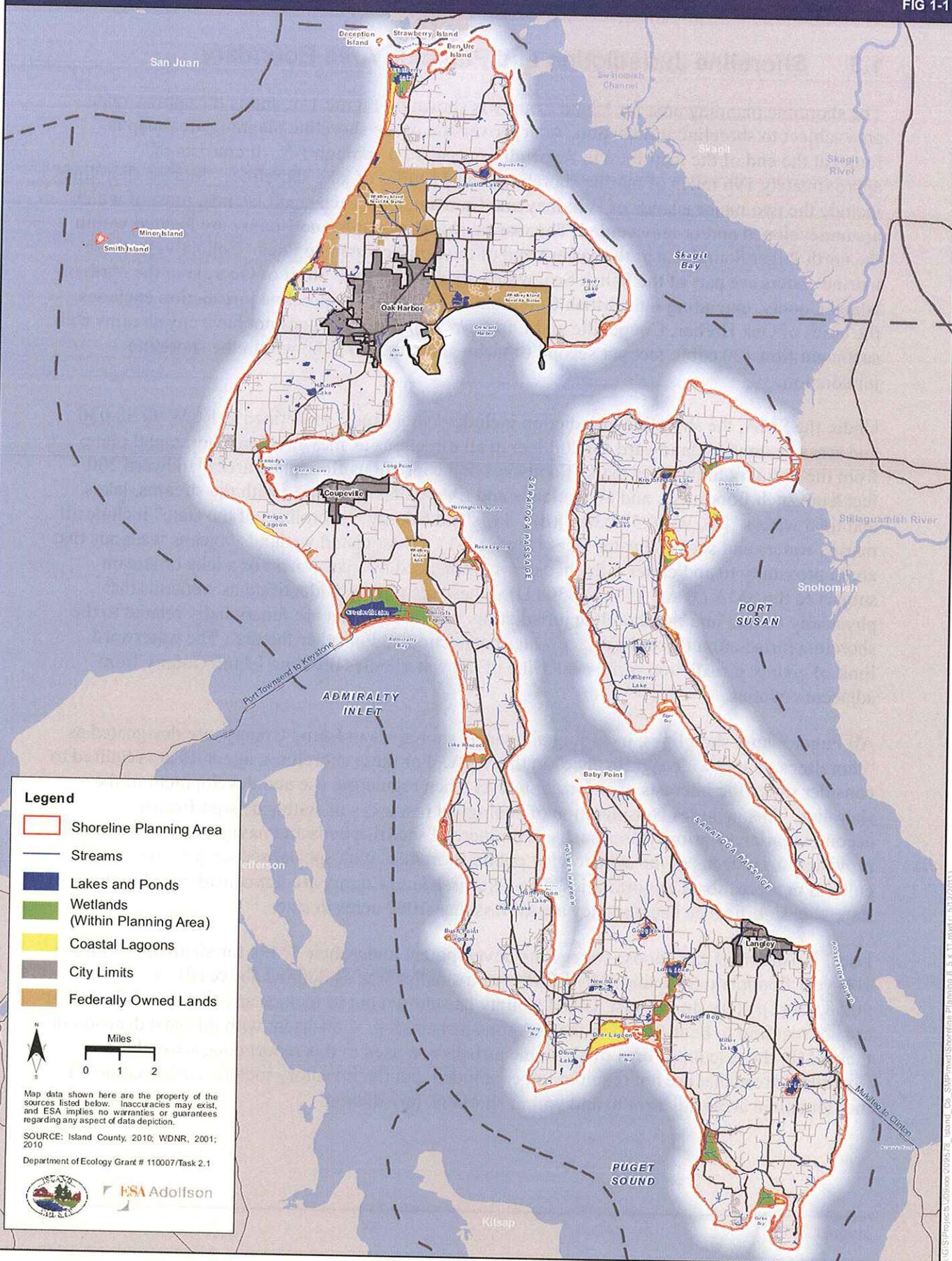
Under the SMA, the shoreline jurisdiction includes "shorelines" as defined in RCW 90.58.030 and areas "extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward 200 feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters" [RCW 90.58.030(2)(d)]. In Island County, "shorelines of the state" include all marine waters and six freshwater lakes (Figure 1-1). "Associated wetlands" means 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. The waterward limit of county jurisdiction is the centerline of the waterbodies dividing Island County from adjacent counties.

The SMA designates some shorelines as "shorelines of statewide significance." In Island County, these include the open water areas of Puget Sound lying seaward from the line of extreme low tide to the center of the channel corresponding to the County boundary. In addition, shorelines along Skagit Bay and the adjacent area extending from Brown Point to Yokeko Point (RCW 90.58.030 (2e) (ii)(D)) are defined as "shorelines of statewide significance" from the line of extreme low tide landward to the ordinary high water mark (OHWM), as well as the adjacent 200 feet landward of the OHWM. For these shorelines, agencies are required to consider statewide interests over local interests when regulating use and development of the shoreline. This includes consideration of ecological resources of statewide significance, accommodation of priority uses such as commercial shellfish beds and navigable harbors, and provision for citizens of the state to visit public shorelines with special scenic qualities or cultural or recreational opportunities.

Local jurisdictions can choose to regulate development under their SMPs for all areas within the 100-year floodplain (as mapped by FEMA) or a smaller area as defined above (RCW 90.58.030(2)(f)(i)). In the past, Island County has chosen not to include any floodplain areas that are not required to be included in the shoreline jurisdiction. Consistent with this past decision in

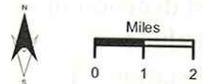
their SMP, the calculated area of shoreline jurisdiction used in this report does not include floodplain areas that are not required to be included, but the inventory includes information on the floodplain areas adjacent to and within shoreline jurisdiction.

Shoreline jurisdiction in Island County is shown on the following Figure 1-1. The “shorelines of the state” in Island County are comprised of marine waters surrounding eight islands: Whidbey, Camano, Baby, Ben Ure, Deception, Minor, Smith, Strawberry; coastal lagoons: Admiral’s, Bush Point, Crockett, Deer, Harrington, Kennedy’s, Lake Hancock, Perego’s, Race, Swan Lake, Twin; fresh water lakes: Cranberry, Deer, Dugualla, Goss, Kristoferson, and Lone.



**Legend**

- Shoreline Planning Area
- Streams
- Lakes and Ponds
- Wetlands (Within Planning Area)
- Coastal Lagoons
- City Limits
- Federally Owned Lands



Map data shown here are the property of the sources listed below. Inaccuracies may exist, and ESA implies no warranties or guarantees regarding any aspect of data depiction.

SOURCE: Island County, 2010; WDNR, 2001; 2010  
 Department of Ecology Grant # 110007/Task 2.1



## CHAPTER 2 METHODS AND APPROACH

This report has been prepared using available data from the most current, accurate, and complete scientific and technical information from a variety of sources. Data, maps, and reports were compiled, analyzed, and summarized to provide a snapshot of the state of the shorelines in Island County. A map folio (Appendix A) displaying available GIS data was assembled to allow comparison and analysis of spatial information regarding the natural and built environment. A brief description of the methods and approach used in the report follows below. For a more complete description see Appendix G.

### 2.1 Shoreline Planning Area and Reaches

The shoreline planning area is described in Section 1.3, and includes the water areas as well as the land areas under shoreline jurisdiction (see Figure 1-1). All marine shorelines are included, as are the associated coastal lagoons and other associated wetlands, and the area 200 feet landward of the ordinary high water mark. Several lakes that are identified by the state (in WAC 173-20) as being within shoreline jurisdiction are actually lagoons associated with marine shorelines. In this report, these coastal lagoons are considered part of the marine environment. The report identifies six freshwater lakes that are 20 acres or larger and not associated with marine shorelines.

To provide a more detailed look at the shorelines, the shoreline has been segmented into inventory units called “reaches with similar geomorphology, aspect, and hydrologic processes. Lake shore were not divided into separate reaches because conditions were relatively uniform. Map 1 in Appendix A shows the reaches that were used for this report. The number of reaches by shoreline type is summarized below in Table 2-1.

**Table 2-1. Shoreline Summary by Type, Island County, Washington**

Shoreline Type	Number of Reaches	Total Miles
Marine	38	196
Lakes	6	11
<b>TOTAL</b>	<b>44</b>	<b>207</b>

### 2.2 Data

The shoreline master program guidelines state that shoreline inventory and characterizations should use existing sources of information that are both relevant and reasonably available (WAC 173-26-201(3)(c)). 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 County has undertaken relevant to the SMP. Key sources of information include County planning documents and technical studies (including comprehensive plan), and the Puget Sound Nearshore Ecosystem Restoration Project (PSNERP)

publications. Mapping information and other studies from local, regional, state, federal, and tribal agencies (including Washington Department of Fish and Wildlife, Department of Ecology, and Department of Natural Resources) were also used. Chapter 9 contains a list of the primary technical and scientific references used to prepare this report. A complete list of GIS/mapping data sources is included in Appendix B.

## **2.3 Analysis and Characterization**

Because Island County comprises a group of islands surrounded by marine waters, ecosystem-wide processes (or landscape processes) are described primarily with respect to marine coastal and nearshore processes.

In this document, the term *ecosystem-wide processes* refer to the dynamic physical, biological and chemical interactions that form and maintain the landscape. Information on nearshore geomorphic processes was derived in large measure from PSNERP, with refinements from more detailed studies prepared for the Island County Marine Resources Committee. The focus of PSNERP has been to identify significant regional ecosystem problems along Puget Sound marine shorelines arising from degradation of geomorphic processes due to human activity, and to prioritize a suite of protection and restoration strategies and projects to help address the problems identified. Because of the regional intent of PSNERP's effort, PSNERP data and resources are at a regional scale. This data was supplemented with more detailed local information on geology, climate, hydrology, biology, land use, public access, and other topics relevant to shoreline planning at the reach scale.

Data were compiled and analyzed at the landscape and reach scale, and compared to historic conditions where data was available. The report describes the relative condition of ecological functions, and estimates the degree of change anticipated from future development in the shoreline. The reach scale assessment provides a summary of conditions, management recommendations, and restoration opportunities for each reach. This analysis helped to identify potential use conflicts and issues, and also provides a basis for the overall recommendations included in Chapter 8.