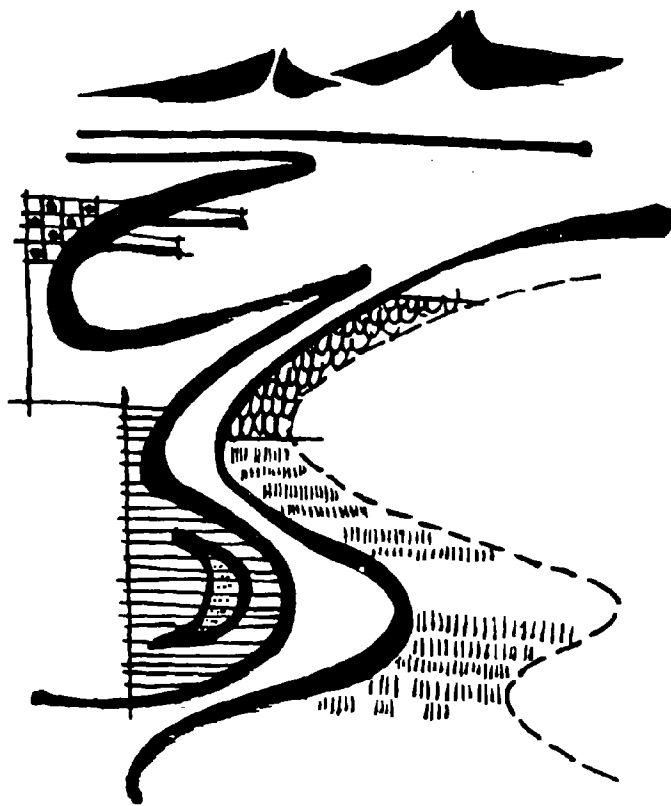


Shoreline Management
Guidebook

Second Edition, 1994



Volume II

Shoreline Master Program
Handbook



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Preface

The *Shoreline Master Program Handbook* is a guide to preparing shoreline master program amendments; it is intended to provide assistance in addressing common shoreline management issues and to respond to new directions in shoreline management practice. Interpretations and policies in this *Handbook* are based on the Shoreline Management Act of 1971 (Chapter 90.58 RCW), related rules and regulations (Chapters 173-14, 173-16, 173-17, 173-19 and 173-22 WAC), Shorelines Hearings Board cases, court decisions, Attorney General Office opinions, and Ecology staff determinations.

The Shoreline Management Act (SMA) is administered through a cooperative program between local government and the state Department of Ecology. Local governments have the primary responsibility for initiating and administering the regulatory programs of the SMA. Ecology provides technical assistance to the local governments with an emphasis on ensuring compliance with the policies and procedures of the SMA and related rules. Technical assistance is provided through workshops and conferences, direct inquiries to department staff and through technical assistance documents.

Technical assistance documents include this *Shoreline Master Program Handbook*, Volume II of Ecology's two-volume *Shoreline Management Guidebook*; and the *Shoreline Administrator's Manual*, Volume I of the *Shoreline Management Guidebook*. These documents as well as related laws and regulations are available from the Department of Ecology Shorelands Program.

The 1994 *Guidebook* addresses the following trends in shoreline management:

1. Many master program amendments are updates rather than new documents or full-scale rewrites. *Handbook* Chapter 3 outlines procedures and techniques to update master programs in an effective and timely manner.
2. Recent amendments to SMPs are placing greater emphasis on general provisions. *Handbook* Chapter 5 contains extensive general policies and regulations, which can be customized to fit local situations. The *Handbook* emphasizes general policies and regulations because:
 - a. General regulations eliminate the need to repeat the provisions which apply to all uses, activities, and environment designations.
 - b. General regulations can incorporate up-to-date environmental requirements and practices.
 - c. Model general provisions foster greater state-wide SMP consistency.

3. The state is experiencing increased development along river systems on both sides of the Cascades. *Handbook* Chapters 13 and 14 address emerging issues related to rivers and present a number of applicable shoreline management techniques, including:
 - a. Parallel environment designations;
 - b. Options for establishing shoreline jurisdiction;
 - c. Habitat, vegetation, fisheries and forest practices management;
 - d. Environment designations on federal lands;
 - e. Environmentally sensitive flood hazard management; and
 - f. Destination resort and other recreational activity planning.
4. State-wide shoreline management objectives are receiving greater attention. *Handbook* Chapter 5 clarifies provisions for shorelines of state-wide significance.
5. Local governments are requesting permit administration guidance. The *Shoreline Administrator's Manual* clarifies the shoreline permit process including permit review procedures and special issues such as shoreline jurisdiction, exemptions, variances, and conditional use permits. *Handbook* Chapter 9 provides model SMP provisions for shoreline permit administration and enforcement.
6. Local governments are pursuing waterfront redevelopment as part of comprehensive economic revitalization efforts. *Handbook* Chapters 10, 11 and 12 address a number of waterfront redevelopment issues, including:
 - a. Mixed-use projects;
 - b. Historic sites;
 - c. Shoreline redevelopment district planning; and
 - d. Water-oriented use suitability analysis and management.
7. Special issues in Eastern Washington are demanding greater attention. The *Guidebook* makes an effort to address shoreline management issues which relate to the eastern half of the state, including:
 - a. River systems in arid regions;
 - b. Shoreline use policies where water borne commerce is not prevalent;
 - c. Large scale resort/recreational community development; and
 - d. Permit review procedures and SMP administration in small communities.

8. Local governments are developing innovative shoreline management techniques that warrant special recognition and are discussed in the *Handbook* in detail. These include:
 - a. Aquatic environment designations;
 - b. Shoreline use, activity and development standards matrices;
 - c. Comprehensive shoreline planning techniques; and
 - d. Detailed public access plans and provisions.
9. Many local governments are now planning under the Washington State Growth Management Act (GMA) which directs applicable cities and counties to prepare and implement comprehensive plans and development regulations. *Handbook* Chapter 3 and Appendix A discuss the interrelationship between SMA and GMA and how to achieve greater consistency between comprehensive plans, development regulations and SMPs.
10. Flood hazard management is receiving increased attention. Reasons for this attention include: the disastrous floods of 1990, which illustrated the need to focus on flood hazard management and prevention; recent floods illustrate the limitations of structural flood control works; and flood control measures have significant implications for shoreline management and comprehensive planning. *Handbook* Chapter 13 discusses flood hazard management issues as they relate to SMPs.
11. Off-site environmental mitigation (compensation) for on-site development impacts is becoming increasingly common when on-site mitigation is not possible. The Department of Ecology is currently reviewing the policies and procedures regarding off-site compensatory mitigation for individual projects. *Handbook* Chapter 16 and Appendix B address Ecology's approach to off-site environmental mitigation planning.
12. SMPs need clear, consistent definitions for commonly used shoreline management terms. The *Manual* and the *Handbook* contain glossaries with definitions recommended for SMPs.

Ecology welcomes comments on the Second Edition of the *Shoreline Master Program Handbook*. Please forward your comments to Peter Skowlund, Ecology Shorelands and Coastal Zone Management Program, P.O. Box 47690, Olympia, Washington, 98504-7690.

Acknowledgments

This document was produced by the Washington State Department of Ecology Shorelands and Coastal Zone Management Program, Rod Mack, Program Manager. Special recognition goes to all Shorelands Program staff who participated in the project. Tom Mark and Peter Skowlund were the principal staff persons developing shoreline management concepts and directing the work. Consultant team members included John Owen, Rebecca Rudd and Karin Chew of MAKERS Architecture and Urban Design.

The Department also would like to acknowledge the participants from local governments, associated agencies and consulting firms that participated in the state-wide workshop in Seattle, April 19 and 20, 1992, and who reviewed draft materials and helped define shoreline management issues.

This publication was funded in part by the National Oceanic and Atmospheric Administration. The views expressed herein are those of the authors and do not necessarily reflect the views of NOAA or any of its subagencies.



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CHAPTER 1

Introduction to the Handbook

Purpose

This *Handbook* is a guide for preparing or updating shoreline master programs in the State of Washington. Its purpose is to describe the elements, procedures and practices in preparing shoreline master programs (SMP) in accordance with the Washington State Shoreline Management Act of 1971 (SMA or the "Act") and the Washington Administrative Code (WAC). To that end, it contains detailed information and recommendations regarding:

1. The contents and organization of master programs;
2. The process to prepare and submit master programs and amendments to the Washington State Department of Ecology (Ecology); and
3. Guidelines, examples and model language for each of the principal sections typically found in master programs (see Chapters 4-9).

The *Shoreline Master Program Handbook* represents a compilation of the "best practices" contained in existing shoreline master programs, but also incorporates state-of-the-art strategies in shoreline management that have been developed and refined as a result of practical experience over the past two

decades. Most master programs were developed and adopted over fifteen years ago, and many cities and counties are now working on amendments to update their programs and address emerging issues. The *Handbook* is designed to provide a comprehensive set of policies and regulations upon which local jurisdictions can draw in developing future master program amendments.

This *Handbook* is a partial fulfillment of Ecology's responsibility to provide technical assistance to local governments in the implementation of the State Shoreline Management Act. The *Handbook* is Volume II of the two-volume *Shoreline Management Guidebook*. Volume I is the *Shoreline Administrator's Manual*, a tool for the local permit administrator planner.

History of the SMA

In 1969, the Washington State Supreme Court decided in the case of *Wilbur v. Gallagher* (77 Wn 2d 302), commonly known as the "Lake Chelan Case", that certain activities along shorelines were contrary to the public interest. The court findings required that the public interest be represented in the proper forum for determining the use of shoreline properties. The ramifications of this decision were significant in that developers, environmentalists and other interested parties began to recognize, although probably for different reasons, the need for a comprehensive planning and regulatory program for shorelines.

Wilbur v. Gallagher was a case primarily involving property rights. It was decided at a time of heightened environmental awareness. Federal legislative committees were hearing the beginnings of what eventually became the National Environmental Policy Act of 1969. "Earth Day" and the concept of "spaceship earth" were part of the American scene. "Conservationists" had become "environmentalists" and some had even gone so far as to call themselves "ecologists". Whatever the name or concept, concern for fragile ecological areas became important, along with the rights of property ownership.

Voters of the state, seeing the failure of the Seacoast Management Bill in the State legislature, validated an initiative petition commonly titled the "Shoreline Protection Act". The State legislature, choosing between adoption of the peoples' initiative petition or its own alternative, passed into law the "Shoreline Management Act of 1971", effective June 1, 1971, which contained the provision for both statutes to be deferred to the electorate in the November 1972 election. The election issue required that voters respond to two questions: (1) Did they favor shoreline management? And (2) which alternative management program did they prefer? Most Washington voters

avored both shoreline management and the legislature's alternative by an approximate 2 to 1 margin. It is important to keep in mind that the SMA was a response to a peoples' initiative and was ratified by the voters, giving the Act a populist foundation as well as an environmental justification.

The Act's paramount objectives are to protect and restore the valuable natural resources that shorelines represent and to plan for and foster all "reasonable and appropriate uses" that are dependent upon a waterfront location or that offer opportunities for the public to enjoy the state's shorelines. With this clear mandate, the provisions of the SMA established a planning and regulatory program, which is initiated at the local level under state guidance.

This cooperative effort balances local and state-wide interests in the management and development of shoreline areas by requiring local governments to plan (via shoreline master programs) and regulate (via permits) shoreline development. Local government actions are monitored by Ecology, which approves new or amended SMPs, reviews substantial development permits and approves conditional use permits and variances (see Figure 1-1). The master program is essentially a shoreline comprehensive plan with a distinct environmental orientation applicable to shoreline areas and customized to local circumstances. Collectively, all the local master programs throughout the state comprise the State Shoreline Master Program.

Geographic Applications of the SMA

The Shoreline Management Act covers all shorelines of the state, including "shorelines" and "shorelines of state-wide significance" (SSWS). Provisions of the Act apply to the following geographical shoreline areas (see RCW 90.58.030 (2)):

1. All marine waters of the state, together with the lands underlying them;
2. Streams and rivers with a mean annual flow of 20 cubic feet per second (cfs) or more;
3. Lakes and reservoirs larger than 20 acres in area; and
4. Wetlands associated with the above (this is a specific SMA term which includes related dry upland, shoreland and wetland areas).

Figure 1-1. Local and State Responsibilities

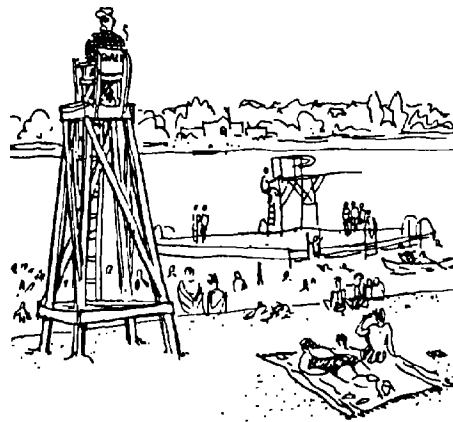
	Local Government Responsibility	State (Ecology) Responsibility
SMP Development	<p>To administer the SMA at the local level.</p> <p>To perform shoreline inventory, analysis and planning and public participation activities in preparation of the SMP.</p> <p>To prepare the SMP and update regularly and submit to Ecology for approval.</p>	<p>To insure that the SMA's objectives are implemented statewide.</p> <p>To assist local government in addressing the full range of new and emerging shoreline management issues (e.g. wetlands, ocean use activities, public access, special area management planning, etc.)</p> <p>To review and approve locally prepared SMP's and amendments that are consistent with the Act and</p>
Permit Review	<p>To review all substantial development conditional use and variance permits to approve, condition or deny permit applications and to submit all approved applications to Ecology for review.</p>	<p>To review all shoreline substantial development permit applications submitted by local governments; and, to review and decide upon shoreline CUP and variance permits.</p>
Enforcement	<p>To enforce the provisions of the local master program within the authority given</p>	<p>To enforce the SMA in cooperation with, or independent of, local government.</p>

Shoreline Master Programs

The SMA sets up a process for managing development of the state's shorelines through state-monitored, locally-administered permitting programs. Local governments are required to prepare a detailed shoreline inventory and a "shoreline master program" to manage shoreline development. Based upon the inventory of local shorelines, a system for categorizing various segments is established through application of shoreline environment designations. The Act specifies that master programs include policy statements (i.e. the required "elements") that take into account economic development, public access, circulation and transportation, recreation, shoreline use, conservation and historical and cultural aspects of the shoreline area (RCW 90.58.100 (2)). From these policy statements, regulations are derived which establish appropriate permitted uses and standards within each shoreline environment.

Following approval of its master program, local government is required to administer and enforce a procedure for issuing permits for activities in the shoreline area. The Act requires local government to take primary responsibility for initiating and administering the regulatory program. Ecology is required to support local efforts and to review programs and permits for consistency with the Act (RCW 90.58.050).

By providing guidance and assistance to local governments in preparing and updating master programs, this *Handbook* is an integral part of Ecology's support mission.



User's Guide to the Handbook

Chapter Format

This *Handbook* is divided into two parts. Chapters 1-9 address SMP preparation. Chapters 10-18 address special topics, for example, public access and off-site environmental mitigation.

Chapters 4-8 each cover a specific master program component and are divided into two sections:

1. Introduction: Describing the purpose, format and special considerations involved in preparing the applicable master program section.
2. Model Language: Presenting sample provisions for a typical master program. The model language has been compiled from several sources and represents a set of "best practices" related to the topic. The sample provisions can be customized by the local government for use directly in a master program. They do not necessarily represent mandatory state-wide requirements. Their intent is to provide assistance and information rather than act as a constrictive specification. Chapters 4-9 contain all the components of a complete SMP.

Throughout the text you will also find:



Special Tips

Which answer commonly asked questions or explore special topics in greater detail.



Notes to Master Programmers

Which provide additional background information on special topics concerning the shoreline elements, uses or activities. These are located throughout the model provisions.

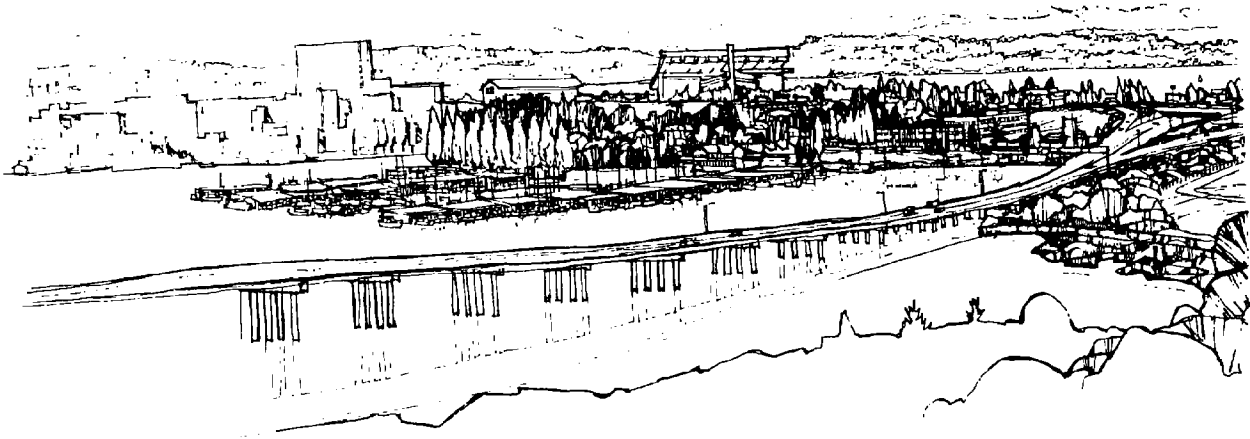
References

The fundamental reference for updating and amending master programs is, of course, the Shoreline Management Act of 1971, RCW 90.58. WAC-173-16, which contains guidelines for preparing master programs, is also essential for preparing master programs. You should always work from the most current edition. Check with Ecology's Shorelands Program for copies of current RCWs and WACs.

The *Shoreline Administrator's Manual*, Volume I of the *Guidebook*, discusses the SMP's legal and historical foundations in greater detail. The *Manual* discusses the flip side of shoreline management: permit review and most of the topics that have relevance to master program implementation. Chapter 19 provides a detailed list of technical references by subject area.

Contacts for Assistance

The Ecology Shorelands Program SMP Coordinator should be your first point of contact for assistance in updating a local SMP (Telephone: (206) 407-6523).



CHAPTER 2

SMP Organization

Introduction

Proper organization of a shoreline master program can influence its coordination with other local regulatory programs and improve its administration and public understanding. This chapter examines two basic aspects of program structure: (1) the way components are organized in an SMP and (2) the relationship between SMP policies and regulations. Because it is important that the program be clearly understandable to the public, the chapter also includes a section describing tools to aid public understanding of shoreline master programs.

SMP Components

Shoreline master programs contain the following:

A. Introduction

1. The history and objectives of shoreline management in Washington State;
2. The legislative and legal framework and applicability of shoreline master programs (see the *Shoreline Administrator's Manual*);
3. The relationship of the shoreline master program to other regulatory programs; and
4. How to use the SMP, including a guide to processes and concepts involved with shoreline management and an organizational outline of the document (see Figure 2-1).

B. Goals

The goals are the broadest principals that establish the intent behind the policies and regulations contained in the SMP. Goals are organized into the following "Master Program Elements" as directed in WAC 173-16-040.

1. Shoreline Use Element;
2. Economic Element;
3. Circulation Element;
4. Conservation Element;
5. Public Access Element;
6. Recreational Element;
7. Historic/Cultural Element; and
8. Other Elements: as added by local governments (e.g. Growth Management Planning, Community Redevelopment, Education, Public Trust Elements).

C. General Policies and Regulations

This section includes specific policies and regulations for shoreline management topics which apply equally in all environment designations such as public access, view protection, parking, water quality, utilities, signs, stormwater runoff, erosion, vegetation management, shoreline modification and wetland preservation . This is also a good location for policies related to Shorelines of State-wide Significance. Experience with contested permits indicates that regulations must flow directly from policies, hence a general policies section is also included in our example.



Special Tip

General policies and regulations cover the most basic shoreline management issues and a broad range of shoreline conditions. The general policies and regulations are applicable to most governmental jurisdictions throughout the state. Recent experience indicates that use of general regulations makes master programs simpler by reducing redundancy and bulk in the text resulting in a more accessible SMP that is easier to administer. Therefore, this handbook encourages master programs to contain strong general policies and regulations and includes model language for these generic components.

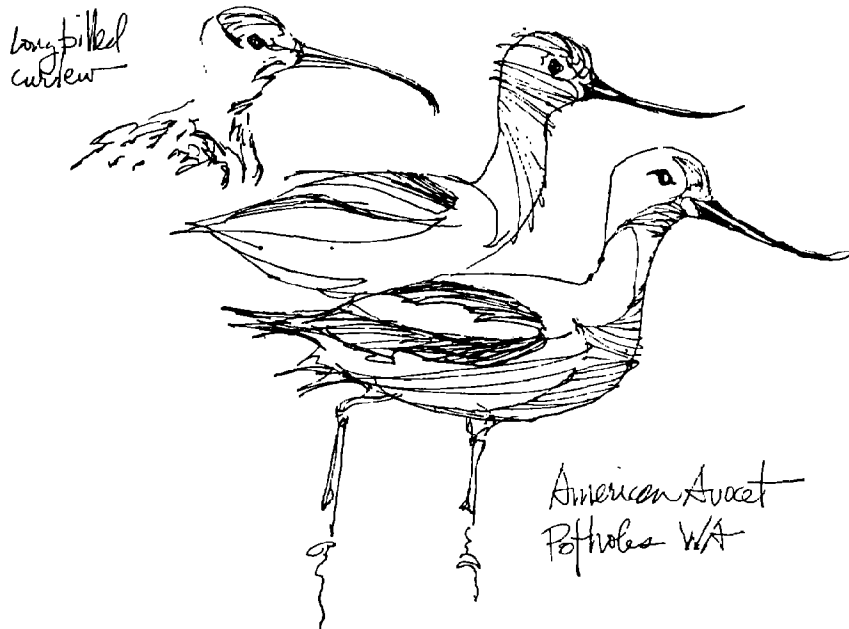


Figure 2-1. SMP Elements and Processes

How Developed	Section/Contents	How Used
<p>Written by local governments. A good vehicle for citizen involvement. Interprets state-wide objectives in local terms.</p>	<p>Goals Broadest policy contained in the SMP "elements" categories. Provides basis for all other policies and regulations. Also could include recommendations for other actions (e.g. biostudies, civic development, park acquisition) outside the typical scope of SMP administration.</p>	<p>Primarily as a foundation for the policies and regulations in other sections. Recommendations for other local actions could be used to coordinate other local government efforts consistent with the SMP.</p>
<p>Local application of state guidelines. Should be relatively consistent jurisdiction to jurisdiction.</p>	<p>General Policies & Regulations Provisions that apply to all environments, uses or activities including public access, water quality, wetland protection, utilities, signs, etc.</p>	<p>A useful place to locate regulations and avoid repetition of similar regulations in several use or environment categories. This may be the last place a permit applicant will look so must be cross-referenced to specific use and activity regulations.</p>
<p>Since this section is most responsive to local conditions, it is the best way to integrate SMP into local planning efforts and address issues such as public access planning, waterfront redevelopment and protection of specific habitats. This section, developed by local governments, evolves from comprehensive land use and shoreline planning.</p>	<p>Environment Designation Policies & Regulations</p> <ol style="list-style-type: none"> 1. Description of environment designations and criteria for classifying shorelines. 2. Policies and regulations for each designation based on location, physical and design objectives. 3. Shoreline environment maps and descriptions establishes geographic extent of environment designations. 	<p>This section will occupy the bulk of the planning effort during SMP update. It will be used by local governments as a comprehensive shoreline development and regulatory tool. Permit applicants will turn here first to determine what can be done on their property. There is a chance for confusion with zoning ordinance.</p> <p>Note: Uses permitted in each environment must be consistent with the stated purpose of each environment.</p>
<p>Local government establishes environment designations based upon shoreline inventory and WAC designation criteria.</p>	<p>Shoreline Use Policies & Regulations Development guidelines and standards for specific uses (e.g. marinas, industry, etc.)</p>	<p>Used by local governments to identify applicable environment designations for specific shoreline locations.</p> <p>Once applicant determines environment specific regulations regarding use, she/he will turn to use regulations to identify specific standards for that particular use.</p>
<p>State provides guidelines and local jurisdictions customize.</p>	<p>Shoreline Modification Activity Policies & Regulations Development guidelines/standards for construction activities in preparation of or supporting a shoreline use.</p>	<p>Applicant must check this to see that proposed construction conforms. Deals primarily with construction issues.</p>
<p>State provides guidelines consistent with legal requirements of the SMA/WAC.</p>	<p>Permit Administration Addresses the details of shoreline management implementation.</p>	<p>Used primarily by local shoreline administrator to identify the step-by-step process for processing all shoreline permits, appeals, enforcement actions and SMP amendments.</p>
<p>Local government establishes environment designations based upon shoreline inventory and WAC designation criteria.</p>	<p>Shoreline Environment Maps and Descriptions Establishes geographic extent of environment designation.</p>	<p>Used by local governments to identify applicable environment designations for specific shoreline locations.</p>

D. Policies and Regulations for Specific Environment Designations

WAC-173-16-040 (4) calls for classifying shorelines into specific "environment designations" based on the shorelines physical, biological and development characteristics. The WAC recommends four basic environment classifications including "natural", "conservancy", "rural" and "urban" categories, but many local governments have added additional classifications to this list. Policies and regulations are developed for each designation, reflecting the specific purpose and intent of each environment and responding to its specific conditions. Environment designation regulations can, for example, establish standards for:

1. Locations where water-dependent, water-related, water-enjoyment uses and non-water-oriented uses are permitted/prohibited;
2. Shoreline setbacks, over-water construction and building height standard specific to each designation;
3. Locations where mixed-use developments are either encouraged or prohibited; and
4. Protection of environmentally sensitive areas.

Environment-specific regulations are commonly placed in a series of matrices or charts indicating the use/activity development standard. These matrices often become the most referred to part of the SMP document and are encouraged. Where necessary, the matrices refer to specific regulations in the SMP text that state the requirement in greater detail.

E. Shoreline Use Policies and Regulations

Development regulations supported by related policies for specific shoreline "use" categories such as agriculture, aquaculture, mining, commercial, industrial, recreation and marinas are included in this chapter. A shoreline "use" is defined as the "end" to which a land or water area is ultimately employed.

F. Shoreline Modification Activity Policies and Regulations

Shoreline modification "activities" are considered by WAC 173-16-060 as "use activities" although for management purposes we have separated them. They include dredging, landfill, piers, bulkheads, etc. Shoreline modification activities are usually preliminary construction actions undertaken in preparation for, or in support of, a shoreline use and should not be granted a permit unless a "use" is specified.

There are several advantages of distinguishing "use" from "activity". One is that a single use, such as a marina, may require several activities, such as pier and breakwater construction, dredging, grading, etc. Also a single activity may be a part of developing a variety of uses. However, for legal purposes, such as conditional use and variance, "uses" and "activities" are treated together as "uses" (e.g. a prohibited "activity" could not be granted a variance or conditional use permit). What must be kept in mind is that the distinction is also important because a permit should not be granted for a modification activity unless a use is specified. For example, dredging may be permitted as necessary to develop a berthing pier but not in preparation for an inappropriate dump site. Shoreline modification activity regulations generally deal with construction impacts whereas use regulations typically address longer term shoreline management issues.

G. Program Administration

Establishes administrative procedures and responsibilities of all involved including:

1. Applicability;
2. Permit application requirements and process;
3. Local appeal and interpretations;
4. Enforcement, and
5. Process for updating/revising SMP.

H. Definition of Terms

Refer to glossary at the end of this document.

I. Technical References

An optional but helpful section is a list of references pertaining to each category addressed in the *Handbook* for use by those seeking additional technical information.

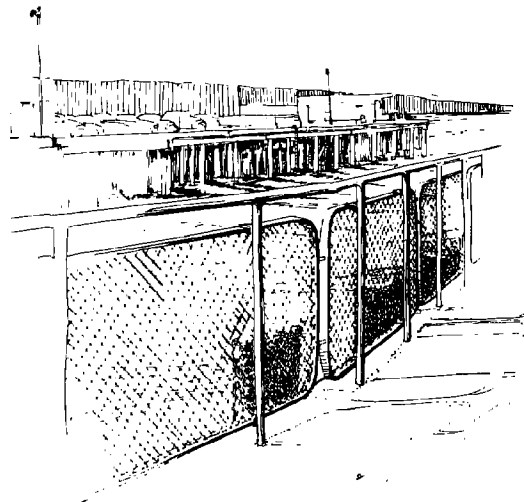
J. Personnel Contacts

Another helpful piece of information is a list of state and federal agencies that are involved in some capacity concerning the management of state shorelines.

K. Environment Designation Maps and Descriptions

These maps should be recognized as a **major** component of every SMP.

1. Shoreline Environment Designation Map(s) showing geographic extent of environment designations; and
2. Common boundary descriptions for each environment designation indicating the border where each designation begins and ends.



The Relationship Between Goals, Policies and Regulations

For the purpose of this *Handbook*, "goals" mean the broadest expression of community desires consistent with the SMA. A "policy" is a commitment to act in a prescribed manner in the administration of the master program. Most policy statements use the verb form "should" to indicate the principal to be upheld in making a decision and that the policy direction itself will require interpretive judgment in applying it to a specific case. A "regulation" is an authoritative rule dealing with the specifics of a use or physical standard. Regulations are specific, as definitive as possible, and generally use the verb form "shall" to indicate that the statement must be conformed to. The term "provision" is used in this *Handbook* to include goals, policies and regulations. Shoreline master programs include goals, policies and regulations relating to development in shoreline areas (see Figure 2-2).

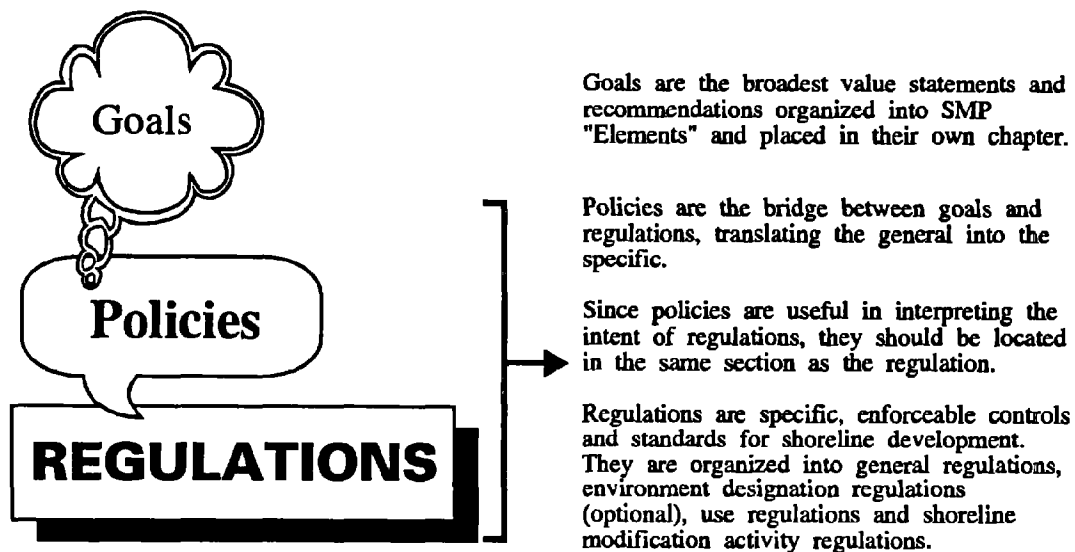


Figure 2-2. The Organization of SMP Goals, Policies and Regulations

Legally, the entire SMP is adopted by Ecology as a planning and regulatory program and incorporated in the WACs. In practice, however, the SMP policies are adhered to with more flexibility than the use regulations in the review of development proposals at the local and state level. Most jurisdictions use the regulations as the primary standards against which all development proposals are evaluated. The policies form the umbrella framework under which the regulations were originally developed and are now used to help interpret, give support to or explain the regulations. It is important to keep in mind that the mandate of the SMA is to implement adopted shoreline policy.

An underlying issue in the organization of a master program is whether to compile all the policy statements into a discrete section of policies or to include relevant policies as an introduction to each of the regulation sections. In the past, some jurisdictions have placed all the policies in a single section and organized them into the required master program "elements." However, practice has shown that separating the policies from the regulations has reduced their practical linkage and effectiveness in providing guidance to the interpretation and implementation of specific regulations. Therefore, it is strongly recommended that policies specific to general use, activity or environment designation regulations be included in each of those sections. This leaves the Goals section to address the most general objectives related to shoreline master program elements as applicable to the particular jurisdiction. The specific policies then become the bridge between goals (elements) and the regulations, and can be located in the section which makes the connection between policy direction and implementing regulation most apparent and effective.

Special Tips for Writing SMP Provisions

1. Use the verb form "should" in policy statements to indicate intent and provide direction while at the same time allowing needed administrative flexibility.
2. Use the verb form "shall" when stating mandatory regulations.
3. Use the term "may be permitted" or "may be allowed" when describing a use or modification activity that could be permitted subject to and complying with the SMP provisions (e.g. marinas may be permitted in the Urban environment designation). This provides the jurisdiction the expressed discretion of approving, approving with conditions or denying proposals.

4. Use the verb form "will" when describing an administrative action taken by the government (e.g. the city will review the submittal and approve or deny the permit application)
5. Use the term "prohibited" when describing a use, activity or condition that is not permitted under any circumstance. This is very important, because a "prohibited" use cannot be granted a variance or conditional use process. WAC 173-14-140 states that a conditional use permit shall not be granted for a use which is specifically prohibited. The various sections of a master program applied during the review of a project should not conflict and when the intent of the WAC so that "not permitted" may be given the overall connotation of "not usually permitted", thus opening the possibility of applying the conditional use. The lack of a specific prohibition also fuels the confusion. The bottom line is, state the use as "is prohibited" if you want to insure that the prohibition will stand up.
6. Wherever possible, cross-reference interrelated general use, environment designation and modification activity regulations so it is clear that all apply. This will make administration easier and the document more user-friendly.
7. Use the general term "shoreline permit" if the referenced provisions could apply to a substantial development, variance or conditional use permit, or any combination thereof.
8. Often, a large maritime industrial or commercial activity will require non-water-oriented uses such as parking or office and warehouse space. Unless some accessory use provision is included in the master program, these support activities will be difficult to regulate. At the same time, the definition of an accessory use must not be so broad as to allow uses that are not subordinate to and supportive of the primary use or else unintended uses could be permitted on the shoreline as accessory uses. Thus, an accessory use should be defined as follows:

Accessory Use: A use that is demonstrably subordinate and incidental to the principal use and which functionally supports its activity.

CHAPTER 3

SMP Amendment Process

Introduction

Generally speaking, amending (updating) a local shoreline master program (SMP) involves a two-step process (see Figure 3-1):

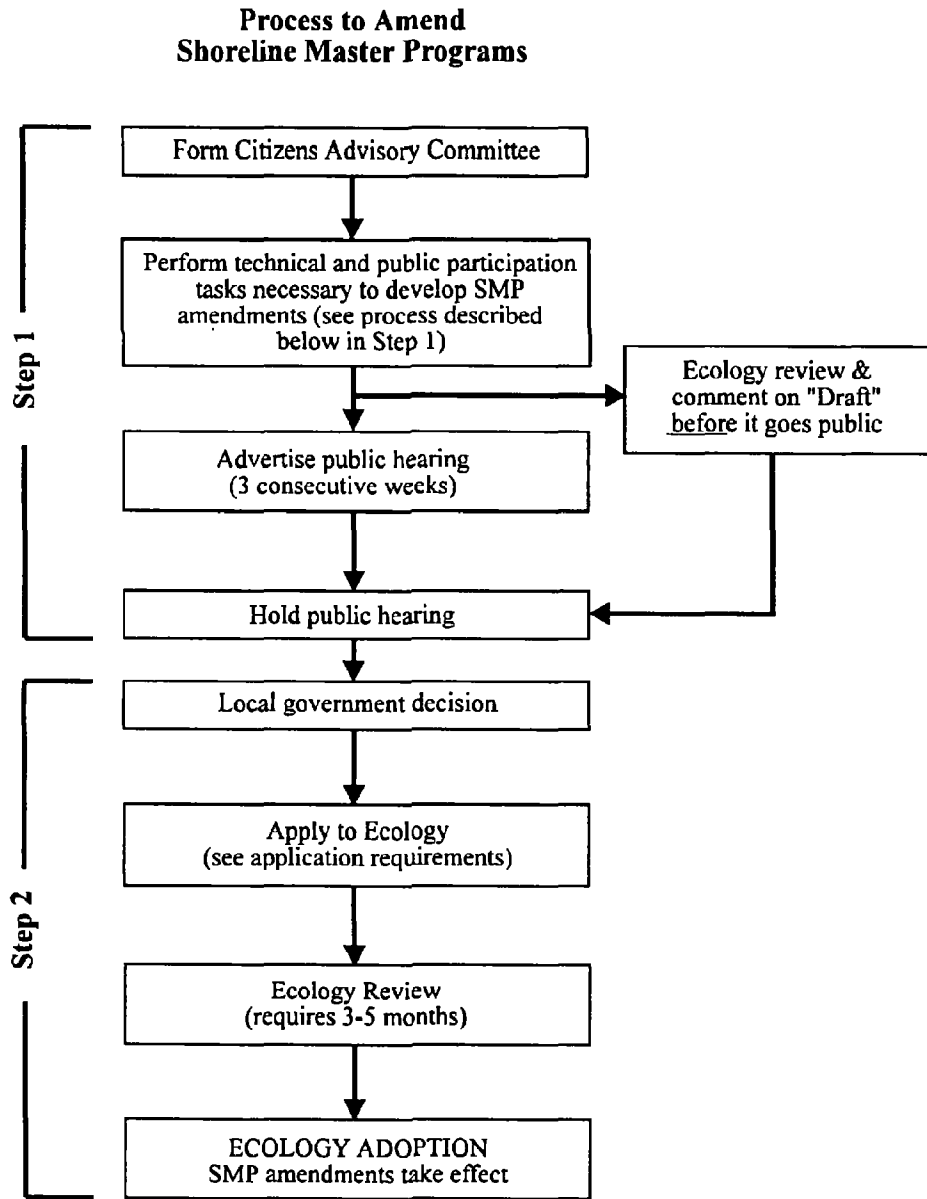
Step 1 Preparation of amendments for review and approval at the local level (WAC 173-19-060 and -061).

Note: A "draft" of proposed amendments must be sent to Ecology for review and comment before local action is taken.

Step 2 Transmittal of the locally approved amendments to Ecology who must then review and process the proposals (WAC 173-19-062(4)), and where consistent with the SMA, adopt them.

Note: All master program amendments must be reviewed and adopted by Ecology in order to become effective.

Figure 3-1. SMP Amendment Process



Step 2, Ecology review, will take at a minimum between three to five months for additional state agency, Ecological Commission and public involvement. The SMA and implementing WACs place specific procedural requirements on amending master programs including:

1. Public involvement requirements at the local and state level;
2. Coordination with adjacent jurisdictions;
3. Coordination with applicable state agencies, Native American nations, federal agencies, etc.; and
4. Technical requirements for modifying specific master program sections. (For example, the requirements for justifying changes in environment designation boundaries are called out in WAC 173-16-040(4).)

Because shorelines are a limited resource, they attract a lot of attention, and local and state-wide interests can certainly differ. Even minor changes in an SMP can be complicated by a backdrop of comprehensive issues. Protection of the natural environment, optional use of shoreline resources, the desire for public access and other civic goals are not always congruent. Sometimes a change in one SMP provision will trigger a necessary change in another provision. The bottom line is that many shoreline management issues are complicated.

There are three basic levels of SMP updates.

1. Selective Text Amendments

Selective text amendments focus on changing a use or modifying specific shoreline policies and regulations or administrative provisions. This type of amendment usually does not require the comprehensive planning process, nor the environment designation change justification of the other two processes below. However, the proposed amendments must meet the requirements listed on the "Checklist for Submittal of SMP Amendments (WAC 173-19-062)" in its most current form. A sample of the current checklist is included at the end of this chapter. An example of a selective text amendment would be a proposed change in the Piers and Docks provisions of the SMP.

2. Changes in Environment Designations or Boundaries (i.e. environment map changes)

Amendments which propose a change to an environment designation boundary require special scrutiny because they represent a fundamental change in the shoreline management system as locally applied. This type of amendment is often instigated by individual development proposals and can

result in "spot redesignation" of a shoreline and a general erosion of shoreline resource planning and protection standards. Therefore it is critical that these proposed SMP modifications be supported by a comprehensive written justification for the redesignation. These should address at a minimum, the three criteria in WAC 173-16-040(4), including:

1. The biophysical capabilities and limitations of the shoreline;
2. The existing development pattern in the area; and
3. The goals and aspirations of the local citizenry.



Special Tip

If the area in question is a shoreline of state-wide significance, additional criteria apply; namely that priority should be given to the following values in descending order of preference:

- 1. Recognize and protect the state-wide 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 shorelines;*
- 6. Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.*

(See Chapter 5 for more information on shorelines of state-wide significance).

Chapter 6 discusses the process to establish or revise environment designations. In addition, all of the requirements in the "Checklist for Submittal of SMP Amendments (WAC-19-062)" apply (see the sample checklist at the end of this chapter).

3. Comprehensive SMP Update

The process to update a master program on a comprehensive basis is presented below. Since even the easiest SMP amendment involves extensive local and state review, it is often preferable to prepare a single comprehensive update rather than several amendments over time.



Special Tip

The comprehensive process outlined below may seem particularly lengthy. This is because our discussion is intended to account for a wide variety of conditions and to assist in developing a scope of work in which all of the steps are clearly defined. Local governments may find that they do not require all of the steps listed in the process or that some of the comprehensive planning tasks have already been accomplished in other steps.

The procedural model below and associated descriptions are presented as a guide rather than a recipe. However, there are certain steps of the process (e.g. public participation) which are required by law. Procedural requirements are referenced in the description for your convenience. Consult with Ecology Shorelands staff regarding the appropriate process.

Comprehensive SMP Amendment Process

Shoreline master programs are not designed as static documents. Conditions change and new objectives emerge that require master program updates. However, updating a master program on a piecemeal, issue-by-issue basis is not efficient because such an approach does not consider shoreline resources in a comprehensive manner. Therefore, it is recommended that local governments initiate a comprehensive update of their master programs when:

1. Problems in administering the current master program arise frequently or if current master program regulations are not meeting stated goals.
2. Changes have occurred in the physical, economic or social environment that are not considered in a current master program.
3. Amendments are required to bring the master program into compliance with state-wide environmental standards or procedures.
4. New planning issues (e.g. Growth Management Act requirements) or civic objectives arise that can be addressed through shoreline management.
5. Annexation has occurred and added new shoreline area (WAC 173-19-044).

In recent years, many governments have updated their original master programs. These experiences have resulted in a set of suggested procedures that have proven effective in updating local master programs. The steps in the process outlined below are intended as a general guideline to be adapted to local conditions and needs.

One benefit of comprehensively updating a master program is that it offers an opportunity to incorporate Ecology guidelines into the updated program. Since these guidelines are based on similar regulations that have proven effective in other jurisdictions or incorporate other environmental regulatory standards, they can provide a useful starting point. Their use can simplify master programs and result in regulations that are easier to administer, that comply with state requirements and that are congruent with those of other regulatory agencies. Use of Ecology guidelines and models also typically speed the amendment review approval process, since they represent acceptable standards.

Comprehensive updating of a master program also offers the opportunity for shoreline planning. Since the strong environmental regulations mandated through the Shoreline Management Act of 1971 are based on both enabling legislation powers and the public trust doctrine, master programs can be a planning enforcement tool to direct shoreline use, implement public access plans, encourage redevelopment, promote maritime industries and upgrade the environmental, visual and functional qualities of a local waterfront.

Also, a comprehensive SMP approach makes it easier to coordinate with Growth Management Act requirements and incorporate public participation. These two critical topics are discussed prior to the step-by-step SMP amendment process outline.

Shoreline Management and Growth Management

The Growth Management Act (GMA) has fundamentally changed the focus of environmental protection in Washington State. It both empowers and requires local governments to incorporate environmental protection into their decisions. At the same time, the GMA did not repeal any preexisting environmental legislation. The SMA, for example, remains unchanged and is still in full force and effect. This means that local and state government must closely coordinate implementation of the two laws. Fortunately, the two laws are quite compatible.

The GMA requires local comprehensive plans and adoption of "development regulations". Similarly, the SMA is a program that involves both comprehensive planning and implementation functions through use regulations. GMA-required comprehensive plan elements are similar in many cases to SMA-required shoreline master program elements. The goals relating to environmental protection are similar, particularly as related to public access, recreation and open space. Many of the environmental resources addressed in the SMA and its guidelines are also addressed in Growth Management as "critical areas" and natural resource lands.

The SMA focuses on shorelines, with jurisdiction limited to certain water areas and adjacent shorelines. The SMA applies to all cities and counties with shorelines of the state within their boundaries.



Shorelines and other water resources must be managed for a variety of industrial, agricultural, commercial, recreational and environmental purposes.

Shoreline master programs (implementing the SMA) must receive state review and approval before becoming effective and are adopted as state rule (WAC). Certain shoreline permits require state approval, penalties are provided and the State Shorelines Hearings Board hears appeals.

The GMA is broader; is limited to "growth" and "opting-in" counties and cities (except that critical area protections apply to all); and local comprehensive plans are "presumed valid" and do not require state approval. Sanctions for GMA noncompliance now exist and appeals can be filed with regional growth planning hearings boards.

Relationship Between Comprehensive Plans and SMPs

A local government comprehensive plan contains a jurisdiction's vision of its future. Local governments need to include the state perspective in this vision. The state perspective is reflected in the GMA's comprehensive planning goals found in RCW 36.70A.020. For local governments with shoreline areas within their jurisdiction, the local vision should also consider and incorporate the policies of the SMA (RCW 90.58.020).

Involvement of state agency staff is encouraged early on in the local planning process – prior to SEPA review would be the ideal. One of the principal tenets of the GMA is that local government decisions should be made with full knowledge of the consequences, addressing not only fiscal constraints but also the environmental consequences. This presents an opportunity for Ecology to share its expertise and available information with local planners and decision makers. In so doing, appropriate and informed decisions will be made and conflicts can be avoided.

A jurisdiction's vision in the comprehensive plan must be reflected in local plans and implementing regulations. This includes local shoreline master programs. Ecology encourages local governments to amend their SMPs so they are consistent with their comprehensive plans. Of course, proposed amendments to the local SMP cannot be approved unless they are consistent with SMA policies, guidelines and regulations.

Local governments should incorporate shoreline policies and issues in their comprehensive planning process. The extent to which shorelines policies and issues are incorporated depends on the jurisdiction and the extent and character of shoreline resources in the area. The key to effectively incorporating shoreline issues is to include them as an integral part of the planning process, rather than adding them on at the end.

SMA Policy Fundamentals

Local governments will undoubtedly use a number of methods to consider shoreline issues and concerns in the planning process. Shoreline areas and resources can be included in GMA-required inventories of critical areas and resource lands. Shoreline policies can also be incorporated into the comprehensive planning analysis of trends and opportunities. For example, changes on the waterfront from industrial to commercial use may create opportunities for shoreline redevelopment and increased public access. Shoreline factors can also be included in land capability and suitability analyses. Existing shoreline master program environment designations, floodplains, access to deep water shipping channels, fish and wildlife habitat and riparian vegetation should be addressed in planning suitability analyses.

And of course, consultation with Ecology on draft plans and implementing regulations is encouraged. This peer review can help local governments address potential problems before adoption.

This will also make it easier for local governments to amend their SMPs to make them consistent with newly adopted comprehensive plans because Ecology will have had the opportunity to identify and resolve any problems during the comprehensive planning process.

Shoreline related policies and issues to incorporate into GMA-mandated comprehensive planning can, where applicable, include:

- Reserving appropriate shoreline areas for water-dependent, water-related and water-enjoyment uses;
- Protecting the character and resources of natural, conservancy and rural shoreline environments;
- Protecting the productive capacity and resource values of urban and suburban environments;
- Protecting shoreline wildlife sanctuaries and sensitive habitat areas (including kelp and eel grass beds);
- Protecting shoreline visual assets and physical access to the water, consistent with SMA and Public Trust Doctrine principles;
- Encouraging use and densities on adjacent lands that reinforce the policies of the SMA and local master programs;
- Planning for public utilities and transportation facilities so they reinforce shoreline environment designations;

- Considering river basin plans and the maintenance and restoration of riparian vegetation in shoreline areas and on tributary streams which affect shoreline resources;
- Considering state and federal wetland protection policies in shoreline areas and adjacent lands;
- Considering coastal hazards and the impacts of vertical land movement and sea level rise on coastal resources;
- Considering state and federal floodplain policies in shoreline areas and adjacent lands (including Comprehensive Flood Hazard Management Plans);
- Considering land clearing, soil disturbance and nonpoint runoff control measures affecting water quality in shoreline areas and adjacent lands;
- Considering applicable stormwater regulations and surface and ground water cumulative impacts as they affect shoreline resources;
- Encouraging revitalization/restoration of blighted and degraded urban waterfronts consistent with SMA policy; and finally
- The use of preferences of designated shorelines of state-wide significance (RCW 90.58,020), recognizing state-wide interests, long-term over short-term benefits, preservation of natural shoreline character and increased public access to such shorelines.

In light of the above, one can conclude that there is considerably more to shoreline management than protection of critical areas. There are state-wide concerns of preserving our finite shoreline areas for uses that must locate there, maintaining or restoring the natural character of such resources, increasing public access and general environmental protection. These shoreline issues and concerns require specific attention in the local comprehensive planning process.

Each local SMP is a complete shoreline management "program" (i.e. more than just a "plan"). Each master program consists not only of shoreline policies and implementing regulations, but also an administrative (shoreline permitting) component. Most local jurisdictions will want this permit administration component (with related shoreline regulations and development standards) to be consistent with its other local planning policies and approaches. Many local SMPs are currently out of date and may not be consistent with renewed local visions. As a result, many local SMPs will need updating as an indirect consequence of GMA planning mandates.

Integrating Comprehensive Plans, Development Regulations and SMPs

Local governments in Washington State have twenty years experience integrating comprehensive plans and shoreline master programs. Some approaches have worked better than others. Alternative approaches include, but are not limited to:

1. Treating SMPs as special area plans and special area regulations;
2. Including a shorelines sub-element in the Conservation (or other) Element of the local Comprehensive Plan;
3. Adopting a "development ordinance" with chapters which contain the SMP;
4. Including SMP provisions, applicable Comprehensive Plan provisions and Development Regulations in a single document for a limited geographic area;
5. Including a nonregulatory overlay in the Comprehensive Plan or Development Regulations;
6. Integrating Sensitive Area Regulations with SMPs;
7. Centralizing or integrating permit services;
8. Simultaneous review of multiple permits; and
9. Combining public hearings.

These and other approaches are discussed in detail in an Ecology technical assistance paper prepared by Tim Trohimovich, AICP, titled *Integrating Growth Management with Shorelines Management: Local Options* (Washington State Department of Ecology, November 1991). This is included in its entirety in the *Guidebook* as Appendix A.

The process to update SMPs described in the following section indicates where special attention should be given to integrating shoreline concerns within local comprehensive plans.

Public Participation

Any master program amendment must incorporate public input and coordination with public agencies. The Shoreline Management Act states that all people should have an opportunity for involvement in the development and

implementation of SMPs and that Ecology and local governments shall actively encourage participation by the public and federal, state and local agencies (RCW 90.58.130).

WAC 173-16-040 suggests a process to comply with the SMA's public participation requirement consisting of the following actions:

1. Appoint a citizens advisory committee to guide the master program formulation;
2. Hold at least 3 public meetings during the draft SMP development and environment designation process. Public notice should be given 7 days before each meeting and a record should be kept of the proceedings. The final meeting should be at least 7 days prior to the required public hearing;
3. Notice of public hearing must appear in a newspaper of general circulation in the area in **each of the three weeks preceding** the hearing date (WAC 173-19-061(2));
4. Publish a newsletter to explain the process and publicize meeting times and locations;
5. Publicize the master program update effort through radio and local news media.

The procedures detailed in the WAC have generally been found to be effective in building a consensus on shoreline management issues if representatives from a broad spectrum of civic groups and interests are included. The number of meetings and public notification steps may vary depending on the size of the community and complexity of issues and necessary techniques for coordinating with GMA requirements.

Step I – Local Process

As noted earlier, updating a master program is a two-step process. The first step involves the development of new SMP provisions and approval by the local government prior to submitting it to Ecology.

There are three broad categories of tasks in writing master program amendments:

1. Setting or revising goals and general policies that serve as a foundation for specific regulations and standards.

2. Developing general, use and shoreline modification activity policies and regulations from state standards. This process is facilitated by adapting state guidelines for these regulations to fit local conditions.
3. Classifying various sections of the shoreline into environment designations and setting environment specific regulations for each designation. This effort requires comprehensive shoreline planning as it sets standards for shoreline use, height, bulk, environmental protection, site design and other issues for specific sections of the shoreline. This category of tasks is often the most difficult technically, but it offers the opportunity for communities to "fine tune" their master programs to do such things as protect special resources, coordinate redevelopment activities or promote maritime industries in special districts.

There are ten separate tasks involved in Step 1 of updating a master program. The following numbered tasks describe the process that local governments are responsible for.

Task 1: Form a Citizens Advisory Committee

As stated earlier, WAC 173-16 recommends that local government form a citizen advisory committee (CAC) to provide a forum to discuss shoreline management issues, set goals, review technical work and propose regulations and to promote communication with the general public concerning shoreline management issues.

The first meeting of the CAC should be used to introduce committee and staff members, outline the purpose, process and responsibilities of the committee and review issues needing attention.

Following are some tips and suggestions for selecting a committee, establishing procedures, starting the process, building a working consensus and involving the public.

Selecting a Committee

- Committee members should represent a cross section of interest groups and public values. However, all committee members should have experience in working toward consensus. "Radicals" or "extremists" who cannot work in a group setting should be passed over for individuals with similar values who can develop constructive solutions to satisfy opposing interests.
- Search for members who are committed to participating on the committee, not just those who are available.

- The committee should be limited to no more than about a dozen members unless there is an overriding circumstance. Larger groups can be unwieldy and prevent efficient work.
- The committee chair should remain neutral and not represent a particular group or interest. When there is a conflict it should be the chair's primary task to direct the process and arrive at consensus.

Establishing Committee Rules and Procedures

- It is very important to clearly describe the committee's authority, responsibilities and work procedures. Generally, the committee will be advisory to the planning commission, governmental council or other decision making body. Clarify what the committee's tasks will be. (i.e. Will the committee actually help prepare the provisions or will they review and approve or reject staff's language? Will they be given alternate provisions to choose between?) The committee's authority and responsibilities should be prepared in writing and should be indicated in the initial letter of invitation to prospective members.
- Set a standard meeting time and place for committee meetings. That way all members can more easily adjust their schedules. Begin and end the meetings on time.
- Discuss a long-term schedule, with the understanding that the process may take much longer. Since turnover can be expected, discuss how replacements will be selected.
- Determine a decision making process. Is consensus required? What constitutes a consensus?
- Keep at least informal minutes of the meetings.
- Determine what will happen to the committee after the SMP is adopted. Unless there are specific tasks for the committee after adoption, it is recommended that the committee be disbanded. On the other hand, there have been instances where CACs have evolved into active, ongoing committees. These assist in substantial development permit review, shoreline program implementation and public access improvement programs.
- Determine whether or not other citizens may take part in committee meetings. Although allowing all citizens to observe meetings is important, opening the discussion to the general public can be very distracting and prevent progress. It is recommended that outside participation during the meeting be limited, by allowing input in writing

or by invitation or appointment only, or by setting a specific time in the meeting for public comment.

Starting up the Process

- A tour of the shoreline, especially a boat tour, is an ideal way to give the committee members a familiarity with the waterfront.
- It also can be useful to have "guest experts" such as port officials, Department of Fisheries and Wildlife staff, Ecology staff dealing with special issues, maritime economists, etc. address the committee to provide background information.
- Other committees have found the *Shoreline Management Guidebook* (or selected excerpts) a useful introduction to the work before them. Copies of the *Guidebook* are available from the Department of Ecology Shorelands Program.

Decision Making

The real key is to avoid a split committee vote. Each difficult issue must be tackled in a way that looks for a solution satisfactory to all interests. Such a solution is not necessarily a compromise, but rather a "solution" to a complex problem. Ideally a committee should act as a team that considers all objectives. The win-win negotiating technique described by Roger Fisher and William Ury in the book, *Getting to Yes*, provides a good model for solving potentially difficult conflicts. The approach features the following four elements in arriving at a fair solution to a conflict.

1. *Separate people from the problem.*

Emotions often get in the way of solving conflicts. Hopefully, this will not be as big a problem in a committee setting as it is in negotiation, but personalities can arise and suspicion between different parties can limit a committee's effectiveness. Fisher and Ury suggest several methods for dealing with emotions, including acknowledging both sides' perceptions and prejudices, not responding to emotional outbursts and using effective communication methods. The key is to build personal working relationships so all participants can work together to solve a problem, rather than create a conflict in which each side tries to win. Opportunities to meet informally, such as during a shoreline tour, help strengthen a working relationship.

2. *Focus on interests rather than positions. (Describe what each party wants, not what they demand.)*

A position is a statement or demand. An interest is a desire, a motivation or a concern. "I don't want any public access in the industrial waterfront" is a position. "I want to make sure that the safe, efficient operation of industrial activities is not diminished by public access improvements" is an interest. Focusing on interests rather than positions allows both sides to explore areas of compatible interests and to attack the problem rather than each others objectives.

3. *Explore options for mutual gain.*

Searching for creative solutions is preferable to simply trying to compromise. Staff members can assist in this effort by proposing the solutions that optimize all interests. Usually in SMP planning, or any other type of planning, for that matter, there are a number of ways to satisfy several interests. For example, in the case of a conflict between industrial operators and public access advocates, there are several ways to promote both objectives, including: 1) develop plans for public access features that do not impede industrial activities, 2) include an SMP provision that describes how to decide when public access is inappropriate or 3) describe explicitly where public access is not required, allowing off-site public access mitigation according to a specified plan.

4. *Use objective criteria to make a decision.*

Resolving the issue ultimately means arriving at a decision that may not please everyone. Before taking a potentially divisive vote, the committee should evaluate all options with respect to objective criteria. In this case, the criteria should obviously be the Goals and Objectives set out in the Elements section. The preferred solution should be in conformance with the SMA and, if applicable, the priorities set for shorelines of state-wide significance.

Getting to Yes develops these principles in detail and presents many useful techniques for their implementation. The book is strongly recommended.



Special Tip

Major issues should be resolved locally to the maximum extent possible. Keep in mind that locally unresolved or contentious issues will likely surface at the state level as well.

The Nurturing of a Committee

This is most important. Remember that committee members are providing an invaluable and difficult service, and recognition of their work is important. Each committee member deserves his or her viewpoint to be considered by the

other members and the staff. The greatest reward is knowing that they are making an important contribution. Keeping the committee on track in meeting objectives, verifying role(s) and reviewing performance occasionally will enhance this feeling.

Public Outreach Program

Public participation during the entire planning process is essential. Several optional public outreach techniques are discussed below,

- In some cases, distributing a mail-in or telephone survey early in the process to determine public opinion on shoreline management issues can be added. This optional step can provide a gauge of the public values useful in formulating goals and evaluating possible regulations.
- Another public outreach effort to both publicize the master program update and to elicit citizen participation is an open house forum. Such a forum is especially useful if sponsored and attended by the CAC, because it provides the opportunity to directly discuss issues at the project's outset.
- Two formats for beginning a planning process have proven effective in open houses. The first is the traditional public presentation to the complete group followed by a period where the large group is divided into smaller groups (six to twelve individuals) that discuss issues, problems and goals. These small group exercises are most effective when they are structured with specific work sheets, instructions and/or questions to discuss. Obviously, this open house format requires thoughtful preparation.
- A second open house format is the informal "drop-in" center at which individuals are invited to attend any time during an advertised 2 to 4 hour period. Staff persons and/or CAC members are available to explain the upcoming process and discuss the project informally. It is often useful to display presentation graphics explaining key concepts, jurisdictional boundaries, etc. The use of a survey questionnaire form that provides space for general comments assists participants in expressing their concerns and values. These forms can be collected and tabulated to provide an index of participant comments.

The advantage of the drop-in format is that it allows individual exchange of information in a relaxed setting. On the other hand, the presentation/group exercise format promotes the exchange of viewpoints and forces participants to recognize the wide range of issues and trade-offs involved with shoreline management.



Special Tip

A list of "interested persons" names and addresses that participated in the process should be maintained so that they can be kept informed through the local process and by Ecology during the state review process addressed later in Step 2.

Task 2: Inventory Shoreline

This step begins the effort to characterize the different environments that are specific to different sections of the shoreline. Since shoreline inventories can be time consuming efforts, they can be begun earlier and conducted in conjunction with the previously listed tasks. This work often involves comprehensive shoreline management planning and deals with such varied issues as central waterfront revitalization, view blockage, vegetation protection, wetlands and sensitive areas protection and shoreline access. A complete shoreline and resource inventory is an essential tool in this effort. Therefore, base maps should be prepared on which the following information is illustrated:

- Shorelines of state-wide significance
- Shoreline jurisdiction and current environment designations
- Wetlands (from wetland inventory)
- Parks, open spaces, trails (existing and proposed), public access in general.
- Significant natural resources, marshes, bogs and swamps, vegetation, topography, habitat areas, etc.
- Hazardous and sensitive areas: Slide areas, feeder bluffs, frequently flooded areas, floodways, floodplains, river deltas, aquifers, etc.
- Shoreline uses: residential, commercial, industrial, etc.
- Water depth and suitability assessment for commerce
- Other planning and regulatory policies: zoning, comprehensive planning, revitalization plans, historic districts, etc.
- Land and shoreline ownership, public tidelands and Public Trust Doctrine areas
- Circulation systems, rail, etc.
- Drainage or hydrological systems, flood protection, irrigation, etc.
- Other shoreline management issues

Local technical staff should evaluate and decide which of the above elements are applicable, then assemble the information and prepare the maps, common boundary descriptions or other analytical tools.



Special Tip

Much of this inventory work may be accomplished as part of growth management planning (using Department of Community Development Growth Management funds) and flood hazard management planning (using Flood Control Assistance Account Program [FCAAP] funds) or Section 306 Coastal Zone Management Grants available from Ecology's Shorelands Program. Inventory work should be coordinated to optimize use of local staff and grant resources as well as to avoid duplicative work.

Task 3: Perform Technical Analysis of Shoreline Issues

The extent of technical analysis required will depend upon the complexity of the jurisdictions' shoreline. Key tasks in the technical analysis that may be necessary, depending on local conditions, are:

A. Shoreline Use Component (See Figure 3-2)

1. Determine suitability of shoreline areas for various water-oriented uses such as maritime industrial uses. Identify opportunities and constraints for water-oriented uses (e.g. dredging, wave exposure, public access, etc.).
2. Identify sections of shoreline where commercial redevelopment is desirable. Examine opportunities and restrictions on civic revitalization efforts. Evaluate water-enjoyment use potential.
3. Examine constraints and issues related to transportation, parking, loading, storage, etc.
4. Determine actions necessary to bring comprehensive planning and zoning (and related GMA mandates) in conformance with shoreline management policies including Comprehensive Flood Hazard Management Plans, Open Space and Parks Plans and Public Access Plans (see section "C" below).

5. Examine compatibility between existing and adjacent uses and projected trends.
6. Identify opportunities to integrate shoreline management activities with protection or enhancement of historical/cultural resources.

B. Environmental Component (See Figure 3-3)

1. Identify environmental resources of special significance. Explore opportunities to restore, protect and enhance environmental systems (e.g. estuary systems, kelp and eelgrass beds and other unique aquatic habitats). Identify sensitive areas that should be preserved (e.g. wetlands, rookeries, etc.).
2. Identify potential conflicts between types of development and environmental resource protection.
3. Identify general environmental parameters and concerns relative to specific shorelines and also common to all areas (e.g. vegetation management objectives, erosion control, wildlife corridor considerations, etc.).
4. Examine how stormwater management and water resource allocation may influence shoreline management objectives.
5. Identify areas where presently degraded shoreline can be restored (e.g. toxic waste clean up sites or severely modified shoreline).

C. Public Access and Recreation Component

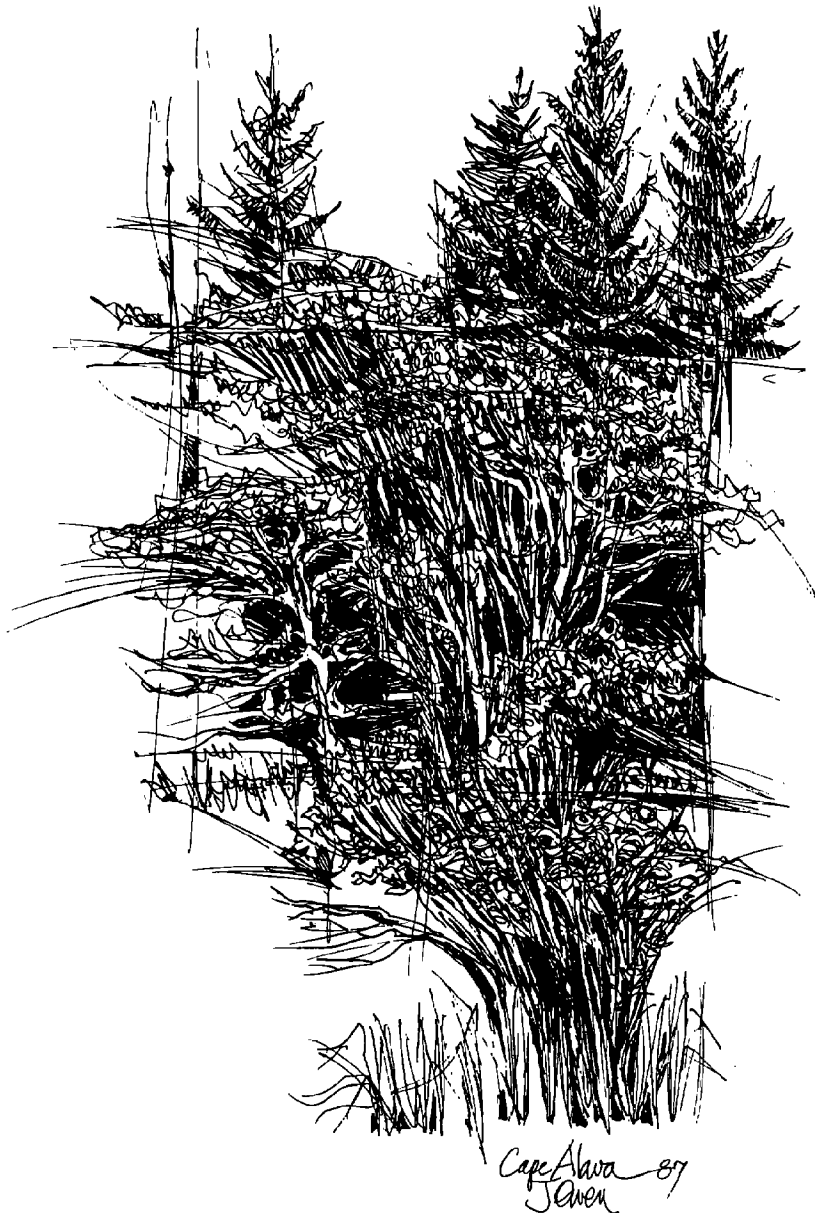
1. Identify opportunities for public access and recreational development by reviewing the shoreline component of public trail systems.
2. Identify public access projects on public properties and potential links that should be constructed as a condition for approval of private development.
3. Explore ways to integrate public access component with use and environment components.
4. Identify significant views of the water from public and private areas and explore design standards necessary to protect views and desired visual character of the shoreline area.

These materials should be presented to the CAC for review prior to developing the shoreline management strategy plan. Conducting a workshop with technical staff, committee members, staff of Ecology and other relevant agencies provides an opportunity to review the analysis and brainstorm concepts for the shoreline management strategy plan.



Special Tip

Do not underestimate the importance of a shoreline resource inventory in the SMP amendment process. Inventories conducted as a part of GMA efforts may be useful in updating an SMP.



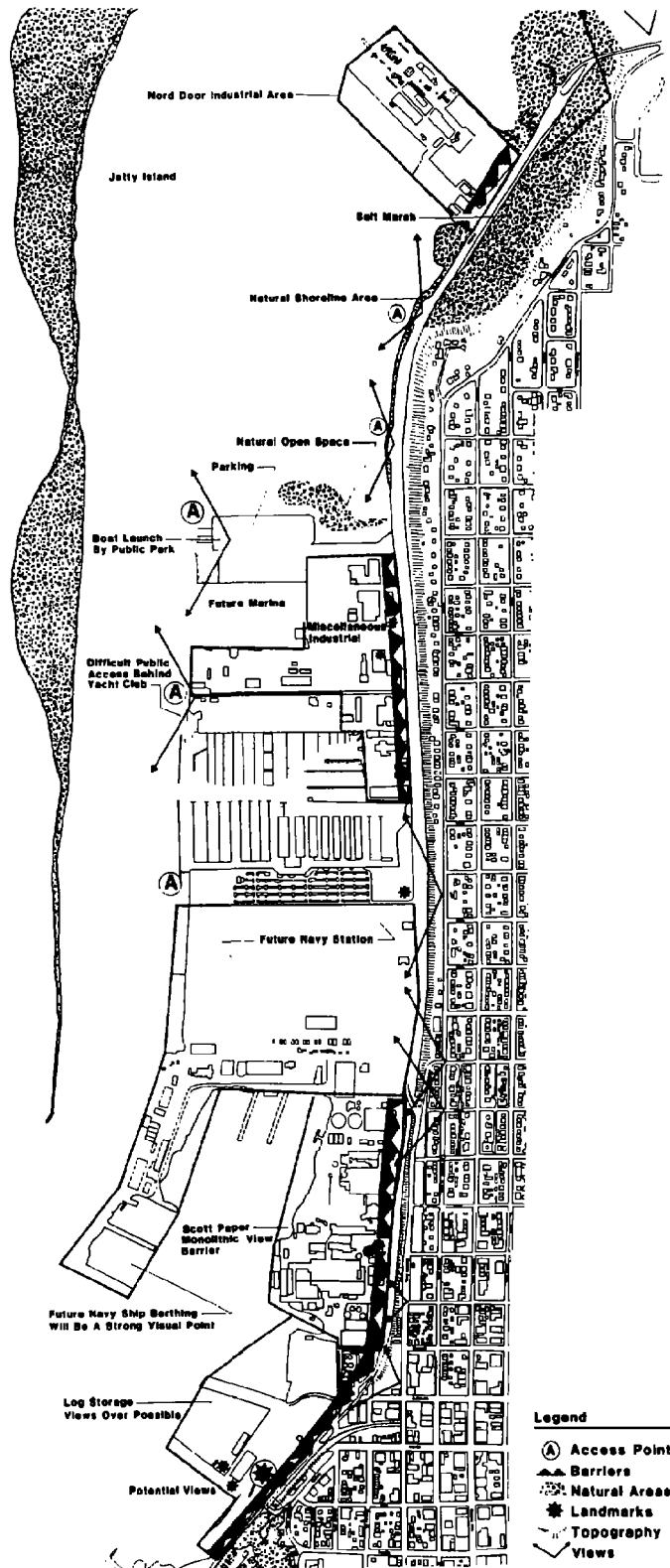
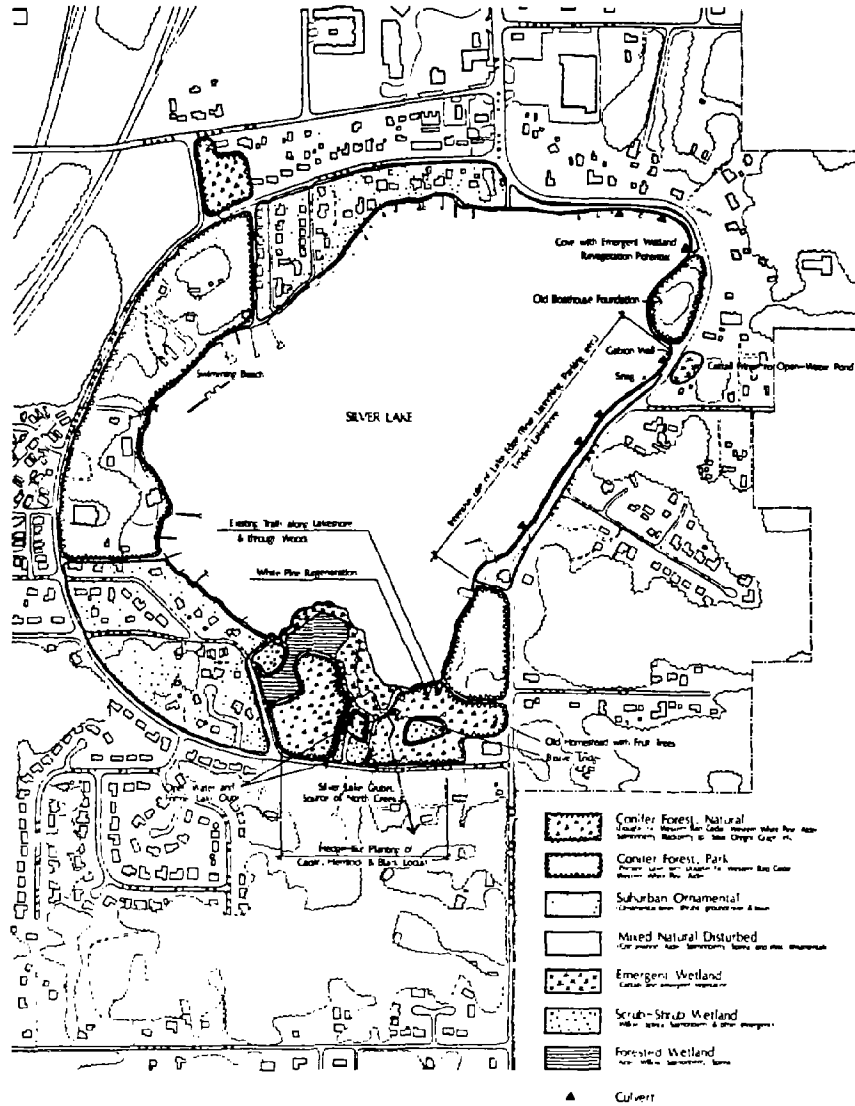


Figure 3-2. Example Shoreline/Resource Inventory Map displaying key inventory information useful in committee workshops and setting environment designations.



Silver Lake Shoreline Management & Access Plan
 Natural Systems, Site Features & Vegetation



Figure 3-3. Graphic illustrating environmental information useful in shoreline planning. Scientific wetland and environmentally sensitive area boundaries should be illustrated and incorporated into the planning process.

Task 4: Develop Shoreline Management Strategy

Although WAC 173-16 does not include a specific requirement for a shoreline management strategy plan, such a product is useful in clarifying management issues, integrating the master program regulations with other civic actions into a comprehensive regulatory/public improvement shoreline development program and serving as a basis for the explicit environment designation requirements. Such a management strategy should call for public actions to accomplish shoreline management objectives.

A. Shoreline Use Component (See Figure 3-4)

1. Identification of shoreline segments with differing use and development opportunities. Guidelines for directing shoreline use and development in each segment should be formulated with consideration of type of use.
2. Identification of specific segments of shoreline where mixed-use/ commercial development, community revitalization, maritime industrial, recreational and residential uses should be encouraged.
3. Recommendations for modifying other local land use controls to coordinate with the shoreline management strategy. RCW 90.58.340 requires that local planning and zoning for lands adjacent to the shoreline be consistent and not in conflict with the SMP.

At the same time, the Growth Management Act (GMA) directs local governments to adopt local "development regulations" that are consistent with and implement the comprehensive plan. As a local implementation tool the SMP should be consistent with the comprehensive plan. The requirements of both the SMA and the GMA can best be satisfied by considering shoreline management objectives in the local comprehensive planning process. With this policy foundation laid, certain GMA mandates can then be implemented most effectively through amendments to the SMP.

4. Recommendations for circulation and other public improvements that support shoreline use component directives.
5. Policies to reduce incompatibility of different uses and to equitably address nonconforming uses.
6. Identification of those limited areas where and under what conditions over-water development should be allowed.

B. Environmental Component (See Figure 3-5)

1. Identification of impacts and issues raised in applicable SEPA documents (EISs, checklists).
2. Policy guidelines and recommendations to protect environmental resources.
3. Recommendations for regulatory or public acquisition steps to protect environmental resources (e.g. wetlands, parks and other critical areas) including those to be implemented by local land use controls other than shoreline master program amendments.
4. Recommendations for stormwater quality and water resource management actions.

C. Public Access Component (See Figure 3-6)

1. Recommendations for a comprehensive public access plan including a trail system connecting shoreline features with other recreation resources, bicycle, pedestrian and parking areas. If a public access plan already exists, it can be referenced and appropriate provisions incorporated into the SMP.
2. Recommendations for development of waterfront recreation features and ways to integrate them into surrounding shoreline activities.
3. Guideline policies for public access requirements on private developments in areas where pedestrian links to pocket parks or water access may be critical.

D. Urban Design Component (See Figure 3-7)

1. Recommendations for height and bulk controls in specified areas.
2. Recommendations for sign controls, if appropriate.
3. Recommendations for public and private actions to enhance view and other visual characteristics of key districts.
4. Recommendations for protection or enhancement of historical and cultural resources.

E. Implementation and Action Plan (See Figure 3-8)

1. Recommendations to coordinate use, environmental and recreation and urban design actions listed above, in upgrading the function, environmental and visual qualities of the shoreline within the context of the community's vision and desires.
2. Schedule showing projected implementation for recommended actions.
3. Funding sources and resources necessary to accomplish such actions.
4. Identification of lead and supporting participants to pursue recommendations.
5. Local Capital Improvement Plan (CIP) consistency with Comprehensive Plan and SMP.

Some of the components listed above may have already been developed by the local government. Other components may not be applicable. The results of the management strategy plan may be presented formally in a document as a record of the analytical work and a useful planning tool. The recommendations in the plan may be quite specific; if the issues are complex, the recommendations can be general in nature and call for further study. For example, the public access component may identify key trail routes and recommend a detailed hiking trail development plan to be accomplished in the near future. Some jurisdictions may minimize this step as a brief policy formulation exercise in preparation for refining environment designation and use requirements. Others will find this an ideal opportunity to coordinate several shoreline management issues and integrate master program regulations with other civic redevelopment actions.

Shorelines of state-wide significance should receive special attention at this point. Options for environment designations and use regulations should provide for "optimum implementation" of SMA objectives as called out in RCW 90.58.090(2). Policies and regulations being considered should also give priority to those values described in WAC 173-16-040(5), namely in order of preference to favor state-wide over local interests, preserve the natural character of the shoreline, result in long-term over short-term benefit, protect ecological resources and increase public access and recreational opportunities.

The completion of Task 4 is a good opportunity for a public presentation as it will allow citizens comments prior to formulating environment designation and use requirements.



Special Tip

Shoreline management strategy planning provides an opportunity to coordinate with the comprehensive planning being accomplished under the GMA. The shoreline management strategy plan may be prepared as part of the comprehensive plan (perhaps as a specific task force function) or the strategy plan may be the SMP effort's contribution to the comprehensive plan.

Task 5: Review and Revise Goals (i.e. Elements)

After the CAC has had a chance to review the background materials and the survey or public forum has been completed, the members should set the master program's general goals. These goals are statements of intent in most general terms. It is useful to categorize the goal statements into the "elements" listed in WAC 173-16-040 (3). This format has proven effective in promoting review of the existing goals of the current master program or considering issues raised by Ecology guidelines or technical staff members, along with satisfying SMP requirements. It is generally useful for the local staff to prepare a discussion sheet laying out these issues and draft goal statements.



Special Tip

Be sure that the goals statements are consistent with the local comprehensive plan. This will also help to insure that the comprehensive plan is consistent with the provisions of the SMA.



Special Tip

The "goals" section is not the best location for "policies" which relate to specific regulations (see Chapter 4) because the linkage between policies and regulations should be clear. It is likely that some of the discussion will result in more specific policy statements which can be used in the master program policies and regulations.

Figure 3-4. Graphic Illustrating Shoreline Use Component Policies

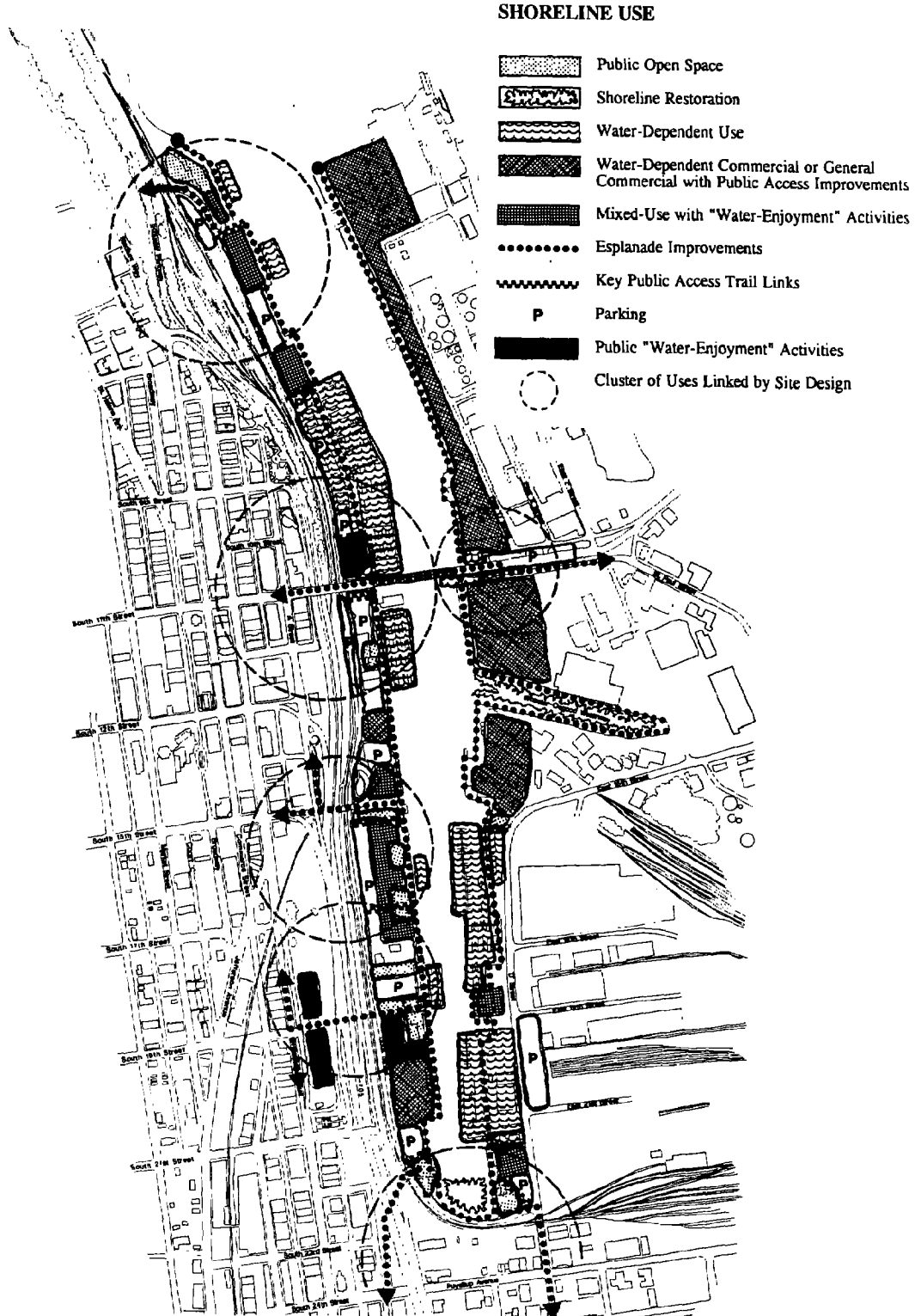
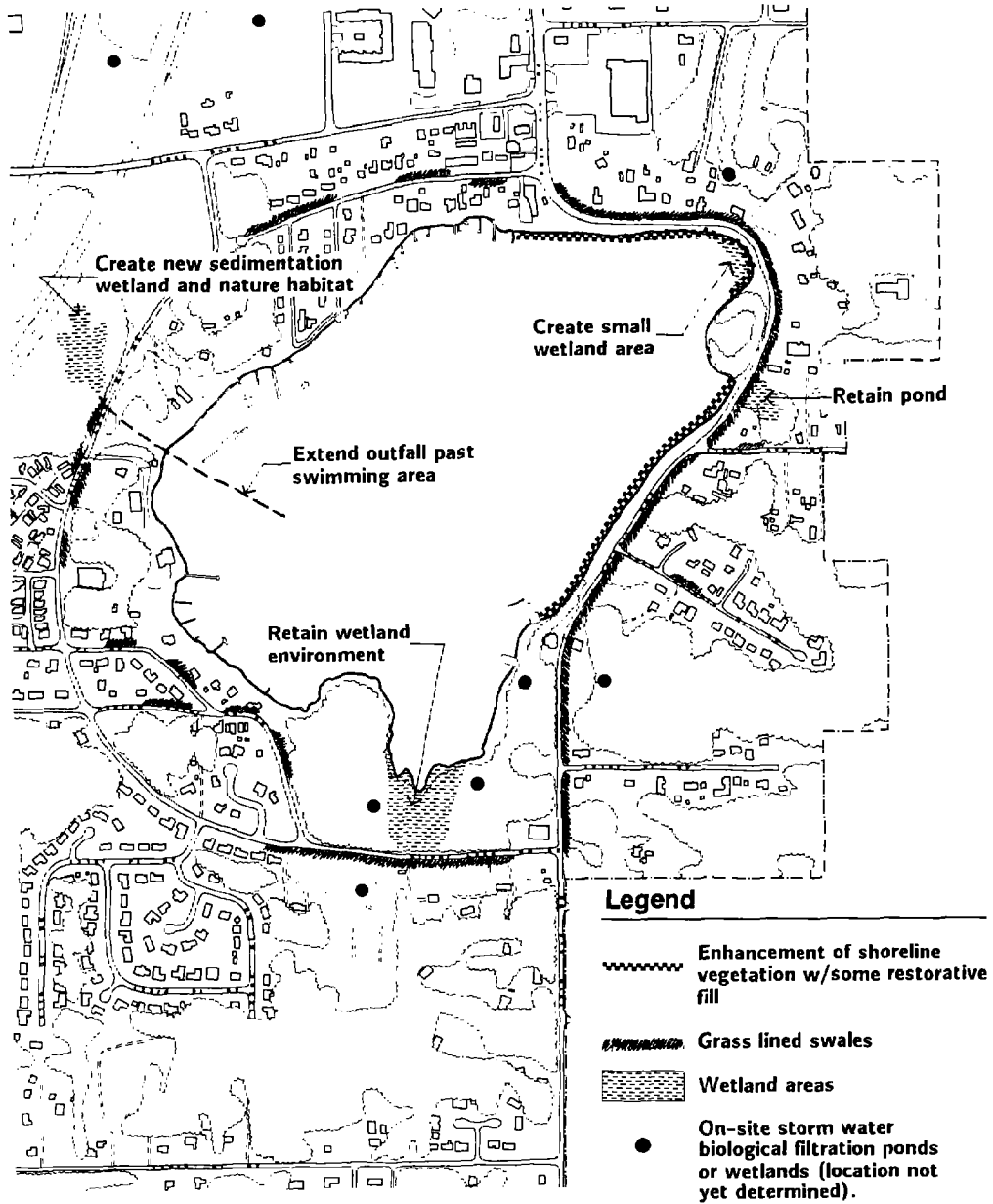


Figure 3-5. Example of Environmental Component Measures



Environmental Enhancement Measures
Silver Lake Shoreline Management & Access Plan

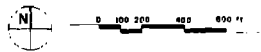


Figure 3-6. Example of a Public Access Component

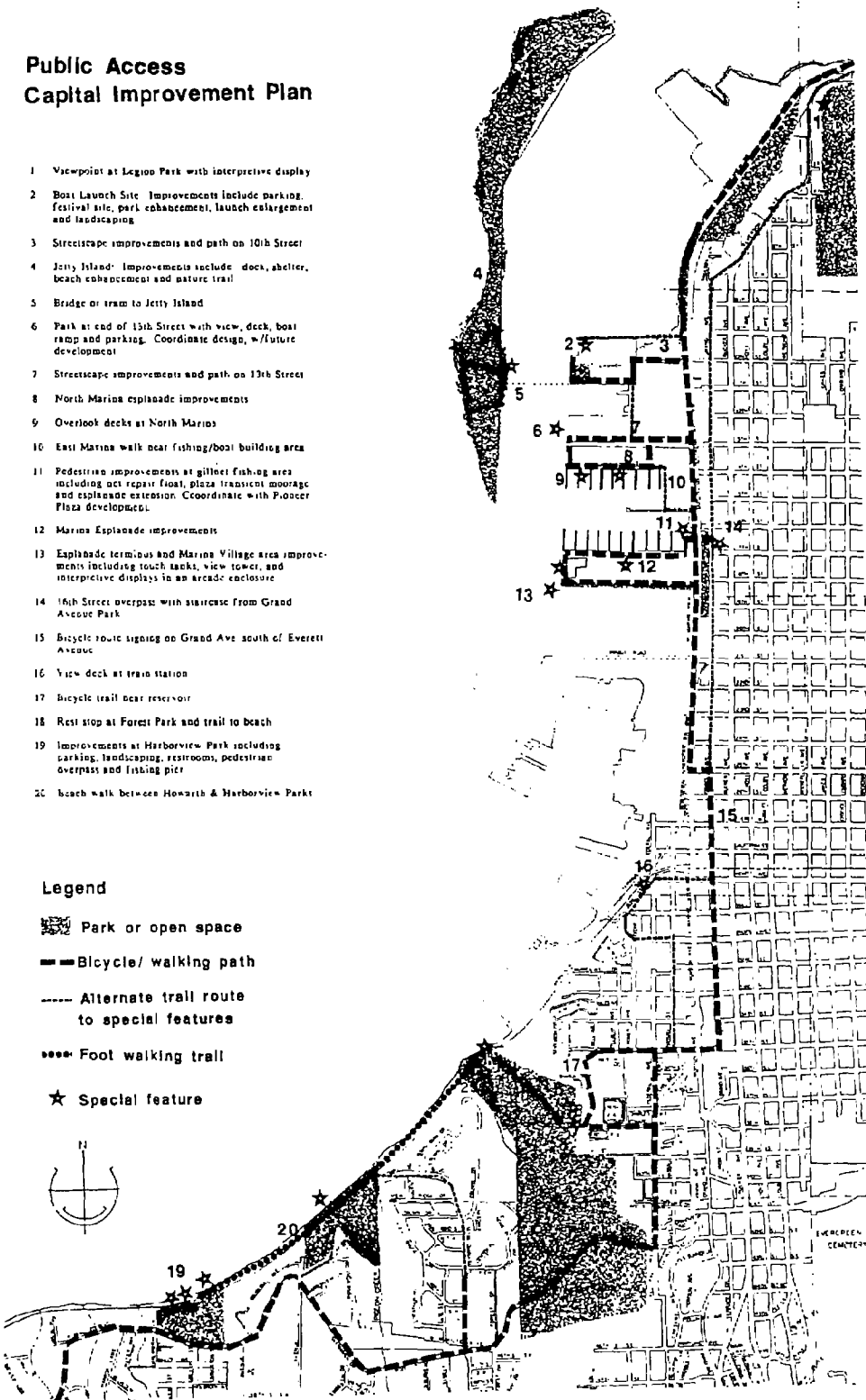


Figure 3-7. Example of an Urban Design Component

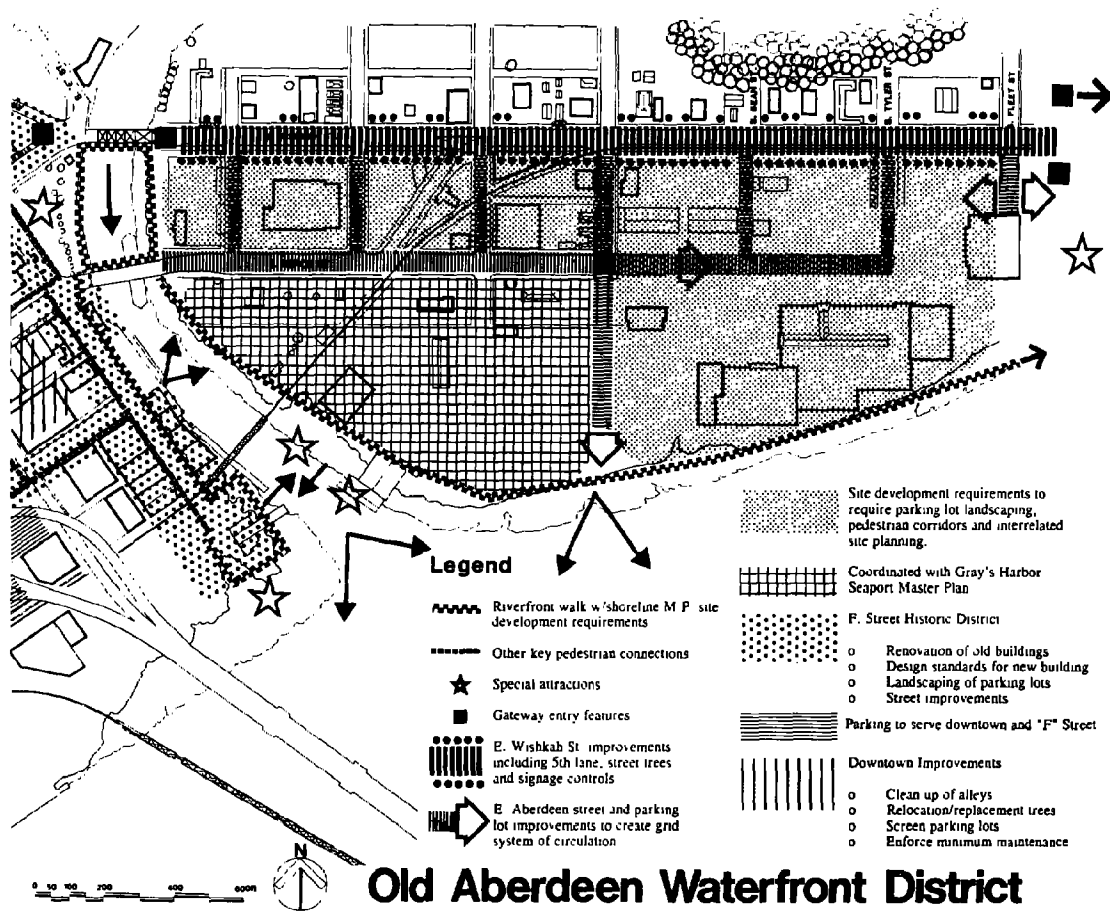


Figure 3-8. Example of a Proposed Implementation Action Summary

Implementation Actions	PARTICIPANT					TIME FRAME/COMMENTS
	Planning Department	Parks Department	Public Works Department	State Dept. of Ecology	State Dept. of Transportation	
ACTION						
Develop circumferential footpath with shoreline vegetation	●	●	○	○	○	Present-1990 Combination of public and required private access improvements.
Complete master program amendments	●			●		1988
Acquire trailer park property	○	●	○			Present-1989 - Park bond funds
Upgrade 527 to 3 lanes plus signals and sidewalks	○		●	●		As part of private development projects
Masterplan park	○	●				1988-89
Improve park parking lot and reroute Silver Lake Road	○	●	●			1989-1991 - Park bond funds
Park Improvements: construct boat launch and upland improvements, extend beach, add parking lots	○	●				1990-92 - Park bond funds
Develop park wetland/nature trail	○	●	○	○		1990-94 - Seek state assistance
Construct pedestrian features along shoreline	●	○				1988-94 - Funded partly by shoreline permits requirements
Undertake water quality management program	○	○	●	○	○	1988 - Based on U.W. study recommendations
Develop south lake parking lot	○	●	○			Accomplish when demand warrants
Construct recreation center	○	●				1992-96 - As demand warrants
Review shoreline development permits and monitor water quality utility are met	●		○	●		Ongoing - Insure requirements for new access, setback, landscaping and
Widen SR 527 to 5 lanes	○		●	○	●	1995-2000 - Do only if necessary for traffic safety

● Primary responsibility or initiation

○ Secondary or coordination role

Task 6: Develop General Policies and Regulations

General Policies and Regulations are those which apply to several uses and shoreline modification activities irrespective of environment designations (see Chapter 6). Local technical staff should review current regulations and the state guidelines included in this *Handbook*, and modify them to conform to the goals statements and local conditions. Review by Ecology Shorelands staff during this task is recommended if significant changes are being considered.



Special Tip

General policies and regulations for shoreline sensitive areas (especially wetlands) should be consistent with other development regulations such as local (SEPA) sensitive areas ordinances. This does not mean that the SMP regulations must be identical with the sensitive areas ordinance, it means that direction must be provided to prevent conflict between the two sets of regulations. It should be noted which regulations take precedence in given situations. A new sensitive areas ordinance written under the GMA does not preclude the necessity of general environmental regulations in an SMP. The two sets of regulations are promulgated under separate authorities and can have different purposes.

Task 7: Develop Policies and Regulations for Shoreline Uses and Modification Activities

Shoreline "use" policies and regulations are specific to individual shoreline use categories such as marinas, commercial businesses, industry, residential development, aquaculture, etc. Most current shoreline master programs include such use requirements, and Ecology has developed guidelines for use requirements based on best practices, environmental regulations and the experiences of other jurisdictions. When updating the current master program, the local staff should review current use requirements and the state guidelines, incorporating the guidelines and adapting them as necessary.

Shoreline modification "activities" are actions which alter the shoreline by constructing a pier, breakwater, dredging, etc., in preparation for a shoreline development or use. Updating these requirements can follow a procedure similar to that for the use requirements (see Chapter 8). After the staff has prepared the preliminary set of policies and regulations, they should be reviewed by the CAC at a work session. Often it is useful for the staff to lay out a range of alternatives to be considered by the CAC if the provision involves the resolution of a local issue.

Task 8: Set Environment Designation Boundaries, Policies and Regulations (see Chapter 6)

During this step the recommendations of the Task 4 strategy plan are translated into regulations that are specific to individual environments. These regulations may include:

1. Where water-dependent, water-related and water-enjoyment uses are permitted;
2. Prohibitions and/or restrictions on non-water-oriented uses;
3. Provisions for over-water construction, shoreline setbacks and shoreline modification specific to a given environment;
4. Height, bulk, lot coverage, density and site planning standards;
5. Special environmental protection provisions;
6. Special public access view corridor requirements, etc.; and
7. Provisions for mixed-use developments or other special conditions.



Special Tip

Create environment designation specific regulations for those issues that vary from designation to designation. For example, many shoreline use or environment protection provisions will be the same for all designations and should be defined as a General Regulation.

WAC 173-16-040 introduces four different environment designations (natural, conservancy, rural and urban). However, many jurisdictions may find it useful to create additional environment designations to be more specific in special areas (see Chapter 6). Matrices should be used as a tool to indicate how the use and site development requirements differ in the specific environments (see Chapter 6, Figures 6-2, 6-3 and 6-4).

Task 9: Examine Permit Administration Section and Modify as Appropriate

Ecology has developed new guidelines for the administrative sections which should be accommodated in the master program update. Technical staff can accomplish the bulk of this work in coordination with Ecology staff.

In addition, the CAC and staff can review local administrative procedures and consider eliminating or correcting any procedural requirements that are not required by the State which cause difficulties in local shoreline administration. Examples might include establishing permit fees and local review processes in a separate ordinance or resolution which can be easily updated without involving lengthy state review and approval. One issue that often develops is the need for a local appeal procedure prior to submission of the permit to Ecology for review or approval. If the local jurisdiction does not have a local appeal procedure, one should be added that address permit decisions and policy and regulation interpretation by the local administrator.

The completion of Task 9 marks the end of the local master program technical review process. The CAC should meet and review the completed draft master program prior to the first public hearing.



Special Tip

Be sure to consult with Ecology staff for a review of the draft at this stage as required by WAC 173-19-061(5).

Task 10: Hold Public Hearing(s)

WAC 173-19-061 sets forth the procedures to be followed for the local public hearing required by the Shoreline Management Act.

At a minimum, one public hearing is required. However, it is critical that the hearing announcement be locally published at least once in each of the 3 consecutive weeks prior to the hearing. This requirement is unique and often overlooked, making the hearing invalid.



Special Tip

Do not disregard the previous two sentences, or you may be required to repeat the public hearing and local approval process.

Step II – State Review and Approval Process

With the completion of the local hearing process you have entered the second phase of amending a SMP, that of final review and adoption as State Rule (WAC). SMP amendments are effective only after adoption by Ecology. During this step Ecology will:

1. Circulate the proposed amendment to state, federal and other resource agencies for review and comment and to the State Ecological Commission for advice and guidance;
2. Hold at least one public hearing in the locale;
3. Take public comment;
4. Review the proposed amendments for consistency with the SMA and implementing WACs;
5. Take action to adopt, modify, or deny the proposed amendments within six months of filing with the State Code Revisor; and
6. Follow up as appropriate to concerns expressed during the comment period.

Department Review

The department's principal focus in reviewing master programs and amendments is to ensure that proposals are consistent with the Shoreline Management Act and its implementing WACs. In an effort to protect shoreline values while at the same time, foster reasonable use, the SMA incorporates the concept of preferred shoreline uses. Preference is given to uses and activities which protect the natural environment, are dependent upon shoreline location and which preserve and enhance public access or increase recreational opportunities for the public along shorelines. In addition, departmental review has the further goal of:

1. Ensuring master programs are kept consistent and up-to-date with amendments to the Act and supporting WACs;
2. Recognizing the role and prerogatives of local government under the Act, providing for the expression and resolution of local shoreline management concerns;
3. Providing for consistency between adjacent jurisdictions;
4. Providing for clear terminology, effective and enforceable provisions and common understanding between state and local governments to enhance program administration; and
5. Coordinating review by federal and state agencies, the public, tribal nations and the State Ecological Commission to ensure recognition of public trust and state-wide interests in the proposal.

Since all SMPs are adopted as state rule (WAC), the department (in conjunction with the procedures of the SMA) is required to follow the process for rule adoption contained in the State Administrative Procedures Act (Chapter 34.05 RCW). In addition, compliance with section 43.21A.190 RCW requires that the State Ecological Commission provide their "advice and guidance" to the department on all such rule adoptions.

The department presents each SMP proposal to the Ecological Commission at its regularly scheduled meetings, and in accordance with Chapter 43.21A requirements the Commission is given at least 30 days to review and respond. Local government is invited to attend Ecological Commission proceedings at the time their proposals are considered. The Commission's role is to advise the department on rule adoption. Ecology retains its authority under the SMA to adopt, modify, or deny SMP proposals.

SMPs are intended to be dynamic documents. The SMA envisions the need for local governments to periodically modify master programs to reflect changing local circumstances, new information, or improved shoreline management approaches. In light of the many players involved however, it takes at least three but no more than 6 months (without refiling) to complete the state review and approval (Step II) process.

Application Requirements

The "Checklist for Submittal of SMP Amendments" included at the end of this chapter lists the documents required for submittal of master program amendments to Ecology for review. **The submittals must conform to WAC 173-19-062.**

Note: Where map changes are involved, there is a requirement to address the three criteria listed in WAC 173-16-040(4) (see checklist item #6). The justification for the environment designation change should describe the alternatives considered for redesignation (as derived from SEPA guidelines). For example, if a shoreline is being changed from a "conservancy" to an "urban" environment, there should be a consideration of alternatives such as a change to a "rural", "suburban" or other less drastic modification or use of a parallel environment designation (see Chapter 14, Parallel Environment Designations). Also, you should note whether or not redesignation involves a Shoreline of State-wide Significance and how priorities for such shorelines are satisfied by the proposal.

WAC 173-19-064 describes the Ecology review procedure. The Department of Ecology may deny a new or amended program if it is inconsistent with:

1. The Shoreline Management Act; and
2. Ecology guidelines, rules and regulations, (i.e. supporting WACs) SEPA, etc.

Ecology's role in the adoption of local SMP proposals is limited to:

1. Minor editing (record as corrected);
2. Minor modifications (approved with concurrence from local government); and
3. In the case of substantial inconsistency with the SMA and supporting WACs, rules and regulations, denying the proposal and remanding it back to local government with suggested modifications to achieve consistency.

The decision to adopt or deny an SMP amendment may be appealed only by the local jurisdiction as provided for in the SMA (RCW 90.58.190). The amendments become locally effective immediately upon Ecology approval if the local resolution or ordinance states that the amendments are "approved" (not just intended to be approved pending Ecology's approval). The local resolution should read "are approved subject to adoption by Ecology" or similar language as illustrated in Figure 3-9.

The SMP becomes effective as State law (i.e. WAC) 31 days after filing with the State Code Revisor.

See the following pages for a "model" resolution of a locally approved amendment forwarded to Ecology for adoption.

Figure 3-9. Model Adoption Resolution (page 1 of 2)

CITY/COUNTY OF _____
RESOLUTION NO. _____

A RESOLUTION OF THE CITY/COUNTY COUNCIL OF _____
DECLARING THE COUNCIL'S APPROVAL AND INTENTION TO ADOPT THE
_____, 199__ AMENDMENTS TO THE SHORELINE MASTER PROGRAM

WHEREAS, the State of Washington Shoreline Management Act of 1971 (Chapter 90.58 RCW) requires that Counties and Cities incur certain duties, obligations and responsibilities with regard to implementation of said Act; and,

WHEREAS, the City/County Council finds that certain revisions to the existing City/County Shoreline Master Program are necessary in furtherance of the provisions of Chapter 90.58 RCW, and that such revisions are in the best interest of the citizens of _____ City/County; and,

WHEREAS, the City/County Shoreline Advisory Committee, and Planning Commission held public meetings soliciting comment on the proposed shoreline master program amendments on the following dates, _____, 199__ and _____, 199__ respectively; and,

WHEREAS, comments were solicited from federal, state, local, regional and tribal interests in accordance with WAC 173-19-061(3); and

WHEREAS, the _____, 199__ DRAFT amendments to the City/County Shoreline Master Program were sent to the Department of Ecology for comment in accordance with WAC 173-19-061(5), and on _____, 199__, Ecology provided the City/County with comments; and,

WHEREAS, the City/County Council held a public meeting on _____, 199__ to review the proposed shoreline master program amendments and Ecology's comments; and,

WHEREAS, the City/County Council held a public meeting on _____, 199__ to consider the criteria set forth in WAC 173-16-040(4) in establishing proposed changes to shoreline environment designations and provided rationale in the attached written materials; and,

WHEREAS, as a result of these meetings, revisions recommended by the public, commenting agencies and the Department of Ecology were incorporated into the proposed shoreline master program amendments; and,

Figure 3-9. Model Adoption Resolution (page 2 of 2)

WHEREAS, the revised shoreline master program was formally considered by the City/County Council during a public hearing held on _____, 199 __, as advertised in accordance with WAC 173-19-061(1) and (2); and,

WHEREAS, the City/County Council directed the Planning Department to send the proposed shoreline master program amendments and supporting materials, consistent with WAC 173-19-062 submittal requirements, to Ecology for its review and adoption;

NOW THEREFORE, BE IT RESOLVED by the City/County Council of _____, as follows:

- 1) The City/County Council approves the _____, 199 __ shoreline master program amendments that are attached to this resolution and incorporated herein by reference, with the understanding that in accordance with RCW 90.58.190(3), the proposed shoreline master program amendments will become effective locally immediately upon formal State Department of Ecology adoption; and,
- 2) Following Ecology adoption of the amendments, the City/County Council intends to adopt (and codify), by ordinance, the subject shoreline master program amendments.

PASSED by the City/County Council this _____ day of _____, 199 __, and signed by me in open session in authentication of its passage this _____, day of _____, 199 __.

APPROVED:

City/County Council Chair

APPROVED by the Mayor this _____ day of _____, 199 __.

City/County Mayor

FILED this _____ day of _____, 199 __.

ATTEST: _____
City/County Clerk

APPROVED AS TO FORM:
BY: _____
City/County Attorney

RESOLUTION NO. _____

Figure 3-10. Checklist for Submittal of SMP Amendments (page 1 of 2)

Washington State Department of Ecology	Date / / Jurisdiction _____
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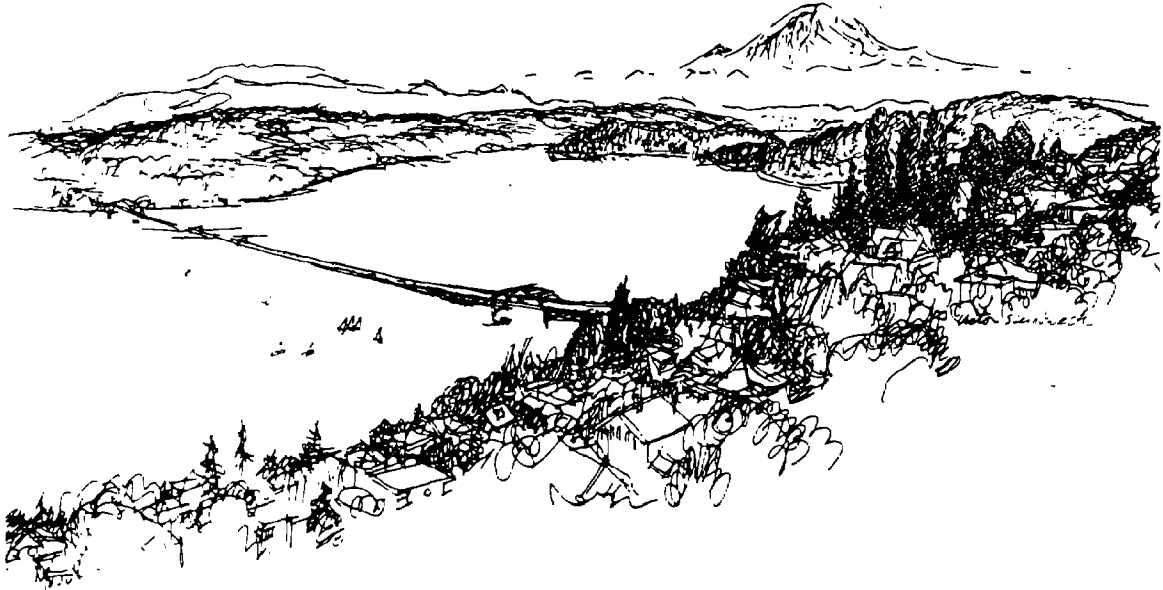
CHECKLIST for Submittal of SMP Amendments
(WAC 173-19-062 requirements)

In order for submittals to be found complete and acceptable for Ecology review and processing, local government must provide:

- _____ 1) transmittal letter from authorized local official (i.e. Mayor, County Commission Chair, Planning Director, etc.).
- _____ 2) documentation of local approval of the master program amendment (i.e. approved resolution or ordinance). See Figure 3-9 Model Resolution.
- _____ 3) a copy of the amended text, where applicable. Strikeout (though old text) and underline (of new text) clearly showing the proposed changes is required excepting that strike and underline is not necessary for major rewrites or very large amendments. All new or deleted sections should be clearly labeled however. In such cases, the summary provided (item #5 below) should also be more detailed. Note: an "insertable" (without strike and underline) that can be readily incorporated into the State's official SMP must be provided by local government after Ecology has adopted the amendment including any minor modifications.
- _____ 4) where applicable, amended environment designation maps. Note: approximate acreage, scale, north arrow and existing physical features should be shown on maps of standard size that can be easily photocopied.
- _____ 5) a summary of what is being amended and the history behind it, and in the case of environment redesignations the boundaries of those areas affected. For a total rewrite, indicate in an executive summary format or outline useful for comparative purposes those changes made from the original SMP (i.e. Water-dependent Commercial uses: setbacks increased...). Environment redesignations should also include where applicable, old and new maps clearly indicating areas where redesignations are proposed.
- _____ 6) applicable staff reports, meeting minutes, etc., that document the need for the amendments and alternatives considered. Note: all proposals for environment redesignation (i.e. map changes) must provide written justification for such re-designation addressing, at a minimum, the three criteria contained in WAC 173-16-040(4) including: the existing development pattern in the area; the biophysical capabilities and limitations of the shoreline being considered and; the goals and the aspirations of the local citizenry.

Figure 3-10. Checklist for Submittal of SMP Amendments (page 2 of 2)

CHECKLIST (CONT.)	
_____	7) evidence of SEPA compliance (i.e. properly dated and approved DNS or EIS specifically pertaining to the amendment, <u>not</u> a related zoning or other project action).
_____	8) affidavit of publication. Consistent with WAC 173-19-061, it <u>MUST</u> show that the notice of Public <u>HEARING</u> : _____ was published at least "once in each of the three weeks preceding the hearing," _____ refers to Chapter RCW 90.58 as the authority for the action taken, describes the proposed changes, _____ indicates the date, time and place of hearing and the manner in which comments will be taken, _____ indicates that copies of the amendments are available at local government offices or upon request.
_____	9) copies of any comments received in the local process (if none, a statement of such).
_____	ALSO include a list of names and addresses of any "interested parties" so that Ecology can ensure compliance with WAC 173-19-064(1)(e) notification requirements.
IF THE ABOVE MATERIALS ARE PROVIDED, Ecology SHOULD BE ABLE TO ACCEPT THE AMENDMENT FOR PROCESSING.	



CHAPTER 4

SMP Goals

Introduction

Background and Purpose

The use of elements is mandated by the SMA and is intended to guide and support the major shoreline management issues. The seven use elements are: shoreline use, economic development, circulation, conservation, public access, recreational and historic/cultural resources. Additional subject areas are encouraged under the heading of "other" elements. The general goal statements found within each element are intended to provide the policy basis for SMP General Policies and Regulations.

Format and Contents

This chapter contains model language for the elements typically found in SMPs. The goals and objectives found within each element may vary from jurisdiction to jurisdiction. Suggestions for additional elements are included at the end of the chapter.

Model Goal Statements

Shoreline Use Element

Goals

1. Establish and implement policies and regulations for shoreline use consistent with the Shoreline Management Act of 1971. These policies and regulations should insure that the overall land use patterns that result in shoreline areas are compatible with existing shoreline environment designations and will be sensitive to and not degrade habitat and ecological systems and other shoreline resources.
2. Identify and reserve shoreline and water areas with unique attributes for specific long-term uses, including agricultural, commercial, industrial, residential, recreational and open space uses.
3. Insure that proposed shoreline uses are distributed, located and developed in a manner that will maintain or improve the health, safety and welfare of the public when such uses must occupy shoreline areas.
4. Insure that activities and facilities are located on the shorelines in such a manner as to retain or improve the quality of the environment as it is designated for that area.
5. Insure that proposed shoreline uses do not infringe upon the rights of others or upon the rights of private ownership.
6. Encourage shoreline uses which enhance their specific areas or employ innovative features for purposes consistent with this program.
7. Encourage joint-use activities in proposed shoreline developments.
8. Designated shorelines of state-wide significance (SSWS) are of value to the entire state and should be protected and managed. In order of preference, the priorities are to:
 - a. Recognize and protect the state-wide interest over local interest;

- b. Preserve the natural character of the shoreline;
 - c. Result in long-term over short-term benefit;
 - d. Protect the resources and Ecology of shorelines; and
 - e. Increase public access to publicly owned areas of the shorelines.
9. Encourage restoration of shoreline areas that have been degraded or diminished in ecological value and function as a result of past activities or catastrophic events.
 10. Ensure that planning, zoning and other regulatory and nonregulatory programs governing lands adjacent to shoreline jurisdiction are consistent with SMA policies and regulations and the provisions of this SMP.

Economic Development Element

Goals

1. Insure healthy, orderly economic growth by allowing those economic activities which will be an asset to the local economy and which result in the least possible adverse effect on the quality of the shoreline and surrounding environment.
2. Protect current economic activity (e.g. shipping, marinas, agriculture, etc.) that is consistent with the objectives of the SMP and provide for environmentally sensitive new development.
3. Develop, as an economic asset, the recreation industry along shorelines in a manner that will enhance the public enjoyment of shorelines.
4. Insure that any economic activity taking place along the shoreline operates without harming the quality of the site's environment or adjacent shorelands.
5. Encourage new economic development to locate in areas already developed with similar uses which are consistent with this master program.
6. Before new commercial/industrial development is permitted within the shoreline, it is the proponent's responsibility to demonstrate that upland areas are not feasible for the intended economic activity.

7. Limit new shoreline industrial and commercial development to that which is classified as water-dependent, water-related, or water-enjoyment uses and discourage and/or prohibit non-water-oriented uses which are not accessory to a water-oriented use.
8. Proposed economic use of the shoreline should be consistent with local comprehensive plans. Conversely, upland uses on adjacent lands outside of immediate SMA jurisdiction (in accordance with RCW 90.58.340) should be consistent with the purpose and intent of this master program as they affect the shoreline.
9. Protect current agricultural land uses and provide for environmentally sensitive new agricultural development.

Circulation Element

Goals

1. Provide safe, reasonable and adequate circulation systems to shorelines where routes will have the least possible adverse effect on unique or fragile shoreline features and existing ecological systems, while contributing to the functional and visual enhancement of the shoreline.
2. Locate land circulation systems which are not shoreline dependent as far from the land-water interface as feasible to reduce interference with either natural shoreline resources or other appropriate shoreline uses. Where possible avoid creating barriers between adjacent uplands and the shoreline.
3. Route transportation corridors to harmonize with the topography and other natural characteristics of the shoreline.
4. Provide for alternate modes of travel with some freedom of choice and encourage multiple-use corridors where compatible.
5. Acquire and develop physical and visual public access where topography, view and natural features warrant as a result of new transportation development in shoreline areas (e.g. turnouts, rest areas).
6. Discourage shoreline uses which curtail or reduce existing free movement of the public unless such restriction is in the interest of the environment, public health and safety, or is necessary to a proposed beneficial use.
7. Where feasible relocate existing shoreline transportation facilities such as rail lines or freeways that are disruptive to public shoreline access or other shoreline uses or convert such rights-of-way to new public access routes.

8. Protect, manage and enhance those characteristics of shoreline roadway corridors that are unique or have historic significance or aesthetic quality, for the benefit and enjoyment of the public.

Conservation Element

Goals

1. Develop and implement management practices that will insure a sustained yield of renewable resources of the shorelines while preserving, protecting, enhancing and restoring unique and nonrenewable shoreline resources or features, including forested areas, wetlands and wildlife habitat.
2. Insure that utilization of a resource takes place with the minimum adverse impact to natural systems and quality of the shoreline environment.
3. Reclaim and restore areas which are biologically and aesthetically degraded to the greatest extent feasible while maintaining appropriate use of the shoreline.
4. Preserve the scenic aesthetic quality of shoreline areas and vistas to the greatest extent feasible.

Public Access Element

Goals

1. Provide, protect and enhance a public access system that is both physical and visual, utilizing both private and public lands, which increases the amount and diversity of public access to the State's shorelines and adjacent areas, consistent with the natural shoreline character, private rights and public safety.
2. Integrate public access to shorelines as a part of the (City/County) public trail system.
3. Prepare and implement a comprehensive public access plan that incorporates public access into new shoreline development and unifies individual public access elements into an organized system.

Recreational Element

Goals

1. Insure optimal recreational opportunities now and in the future in shoreline areas that can reasonably tolerate during peak use periods active, passive, competitive or contemplative uses without destroying the integrity and character of the shoreline.
2. Coordinate with the (City/County) Department of Parks and Recreation to optimize opportunities for water-oriented recreation.
3. Integrate recreational elements into federal, state and local public access and conservation planning.
4. Encourage federal, state and local government to acquire additional shoreline properties for public recreational uses.
5. Insure existing and proposed recreational uses are of a safe and healthy nature.
6. Consider both active and passive recreational needs in development of recreational areas.

Historical/Cultural Element

Goals

1. Identify, protect, preserve and restore important archaeological, historical and cultural sites located in shorelands of the State for educational, scientific and enjoyment of the general public.
2. Acquire historical/cultural sites through purchase or gift, so as to insure their protection and preservation.
3. Encourage educational projects and programs that foster a greater appreciation of the importance of shoreline management, maritime activities, environmental conservation and maritime history.

Other Elements

Local governments may elect to place any additional goal statements under new element headings. Examples of element goal statements that are useful in certain situations include:

Goals

1. Comprehensive Long Range Planning Element - That supports integration of other city planning and regulatory efforts with shoreline management activities. This element may also be used to factor in goals relevant to Growth Management Act planning and implementation.
2. Community Redevelopment Element - That indicates how shoreline management activities can support efforts to upgrade residential neighborhoods, revitalize and restore city waterfronts, etc.
3. Educational Element - That recommends interpretive features, maritime centers or educational programs that alert people to the importance of shoreline management.
4. Flood Hazard Management Element - That incorporates goals from a Comprehensive Flood Hazard Management Plan.



Notes to Master Programmers

Long range planning as an additional SMP element has many benefits for local jurisdictions.

There are a variety of long range planning directions a jurisdiction can take, depending on their particular needs. Sprawling cities can use long range planning to focus on urban issues, utilities, capital improvements, parks, open space and trails. In rural communities, agricultural and flood control issues may also be planned for. Coordination between local comprehensive plans, implementing Capital Improvement Plans and SMPs is most beneficial.

CHAPTER 5

General Policies & Regulations

Introduction

Background and Purpose

General policies and regulations are applicable to all uses and activities (regardless of SMP environment designation) that may occur along a jurisdiction's shorelines. Their importance and usefulness cannot be understated. They effect all other more specific policies and regulations. They are meant to be woven into your local master program providing the broader policies and regulations affecting all shoreline uses. If used properly they can also eliminate redundancy in your SMP, by eliminating the need to repeat regulations over and over for each environment designation.

The policies and regulations found in this chapter can be modified to suit the needs of various jurisdictions. They are intended to be used **in conjunction with** the more specific use and activity regulations found in the following chapters.

Format and Contents

This chapter is broken up into thirteen different topic headings and is arranged alphabetically. Each topic begins with a description of its applicability, followed by general policy statements and general regulations. The intent of these model provisions is to be inclusive, making them applicable over a wide range of environments as well as particular uses and activities. They can be used directly or modified to include more restrictive language as necessary.

Special Considerations

Shorelines of State-wide Significance

Of special consideration in this chapter are shorelines of state-wide significance (SSWS). The Act specifically identifies shorelines designated as having state-wide significance and sets general principals for managing such shorelines. These principals are best implemented by taking the state-wide interest into account during the preparation of SMP amendments. This portion of the *Handbook* deals specifically with the language of the law and discusses how the guidelines can be applied. Model language for shorelines of state-wide significance can be found in the following section.

Background

The State's shorelines have been found to be among the most valuable and fragile resources of the state and as such attention has focused on their appropriate utilization, protection, restoration and preservation. Particular shorelines have been called out in the legislation as shorelines of state-wide significance, raising their status at both state and local levels. Because these shorelines are considered major resources for all the people in the state, the guidelines and master programs must give preference to uses which favor public and long-range goals. RCW 90.58.020 emphasizes this point when it says:

"The legislation declares that the interest of all people shall be paramount in the management of shorelines of state-wide significance."

What follows from this declaration is that SSWS will be given more scrutiny at the state level to ensure that their use will comply with requirements of *optimum implementation of the policy of this chapter (RCW 90.58) to satisfy the state-wide interest (RCW 90.58.090(2))*. This pertains to both the writing of a master program and implementation on these shorelines.

Local jurisdictions need to recognize the significance of these specially designated shorelines and follow closely the guidelines presented by the state when developing and administering their master program. The key is that local master programs **shall** give preference to uses which meet the principles outlined on the following page.

General Implications for Shorelines of State-wide Significance

It has not been easy for state and local administrators to implement the SMA's shorelines of state-wide significance provisions. One reason for this is that references to SSWS are scattered throughout RCW 90.58 and WAC 173-16. As a result, SSWS function as a special type of "overlay", applying additional standards to shorelines that include diverse character and multiple environment designations. Another reason is that WAC 173-16 does not specifically describe how provisions for SSWS fit into the structure of a master program.

It is clear that SSWS provisions do have implications for both master program preparation and the administration of local permit review. First, if an SMP amendment proposal involves a SSWS, Ecology has special authority to set out an alternative proposal that better addresses the Act's objectives (RCW 90.58.090(2)). This provision also gives Ecology the authority to reject any master program that does not provide for "optimum implementation." This means that Ecology (and in appeals, the Shorelines Hearings Board [SHB]) will evaluate master program amendment proposals and permit applications on the basis of optimum protection and utilization from a state-wide viewpoint, rather than local circumstances. RCW 90.58.190 states that in considering master program amendment appeals related to SSWS the Shorelines Hearings Board shall uphold the decision by Ecology unless a local government can clearly convince the SHB that the decision of the Department is inconsistent with policies for SSWS set out in RCW 90.58.020.

Priorities Set by the SMA

The Act sets specific priorities for the management of shorelines of state-wide significance giving preference to uses which adhere to the seven objectives discussed below. Language in RCW 90.58.020 and WAC 173-16-040(5) interpret these principles into guidelines for writing master programs. It is important to remember that the Act lists these objectives **in order of preference**. Therefore objective (1) "Protecting state-wide interests over local", takes priority over (2) "Preserving the natural character of the shoreline." Listed below are the seven criteria with a brief discussion of how the priorities have been applied in specific situations.

1. Recognize and protect the state-wide interest over local interest.

This means that where a resource of state-wide interest, such as fisheries, is in jeopardy from some proposed use, state-wide concerns will prevail over local interests. The local jurisdiction should take every opportunity to solicit comments and opinions from citizen groups and individuals representing state-wide interests (e.g. Sierra Club, Audubon Society, Trout Unlimited, etc.). Appropriate state agencies, universities, colleges and Native American Nations should also be involved along with comments, opinions and advice from experts in ecology, oceanography, geology, limnology, aquaculture and other scientific fields that may be pertinent to the specific shoreline .

Administratively, the consequence of this guideline is that all state-wide interests prevail, and any proposed use or master program that does not recognize and comply with those state-wide interests will be rejected.

2. Preserve the natural character of the shoreline.

This guideline means that any action that adversely affects the natural character of the shoreline without enhancing the public interest, will probably be denied. Numerous Shorelines Hearings Board decisions have been made against private/community boat launches, bulkheads and the like where the "natural character" of the shoreline would be altered and where there was no benefit for the public at large. The intent is to minimize man-made intrusions on SSWS. Implicit in this guideline is the intent to upgrade those areas of more intensive development by reducing their adverse impacts on the natural environment. Urban environments that have natural qualities or resources should preserve those low-intensity uses compatible with resource protection while accommodating high-intensity use in areas already developed. In urban environments this means that riparian corridors and natural vegetative cover should be preserved (through appropriate structural setbacks and clearing and grading regulations) even in this intensive use environment. This guideline also addresses commercial timber cutting, allowing a maximum of 30 percent of timber to be selectively cut from lands designated as SSWS.

For the administrator, this guideline calls out the importance of the natural shoreline, as can be seen in the SHB case Ecology and the Attorney General v. Mason County and the Hama Hama, Co. Even if the immediate shoreline was not natural, the water portion of the shoreline was and the Board determined that it must be preserved for preferred uses that would prevent damage to the natural environment, or are unique to or dependent upon use of the shoreline.

3. Result in long-term over short-term benefit.

The purpose here is to ensure for future generations the possibility to use the shorelines either in their natural state or for preferred uses such as those that are water-dependent or water-related. That is to say, if a mixed-use development is slated for your urban waterfront, it should not preclude the possibility of a water-dependent use. An example of this is in the Port of Seattle's central waterfront redevelopment project proposing mixed-use development directly over the water. The design of the mixed-use proposal should not preclude future water-dependent uses, such as a passenger terminal, and shall be designed to accommodate it. The intent here is to evaluate short-term economic gains in relation to long-term and potentially costly impairments to the environment and water-dependent uses.

4. Protect the resources and ecology of the shoreline.

The master program should recognize the importance of the unique or fragile natural resources found along the shorelines and leave those areas undeveloped. This guideline extends beyond the natural shoreline to include the prevention of erosion and sedimentation that would alter the natural function and habitat of the water body. Any advances in technology or methodology should be employed to maintain good water quality. In sensitive areas where it is too difficult to maintain the integrity of the environment under human use, public access should be restricted.

The administrator of this guideline should be aware that even projects that are for the greater public good, as in the SHB case *Henderson v. Snohomish County and Barber*, the proposed project is subject to scrutiny on the basis of this objective. In this case, the SHB ruled that if the proposed campsite is not designed and conditioned to assure preservation or replacement of trees and vegetation, the permit would not be issued. Other resources that should be considered may include fish and wildlife habitat, wetlands, feeder bluffs, accretion beaches, stream bank integrity, etc. Finally, attributes of a site that promote water-dependent uses are also resources to be protected. This includes deep-water access, navigability, adequate water circulation, stable upland areas for support activities, etc.

5. Increase public access to publicly owned areas of the shoreline.

The emphasis here is on providing appropriate public access to all publicly owned lands including all federal and state agencies holding shorelands, tidelands and bottom lands, as well as local parks departments and port districts.

Master programs should give priority to developing a path/trail or pocket parks providing water access and views to and along the shorelines connected to upland parking and adjacent parks facilities. Master program general provisions for public access should place special emphasis on providing public access for port district or government-sponsored developments on shorelines of state-wide significance. For large industrial sites where direct public access is dangerous or physically undesirable, a port or government agency can provide substantial off-site public access as approved by the local government and Ecology.

Administratively, off-site public access should be substituted for on-site public access only where water-dependent uses and sensitive areas make public access elements physically infeasible.

It should be noted that the public access objective is placed fifth, lower in priority than the preservation of natural resources. This means that public access should not be developed on shorelines of state-wide significance if it destroys the shoreline's natural character. Whether or not public access is compatible with natural resource protection is often a matter of design. In some cases, such as a sensitive river corridor habitat, this may mean that a public access trail be set back from the shoreline, perhaps with viewing platforms or vistas provided at infrequent selective spots. In other cases, such as a truly pristine high-value wetland, any access may want to be avoided altogether.

6. Increase public recreational opportunities on the shoreline.

Any master program update that includes the redesignation of environments on shorelines of state-wide significance should include planning for the encouragement of recreational use of the shorelines. This can help insure that areas are reserved for lodging and other related facilities in upland areas accompanied by provisions for nonmotorized access to the shorelines.

Here, the administrator needs to recognize the need to include long-range planning for recreational facilities in their community. Here again, the master program should clearly state the goals which favor the public and long-range goals.

While the lowest of the specified use priorities, this emphasizes the importance of general public use of shoreline through recreation opportunities.

7. Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.

RCW 90.58.100 describes the procedures and requirements for preparing an SMP. In essence, this criteria directs local governments to follow sound shoreline management practices as outlined in the SMA.

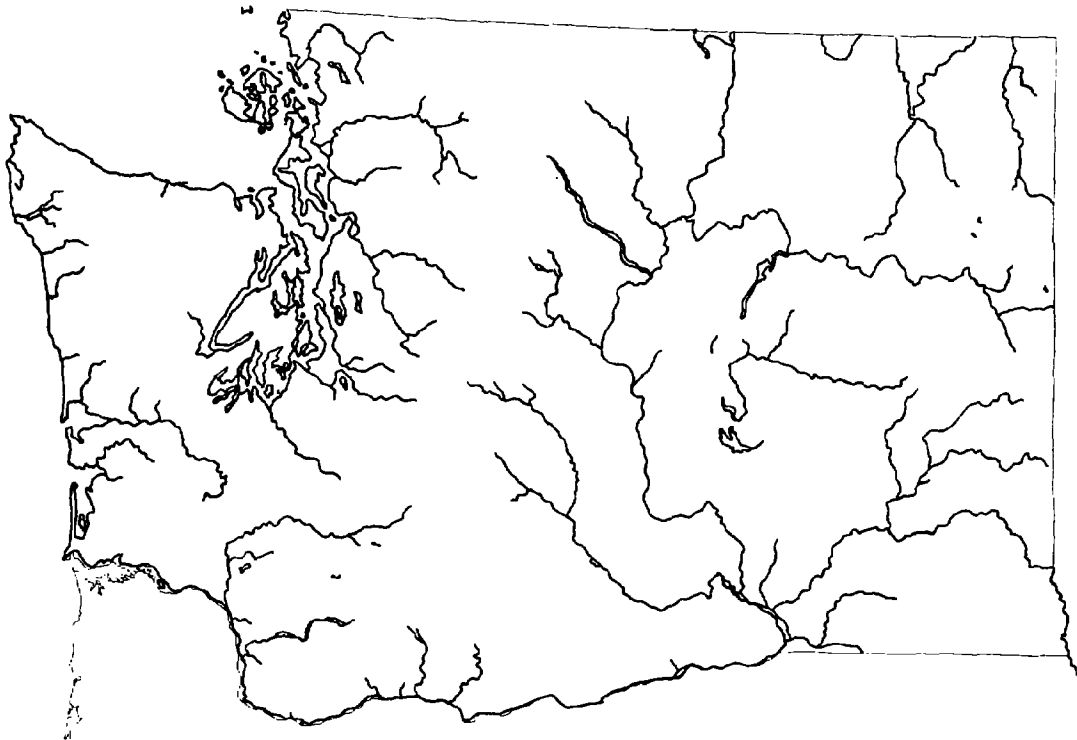


Figure 5-1. Shorelines of State-wide Significance Illustrating State-wide Coverage

Note: SSWS includes water area, tidelands and wetlands as defined in the Act (excluding upland areas, the Straits and most of Puget Sound).

Model Language

The sample language presented for General Policies and Regulations is based on "best practices" standards specific to each shoreline topic. These sample provisions have been developed with input from Ecology and other state resource agencies with expertise, along with provisions from a variety of master programs presently being implemented by local governments throughout the state. The sample provisions can be adapted by local government as appropriate to fit their particular needs.

General Regulations



Notes to Master Programmers

The following regulations describe the requirements for all shoreline uses and activities.

1. All shoreline uses, and shoreline modification activities including those that do not require a shoreline substantial development permit (SDP), must conform to the policies and regulations of this master program.
2. Shoreline modification activities must be in support of an allowable shoreline use which conforms to the provisions of this master program. Except as otherwise noted, all shoreline modification activities not associated with a legally existing or an approved shoreline use are prohibited.
3. Shoreline uses, modification activities and conditions listed as "prohibited" shall not be eligible for consideration as a shoreline variance or shoreline conditional use permit.
4. The "policies" listed in this master program will provide broad guidance and direction and will be used by the (City/County) in applying the "regulations".
5. Where provisions of this master program conflict, the more restrictive of the provisions shall apply unless specifically stated otherwise.

Archaeological and Historic Resources

Applicability

Archaeological and historic resources, because of their finite nature, are valuable links to our past and should be considered whenever a development is proposed along the state's shorelines. Where such resources are either recorded at the State Historic Preservation Office and/or with local jurisdictions, or have been inadvertently uncovered, the following policies and regulations apply.

Policies

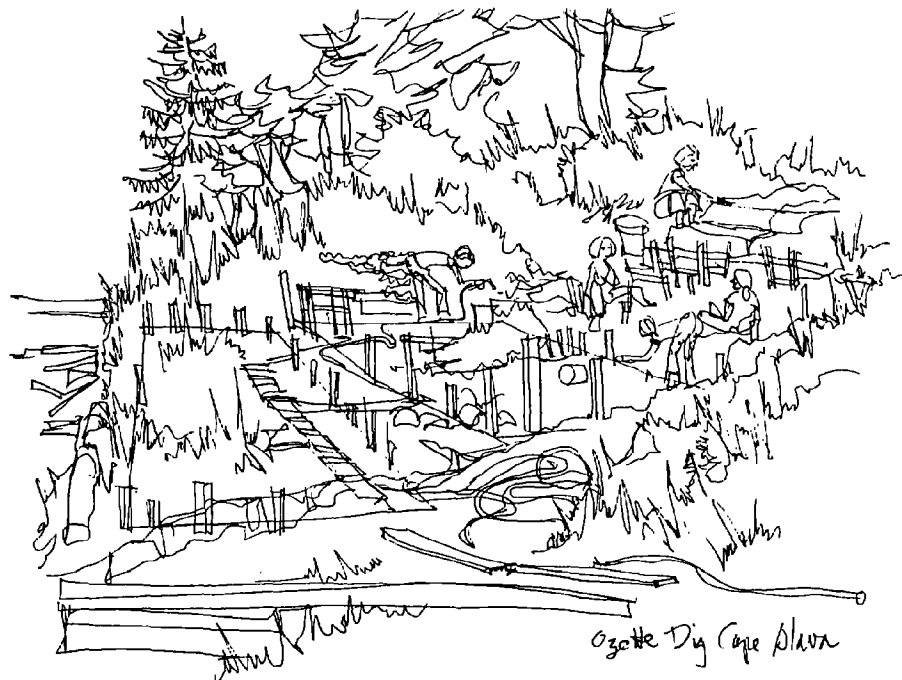
1. Due to the limited and irreplaceable nature of the resource, public or private uses and activities should be prevented from destroying or damaging any site having historic, cultural, scientific or educational value as identified by the appropriate authorities.

Regulations

1. All shoreline permits shall contain provisions which require developers to immediately stop work and notify the City/County if any phenomena of possible archaeological interest are uncovered during excavations. In such cases, the developer shall be required to provide for a site inspection and evaluation by a professional archaeologist to ensure that all possible valuable archaeological data are properly salvaged.
2. Permits issued in areas known to contain archaeological artifacts and data shall include a requirement that the developer provide for a site inspection and evaluation by an archaeologist. The permit shall require approval by the City/County before work can begin on a project following inspection. Significant archaeological data or artifacts shall be recovered before work begins or resumes on a project.
3. Significant archaeological and historic resources shall be permanently preserved for scientific study, education and public observation. When the City/County determines that a site has significant archaeological, natural, scientific or historical value, a Substantial Development Permit shall not be

issued which would pose a threat to the site. The City/County may require that development be postponed in such areas to allow investigation of public acquisition potential and/or retrieval and preservation of significant artifacts.

4. In the event that unforeseen factors constituting an emergency as defined in RCW 90.58.030 necessitate rapid action to retrieve or preserve artifacts or data identified above, the project may be exempted from the permit requirement of these regulations. The City/County shall notify the State Department of Ecology, the State Attorney General's Office and the State Historic Preservation Office of such a waiver in a timely manner.
5. Archaeological sites located both in and outside the shoreline jurisdiction are subject to RCW 2744 (*Indian Graves and Records*) and RCW 2753 (*Archaeological Sites and Records*) and shall comply with WAC 25-48 as well as the provisions of this master program.
6. Archaeological excavations may be permitted subject to the provisions of this program.
7. Identified historical or archaeological resources shall be considered in park, open space, public access and site planning, with access to such areas designed and managed so as to give maximum protection to the resource and surrounding environment.
8. Clear interpretation of historical and archaeological features and natural areas shall be provided when appropriate.



Clearing and Grading

Applicability (see also "View Protection")

One intent of the Shoreline Management Act is to minimize as much as possible impacts to the ecology of the shoreline and its waters. This is substantiated by RCW 90.58.020:

"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 the ecology and environment of the shoreline area and any interference with the public's uses of the water."

Clearing and grading is the activity associated with developing property for a particular use including commercial, industrial, recreational and residential uses. Specifically, "clearing" means the destruction or removal of vegetative ground cover and/or trees including, but not limited to, root material removal and/or topsoil removal. This includes such activities as clear-cutting or selective harvest of trees, chipping of stumps and hauling off of shrubs, slash piles, etc. "Grading" means the physical manipulation of the earth's surface and/or surface drainage pattern without significantly adding or removing on-site materials. This includes removing the duff layer, all surcharging, preloading and recontouring the ground and may include minor excavation and filling. Landfill addresses the placement of dry fill on existing dry or existing wet areas (see Chapter 8 "Landfill").

Both activities, clearing and grading, may increase erosion, siltation, runoff/flooding, change drainage patterns, reduce flood storage capacity and damage habitat. Although it is not technically considered "development" which triggers a substantial development permit, clearing as an activity that impacts shoreline resources is regulated in order to achieve the design goals and objectives of the SMA, particularly along SSWS where preservation of natural shoreline characteristics takes a very high priority. All policies and standards must be adhered to and a conditional use requirement may be utilized where appropriate (e.g. in natural and conservancy). Grading is considered development and will be managed accordingly. For single-family residences, 250 cubic yards of fill may be allowed without a substantial development permit provided all policies and regulations are met.

Policies

1. All clearing and grading activities should be designed and conducted to minimize impacts to wildlife habitat, sedimentation of creeks, streams, ponds, lakes, wetlands and other water bodies and degradation of water quality.
2. Clearing and grading activities in shoreline areas should be limited to the minimum necessary to accommodate shoreline development. Such activities should be discouraged in designated (structural) setback areas and allowed in other shoreline locations only when associated with a permitted shoreline development.
3. Negative environmental and shoreline impacts of clearing and grading should be avoided wherever possible through proper site planning, construction timing and practices, bank stabilization, bioengineering and use of erosion and drainage control methods as well as adequate maintenance.
4. Cleared and disturbed sites remaining after completion of construction should be promptly replanted with native vegetation or, in limited circumstances, with other species contained in City/County approved plant lists.
5. All clearing and grading activities should be designed with the objective of maintaining natural diversity in vegetation species, age and cover density.
6. For extensive clearing and grading proposals, a clearing and grading plan addressing species removal, replanting, irrigation, erosion and sedimentation control and other methods of riparian corridor protection should be required conforming to the standards for the maximum percentage of site clearing permitted.

Regulations

1. All clearing and grading activities shall be limited to the minimum necessary for the intended development, including residential development.
2. Clearing and grading within designated shoreline (structural) setback areas (or vegetation management corridors, depending on how the SMP is structured) shall not exceed the following maximums (all measurements taken parallel to the shoreline):

- a. Lots, parcels with up to 200 feet of shoreline frontage: 30 feet maximum.
- b. Lots, parcels with between 201 feet and 500 feet shoreline frontage: maximum of 15 percent of the lot frontage along a shoreline.
- c. Lots, parcels with over 500 feet lot frontage: maximum of 15 percent of total lot frontage, provided clearing occurs in two or more segments separated by at least 100 feet of undisturbed area where no one segment exceeds 75 feet in length along the shoreline.
- d. When applying the above clearing and grading standards the following plant communities shall determine in descending order of preference where clearing and grading may be allowed. The first plant community listed indicates the most preferred location for clearing and grading:
 - i. grass
 - ii. shrub/scrub
 - iii. forest



Notes to Master Programmers

This language defines clearing and grading limits based on a linear measurement along the shoreline and applies to required setbacks. Chapter 6, Figure 6-4 illustrates another approach based on a percentage of area within a defined vegetation management corridor. Either approach may be used depending on local conditions, however, the language and the matrix used must be consistent.

3. Clearing and grading activities may only be permitted (landward of required setbacks) when associated with a permitted shoreline development, PROVIDED that upon completion of construction, remaining cleared areas shall be replanted with native species contained in the City/County approved plant list. Replanted areas shall be maintained such that within three-years time the vegetation is fully reestablished.
4. Normal nondestructive pruning and trimming of vegetation for maintenance purposes shall not be subject to these clearing and grading regulations. In addition, clearing by hand held equipment of invasive nonnative shoreline vegetation or plants listed on the State Noxious Weed List is permitted in shoreline locations if native vegetation is promptly reestablished in the disturbed area.

5. Any significant placement of materials from off-site, (other than surcharge or preload) or substantial creation or raising of dry upland shall be considered landfill and shall also comply with the landfill provisions in Chapter 8, Shoreline Modification Activity Policies and Regulations.



Environmental Impacts

Applicability

The SMA is concerned with the environmental impacts that both a use and activity may have on the fragile shorelines of the state. Shoreline and water quality degradation caused by the introduction of contaminants such as petroleum products, chemicals, solid waste, domestic or industrial wastewater and sediment from erosion are all issues that must be addressed.

Policies

1. The adverse impacts of shoreline uses and activities on the environment should be minimized during all phases of development (e.g. design, construction, management and use).

Regulations

1. The location, design, construction and management of all shoreline uses and activities shall protect the quality and quantity of surface and ground water adjacent to the site and shall adhere to the guidelines, policies, standards and regulations of applicable water quality management programs and related regulatory agencies.
2. Solid and liquid wastes and untreated effluents shall not be allowed to enter any bodies of water or to be discharged onto land.
3. The release of oil, chemicals or hazardous materials onto land or into the water is prohibited. Equipment for the transportation, storage, handling or application of such materials shall be maintained in 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.
4. All shoreline uses and activities shall be located, designed, constructed and managed in a manner that minimizes adverse impacts to surrounding land and water uses and is aesthetically compatible with the affected area.

5. All shoreline uses and activities shall utilize best management practice (BMP) measures to minimize any increase in surface runoff and to control, treat and release surface water runoff so that receiving water quality and shore properties and features are not adversely affected. Such measures may include but are not limited to dikes, catch basins or settling ponds, installation and required maintenance of oil/water separators, grassy swales, interceptor drains and landscaped buffers.
6. All shoreline uses and activities shall utilize effective erosion control methods during both project construction and operation.
7. All shoreline uses and activities shall be located, designed, constructed and managed to avoid disturbance of and minimize adverse impacts to fish and wildlife resources, including spawning, nesting, rearing and habitat areas and migratory routes.
8. All shoreline uses and activities shall be located, designed, constructed and managed to minimize interference with beneficial natural shoreline processes such as water circulation, sand and gravel movement, erosion and accretion.
9. Land clearing, grading, filling and alteration of natural drainage features and land forms shall be limited to the minimum necessary for development. Surface drainage systems or substantial earth modifications involving greater than 500 cubic yards of material shall be professionally designed to prevent maintenance problems or adverse impacts to adjacent properties or shoreline features.
10. All shoreline developments shall be located, constructed and operated so as not to be a hazard to public health and safety.
11. All shoreline uses and activities shall be located and designed to minimize or prevent the need for shoreline defense and stabilization measures and flood protection works such as bulkheads, other bank stabilization, landfills, levees, dikes, groins, jetties or substantial site regrades.
12. Navigation channels shall be kept free of hazardous or obstructing uses and activities.
13. Herbicides and pesticides shall not be applied or allowed to directly enter water bodies or wetlands unless approved for such use by appropriate agencies (U.S. and State Departments of Agriculture, U.S. Environmental Protection Agency, Washington Department of Ecology).

Environmentally Sensitive Areas

Applicability

Environmentally sensitive areas constitute the most fragile lands which support resources that are economically and culturally important to the state under the SMA. They can be natural resources that provide fisheries habitat for example, or areas that may threaten the health and safety of the public, such as floodways or unstable bluffs, etc. This section is divided into five categories: (1) general provisions, (2) geological hazard area provisions, (3) kelp beds, eelgrass beds, herring spawning areas, smelt spawning areas and other critical salt water habitats (4) wetland provisions and (5) salmon and steelhead habitat provisions.

"Environmentally sensitive areas" shall mean those areas with especially fragile biophysical characteristics and/or with significant environmental resources as identified in a scientifically documented inventory accomplished as part of the SEPA/NEPA process or other recognized assessment. Environmentally sensitive areas include but are not limited to:

- unstable bluffs
- wildlife habitat areas
- fish breeding, rearing or feeding areas
- wetlands
- estuaries
- dunes

Policies

1. Unique, rare and fragile natural and man-made features as well as scenic vistas and wildlife habitats should be preserved and protected from unnecessary degradation or interference.
2. Some areas, because of unique and/or fragile geological or biological characteristics, should be protected from public access (e.g. wetlands, dunes, shoregrass, etc.).

3. Shorelines that are identified as hazardous for or sensitive to development should be discouraged from intensive development.

Regulations

1. All shoreline uses and activities shall be located, designed, constructed and managed to protect and/or not adversely affect those natural features which are valuable, fragile or unique in the region and to facilitate the appropriate human intensity of use of such features, including but not limited to:
 - a. Estuaries and marshes, bogs and swamps;
 - b. Fish, shellfish and wildlife habitats, migratory routes and spawning areas;
 - c. Kelp beds, eelgrass beds, herring spawning areas and smelt spawning areas;
 - d. Accretion shore forms;
 - e. Natural or man-made scenic vistas or features;
 - f. Unstable bluffs; and
 - g. Floodways.
2. When a development site encompasses environmentally sensitive areas, these features shall be left intact and maintained as open space or buffers. All development shall be set back from these areas to prevent hazardous conditions and property damage, as well as to protect valuable shore features.
4. All shoreline development shall be designed in accordance with all applicable local and FEMA flood control management codes and regulations, the State Environmental Policy Act and other applicable local land use codes.
5. Areas with either an existing or high potential for aquaculture activities shall be protected from degradation by other types of uses which are located or are proposed to be located within 1 mile of adjacent uplands. A conclusive finding that such an adjacent use would result in irreparable damage to or destruction of an existing aquaculture enterprise shall be grounds for the denial of such use or activity.

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

Geological Hazard Areas

Applicability

Geological hazard areas are areas susceptible to severe erosion or slide activity, such as unstable bluffs, and include areas with high potential for earthquake activity. They may be identified in GMA Critical Area documents or the *Coastal Zone Atlas*. In general, they are not suitable for placing structures or locating intense activities or uses due to the inherent threat to public health and safety.

A certain level of erosion is natural to Puget Sound and rivers. Erosion is the primary source of sand and gravel found on beaches including accretion beaches (gravel bars, sand pits and barrier beaches). Extensive "hardening" of feeder bluff areas will eventually starve beaches down drift or current of the bluff, resulting in lowered beach profiles, channel shifts and the potential for increased erosion. Changes in the beach substrate may result in habitat impacts.

Vegetation removal during development of adjacent uplands alters surface runoff and ground water infiltration patterns and can lead to increased bluff instability.

Homes and other developments are often constructed very close to the top of bluffs in order to capitalize on views. In response to accelerated erosion rates, or on considering the results of normal erosion rates, land owners frequently turn to bulkheading the toe of the slope.

A bluff is a steep headland, promontory, broad faced bank or cliff running adjacent to and rising up from the shoreline. For the purpose of measuring setbacks from the top of a bluff, the following shall apply. A bluff rises up from the OHWM to the first significant break in slope. The "first significant break" in slope is a bench at least 30 feet deep. The top of a bluff is measured from the point where the first significant break in slope occurs.

Much of Puget Sound and some riverine shorelines consist of unstable bluffs. These steep slopes of unstable materials erode at variable rates depending on the type of material and intensity and frequency of forces acting on them such

as flood flows or storm waves. In some locations, the high-risk area is a narrow band near the edge; in others, old landslides or active river channels may impact a large distance inland.

Policies

1. Development should be prohibited or minimized on unstable or moderately unstable slopes.
2. Development should be permitted only in locations where no slope protection is necessary or where nonstructural protection is sufficient for the life of the project.
3. Clearing vegetation on and within edges of bluffs should be avoided. Retention of a natural buffer should be encouraged.
4. Construction should be discouraged within a 2:1 slope (a slope that rises 1 foot for every 2 feet horizontal) from the base of the bluff.
5. Structures should be designed and constructed in a manner that provides safety for the useful life of the structure and does not require construction of a retaining wall or bulkhead during that same time span.
6. Subdivision of lots on bluffs should allow sufficient lot depth for development to occur without need for bulkheading or other structural stabilization.
7. All sites indicated in the *Coastal Zone Atlas*, local sensitive area maps or other engineering documents to be on unstable material, river banks or old landslides shall require a geotechnical report assessing the safety of the site and addressing drainage, grading and clearing requirements.

Regulations

1. Construction activity shall not increase or result in slope instability or sloughing.
2. Tree clearing and vegetation removal shall be limited to the minimum extent necessary to allow construction of the proposed development.
3. Foundations and septic systems shall be placed out of the 2:1 slope area, unless a soil engineer report indicates that slope stability will not be affected.

4. Surface drainage down the face of the bluff shall be contained in a tight line (closed, nonleaking pipe) for discharge at the shoreline in such a way that erosion will not occur.
5. Surface drainage away from the bluff shall also use a tight line or some other approved method for discharge into a natural drainage course.
6. Stormwater retention systems will be discouraged unless designed by a licensed civil engineer and a soil or geology engineering report verifies that slope stability shall not be affected.
7. Proposals for developments on or immediately adjacent to unstable bluffs shall include the following information in their application:
 - a. Soils, topography and existing vegetation;
 - b. Existing drainage patterns and how they may be changed;
 - c. Proposed vegetation removal and grading together with an erosion control plan; and
 - d. Proposed structure and use locations.
8. A geotechnical report shall be required when:
 - a. Activity is within 200 feet of a bluff classified as unstable or having intermediate stability; or
 - b. Activity is within 200 feet of the shoreline when the vertical height of the bank exceeds 20 feet; or
 - c. Activity is within the 2:1 slope of the toe of the bluff.
9. The geotechnical report shall contain:
 - a. Soils and erosion rates;
 - b. Drainage;
 - c. Vegetation management options;
 - d. Recommended setback to avoid need for building bulkhead during life of project;
 - e. Evaluation and statement on stability and safety of structure; and
 - f. Evaluation and statement on stability of bluff.

Kelp Beds, Eelgrass Beds, Herring Spawning Areas, Smelt Spawning Areas and Other Critical Salt Water Habitats

Applicability

The Growth Management Act, in Sections 36.70A.060 and 36.70A.170 RCW, requires local governments to designate and protect critical areas. This requirement applies both to local governments planning under the Growth Management Act and all other local governments. The Minimum Guidelines to Classify Agriculture, Forest, Mineral Lands and Critical Areas, in WAC 365.190.080(5)(a)(4), designate kelp beds, eelgrass beds, herring spawning areas and smelt spawning areas as critical areas. The minimum guidelines also designate commercial and recreational shellfish areas as critical areas.

The Department of Fisheries has identified the four critical areas listed above and the habitats of several other salt water fish as saltwater habitats of special concern. These additional habitats include Pacific sand lance spawning beds, rock sole spawning beds, rockfish settlement and nursery areas and lingcod settlement and nursery areas.

Note: These recommendations are only applicable to local governments which include within their jurisdiction Puget Sound, the Strait of Juan de Fuca, the Pacific Ocean and associated estuaries, or the Columbia estuary. Not all of these areas have the habitat types described in these recommendations. As noted in the definition discussion, local governments should only include the language applicable to their jurisdiction. The Washington State Department of Community Development's Planning Data Source Book for Resource Lands and Critical Areas contains data sources for locating kelp beds, eelgrass beds, herring spawning areas and smelt spawning areas. The Habitat Management Division of the Department of Fisheries is developing a database listing the location of all saltwater habitats of special concern. Other sources are listed in the additional information section in Chapter 18.

A brief description of critical salt water habitats and a suggested approach to protecting these resources can be found in Chapter 18, Aquatic Habitats.

Policies

1. Critical saltwater habitats provide critical rearing and nursery areas for valuable recreational and commercial species. They provide habitat for many marine plants, fish and animals. These habitats should be protected because of their importance to the marine ecosystem and the state and local economy.
2. Critical salt water habitats are:
 - a. Kelp beds (members of the brown algal family Laminariales, including *Alaria marginata*, *Alaria nana*, *Alaria tenuifolia*, *Egregia menziesii*, *Eisenia arborea*, *Pterygophora californica*, *Agarum cribosum*, *Agarum fimbriatum*, *Costaria costata*, *Cymathere triplicata*, *Hedophyllum sessile*, *Laminaria* spp., *Pleurophycus gardneri*, *Dictyoneuropsis reticulata*, *Dictyoneurum californicum*, *Lessioniopsis littoralis*, *Macrocystis integrifolia*, *Nereocystis luetkeana* and *Postelsia palmaeformis*). Kelp beds are found in marine and estuarine intertidal and subtidal areas with a depth of up to 15 meters below mean lower low water (MLLW). The beds can be found on various bottom materials including rocks, boulders, mixed-fines (mixed sand and mud with little gravel), mixed coarse (mixed cobbles, gravel, shell and sand) and cobble.
 - b. Eelgrass beds (*Zostera* spp.). Eelgrass beds are found in marine and estuarine intertidal and subtidal areas. *Zostera marina* tends to favor the lower parts of intertidal areas and *Zostera japonica*, higher elevation parts. *Zostera* spp. are generally found no deeper than 4 meters below mean lower low water (MLLW). *Zostera* spp. beds can be found on mud bottoms, sand bottoms and mixed-fine (mixed sand and mud with little gravel) bottoms. *Zostera* has also been found in subtidal areas with beds of finer material offshore of mixed coarse (mixed cobbles, gravel, shell and sand) intertidal areas.
 - c. Surf smelt (*Hypomesus pretiosus*) spawning beds. Surf smelt spawning beds are located in the upper portions of sand or gravel beaches (intertidal areas) on salt water.
 - d. Pacific herring (*Clupea harengus pallasii*) spawning beds. Pacific herring spawning beds include the lower portions of salt water beaches (intertidal areas), eelgrass beds, kelp beds, other types of salt water vegetation such as algae and other bed materials such as subtidal worm tubes.

- e. Pacific sand lance (Ammodytes hexapterus) spawning beds. Pacific sand lance spawning beds are located in the upper portions of sand or gravel beaches (intertidal areas) on salt water.
- f. Rock sole (Lepidopsetta bilineata) spawning beds. Rock sole spawning beds are located in the upper and middle portions of sand or gravel beaches (intertidal areas) on salt water.
- g. Rockfish (Sebastes spp.) settlement and nursery areas. Rockfish settlement and nursery areas are located in kelp beds, in eelgrass beds, on other types of salt water vegetation and on other bed materials.
- h. Lingcod (Ophiodon elongatus) settlement and nursery areas. Lingcod settlement and nursery areas are located on beaches (intertidal areas) and subtidal areas with beds of sand, eelgrass, subtidal worm tubes or other bed materials.
- i. Shellfish beds. The following shellfish beds are included: the Pacific oyster (Crassostrea gigas), the Olympia oyster (Ostrea lurida), the razor clam (Silqua patula), the native little neck clam (Protothaca staminea), the Manila clam (Venerupis japonica), the butter clam (Saxidomus giganteus), the Geoduck (Panope generosa), the horse clam (Schizothaerus nuttalli and Schizothaerus capax), the cockle (Clinocardium nuttalli), the macoma (Macoma spp.) and the eastern soft shell clam (Mya arenaria).
 - 1) Pacific oyster beds occur on almost every type of salt water beach between the high and low tide marks.
 - 2) Olympia oyster beds occur on mud or gravel flats near estuaries or in tide pools near low tide level.
 - 3) Razor clam beds occur on the intertidal areas of surf-swept sandy beaches on the open ocean. Beds can be found to several meters below the intertidal zone in the open ocean.
 - 4) Native little neck clam beds are found on gravel-mud beaches of protected salt water bays. The clams are concentrated at about the half-tide level, but occur down to the subtidal level.
 - 5) Manila clam beds occur in muddy gravel on salt water beaches above the half tide level.
 - 6) Butter clam beds occur on well protected sand-gravel beaches, chiefly on the lower third of the tidal range. Butter clams have been found as deep as 10 meters below mean sea level.

- 7) Geoduck beds occur on sand and mud substrates from intertidal areas to deep water.
 - 8) Horse clam beds occur on sandy bottoms and gravelly bottoms from extreme low tide into subtidal areas in salt water.
 - 9) Cockle beds occur on sand-mud beaches on salt water in both the intertidal zone and deep water. Cockle beds are also often found in eelgrass flats.
 - 10) Macoma beds occur in mud and sand in protected salt water areas. Their range extends from intertidal areas to water as deep as 50 meters.
 - 11) Eastern soft shell clam beds occur in sand and mud at high tidal elevations, mainly in estuaries.
3. Critical saltwater habitats are mapped in _____. [Omit this policy if resources are not mapped.]
 4. Except for public or semipublic facilities where no alternative location is available uses, activities and structures shall not be located in critical saltwater habitats.
 5. Developments within or adjacent to critical salt water habitats should not directly or indirectly change the composition of the beach and bottom substrate. Habitat enhancement and restoration projects may change beach or bottom substrata when appropriate to restore or enhance habitats.
 6. Developments outside critical salt water habitats but which have the potential to significantly affect these habitats should be located and designed so they do not create significant negative impacts on critical salt water habitats.
 7. Livestock should be prevented from access to surface water in areas which drain to shellfish beds listed in policy 1. Livestock may be given access to surface water for drinking if the watering area is developed to reduce bank erosion and affects only a limited area of the bank.
 8. Where uses, activities, structures and landfills must locate where they will affect critical salt water habitats, the project should be designed and constructed to minimize adverse impacts on the environment and the critical salt water habitats.

9. Project proponents should contact the Habitat Management Division of the Department of Fisheries and the Aquatic Lands Program of the Department of Natural Resources early in the development process to determine if the available data show the proposal will occur in a known critical salt water habitat.
10. When reviewing permits for uses, activities and structures in salt water areas waterward of the ordinary high water mark (OHWM), staff should contact the Habitat Management Division of the Department of Fisheries and the Aquatic Lands Program of the Department of Natural Resources to determine if the proposal will occur in a known critical salt water habitat.
11. A project proponent shall conduct a reconnaissance study to determine whether critical salt water habitats are present within an area affected by a proposed development as provided below.
 - a. For areas which may be used by fish which spawn on sand, gravel, or sand and gravel beaches and shellfish beds, the project proponent shall conduct a reconnaissance study to determine whether critical salt water habitats are present within an area affected by a proposed development if all of the following conditions are met:
 - 1) The proposed use or activity has a significant potential to adversely affect a critical salt water habitat.
 - 2) The beach which the development or use may affect is the type of environment in which a critical salt water habitat typically occurs.
 - 3) The existing data available from the resource agencies do not show that the site is not occupied by a critical salt water habitat.
 - b. For kelp beds, eelgrass beds, rockfish settlement and nursery areas and lingcod settlement and nursery areas, a project proponent shall conduct a reconnaissance study to determine whether critical salt water habitats are present within an area affected by a proposed development if all of the following conditions are met:
 - 1) The proposed use or activity has a significant potential to adversely affect a critical salt water habitat.
 - 2) The salt water area which the development or use may affect is the type of environment in which a critical salt water habitat may occur.
 - c. For all areas, the study should be designed in consultation with the local government, affected state and federal resource agencies and affected Indian Nations. The study should take place during the growing season.

Regulations

1. Landfills shall not intrude into critical salt water habitats.
2. Bulkheads and shoreline modification and stabilization structures shall not intrude into critical salt water habitats, except as provided in regulation 5 below. Where an existing bulkhead or structure cannot be removed because of environmental, safety, or geological concerns, the least environmentally impacting alternative shall be used. Any replacement bulkhead or shoreline protection structure shall be as close the existing structure as possible.
3. Marinas and over-water residences of any type (including floating homes, houseboats and liveaboards) shall not be located over critical salt water habitats. These facilities shall be designed and located to avoid impacts to nearby critical salt water habitats.
4. Floats, rafts, docks and boathouses shall not be located over critical salt water habitats, except as provided in regulation 5 below. Floats, rafts, docks, boathouses and associated moorings shall not shade eelgrass, algae and other saltwater vegetation. Anchoring systems for these structures shall not adversely affect critical salt water habitats.
5. Industrial docks, commercial and industrial vessel moorage, navigation channels, breakwaters, jetties, groins and public shoreline protection structures shall not intrude into critical salt water habitats unless the proponent shows all of the following conditions are met:
 - a. An alternative alignment is not feasible.
 - b. The project is designed to minimize its impacts on critical salt water habitats and the environment.
 - c. Any adverse impacts will be mitigated.
 - d. The facility is in the public interest.
6. Publicly owned recreational facilities such as boat launches shall avoid critical salt water habitats. Where these areas cannot be avoided, publicly owned recreational facilities shall be designed to minimize their impacts on critical salt water habitats and mitigate any adverse impacts.
7. Anchorage and mooring floats shall not be located over critical salt water habitats.

8. In-water dredge spoil disposal sites shall be prohibited in critical salt water habitats or in locations where the disposal of dredge spoil materials is likely to result in the deposition of sediments on critical salt water habitats.
9. Aquaculture uses shall not be established in or expanded into or over critical salt water habitats.
10. Except as a habitat improvement or restoration measure, aquatic herbicide treatments, mechanical removal of vegetation and aquatic pesticide treatments shall not be used on critical salt water habitats. Where alternative management methods will not work, Zostera japonica may be removed from areas currently used for aquaculture.
11. Bridges, causeways and in-water utility corridors shall not intrude into or adversely affect critical salt water habitats unless the proponent shows all of the following conditions are met:
 - a. An alternative alignment is not feasible.
 - b. The project is designed to minimize its impacts on critical salt water habitats and the environment.
 - c. Any adverse impacts will be mitigated.
 - d. The facility is in the public interest.
12. Sand, gravel, or other materials shall not be mined or removed from critical salt water habitats or areas where the activity will adversely affect critical salt water habitats.
13. Outfalls and discharge pipes shall not be located in critical salt water habitats or areas where outfall or discharge will adversely affect critical salt water habitats. unless the proponent shows all of the following requirements are met:
 - a. There is no alternative location for the outfall or pipe.
 - b. The outfall or pipe is placed below the surface of the beach or bed of the water body.
 - c. The outfall discharges waterward of the subtidal zone.
 - d. The disturbed area is revegetated, if it was vegetated before construction.

- e. The discharge point(s) on the outfall or discharge pipe is located so the discharges, including nutrients in the discharge and currents, do not adversely affect critical salt water habitats.

Wetlands

Note: As with other environmentally sensitive areas, wetlands occupy an important niche in the shoreline environment, but they have often been overlooked in the development of shoreline master program policies and regulations due to a lack of guidelines for their protection and management. Local governments are now encouraged to adopt shoreline master program policies and regulations, or other development regulations as required by the Growth Management Act, to protect wetlands. Any provisions to protect shoreline wetlands should be consistent with and at least as protective as other local provisions to protect wetlands. Local governments are also encouraged to implement comprehensive wetlands protection programs that include both regulatory and nonregulatory components.

Applicability

The following provisions apply to all marshes, bogs and swamps and wetlands delineated according to the *1989 Federal Manual For Identifying and Delineating Jurisdictional Wetlands*.

Policies

1. Wetlands serve many important ecological and environmental functions, and help to protect public health, safety and welfare by providing flood storage and conveyance, erosion control, sediment control, fish and shellfish production, fish and wildlife habitat, recreation, water quality protection, water supply, education and scientific research. Wetlands should be preserved and protected to prevent their continued loss and degradation.
2. Wetland areas should be identified according to established identification and delineation procedures and afforded appropriate protection consistent with the policies and regulations of this program.
3. All wetlands should be protected from alterations which adversely impact them so that there is no net loss of wetland acreage and functions. The greatest protection should be provided to wetlands of exceptional resource value, defined as those wetlands that include rare, sensitive or irreplaceable systems such as:

- a. Documented or potential habitat for an endangered, threatened or sensitive species;
 - b. High-quality native wetland systems ;
 - c. Significant habitat for fish or aquatic species as determined by the appropriate state resource agency;
 - d. Diverse wetlands exhibiting a high mixture of wetland classes and subclasses as defined in the U.S. Fish and Wildlife Service classification system;
 - e. Mature forested swamp communities;
 - f. Sphagnum bogs or fens; and
 - g. Estuarine wetlands, kelp beds or eelgrass beds.
4. A wetland buffer zone of adequate width should be maintained between a wetland and any adjacent development to protect the functions and integrity of the wetland.
 5. The width of the established buffer zone should be based upon the functions and sensitivity of the wetland, the characteristics of the existing buffer and the potential impacts associated with the adjacent land use.
 6. All activities which potentially affect wetland ecosystems should be controlled within both the wetland and the buffer zone to prevent adverse impacts.
 7. No wetland alteration should be authorized unless it can be shown that the impact is both unavoidable, necessary and minimized and that any remaining impacts are offset through the deliberate restoration, creation or enhancement of wetlands.
 8. Wetland restoration, creation and enhancement projects should result in no net loss of wetland acreage and functions. Where feasible, wetland quality should be improved.
 9. Wetlands which are impacted by activities of a temporary nature should be restored immediately upon project completion.
 10. In-kind replacement of functions and values is preferred. Where in-kind replacement is not feasible or practical due to the characteristics of the existing wetland, substitute resources of equal or greater ecological value should be provided.

11. On-site replacement of wetlands is preferred. Where on-site replacement is not feasible or practical due to characteristics of the existing location, replacement should occur within the same watershed and proximity.
12. Wetland restoration, creation and enhancement projects should be completed prior to wetland alteration, where possible. In all other cases, replacement should be completed prior to use or occupancy of the activity or development.
13. Applicants should develop comprehensive mitigation plans in order to ensure long term success of the mitigation project. Such plans should provide for sufficient monitoring and contingencies to ensure wetland persistence.
14. Applicants should demonstrate sufficient scientific expertise, supervisory capability and financial resources to complete and monitor the mitigation project.
15. Proposals for restoration, creation or enhancement should be coordinated with appropriate resource agencies to ensure adequate design and consistency with other regulatory requirements.
16. Activities should be discouraged in wetland buffer zones except where such activities have no adverse impacts on wetland ecosystem functions or when necessary to provide for a reasonable use of the property.
17. Wetland buffer zones should be retained in their natural conditions unless revegetation is necessary to restore the buffer.
18. Wetland buffer zones should be reserved as common open space and designated as "native growth protection areas" where multiple ownership is involved and cooperative management is possible.
19. The City/County does not intend to deny all economic use of any property subject to these policies and regulations, except as the public trust doctrine would limit the use of the property. This policy will be implemented through the appropriate application of the following: project design standards, transfers of development rights, mitigation and variances.

Regulations

1. For identifying and delineating a marsh, bog or swamp, applicants shall use the *1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands*.

2. No development or activity including removing or disturbing soil, filling, changing the water level, placing obstructions, constructing a structure, destroying or altering vegetation or introducing pollutants may be permitted within a wetland or its buffer unless authorized by a conditional use permit.
3. Development or activities shall not be authorized in a wetland except where it can be demonstrated that;
 - a. The impact is both unavoidable and necessary;
 - b. Unavoidable and necessary impacts are minimized, and any remaining impacts are offset through the deliberate restoration, creation or enhancement of wetlands of equivalent or greater resource value, including acreage and function;
 - c. The restored, created or enhanced wetland will be as persistent as the wetland it replaces; and
 - d. The applicant demonstrates sufficient scientific expertise, supervisory capability and financial resources to carry out the proposed replacement activity.
4. For wetlands of exceptional resource value, the applicant, in addition to complying with the provisions above, shall demonstrate that there is a compelling public need for the proposed activity or that denial of the permit would impose an extraordinary hardship on the applicant brought about by circumstances peculiar to the subject property.
5. In-kind replacement of functions and values shall be provided, unless it is found that in-kind replacement is not feasible or practical due to the characteristics of the existing wetland and a greater environmental benefit can be demonstrated by an alternative. In such cases, substitute resources of equal or greater ecological value shall be provided.
6. Wetland functions and values shall be calculated using the best professional judgment of a qualified wetland ecologist using the best available technology.
7. On-site replacement shall be provided, unless it is found that on-site replacement is not feasible or practical due to physical features of the property and a greater environmental benefit can be demonstrated by an alternative. In such cases, replacement shall occur within the same watershed and proximity.

8. Except as noted in regulation 9 below, at a minimum, wetland acreage shall be replaced at a ratio of acreage replaced to acreage lost of 1.25:1. For wetlands of exceptional resource value, the minimum acreage replacement ratio shall be 6:1. Actual replacement acreage will be determined case-by-case, based on the following criteria:
 - a. Projected losses or gains in wetland functions and value;
 - b. Location of replacement wetlands;
 - c. The time required to reestablish lost functions;
 - d. The uncertainty of the probable success of the project; and
 - e. The type of compensation (enhancement proposals shall require twice the acreage replacement as restoration and creation proposals); and
 - f. Variety of the wetland type being impacted.
9. Acreage replacement may be authorized at 1:1 where it is found through special studies coordinated with agencies with expertise, or through advance compensation, that no net loss of wetland function results.
10. Replacement wetlands shall be completed prior to or concurrent with wetland alteration, and immediately after activities that will temporarily disturb wetlands activities.
11. A compensation plan shall be required for developments or activities which result in unavoidable and necessary wetland alterations. The plan shall include the following elements:
 - a. Baseline information for the impacted wetland and the proposed replacement site;
 - b. Environmental goals and objectives describing the purposes of the mitigation measures, a description of the site selection criteria and identification of target evaluation species and resource functions;
 - c. Performance standards including specific criteria for fulfilling goals and objectives and for beginning remedial action or contingency measures;
 - d. Detailed construction plan including work schedule, revegetation information, buffers, estimated cost, site plan with contours and elevation and other information;

- e. Monitoring program outlining the approach for assessing a completed project over a five-year period. A report shall be submitted annually, at a minimum documenting milestones, success, problems and contingency actions; and
 - f. Contingency plan identifying potential courses of action and any corrective measures to be taken when monitoring or evaluation indicates project performance standards are not being met.
12. Where restoration, creation or enhancement activities are proposed, the applicant shall be required to:
- a. File a performance bond in an amount to enable the regulatory authority to carry out the compensation plan should the applicant fail to do so; and
 - b. Compensation areas shall be permanently protected through legal instruments such as sensitive area tracts, conservation easements or a comparable use restriction.
13. A wetland buffer zone of 200 feet shall be required adjacent to wetland areas of exceptional resource value unless a greater distance is required by other provisions of this program. For all other wetland systems, a wetland buffer zone of 100 feet shall be required, except that buffers less than 100 feet but no less than 25 feet may be authorized as a conditional use.
14. Wetland buffer zones shall be retained in their natural condition. Where buffer disturbance has occurred during construction, revegetation with native vegetation may be required. Developments and activities shall not be allowed within the buffer except for:
- a. Minor activities which are found to have no adverse impact on the wetland functions or integrity;
 - b. Stormwater management facilities having no feasible alternative location outside of the buffer; or
 - c. Linear developments having no feasible alternative location outside of the buffer.
15. The location of all required buffer zones shall be clearly and permanently marked on any project site prior to initiation of site work.

Salmon and Steelhead Habitats

Applicability

In addition to these provisions, several other chapters of this shoreline master program contain policies and regulations which protect salmon and steelhead habitats. They include the sections on agriculture, forestry, clearing and grading, wetlands, riparian corridors, vegetation management, shoreline modification, instream structures, water quality and floodplains. Applicants should consult these sections as well as this section.

Note: Salmon and steelhead are two of the enduring symbols of the Northwest. Salmon and steelhead are also an important economic and recreational resource. A brief description of salmon and steelhead habitat and a suggested approach to protecting this resource can be found in Chapter 18, Aquatic Habitats.

Many counties contain extensive and varied salmon and steelhead habitats. All of the suggested policies and regulations may apply to them. Some counties and most cities will have a limited number of habitat types. These local governments should include only those suggested policies and regulations which apply to the habitat types within their jurisdiction.

The Department of Community Development's Planning Data Source Book for Resource Lands and Critical Areas contains data sources for locating certain salmon and steelhead habitat areas and high-quality estuarine ecosystems. The Puget Sound Environmental Atlas contains information on salmon and steelhead habitat areas. The Habitat Management Division of the Department of Fisheries is developing a database listing the locations of all saltwater habitats of special concern, including juvenile salmon migration corridors and salt water rearing and feeding areas. The Departments of Fisheries and Wildlife have information on salmon and steelhead habitats. Indian Nations also have information on salmon and steelhead habitats.

Policies

1. Salmon and steelhead habitats support valuable recreational and commercial fisheries. These habitats should be protected because of their importance to the aquatic ecosystem and the state and local economy.

2. Salmon and steelhead habitats are:
 - a. Gravel bottomed streams creeks and rivers used for spawning;
 - b. Streams, creeks, rivers, side channels, ponds, lakes and wetlands used for rearing, feeding and cover and refuge from predators and high waters;
 - c. Streams, creeks, rivers, estuaries and salt water bodies used as migration corridors; and
 - d. Shallow areas of salt water bodies used for rearing, feeding and refuge from predators and currents.
3. Salmon and steelhead habitats are mapped in _____. [Omit this policy if resources are not mapped.]
4. Non-water-dependent or non-water-related uses, activities, structures and landfills should not be located in salmon and steelhead habitats.
5. Where alternative locations exist water-dependent and water-related uses, activities, structures and landfills should not be located in salmon and steelhead habitats.
6. Where uses, activities, structures and landfills must locate in salmon and steelhead habitats, impacts on these areas should be lessened to the maximum extent possible. Significant unavoidable impacts should be mitigated by creating in-kind replacement habitat near the project where feasible. Where in-kind replacement mitigation is not feasible, rehabilitating degraded habitat may be required. Mitigation proposals should be developed in consultation with the affected local government, the Department of Fisheries, the Department of Wildlife and affected Indian Nations.
7. Developments which are outside salmon and steelhead habitats but which have the potential to significantly affect these habitats should be located and designed so they do not create significant negative impacts on salmon and steelhead habitats.
8. Bioengineering is the preferred bank protection technique for rivers and streams used by salmon and steelhead. Also see the Shoreline Modification Policies and Regulations of this master program. (A set of recommended Shoreline Modification Policies and Regulations can be found in Chapter 8 of the *Handbook*.)
9. Floating structures and open pile structures are preferred over landfills or solid structures in water areas used by salmon and steelhead.

10. Open pile bridges are preferred for crossing water areas used by salmon and steelhead.
11. Impervious surfaces shall be minimized in upland developments to reduce stormwater runoff peaks. Structures and uses creating significant impervious surfaces shall include stormwater detention systems to reduce stormwater runoff peaks.
12. The discharge of silt into waterways shall be minimized during in-water and upland construction.
13. Adopt-A-Stream programs and similar efforts to rehabilitate salmon and steelhead spawning streams are encouraged.
14. Fishery enhancement projects are encouraged where they will not significantly interfere with other beneficial uses.
15. The agriculture, forestry, clearing and grading, wetlands, riparian corridors, vegetation management, shoreline modification, instream structures and water quality sections of this shoreline master program contain policies and regulations which protect salmon and steelhead habitats. Uses and activities proposed for shoreline areas should comply with all applicable policies and regulations of this shoreline master program.
16. Project proponents should contact the Habitat Management Division of the Department of Fisheries, the Habitat Division of the Department of Wildlife or affected Indian Nations early in the development process to determine if the proposal will occur in or adjacent to a salmon and steelhead habitat.
17. When reviewing permits for uses, activities and structures proposed for salt water areas, rivers and streams, river and stream side channels, wetlands and ponds connected to rivers and streams and shorelines adjacent to these areas; staff should contact the Habitat Management Division of the Department of Fisheries or the Habitat Division of the Department of Wildlife to determine if the proposal will occur in or affect an adjacent salmon or steelhead habitat. Staff should also contact affected Indian Nations.

Regulations

1. Structures which prevent the migration of salmon and steelhead shall not be allowed in the portions of water bodies used by these fish. Fish bypass facilities shall allow the upstream migration of adult fish. Fish bypass facilities shall prevent fry and juveniles migrating downstream from being trapped or harmed.

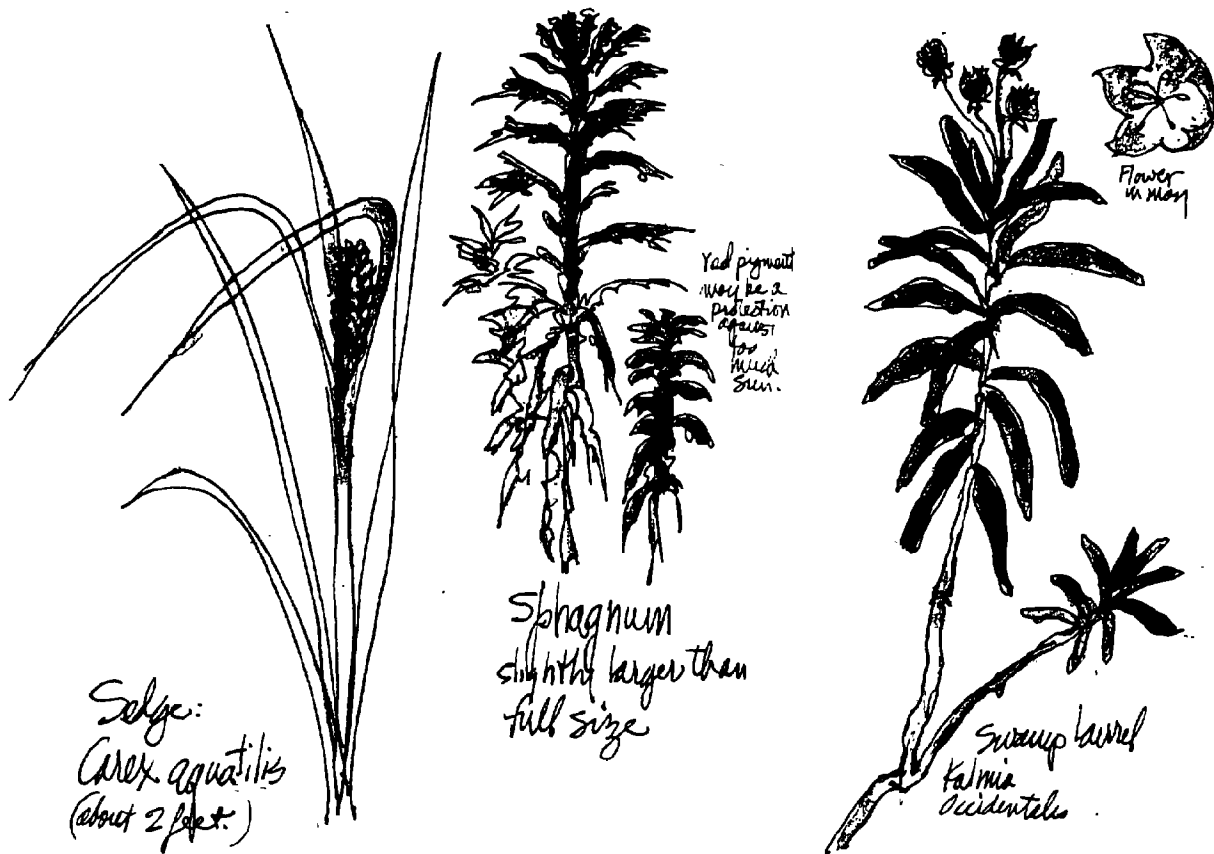
2. Landfills shall not intrude into salmon and steelhead habitats, except as provided in regulation 3.
3. Landfills may intrude into salt water areas used by salmon and steelhead for migration corridors, rearing, feeding and refuge only where the proponent obtains a conditional use permit (CUP) and demonstrates all of the following conditions are met:
 - a. The landfill is for a water-dependent or water-related use;
 - b. An alternative alignment or location is not feasible;
 - c. The project is designed to minimize its impacts on the environment;
 - d. The facility is in the public interest; and
 - e. If the project will create significant unavoidable adverse impacts, the impacts are mitigated by creating in-kind replacement habitat near the project. Where in-kind replacement mitigation is not feasible, rehabilitating degraded habitat may be required as a substitute.
4. Unless the applicant demonstrates that bioengineering techniques will not be successful, bulkheads and other shoreline protection structures are prohibited in salmon and steelhead habitat.
5. Where bulkheads and other shoreline protection structures are allowed, the toe of the bulkhead or structure shall be located landward of the ordinary high water mark except as provided in regulation 6 below. Where an existing bulkhead or structure cannot be removed because of environmental, safety, or geological concerns, the least environmentally impacting alternative shall be used. Any replacement bulkhead or shoreline protection structure shall be as close to the existing structure as possible. Also see the Shoreline Modification Policies and Regulations and the bulkhead and shore protection structure policies for Critical Salt Water Habitats of this master program. (A set of recommended Shoreline Modification Policies and Regulations can be found in Chapter 8 of the *Handbook*.)
6. Bulkheads, breakwaters, jetties, groins and other shoreline protection structures may intrude into salmon and steelhead habitats only where the proponent demonstrates all of the following conditions are met:
 - a. An alternative alignment or location is not feasible;
 - b. The project is designed to minimize its impacts on the environment;
 - c. The facility is in the public interest; and

- d. If the project will create significant unavoidable adverse impacts, the impacts are mitigated by creating in-kind replacement habitat near the project. Where in-kind replacement mitigation is not feasible, rehabilitating degraded habitat may be required as a substitute.
7. Docks, piers, pilings and floats may be located in water areas used by salmon and steelhead for migration corridors, rearing, feeding and refuge, provided the facilities use open piling construction. Approach fills shall be located landward of the ordinary high water mark. Docks, piers, pilings and floats shall not be located in other salmon and steelhead habitats. The project shall be designed to minimize its impacts on the environment.
8. Open pile bridges are the preferred water crossing structures over salmon and steelhead habitats. If a bridge is not feasible, one of the following water crossing structures may be approved if the impacts are acceptable: temporary culverts, bottomless arch culverts, elliptical culverts or round culverts. These structures are listed in priority order, with the first having the highest preference and the last the lowest preference. In order for a lower priority structure to be permitted, the applicant must show the higher priority structures are not feasible. The project shall be designed to minimize its impacts on the environment.
9. Bridges and in-water utility corridors may be located in salmon and steelhead habitat provided the proponent shows that all of the following conditions are met:
 - a. An alternative alignment is not feasible;
 - b. The project is located and designed to minimize its impacts on the environment;
 - c. Any alternative impacts are mitigated; and
 - d. Any landfill is located landward of the ordinary high water mark. Open piling and piers required to construct the bridge may be placed waterward of the ordinary high water mark, if no alternative method is feasible.

Notwithstanding regulations 4 and 12, when installing in-water utilities, the installer may place native material on the bed and banks of the water body or wetland to reestablish the preconstruction elevation and contour of the bed. The project shall be designed to minimize its impacts on the environment.

10. Dredging which will damage shallow water habitat used by salmon and steelhead for migration corridors, rearing, feeding and refuge shall not be allowed unless the proponent demonstrates all of the following conditions are met:
 - a. The dredging is for a water-dependent or water-related use;
 - b. An alternative alignment or location is not feasible;
 - c. The project is designed to minimize its impacts on the environment;
 - d. The facility is in the public interest; and
 - e. If the project will create significant unavoidable adverse impacts, the impacts are mitigated by creating in-kind replacement habitat near the project. Where in-kind replacement mitigation is not feasible, rehabilitating degraded habitat may be required as a substitute.
11. Dredging and the removal of bed materials below the water line is prohibited within salmon and steelhead spawning areas. River bar gravel mining may be allowed as provided in regulation 13.
12. River bar gravel mining may be allowed where the proponent demonstrates all of the following conditions are met:
 - a. The gravel removed from the river or stream does not exceed the average annual recruitment of bedload material. Additional gravel may be removed where the applicant can demonstrate the channel capacity has been significantly reduced.
 - b. The gravel is removed from the area between the existing water level and the permanently vegetated portions of the bank.
 - c. The project will not cause any adverse impacts on salmon and steelhead habitat, especially through increased sedimentation.
13. Projects which propose water withdrawals or diversions shall maintain adequate flows within the water body to maintain salmon and steelhead habitat, taking into account existing and likely future withdrawals and diversions.
14. In-water dredge spoil disposal sites shall not be located in salmon and steelhead habitats.
15. Landfilling, dredging, channelization and other activities which negatively impact habitat values are prohibited in wetlands, ponds and side channels which provide refuge or other habitat for salmon or steelhead.

16. Within salmon and steelhead habitats, permanent channel changes and realignments are prohibited.
17. Aquaculture uses shall not be established in or expanded in salmon and steelhead habitat, except for areas that are only used for migration corridors. This regulation only applies to in-water aquaculture uses, not upland aquaculture uses.
18. The removal of aquatic and riparian vegetation within or adjacent to salmon and steelhead habitats shall be minimized. Trees which shade side channels, streams, rivers, ponds and wetlands used by salmon and steelhead shall be maintained. Areas of disturbed earth shall be revegetated.
19. Unless removal is needed to prevent hazards to life and property or to enhance fish habitat, large woody debris below the ordinary high water mark shall be left in the waterway to provide salmon and steelhead habitat.
20. Outfalls within or upstream of salmon or steelhead spawning areas shall be designed and constructed to minimize disturbance of salmon and steelhead spawning beds.



Parking

Applicability

Parking is the temporary storage of automobiles or other motorized vehicles. Except as noted the following provisions apply only to parking that is "accessory" to a permitted shoreline use. Parking as a "primary" use and parking which serves a use not permitted in the shoreline jurisdiction is prohibited.

Policies

1. Parking in shoreline areas should directly serve a permitted shoreline use.
2. Parking facilities 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.
3. Parking should be planned to achieve optimum use. Where possible, parking should serve more than one use (e.g. serving recreational use on weekends, commercial uses on weekdays).

Regulations

1. Parking as a primary use shall be prohibited over water and within shoreline jurisdiction.
2. Parking in shoreline jurisdiction shall directly serve a permitted shoreline use.
3. Parking facilities shall be designed and landscaped to minimize adverse impacts upon adjacent shoreline and abutting properties. Landscaping shall consist of native vegetation and be planted before completion of the parking area in such a manner that plantings provide effective screening within three years of project completion. (Local jurisdictions may want to establish minimum or maximum height of "screen" and consider specific view corridors across a site.)

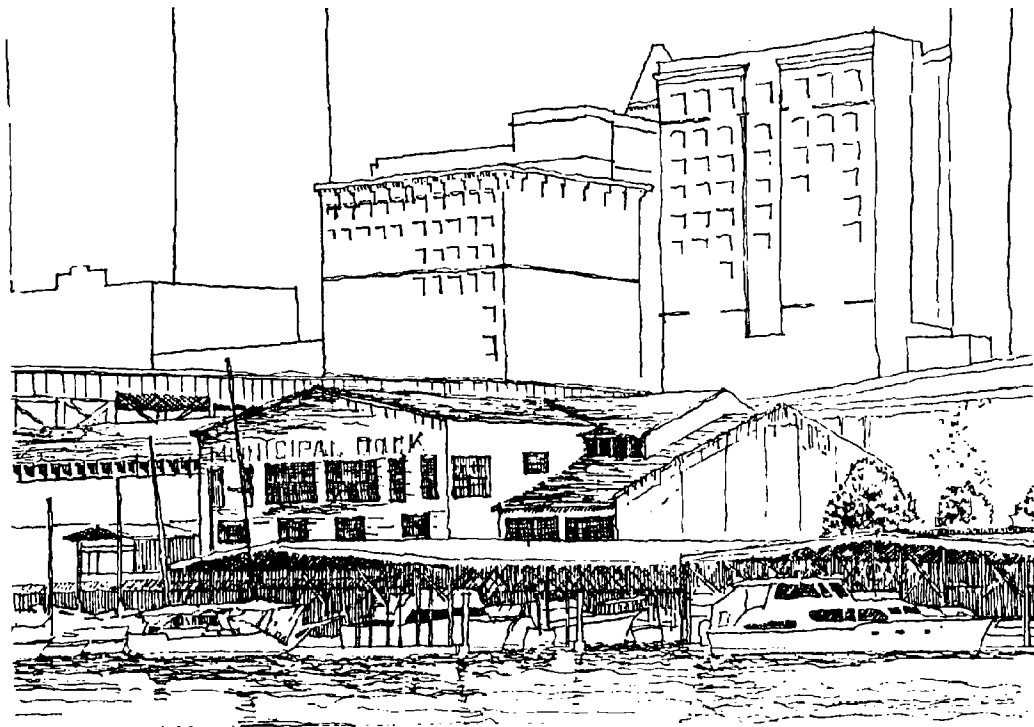
4. Parking facilities serving individual buildings on the shoreline shall be located landward from the principal building being served, EXCEPT when the parking facility is within or beneath the structure and adequately screened, or in cases when an alternate location would have less environmental impact on the shoreline.



Notes to Master Programmers

For example, it may be preferable to locate a large warehouse well away from the shoreline along a river corridor with a pedestrian trail in order to reduce solar shading and the need for site grading.

5. Parking facilities for shoreline activities shall provide safe and convenient pedestrian circulation within the parking area and to the shorelines.
6. Parking facilities shall provide adequate facilities to prevent surface water runoff from contaminating water bodies, using best available technologies and include a maintenance program that will assure proper functioning of such facilities over time.



Public Access

Applicability

Shoreline public access is the physical ability of the general public to reach and touch the water's edge and/or the ability to have a view of the water and the shoreline from upland locations. There are a variety of types of public access including picnic areas, pathways and trails (including handicapped), floats and docks, promenades, viewing towers, bridges, boat launches, street ends, ingress and egress, parking and others.



Notes to Master Programmers

An important goal of the Shoreline Management Act is to protect and enhance public access to the State's shorelines. Critical to accomplishing this goal is the establishment of a Comprehensive Public Access plan which provides a foundation for determining access requirements and setting shoreline development guidelines. The result of developing and implementing a comprehensive plan is the protection and enhancement of shoreline access for the public. A major supreme court ruling (Nollan v. Coastal Commission 1987) deals directly with placing conditions on permits and illustrates the need for comprehensive planning. The Nollan case points out that permit administrators should make decisions on a sound legal basis. Where a public agency requires public access as a permit condition, there must be a rational connection between the project's impact on public access and the public access required.

The public trust doctrine gives individual states the responsibility to hold certain natural resources in trust for the people and is the foundation for a line of court cases defining public access. These cases have affirmed that even though the State has the right to sell lands beneath the waters, the new property owners must abide by the dictates of the public trust. This applies to not only navigable waters, but also to certain wetlands subject to the ebb and flow of the tides.

For additional information on this subject, see also Shoreline Public Access Handbook (Ecology Publication #90-6) and Case Studies of Conditional Public Access in Puget Sound (Ecology Publication #91-4).

Policies

1. Public access should be considered in the review of all private and public developments (including land division) with the exception of the following:
 - a. One- and two-family dwelling units; or
 - b. Agricultural/ranching activities; or
 - c. Where deemed inappropriate due to health, safety and environmental concerns.
2. Developments, uses and activities on or near the shoreline should not impair or detract from the public's access to the water.
3. Public access should be provided as close as possible to the water's edge without adversely affecting a sensitive environment and should be designed with provisions for handicapped and physically impaired persons.
4. Publicly owned shorelines should be limited to water-dependent or public recreational uses, otherwise such shorelines should remain protected open space.
5. Public access afforded by shoreline street ends, public utilities and rights-of-way should be preserved, maintained and enhanced.
6. Public access should be designed to provide for public safety and to minimize potential impacts to private property and individual privacy.
7. The public access area should be a comfortable and safe place to visit.
8. There should be a physical separation or other means of clearly delineating public and private space in order to avoid unnecessary user conflict.
9. Public views from the shoreline upland areas should be enhanced and preserved. Enhancement of views should not be construed to mean excessive removal of vegetation that partially impairs views.

Regulations

1. Except as provided in regulations 2 and 3, shoreline substantial developments or conditional uses shall provide public access where any of the following conditions are present:

- a. Where a development or use will create increased demand for public access to the shoreline, the development or use shall provide public access to mitigate this impact.
- b. Where a development or use will interfere with an existing public access way, the development or use shall provide public access to mitigate this impact. Developments may interfere with accesses on their development site by blocking access or by discouraging use of existing on-site or nearby accesses.
- c. Where a use which is not a priority shoreline use under the Shoreline Management Act will locate on a shoreline of the state, the use or development shall provide public access to mitigate this impact.
- d. Where a use or development will interfere with a public use of lands or waters subject to the public trust doctrine, the development shall provide public access to mitigate this impact.

The shoreline permit file shall describe the impact, the required public access conditions, and how the conditions address the impact.

2. An applicant need not provide public access where one or more of the following conditions 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 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;
 - d. Unacceptable environmental harm will result from the public access which cannot be mitigated; or
 - e. Significant undue and unavoidable conflict between any access provisions and the proposed use and/or adjacent uses would occur and cannot be mitigated.
3. In order to meet any of the conditions "a" through "e" above, the applicant must first demonstrate and the City/County determine in its findings 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;
 - b. Designing separation of uses and activities (e.g. fences, terracing, use of one-way glazings, hedges, landscaping, etc.); and
 - c. Developing provisions for access at a site geographically separated from the proposal such as a street end, vista or trail system.
4. Development uses and activities shall be designed and operated to avoid blocking, reducing or adversely interfering with the public's physical access to the water and shorelines.
 5. Public access provided by shoreline street ends, public utilities and rights-of-way shall not be diminished (RCW 35.79.035 and RCW 36.87.130).
 6. Public access sites shall be connected directly to the nearest public street and shall include provisions for handicapped and physically impaired persons, where feasible.
 7. Required public access sites shall be fully developed and available for public use at the time of occupancy of the use or activity.
 8. Public access easements and permit conditions shall be recorded on the deed of title and/or on the face of a plat or short plat as a condition running contemporaneous with the authorized land use, at a minimum. Said recording with the County Auditor's Office shall occur at the time of permit approval (RCW 58.17.110).
 9. Minimum width of public access easements shall be 25 feet, unless the administrator determines that undue hardship would result. In such cases, easement width may be reduced only to the minimum extent necessary to relieve the hardship.
 10. The standard state approved logo or other approved signs that indicate the public's right of access and hours of access shall be constructed, installed and maintained by the applicant in conspicuous locations at public access sites. In accordance with regulation 2-a, signs may control or restrict public access as a condition of permit approval.
 11. Future actions by the applicant successors in interest or other parties shall not diminish the usefulness or value of the public access provided.

Shorelines of State-wide Significance

Applicability

The Shoreline Management Act of 1971 designated certain shoreline areas as shorelines of state-wide significance. Within this City/County's jurisdiction _____, _____, _____ are shorelines of state-wide significance. Shorelines thus designated are important to the entire state. Because these shorelines are major resources from which all people in the state derive benefit, this jurisdiction gives preference to uses which favor long-range goals and support the overall public interest.

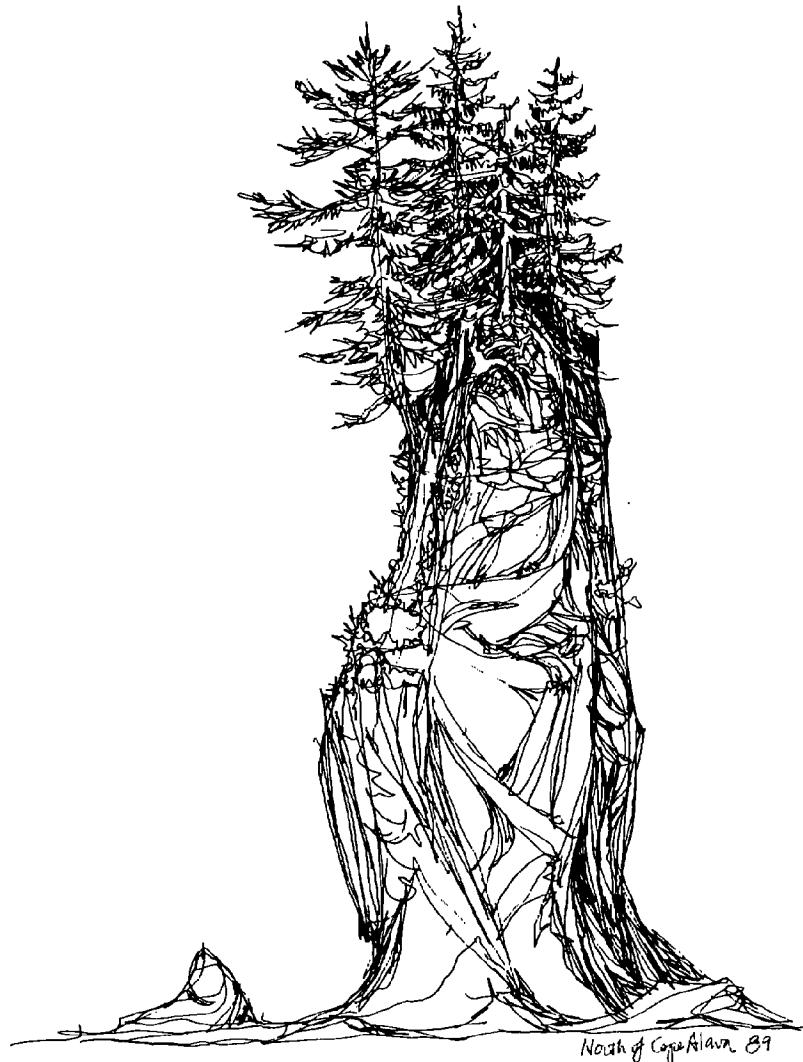
Policies (in order of preference)

1. Recognize and protect the state-wide interest over local interest.
 - a. Solicit comments and opinions from groups and individuals representing state-wide interests by circulating the master program, and any amendments there of affecting shorelines of state-wide significance, to state agencies, adjacent jurisdictions, citizen's advisory committees and local officials and state-wide interest groups.
 - b. Recognize and take into account state agencies' policies, programs and recommendations in developing and administering use regulations and in approving shoreline permits.
 - c. Solicit comments, opinions and advice from individuals with expertise in ecology, geology, limnology, aquaculture and other scientific fields pertinent to shoreline management.
2. Preserve the natural character of the shoreline.
 - a. Designate and administer shoreline environments and use regulations to minimize damage to the ecology and environment of the shoreline as a result of man-made intrusions on shorelines.
 - b. Upgrade and redevelop those areas where intensive development already exists in order to reduce adverse impact on the environment and to accommodate future growth rather than allowing high intensity uses to extend into low-intensity use or underdeveloped areas.

- c. Ensure that where commercial timber cutting is allowed, as provided in RCW 90.58.150, reforestation will be possible and accomplished as soon as practical.
 - d. Provide for review and approval of subsequent use before commercial timber land is converted to a new use to ensure adequate buffers and appropriate site design.
 - e. Protect and preserve existing diversity of vegetation and habitat values, wetlands and riparian corridors associated with shoreline areas.
3. Result in long-term over short-term benefit.
- a. Evaluate the short-term economic gain or convenience of developments relative to the long-term and potentially costly impairments to the natural shoreline.
 - b. In general, preserve resources and values of shorelines of state-wide significance for future generations and restrict or prohibit development that would irretrievably damage shoreline resources.
 - c. Actively promote aesthetic considerations when contemplating new development, redevelopment of existing facilities or general enhancement of shoreline areas.
4. Protect the resources and ecology of the shoreline.
- a. Minimize development activity that will interfere with the natural functioning of the shoreline ecosystem, including, but not limited to: stability, drainage, aesthetic values and water quality.
 - b. All shoreline development should be located, designed, constructed and managed to avoid disturbance of and minimize adverse impacts to wildlife resources, including spawning, nesting, rearing and habitat areas and migratory routes.
 - c. Restrict or prohibit public access onto areas which cannot be maintained in a natural condition under human use.
 - d. Shoreline materials including, but not limited to, bank substrate, soils, beach sands and gravel bars should be left undisturbed by shoreline development. Gravel mining should be severely limited in shoreline areas.
 - e. Preserve environmentally sensitive wetlands for use as open space or buffers and encourage restoration of presently degraded wetland areas.

5. Increase public access to publicly owned areas of the shoreline.
 - a. Give priority to developing paths and trails to shoreline areas, linear access along the shorelines and to developed upland parking.
 - b. Locate development landward of the ordinary high water mark so that access is enhanced.

6. Increase recreational opportunities for the public on the shoreline.
 - a. Plan for and encourage development of facilities for recreational use of the shoreline.
 - b. Reserve areas for lodging and related facilities on uplands well away from the shorelines with provisions for nonmotorized access to the shoreline.



Signage

Applicability

A sign is defined as a device of any material or medium, including structural component parts, which is used or intended to be used to attract attention to the subject matter for advertising, identification or informative purposes. The following provisions apply to any commercial or advertising sign directing attention to a business, professional service, community, site, facility, or entertainment, conducted or sold either on or off premises.

Policies

1. Signs should be designed and placed so that they are compatible with the aesthetic quality of the existing shoreline and adjacent land and water uses.
2. Signs should not block or otherwise interfere with visual access to the water or shorelands.
3. The design of signs should not reduce auto safety or visual aesthetics from adjacent property.
4. Signs should be of a permanent nature that are linked to the operation of existing uses and attached to said uses.

Regulations

1. Sign plans and designs shall be submitted for review and approval at the time of shoreline permit approval.
2. All signs shall be located and designed to minimize interference with vistas, viewpoints and visual access to the shoreline.
3. Over-water signs or signs on floats or pilings shall be related to water-dependent uses only.
4. Lighted signs shall be hooded, shaded, or aimed so that direct light will not result in glare when viewed from surrounding properties or watercourses.

5. Signs related to specific on-site uses or activities shall not exceed 32 square feet in surface area. On-site freestanding signs shall not exceed 6 feet in height. When feasible, signs shall be flush-mounted against existing buildings.
6. Temporary or obsolete signs shall be removed within 10 days of elections, closures of business, or termination of any other function. Examples of temporary signs include: real estate signs, directions to events, political advertisements, event or holiday signs, construction signs.
7. Signs that do not meet the policies and regulations of this program shall be removed or conform within two years of the adoption of this master program.
8. No signs shall be placed in a required view corridor.

Allowable Signs

The following types of signs may be allowed in all shoreline environments:

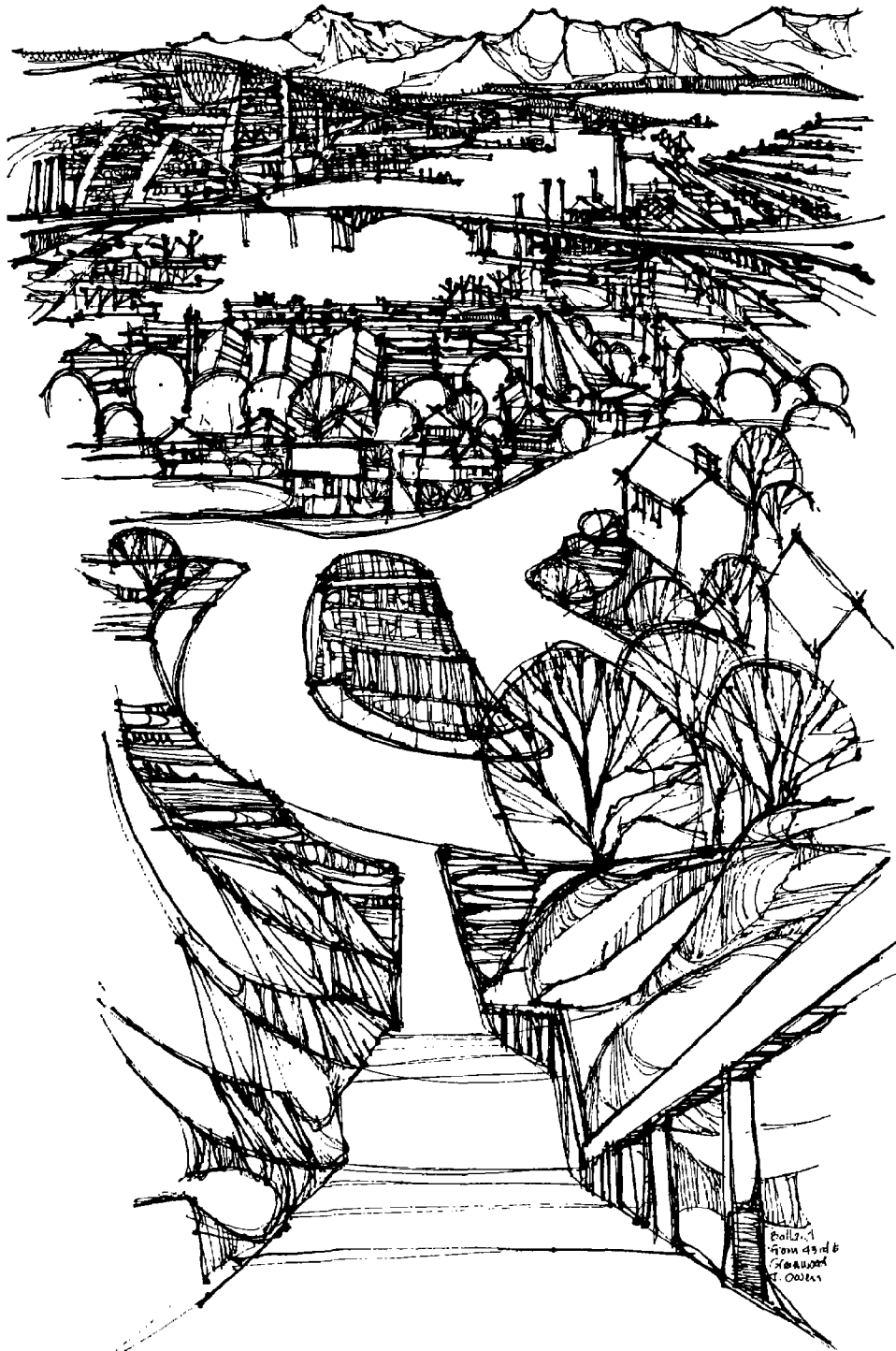
1. Water navigational signs, and highway and railroad signs necessary for operation, safety and direction.
2. Public information signs directly relating to a shoreline use or activity.
3. Off-premise, free standing signs for community identification, information, or directional purposes.
4. Signs with "changing messages" as long as the information is limited to time-temperature-date or public messages.
5. National, site and institutional flags or temporary decorations customary for special holidays and similar events of a public nature.
6. Temporary directional signs to public or quasi-public events if removed within 10 days following the event.

Prohibited

The following types of signs are prohibited:

1. Signage in view corridors which impair visual access.
2. Off-premises detached outdoor advertising signs.
3. Spinners, streamers, pennants, flashing lights and other animated signs used for commercial purposes. Highway and railroad signs are exceptions.

4. Signs placed on trees or other natural features.
5. Commercial signs for products services, or facilities located off-site.



Utilities (Accessory)

Applicability

Utilities have been split into accessory and primary with accessory meaning utilities that effect small scale distribution services connected directly to the uses along the shoreline. For example, power, telephone, cable, water and sewer lines, including stormwater systems, are all considered as utilities accessory to shoreline uses. They are covered in this section because they concern all types of development and have the potential of impacting the quality of the shoreline and its waters.

Policies

1. Utilities are necessary to serve shoreline uses and should be properly installed so as to protect the shoreline and water from contamination and degradation.
2. Utility facilities and right-of-ways should be located outside of the shoreline area to the maximum extent possible. When utility lines require a shoreline location, they should be placed underground.
3. Utility facilities should be designed and located in a manner which preserves the natural landscape and shoreline ecology and minimizes conflicts with present and planned land uses.

Regulations

1. In shoreline areas, utility transmission lines, pipelines and cables shall be placed underground unless demonstrated to be infeasible. Further, such lines shall utilize existing rights-of-way, corridors and/or bridge crossings whenever possible. Proposals for new corridors in shoreline areas involving water crossings must fully substantiate the infeasibility of existing routes.
2. Utility development shall, through coordination with government agencies, provide for compatible multiple use of sites and rights-of-way. Such uses include shoreline access points, trails and other forms of recreation and transportation systems, providing such uses will not unduly interfere with utility operations or endanger public health and safety.
3. Sites disturbed for utility installation shall be stabilized during and following construction to avoid adverse impacts from erosion.

Vegetation Management

Applicability

Vegetation management involves both a passive and active management system. The intent of both systems is to minimize habitat loss and the impact of invasive plants, erosion, sedimentation and flooding. "Passive" vegetation management deals with protection and enhancement of existing diverse native plant communities along all shorelines including rivers, wetlands, lakes and steep bluffs. "Active" vegetation management involves aquatic weed control as well as the restoration of altered or threatened shorelines using a technology called soil bioengineering. Soil bioengineering reestablishes native plant communities as a dynamic system that stabilizes the land from the effects of erosion. Vegetation management provisions apply even to those shorelines and uses which are exempt from a permit requirement.



Notes to Master Programmers

A brief discussion of the underlying principles and the advantages of bioengineering is appropriate because the technology is a relatively new science in this country that uses live plant materials as a main structural component. As they grow, these systems work with the natural environment to create the permanent protection and preservation of land. Both biological and structural elements of the systems must function together in an integrated and complementary manner, whether the structural elements are natural or manmade. The advantage of soil bioengineering is often found where conventional stabilization and erosion control methods are limited in benefits, uneconomical, unsuitable or ineffective. Vegetation also mitigates seasonal temperature swings of waters, provides habitat for wildlife, and contributes to the aesthetic quality of the area. This system should be considered when evaluating any shoreline modification activity (see Chapter 8).

Policies

1. Native plant communities within and bordering state shorelines including, but not limited to, wetlands, lakes, rivers and unstable bluffs should be protected and maintained to minimize damage to the Ecology and environment of the shoreline area.

2. Restoration of degraded shorelines due to natural or manmade causes should, wherever feasible, use soil bioengineering techniques to arrest the processes of erosion, sedimentation and flooding.
3. The design and use of naturally regenerating systems for prevention and control of beach erosion should be encouraged where:
 - a. The length and configuration of the beach will accommodate such systems;
 - b. Such protection is a reasonable solution to the needs of the specific site; and
 - c. Beach restoration/enhancement will accomplish the following objectives:
 - i. Recreate or enhance natural shoreline conditions and habitat;
 - ii. Reverse otherwise erosional conditions; and
 - iii. Enhance access to the shore, especially to public shores.
5. Aquatic weed management should stress prevention first. Where active removal or destruction is necessary, it should be the minimum to allow water-dependent activities to continue, minimize negative impacts to native plant communities, and include appropriate handling or disposal of weed materials.

Regulations

1. All unique and fragile shorelines shall be protected from degradation caused by the modification of the land surface within the shoreline area and/or the adjacent uplands (see Site Specific Environment Designations).
2. Wherever possible, development of commercial, industrial, residential and/or recreational uses shall be located away from shorelines that have been identified as unstable and/or sensitive to erosion (see Site Specific Environment Designations).
3. Restoration of any shoreline that has been disturbed or degraded shall use native plant materials with a diversity and type similar to that which originally occurred on-site.
4. Stabilization of exposed erosion prone surfaces along shorelines including but not limited to rivers, streams and marine systems shall, wherever feasible utilize soil bioengineering techniques.

5. The use of commercial nursery stock in the restoration of disturbed or degrading shorelines shall emulate the previously existing vegetation in both size, structure and diversity at maturation.
6. Beach enhancement is prohibited:
 - a. Within spawning, nesting or breeding habitat;
 - b. Where littoral drift of the enhancement materials will adversely effect adjacent spawning grounds or other areas of biological significance;
 - c. If it will interfere with the normal public use of the navigable waters of the state; and/or
 - d. Where the activity is in support of a nonconforming use unless such activities are necessary to maintain shoreline stability and the natural ecology.
7. Aquatic weed control shall only occur when native plant communities and associated habitats are threatened or where an existing water dependent use is restricted by the presence of weeds. Aquatic weed control shall occur in compliance with all other applicable laws and standards.
8. The control of aquatic weeds by hand pulling, mechanical harvesting, or placement of aquascreens, if proposed to maintain existing water depth for navigation, shall be considered normal maintenance and repair and therefore exempt from the requirement to obtain a shoreline substantial development permit.
9. The control of aquatic weeds by derooting, rotovating or other method which disturbs the bottom sediment or benthos shall be considered development for which a substantial development permit is required, unless it will maintain existing water depth for navigation in an area covered by a previous permit for such activity, in which case it shall be considered normal maintenance and repair and therefore exempt from the requirement to obtain a substantial development permit.
10. Where large quantities of plant material are generated by control measures, they shall be collected and disposed of in an appropriate, identified upland location.
11. Use of herbicides to control aquatic weeds shall be prohibited except where no reasonable alternative exists and weed control is demonstrated to be in the public's interest. A conditional use permit shall be required in such case.

View Protection

Applicability

The protection of "scenic vistas" within the shorelines and water bodies is an important shoreline management objective. Protection of significant views is a form of public access; the access being visual rather than physical. Consideration must be given to protection of the visual quality of the shoreline resource and to maintenance of view corridors to and from waterways and their adjacent shoreland features.

The protection of views as a shoreline management objective is established as set forth in RCW 90.58.320 where it states:

"in the implementation of this policy 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."

RCW 90.58.320 also addresses view protection on adjacent lands stating:

"No permit shall be issued pursuant to this chapter for any new or expanded building or structure of more than 35 feet above average grade level on shorelines of the state that will obstruct the view of a substantial number of residences on areas adjoining such shorelines except where a master program does not prohibit the same and then only when overriding considerations of the public interest will be served."

View protection can include preventing view blockage through height limitations or requiring aesthetic enhancement with landscaping. However, view protection does not allow for excessive vegetation removal to create views or enhance partial existing views. Please refer to the Vegetation Management and Clearing and Grading provisions contained in this chapter.

Policies

1. Development, uses and activities on or near the shoreline should not impair or detract from the public's visual access to the water.
2. Public views from the shoreline and upland areas should be enhanced and preserved. Enhancement of views should not be construed to mean excessive removal of vegetation that partially impairs views.

3. Visual access should be maintained, enhanced and preserved on shoreline street ends, public utilities and rights-of way and within designated "view corridors". In _____ City/County, designated view corridors include _____.



Notes to Master Programmers

View corridors offer unobstructed and/or significant views of the shoreline or shore resources. They may be long and narrow, such as between a major transportation corridor and the shore, or long and perpendicular to the shore, such as from a major public viewpoint.

Regulations

1. Shoreline uses and activities shall be designed and operated to avoid blocking, reducing, or adversely interfering with the public's visual access to the water and shorelines except as provided for in Chapter 5, "Vegetation Management".
2. Public lands such as street ends, rights-of-way and utilities shall provide visual access to the water and shoreline in accordance with RCW 35.79.035 and RCW 36.87.130 (see *Shoreline Public Access Handbook*).
3. In providing visual access to the shoreline, the natural vegetation shall not be excessively removed either by clearing or by topping (see Chapter 5 "Clearing and Grading").
4. Development on or over the water shall be constructed as far landward as possible to avoid interference with views from surrounding properties to the shoreline and adjoining waters.
5. Marinas with covered boathouses shall limit their height above mean sea level (see Chapter 6, Figure 6-3 Use-related Development Standards).
6. Development on the water shall be constructed of nonreflective materials that are compatible in terms of color and texture with the surrounding area.
7. Visual access shall be maintained, enhanced and preserved on shoreline street ends, public utilities and rights of way and within the following identified "view corridors _____." (Local jurisdiction to fill in such identified view corridors).

Water Quality

Applicability

Water quality is effected in numerous ways by human occupation and development of shoreline areas. Typically the increase in impermeable surfaces as a result of development increases runoff causing higher peak stormwater discharge at a higher velocity which causes scouring and erosion of stream banks. Erosion increases suspended solids and carries heavy metals, household wastes and excess nutrients into the water. Increased nitrogen and phosphorous enrichment depresses levels of dissolved oxygen. The degradation of water quality adversely impacts wildlife habitat and public health.

Maintaining high water quality standards and restoring degraded systems has been mandated in RCW 90.58.020:

"This policy contemplates protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life."

Water quality is impacted by a variety of uses and modifications and clearly needs broad policies and regulations to protect the shorelines and the associated waters of the state.

Policies

1. All shoreline uses and activities should be located, designed, constructed and maintained to minimize adverse impacts to water quality and fish and wildlife resources including spawning, nesting, rearing, feeding areas and migratory routes.
2. The City/County should require reasonable setbacks, buffers and stormwater storage basins to achieve the objective of lessening negative impacts on water quality.
3. All measures for controlling erosion, stream flow rates or floodwaters through the use of stream control works should be located, designed, constructed and maintained so that net off-site impacts related to water do not degrade the existing water quality.

4. All measures for the treatment of runoff for the purpose of maintaining and/or enhancing water quality should be conducted **on-site before** shoreline development impacts waters off-site.
5. Dredging and filling activities should be conducted to minimize the effect on water quality from the addition of suspended solids, leaching of contaminants or disturbance of habitats and should be consistent with applicable regulatory agency requirements (e.g. Wildlife, Fisheries, Corps. of Engineers).
6. Agricultural activities such as animal feeding operations feed lot wastes, retention and storage ponds, manure storage, use of fertilizers and pesticides and other activities that can impact water quality should be minimized by implementing best management practices, buffers and setbacks.

Regulations

1. All shoreline development, both during and after construction, shall minimize any increase in surface runoff through control, treatment and release of surface water runoff so that the receiving water quality and shore properties and features are not adversely effected. Control measures include but are not limited to dikes, catch basins or settling ponds, oil interceptor drains, grassy swales, planted buffers and fugitive dust controls.
2. The local government and proposed shoreline uses and activities shall mitigate any reduction in water quality due to erosion of rivers and stream systems by increasing storage of runoff peaks utilizing the hydraulic storage capacity of floodways and wetlands.
3. All industrial, commercial, residential, recreational and agricultural uses shall adhere to all required setbacks, buffers and standards for storage basins (refer to shoreline use and environment designation regulations for specific limits).
4. All shoreline development shall comply with the applicable requirements of the *Stormwater Management Manual for the Puget Sound Basin* (Ecology publication #91-75) or a local government program that meets or exceeds the requirements of the subject manual.

CHAPTER 6

Environment Designations

Introduction

The shoreline environment designations established under the Shoreline Management Act are one of the principal tools available for applying and tailoring the general guidelines of the Act to local shorelines. Not only does classifying shorelines into specific designations as recommended in WAC-173-16-040(4) provide the means of adapting broad policies to shoreline segments with distinctively different conditions and resources, but it also is a way to integrate comprehensive shoreline planning into master program regulations.

The process for classifying local shorelines and developing regulations for each environment is described in *Handbook* Chapter 3, SMP Amendment Process. The recommended procedure involves inventorying shoreline environment resources and identifying the special resource management needs and shoreline development opportunities along each shoreline segment. Chapter 10, Promoting Water-Oriented Uses, details techniques for determining suitability of shorelines for different uses. Local comprehensive planning goals, public access plans and waterfront revitalization can also be incorporated into master program regulations by setting SMP environment designation regulations that further these local objectives. Thus, the environment designation process is most effective when it is developed on a comprehensive basis. It should be

noted, however, that shoreline management, (including master program goals, policies and regulations and environment designations) in accordance with RCW 90.58.340, requires that local governments review their plans, requirements and ordinances which apply to areas adjacent to shorelines jurisdiction and modify such so they "achieve a consistent use policy" with the Act and the local SMP. This means that local comprehensive plans and development requirements for adjacent lands must be consistent with the SMA and local SMP. To help comply with adjacent lands requirements, local governments should incorporate SMA goals and policies into the local comprehensive planning process.

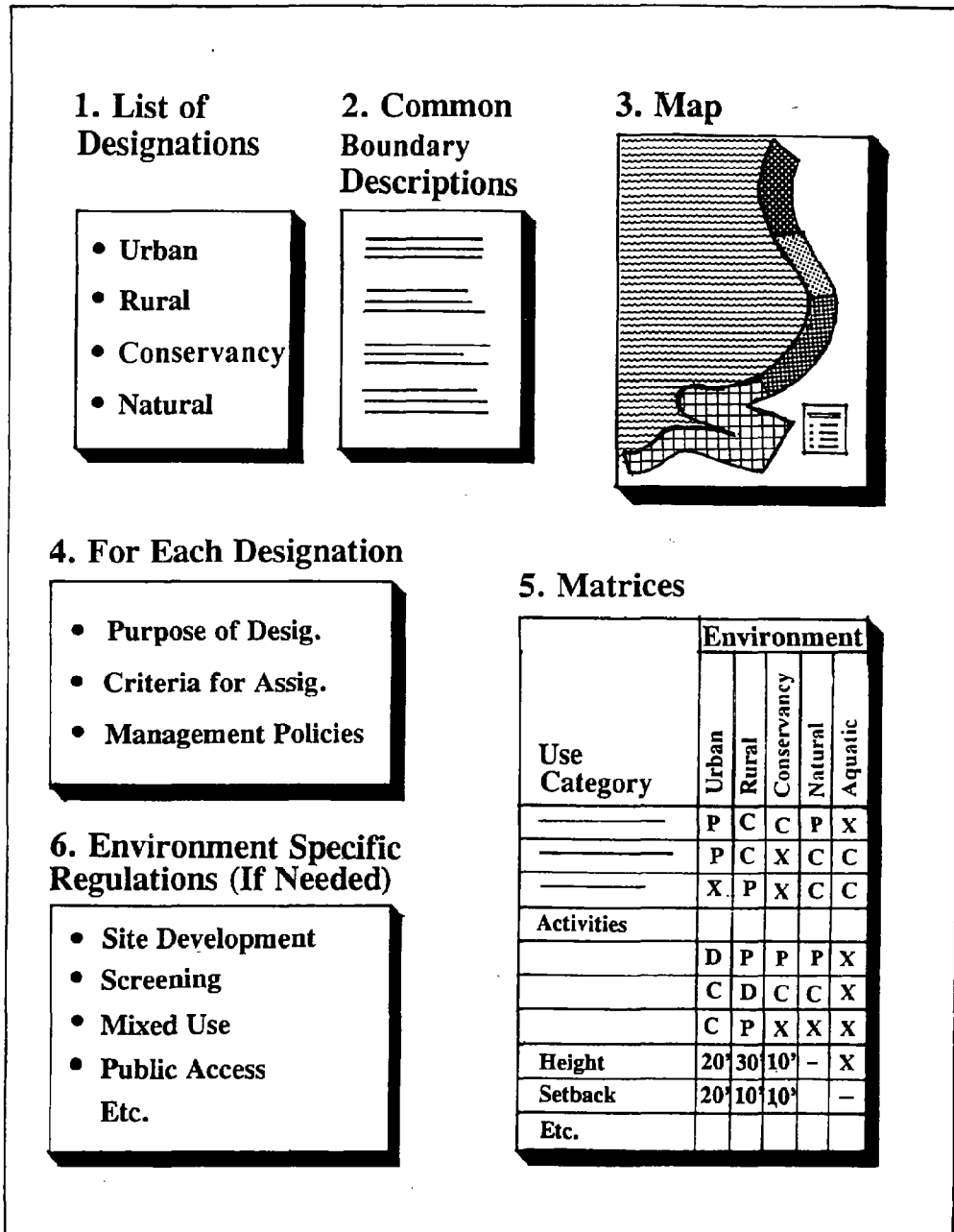
Components of the SMP

The environment designations chapter of a shoreline master program should contain the components identified in Figure 6-1.

Purpose, Designation Criteria, Management Policies and Regulations

1. The statement of purpose should describe the shoreline management objectives of the designation in a manner that distinguishes it from other designations. A few sentences or brief paragraph is usually sufficient for a purpose statement (see examples at the end of Chapter 6).
2. The criteria or basis for classifying (i.e. locating) a shoreline within that designation should be clearly stated (see examples of criteria statements at the end of Chapter 6).
3. The management policies form the basis of the regulations and should be in sufficient detail to assist in their interpretation.
4. Regulations translate the management policies into enforceable requirements and development standards. Environment-specific regulations commonly address:
 - a. Preferred shoreline development requirements (where water-dependent, water-related, water-enjoyment and non-water-oriented uses are permitted) and prohibitions.

Figure 6-1. Contents of Environment Designations Section



- b. Type of uses permitted (Note: specifying where specific types of uses such as marinas, light industrial and laundromats are permitted is an option but not preferred or mandatory, see discussion below.). However, broader categories of uses, such as residential, commercial, industrial, etc. (that are illustrated in a use matrix) need to be supported with specific policies and regulations.
- c. Building height, bulk limits, setbacks and site development standards.
- d. Environment specific requirements for vegetation maintenance, parking, signs, public access and other topics not covered in general use and activity regulations.
- e. Public access requirements that are specific to a particular environment.



Special Tip

An alternate organizational approach to environment specific regulations is to include the regulations for each environment in the general and use regulations rather than place all environment specific regulations in this section. In general, if a master program includes a small number of designations and less sophisticated regulations, it is more efficient to include them in the general and use specific regulations. If, on the other hand, a master program must accommodate a diversity of conditions and complex site development standards, then including a section for environment specific regulations is advantageous. If the master program includes environment specific regulations in the environment designation section, then reference should be routed back to the general and use specific regulations because both will apply.

The purpose, criteria, policies and regulations for each environment should be listed in that order for each environment (see examples at the end of Chapter 6).

Shoreline Environment Map and Description

Clear maps showing environment boundaries are essential in administering the master program.

1. It is required that a map be included within the master program document. The map, however, can be reproduced (and indexed) in sections to allow a scale adequate to give property owners a reasonably clear idea of how the program affects them. The map may be included in a master program's appendix.

2. In the City/County office which administers shoreline permits, an up-to-date and accurate map of the shoreline area and environments must be maintained. This is necessary both to insure consistent application of the program and to provide clear guidance to a property owner proposing development on the shoreline. Although many jurisdictions rely on a determination by the Planning Director or other official to resolve any uncertainties in interpretation, some jurisdictions have found that inconsistent, confusing, or inaccurate maps can lead to lengthy permit disputes and legal battles. If it is not feasible to accurately designate individual parcels on a map, it is very important that the text provide a clear basis for identifying the boundaries or explicit criteria which can be used to distinguish the environments on the ground. "Common" boundary descriptions are now being used by many jurisdictions to accurately define environment boundaries. Common boundary descriptions typically rely on both manmade and natural features (i.e. roads, bluffs, dikes, etc.) to delineate environment boundaries. For example, "The urban designation starts at Taylor Street and runs north to James Street where the suburban designation begins." In all events the maps should indicate that the designation boundaries may change as a result of SMP amendments and that the common boundaries contained in the SMP take precedence over mapped boundaries.
3. Where jurisdiction has been reduced to floodway plus 200 feet, the SMP map should clearly indicate the areas (floodplains, river deltas, associated marshes, bogs and swamps) beyond the 200-foot limit that still remain within shoreline management jurisdiction and what environment designation applies in this case. The master program should also make it clear that in the event of a mapping error, the jurisdiction will rely upon common boundary descriptions and the criteria contained in Chapter 173-22 WAC rather than the incorrect or outdated map.
4. The map and the master program should note that all areas within shoreline jurisdiction that are not mapped and/or designated are automatically assigned a conservancy designation until the shoreline can be redesignated through an SMP amendment. Thus, land which reverts to local control from federal ownership, such as Forest Service land trades or "discovered" associated marshes, bogs and swamps will be afforded a good degree of protection until a complete analysis and amendment is processed.

Summary Matrices and Explanatory Illustrations

Matrices or charts summarizing the permitted uses and development standards of each environment designation are very desirable. Such matrices have proven exceptionally useful in describing different requirements to potential permit applicants and in explaining the comprehensive system of designations to the public. Matrices also provide an excellent "tool" for use in comparing the regulations amongst the various environments such that they present a logical shoreline management system. Examples of environment designation matrices are presented on the following pages. Figure 6-2 shows the preferred method for indicating use regulations and Figure 6-3 presents the preferred method for illustrating height and setback requirements. As examples, these matrices attempt to represent a typical regulatory system. Figure 6-4 addresses vegetation maintenance corridor standards, illustrating one method for determining the minimum land area within shoreline jurisdiction that must be a "Designated Vegetation Maintenance Corridor". Using Figure 6-4, follow the steps below to determine the required "Designated Vegetation Maintenance Corridor" for a given shoreline environment.

1. Determine applicable shoreline environment.
2. See Figure 6-4 for minimum width of designated corridor. (For example, in the natural environment the corridor is 200 feet.)
3. See Figure 6-4 for percentage of designated vegetation maintenance corridor that must be left undisturbed. (For example, in the natural environment, it is 90%.)
4. Preference should be given to leaving undisturbed vegetation closest to the OHWM.

Environment Designations

The basic system of environment classification recommended in the WAC-173-16-040(4) consists of four designations: natural, conservancy, rural and urban (see the examples at the end of this chapter for purpose and criteria of each). In addition, a local government may elect to establish additional classifications as warranted. Each new additional environment should be distinct from existing designations and must have clear purpose, designation criteria and management policies justifying their need. In addition to the four standard designations, some examples of new designations (illustrated in the preceding matrices) include:

1. An "urban-maritime" designation for shorelines where only water-dependent uses are regularly permitted.
2. A "suburban" environment applying to shorelines that are not strictly urban but more intensively developed than a rural setting.
3. An "aquatic" environment to include all water areas and submerged lands.

Other examples of customized environment designations are presented at the end of this chapter.



Special Tip

New environment designations should be given descriptive names rather than a name such as "Conservancy I" or "Rural II". The names could indicate the type of use (e.g. Urban-Maritime), the environmental condition or objective (e.g. "Rural Riparian") or the geographic location (e.g. "Urban-Blue Lake") where the designation applies. Keep in mind that the objective here is not to create a proliferation of special designations for diversity's sake, but to address special considerations and tailor an environment designation for the best fit.

Figure 6-2. Shoreline Use and Modification Activity Matrix (page 1 of 3).

Key

- 1 = Golf courses require a CUP in all environments where permitted.
- 2 = Marinas require a CUP.
- 3 = Includes dredge material disposal in deep water as a CUP, otherwise see landfill.
- 4 = Primary intended use policies and standards must also be met, including residential, commercial, industrial, etc.
- P = May be allowed subject to permit conditions and provisions contained in SMP.
- # = May be allowed over water if allowed in adjacent upland environments.
- C = May be allowed as a conditional use.
- X = Prohibited.
- NA = Not applicable.
- #c = May be allowed as a conditional use over water if allowed in adjacent upland environment.

Figure 6-2. Shoreline Use and Modification Activity Matrix (page 2 of 3).

SHORELINE USE		ENVIRONMENT DESIGNATION						
		NATURAL	CONSERVANCY	RURAL	SUBURBAN	URBAN MARITIME	URBAN	AQUATIC
	Agriculture	X	P	P	C	X	X	NA
	Aquaculture (floating)	NA	NA	NA	NA	NA	NA	C
	Aquaculture (other)	X	C	P	C	P	P	P
	Boating facilities (marinas incl.)	X	C	P	P	P	P	P#2
COMMERCIAL	Water-dependent	X	C	X	C	P	P	#
	Water-related, water-enjoyment	X	C	C	C	P	P	#c
	Non-water-oriented	X	X	X	X	C	C	X
	Flood Hazard Management	X	C	C	C	C	C	#c
	Forest Practices	X	C	P	P	X	X	X
INDUSTRIAL	Water-dependent	X	X	C	X	P	P	#
	Water-related	X	X	C	X	P	P	X
	Non-water-oriented	X	X	X	X	C	C	X
	Mining	X	X	C	C	C	C	#c
	Parking (accessory)	X	P	P	P	P	P	X
	Parking (primary, paid incl.)	X	X	X	C	C	C	X
RECREATION	Water-dependent	C	P	P	P	P	P	C
	Water-enjoyment (1)	X	P	P	P	P	P	#c
	Non-water-oriented	X	X	C	C	X	C	X
	Single family residential	X	P	P	P	P	P	X
	Multi-family residential	X	X	X	P	C	P	X
	Land subdivision (4)	C	C	C	P	P	P	C

Figure 6-2. Shoreline Use and Modification Activity Matrix (page 3 of 3).

SHORELINE USE		ENVIRONMENT DESIGNATION						
		NATURAL	CONSERVANCY	RURAL	SUBURBAN	URBAN MARITIME	URBAN	AQUATIC
SIGNS	On premises	X	P	P	P	P	P	P
	Off premises	X	X	X	X	C	C	X
	Public, highway	C	P	P	P	P	P	C
	Solid waste disposal	X	X	X	X	X	X	X
TRANSPORTATION	Water-dependent	C	C	P	P	P	P	#
	Water-related, water-enjoyment	X	C	P	P	P	P	X
	Non-water-oriented	X	X	X	X	C	C	X
	Roads, railroads	X	C	P	P	P	P	C
	Utilities (primary)	X	C	C	C	P	P	C
SHORELINE MODIFICATION ACTIVITIES								
	Shoreline Stabilization							
	Beach restoration/enhancement	X	C	P	P	P	P	#c
	Bioengineering	C	C	P	P	P	P	C
	Revetments	X	C	C	C	P	P	NA
	Bulkheads	X	C	C	P	P	P	#c
	Breakwaters/Jetties/Rock Weirs/Groins	X	C	C	C	C	C	#c
	Dikes, Levees	X	C	C	C	C	C	X
	Dredging (3)	X	X	C	C	C	C	C
	Hazardous Waste Cleanup	C	P	P	P	P	P	C
	Landfill	X	C	C	C	C	C	#c
	Piers, Docks	X	C	P	P	P	P	#

Figure 6-3. Use-related Development Standards (page 1 of 4).

DEVELOPMENT STANDARDS	ENVIRONMENT DESIGNATION						
	NATURAL	CONSERVANCY	RURAL	SUBURBAN	URBAN MARITIME	URBAN	AQUATIC
Agriculture							
Cultivation, grazing setback	NA	50'	25'	25'	NA	NA	NA
Buildings setback	NA	100'	50'	50'	NA	NA	NA
Manure lagoons	NA	100'	50'	50'	NA	NA	NA
Feedlots	NA	200'	200'	NA	NA	NA	NA
Height limit	NA	35'	35'	35'	NA	NA	NA
Aquaculture							
Water-dependent setback	NA	0'	0'	0'	0'	0'	0'
Water-related setback	NA	50'	35'	25'	25'	25'	NA
Non-water-oriented setback	NA	100'	50'	35'	25'	25'	NA
Height limits:							
Upland	NA	15'	30'	35'	35'	35'	NA
Over-water	NA	NA	NA	NA	NA	NA	10'
Boating Facilities							
Water-dependent setback	0'	0'	0'	0'	0'	0'	0'
Building setback (except parking)	NA	50'	35'	25'	25'	25'	NA
Height limits:							
0 - 100' from OHWM	NA	15'	25'	25'	35'	25'	NA
101 - 200' from OHWM	NA	25'	35'	35'	45'	35'	NA
Over-water structures	NA	NA	NA	NA	NA	NA	15'

Figure 6-3. Use-related Development Standards (page 2 of 4).

*Key on Page 140

DEVELOPMENT STANDARDS	ENVIRONMENT DESIGNATION						
	NATURAL	CONSERVANCY	RURAL	SUBURBAN	URBAN MARITIME	URBAN	AQUATIC
Commercial Development							
Water-dependent Setback	NA	0'	0'	0'	0'	0'	0'
Water-related, water-enjoyment setback	NA	100'	75'	50'	*25'	*25'	NA
Non-water-oriented setback	NA	NA	NA	NA	100'	75'	NA
Building height limit	NA	15'	25'	35'	60'	45'	NA
Forest Practices							
Setbacks	NA	100'	75'	50'	NA	NA	NA
Industrial Development							
Building setback							
Water-dependent	NA	0'	0'	NA	0'	0'	NA
Water-related	NA	NA	75'	NA	50'	50'	NA
Non-water-oriented	NA	NA	NA	NA	100'	100'	NA
Building height limit							
Water-dependent, water-related	NA	NA	NA	NA	60'	45'	45'
Non-water-oriented	NA	NA	NA	NA	45'	45'	NA
Mining and Related Structures							
Setback	NA	NA	100'	100'	100'	100'	NA
Parking							
Primary (#1)	NA	NA	NA	100'	75'	75'	NA
Accessory	NA	150'	100'	75'	25'	25'	NA

Figure 6-3. Use-related Development Standards (page 3 of 4).

DEVELOPMENT STANDARDS	ENVIRONMENT DESIGNATION						
	NATURAL	CONSERVANCY	RURAL	SUBURBAN	URBAN MARITIME	URBAN	AQUATIC
Recreational Development							
Setbacks:							
Non-water-oriented (general)	NA	NA	100'	100'	NA	100'	NA
Campsites, picnic areas, related	NA	100'	75'	50'	50'	50'	NA
Access roads, restrooms, accessory structures	NA	100'	75'	50'	30'	30'	NA
Parking areas	NA	150'	75'	50'	50'	50'	NA
Golf course, sports field, intensive use areas	NA	100'	100'	100'	100'	100'	NA
Height limit	NA	15'	25'	25'	60'	45'	NA
Residential Development							
Setbacks:							
All dwelling units	NA	100'	75'	50'	25'	25'	NA
Height limit	NA	25'	30'	35'	60'	45'	NA
Signs							
Maximum height	10'	10'	15'	15'	20'	20'	#2
Maximum surface area (sq. ft.)	16	24	32	32	60	32	NA
Transportation Facilities							
Setbacks:							
Non-arterial, secondary, access roads	NA	100'	100'	75'	50'	50'	NA
Arterials, highways, railroads (#3)	NA	200'	200'	100'	100'	100'	NA
Non-water-oriented	NA	NA	NA	NA	100'	100'	NA

Figure 6-3. Use-related Development Standards (page 4 of 4).

DEVELOPMENT STANDARDS	ENVIRONMENT DESIGNATION						
	NATURAL	CONSERVANCY	RURAL	SUBURBAN	URBAN MARITIME	URBAN	AQUATIC
Utilities							
Setbacks:							
Buildings, distribution lines	200'	100'	75'	50'	50'	50'	NA
Height Limits:							
Buildings, storage tanks, accessory uses	NA	15'	25'	35'	60'	35'	NA
Distribution poles	35'	35'	35'	35'	35'	35'	NA

Key

- * = Setback requirements may vary for conditional uses.
- #1 = General regulations apply (parking).
- #2 = No higher than existing permitted structure it is attached to.
- #3 = Except buried lines and approved water crossings.

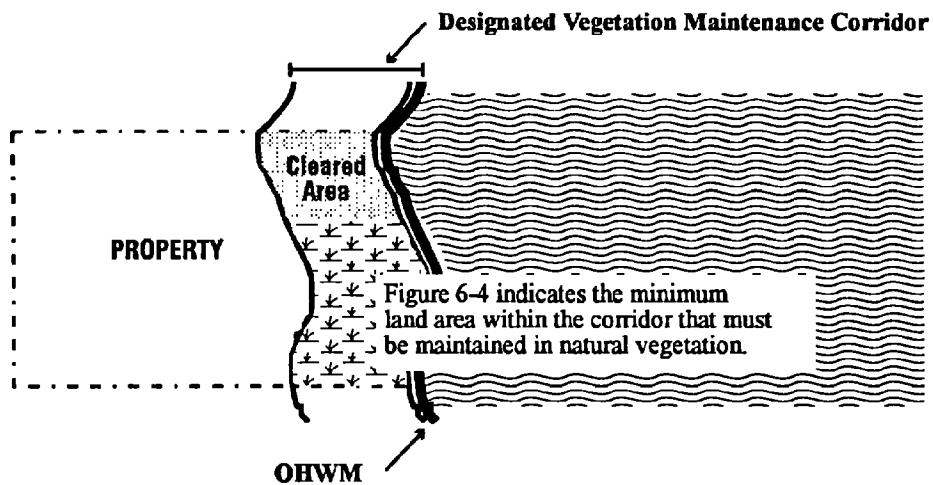
Figure 6-4. Vegetation Maintenance Corridor Standards

GENERAL SITE DEVELOPMENT STANDARDS	ENVIRONMENT DESIGNATION						
	NATURAL	CONSERVANCY	RURAL	SUBURBAN	URBAN MARITIME	URBAN	AQUATIC
Designated vegetation maintenance corridor *2	200'	100'	50'	50'	25'	25'	NA
Percent of corridor that must be left undisturbed	90	75	50	50	10	25	NA

KEY

*1 As measured landward from OHWM, also refer to General Provisions (Clearing and Grading, Vegetation Management)

NA Not applicable



Special Considerations

Environment-Specific Use Provisions

Environment designation regulations should include a description of what uses are permitted in each environment. There are several different approaches available to accomplish this. The most commonly used method is to list all of the use categories (e.g. marinas, agricultural, commercial) which are permitted in each particular environment. This technique may be refined by placing special conditions or performance standards on specific uses in the environment. For example, a marina may be permitted in a conservancy environment provided there is no covered moorage and no boat repair work performed. Or, by permitting specific uses in an environment only through a conditional use permit. A matrix such as Figure 6-2 efficiently summarizes this information.

If this approach is chosen, the use requirements should be compatible with the local zoning code to reduce confusion and it may be necessary to revise the zoning code to accommodate SMP regulations. In any event, it is not recommended that the zoning ordinance be incorporated into the SMP. There are four reasons why the master program and the zoning ordinance should be consistent but independent:

1. Zoning codes generally include extensive, detailed development standards which apply to development activities outside the scope of shoreline management and cover an area much broader than the shoreline. To repeat all such standards for each shoreline designation would create a voluminous and duplicative SMP.
2. There are often numerous existing zoning classifications along urban waterfronts, resulting in a complex zoning map. Creating special shoreline designations for each existing zone falling within shoreline jurisdiction could result in an unwieldy number of shoreline designations.
3. Shoreline management has an additional unique and in some cases stronger legal basis than comprehensive land use planning and zoning because the Shoreline Management Act embodies the principals of the public trust doctrine and has different legal ramifications relative to the takings issue, permit review, public access, etc.
4. Specific itemized listings of uses is not necessary in an SMP. Uses are typically listed by broad use categories (e.g. water-dependent, water-related, etc.). These categories are then specifically defined in the SMP

definitions section. This method has also proven effective if the permitted uses in each environment are also summarized in a matrix as in Figures 6-2, 6-3 and 6-4.

A preferred approach for environment-specific use regulations is to specify where and under what conditions water-dependent, water-related, water-enjoyment and non-water-oriented uses are permitted and/or prohibited, but not set requirements for individual types of uses (see the example "use" matrix provided). This has the advantage of avoiding the potential for conflict with the zoning ordinance and eliminates the complexity of regulating specific use types. By focusing on shoreline preferred uses the SMP directly responds to the SMA objective of giving priority to water-oriented uses. However, this approach does not directly address the issue of compatibility between shoreline uses. For example, under the second approach, a pulp mill might be developed next to a cruise ship terminal or waterfront park unless prevented (or conditioned) by other provisions in the master program or by the local zoning ordinance.

Conditional Use Provisions

Some uses may be appropriate within a certain environment only if they meet certain conditions. In other instances closer review may be necessary to determine if the broader conditions are met. In these cases, the use should be listed in the SMP as a "conditional use" and require a conditional use permit (CUP). A master program should clearly explain the review process required for a conditional use permit.

RCW 90.58.100 (5) states that "each master program shall contain provisions to allow for the varying of the application of use regulations of the program, including provisions for permits for conditional uses and variances, to insure that strict implementation of a program will not create unnecessary hardships or thwart the policy enumerated in RCW 90.58.020. Any such varying shall be allowed only if extraordinary circumstances are shown and the public interest suffers no substantial effect." WAC 173-14-140 states that "The purpose of a conditional use permit is to allow for greater flexibility in varying the application of the use regulations of the master program."

Hence SMPs should require shoreline conditional use permits for special uses that require case-by-case analysis to determine if and when a particular proposal is consistent with overall shoreline management policies. Shoreline CUPs are recognized as the appropriate regulatory vehicle for accommodating use activities which are otherwise out of the norm of uses administered by the

standard shoreline permitting (i.e. Substantial Development Permit [SDP]) process. Uses with potential for aesthetic, environmental and/or public water use conflicts, such as over-water and in-water uses and activities, should be CUPs.

All conditional use permits are reviewed by the Department of Ecology and are subject to Ecology approval. Therefore, a local government is assisted by state review to insure that issues of state-wide interest are met. Conditional use requirements can be set to accomplish numerous regulatory purposes. Among them are:

1. Insuring compatibility of different uses in the same environment. Example: water-enjoyment uses can be allowed in a maritime industrial environment on the condition that they do not conflict with existing or future industrial uses.
2. Insuring that site development performance standards are met. Example: permit can be conditioned on the application of an approved master site plan demonstrating conformance to objectives stated in the SMP.
3. Providing greater control and flexibility in the review of mixed-use projects where water-enjoyment uses are permitted over water. Example: permitting water-enjoyment uses over water in a mixed-use project conditioned on the determination that the use supports public redevelopment objectives.
4. Identifying special cases where non-water-oriented uses are allowed on the shoreline as part of a civic redevelopment area.
5. Insuring that environmental quality is not degraded. Example: dredging may be allowed as a conditional use only after environmental studies show no significant destruction of critical habitat.
6. Requiring approved comprehensive planning before implementation of a large scale project such as a sewage treatment plant or dam.
7. Obtaining the review assistance of Ecology where complex shoreline management issues are involved such as for diking projects associated with flood hazard management.
8. CUPs also typically involve a local public hearing requirement (instead of local administrative approval) insuring appropriate public involvement for such proposals. CUPs are also useful for uses that typically involve some complexity and uncertainty as to what shoreline benefits and impacts can be

anticipated (i.e. mixed-use development). Uses and activities that can't be "pigeon-holed" with certainty as to their impacts should be scrutinized as CUPs on a case-by-case basis.

Classifying Submerged Lands through Aquatic Environments

Preparing environment regulations for water bodies has been problematic for several reasons. Extending environment designations waterward from irregular shorelines often leads to geometric inconsistencies, with portions of the water area falling within several designations (see Figure 6-5). An exception to this is predesignated legal boundaries extending into the water such as jurisdictional boundaries between a City and a County or cases when a jurisdiction's boundary ends at the OHWM.

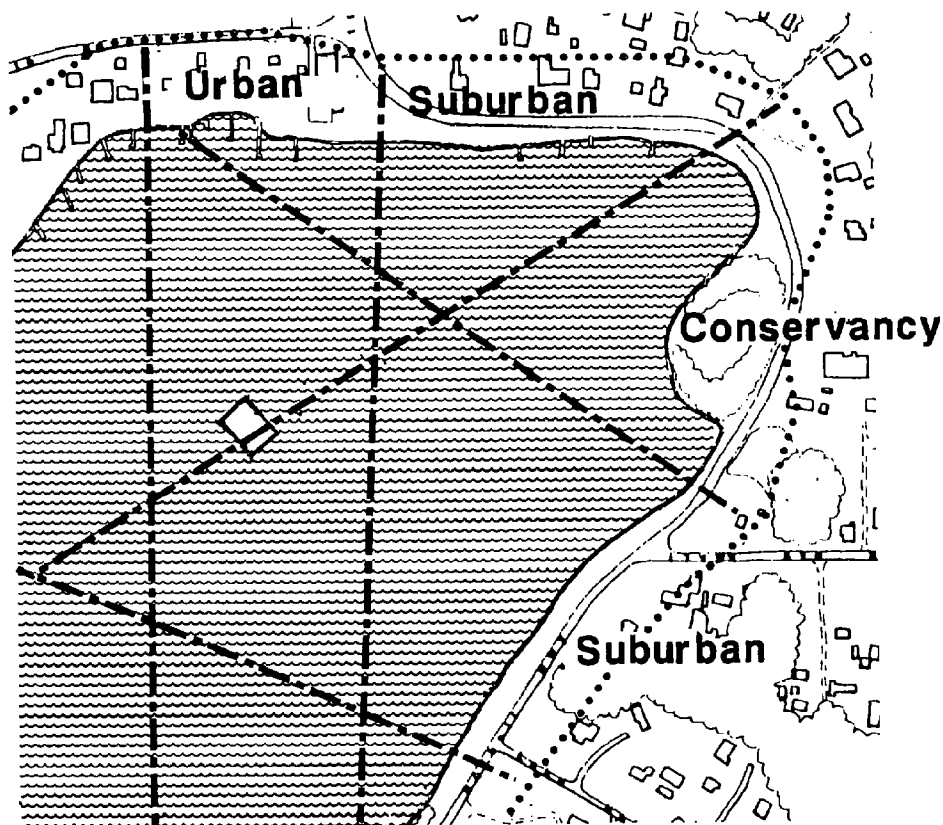


Figure 6-5. Over-water designations based on extension of upland environments can lead to environment designation inconsistencies.

Several jurisdictions have developed an Aquatic environment designation to address management issues specific to offshore areas. Such a designation can help resolve the inherent problems associated with applying land-based designation criteria and management policies to water bodies and uses. The Aquatic environment also provides a cleaner conceptual framework for protecting aquatic resources and marshes, bogs and swamps by eliminating the tendency to think of them as extensions of the uplands and therefore assuming that upland uses should extend freely into these areas. Aquaculture, wetland protection and navigation concerns for instance, can thus be handled more effectively with an Aquatic designation than by an extension of upland environments.

The major limitation of this approach is that it does not explicitly recognize the interaction of upland and offshore uses: upland uses have a bearing on what types of aquatic uses are appropriate and vice versa. For example, a large scale residential subdivision with docks, swimming beaches and substantial boating activity might provide the reason to limit the scale of offshore aquaculture facilities. Alternatively, extensive aquaculture development and/or a biologically productive area might be a prime reason to restrict adjacent uses. Regulations for the Aquatic environment ideally address the interface between land and water uses. Such policies should also recognize that an activity's distance offshore is a factor in determining its impacts on, and conflicts with, upland uses. Thus, establishing an aquatic environment requires some method to differentiate between different portions of the water body in order to regulate uses and assure compatibility between aquatic and upland uses.

The recommended method to deal with these problems on coastal and lacustrine shorelines is to establish an aquatic environment designation for all submerged lands waterward of the ordinary high water mark (OHWM). Special environmental protection regulations can then be applied specifically to all submerged lands and water areas. Uses and activities that depend on contiguous access from the shoreline such as marinas, docks, outfalls, etc., **should be permitted only if the use or activity is also permitted in the nearest adjacent upland environment. If the permit requirements vary between the aquatic environment and nearest adjacent upland environment, (for example, conditional use versus permitted outright) the more restrictive requirements shall apply.** The provisions of over-water construction must then be stated in the regulations for upland environment designations. For example, in Figure 6-6, the dock shown would be permitted only if docks are permitted in the urban environment. The dock's permitted location is fixed between the two dashed lines because that is the section of water area that is closest to the uplands designated "urban." Of course, many shorelines possess unusual geometry where boundaries limiting over-water construction will require clarification. In most cases this can be done with exceptions to the general principal noted above (see Figure 6-7).

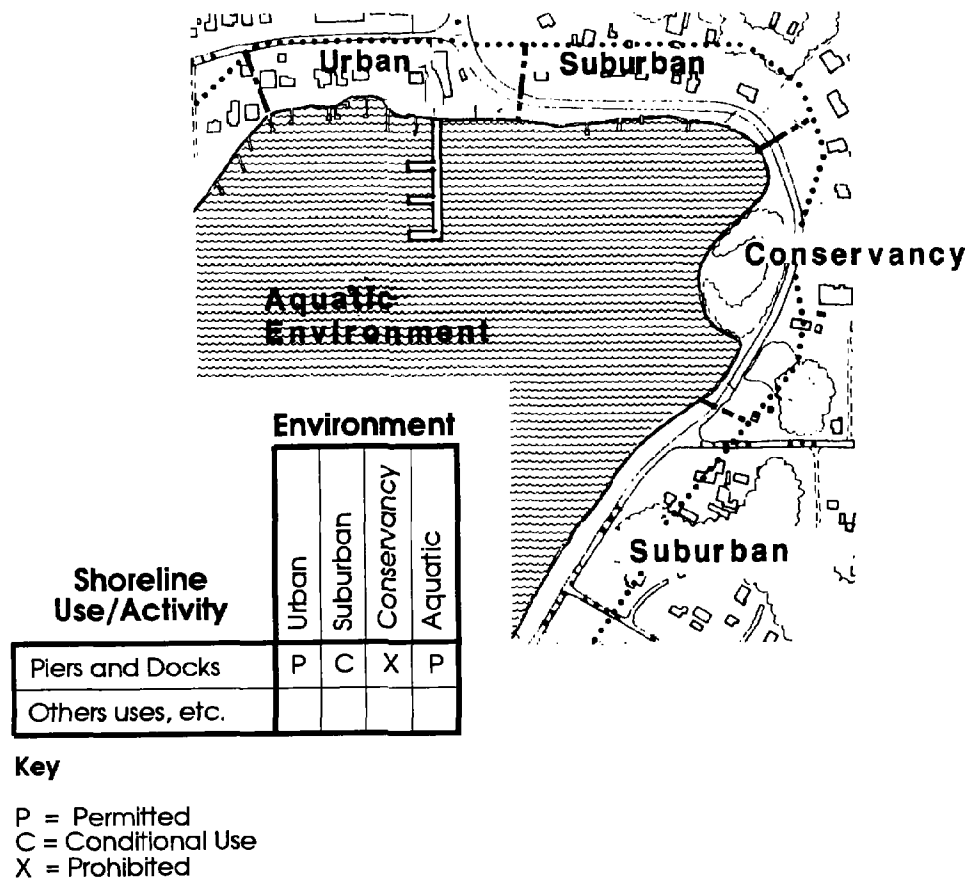


Figure 6-6. Over-water use (dock) regulations tied to nearest adjacent upland environment. In this example, the dock is permitted because it is permitted in both the Aquatic environment and the Urban environment.

The location of uses and activities that do not require contiguous contact with the shoreline such as aquaculture, dredging, filling or offshore moorage are better controlled through regulations that are not tied to the upland environment. This can be done by setting use or activity regulations for the specific uses and activities or through aquatic environment regulations. Some provisions that exemplify this approach are listed below. Depending upon local circumstances, multiple aquatic environments may be desirable to recognize diverse aquatic resources (see Figure 6-7).

1. Aquaculture activities shall not occur within xxx' of a shoreline in the Natural, Conservancy, or Urban environments and require a conditional use permit (see Figure 6-8).

2. Dredging shall not take place in significant marine habitat areas identified during the environmental assessment for the project. (Significant habitat areas as defined by the City/County).
3. Uses in the aquatic environment shall not block navigation channels or restrict access to sections of the shoreline.

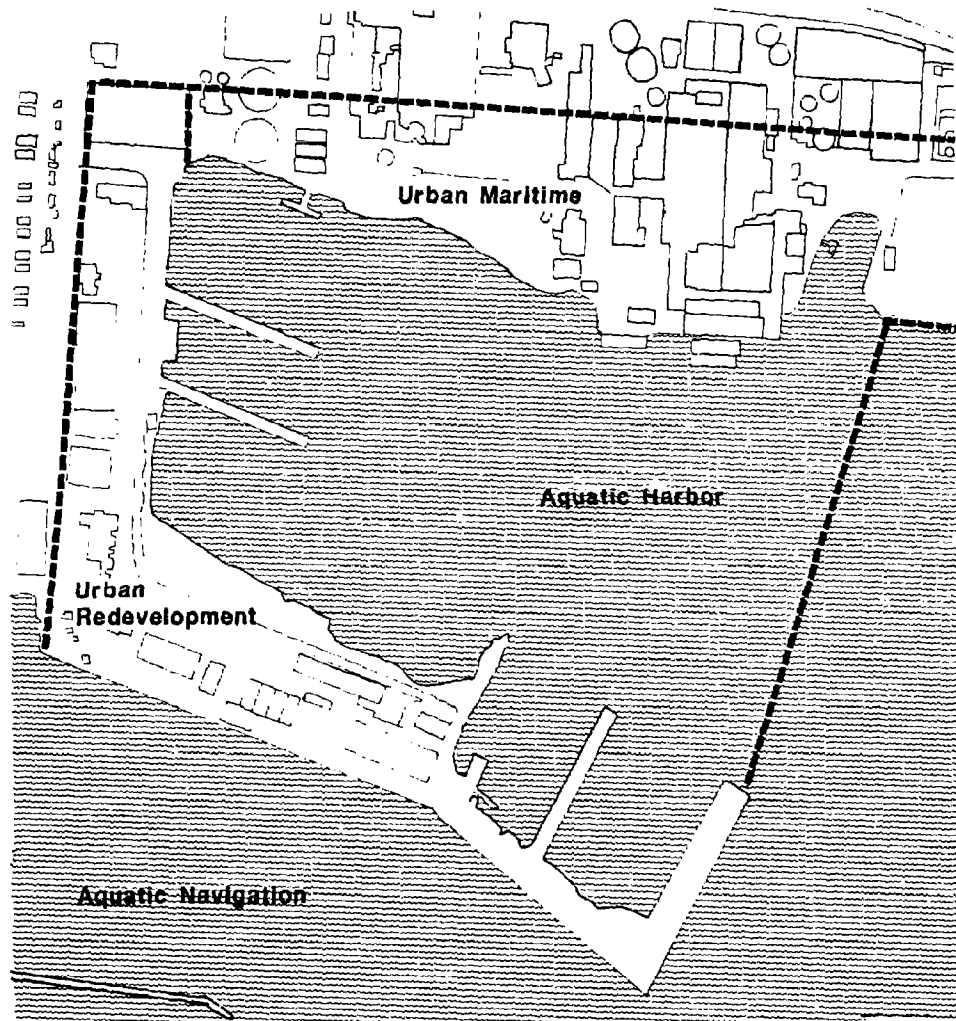
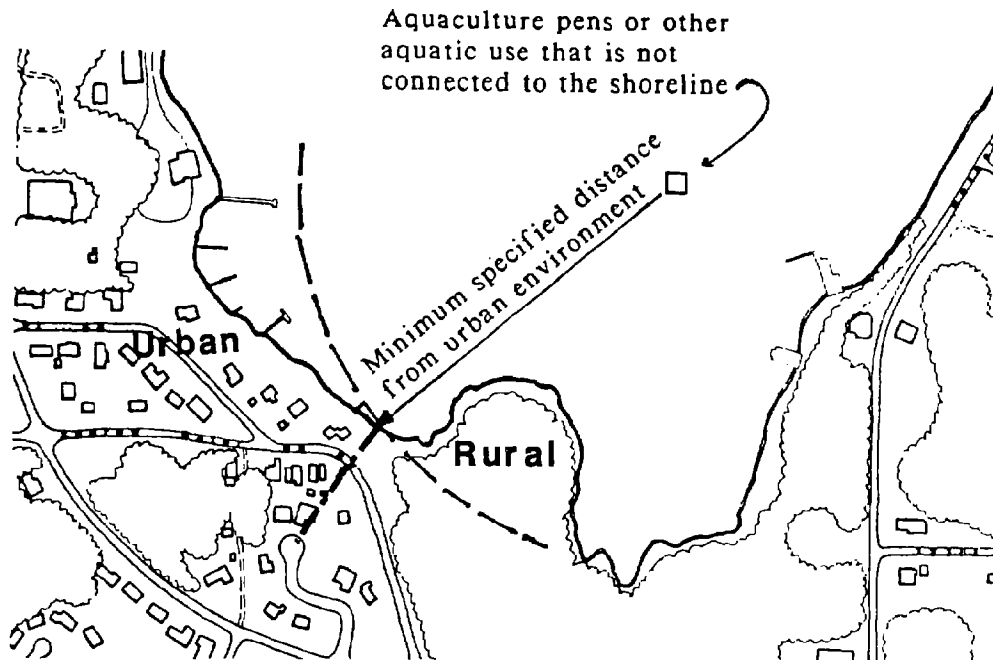


Figure 6-7. Using more than one aquatic environment.



In this case, the regulation sets a minimum distance between aquaculture pens and urban, conservancy and natural environments but does not conflict with rural environments

Figure 6-8. Setting minimum distances to shoreline environments from specified aquatic uses.

Except under unusual circumstances applying aquatic environments to rivers is not necessary since in-water activities are not typically as intensive (as say marinas, ports or aquaculture) and not so closely tied to upland based uses. This is particularly true where a parallel environment designation is applied along the river that emphasizes protection and management of riparian vegetation.

Parallel Environments

Traditional environment designation systems slice the shoreline into perpendicular segments (Figure 6-9). This allows the development of regulations to adapt to different environmental conditions and development opportunities in the individual shoreline segments. A second environment designation technique supplementing the standard segmental approach is to divide the shoreline in a linear fashion, creating "parallel" environments as

illustrated by Figure 6-10. Parallel environments can establish a "win-win" situation, acting to protect the immediate riparian corridor while at the same time allowing appropriate development opportunities on the upland side of the shoreline jurisdiction. Parallel environments, so named because their boundaries run roughly parallel to the shoreline are useful for many purposes, including:

1. Creating a riparian corridor environment along rivers to protect fragile riverbanks (i.e. bluffs) and vegetation.
2. Setting different use requirements for land that is adjacent to the shoreline and uplands which are separated from the shoreline by a road, railroad, dike or other barrier.
3. In urban settings, formulating mixed-use provisions that give preference to water-dependent uses on the land near the shoreline.
4. Retaining the natural character of lake or marine shorelines while allowing more intensive development of upland areas.

Parallel environment techniques are discussed in Chapter 14 of this *Handbook*.



Figure 6-9. Typical Environment Designations

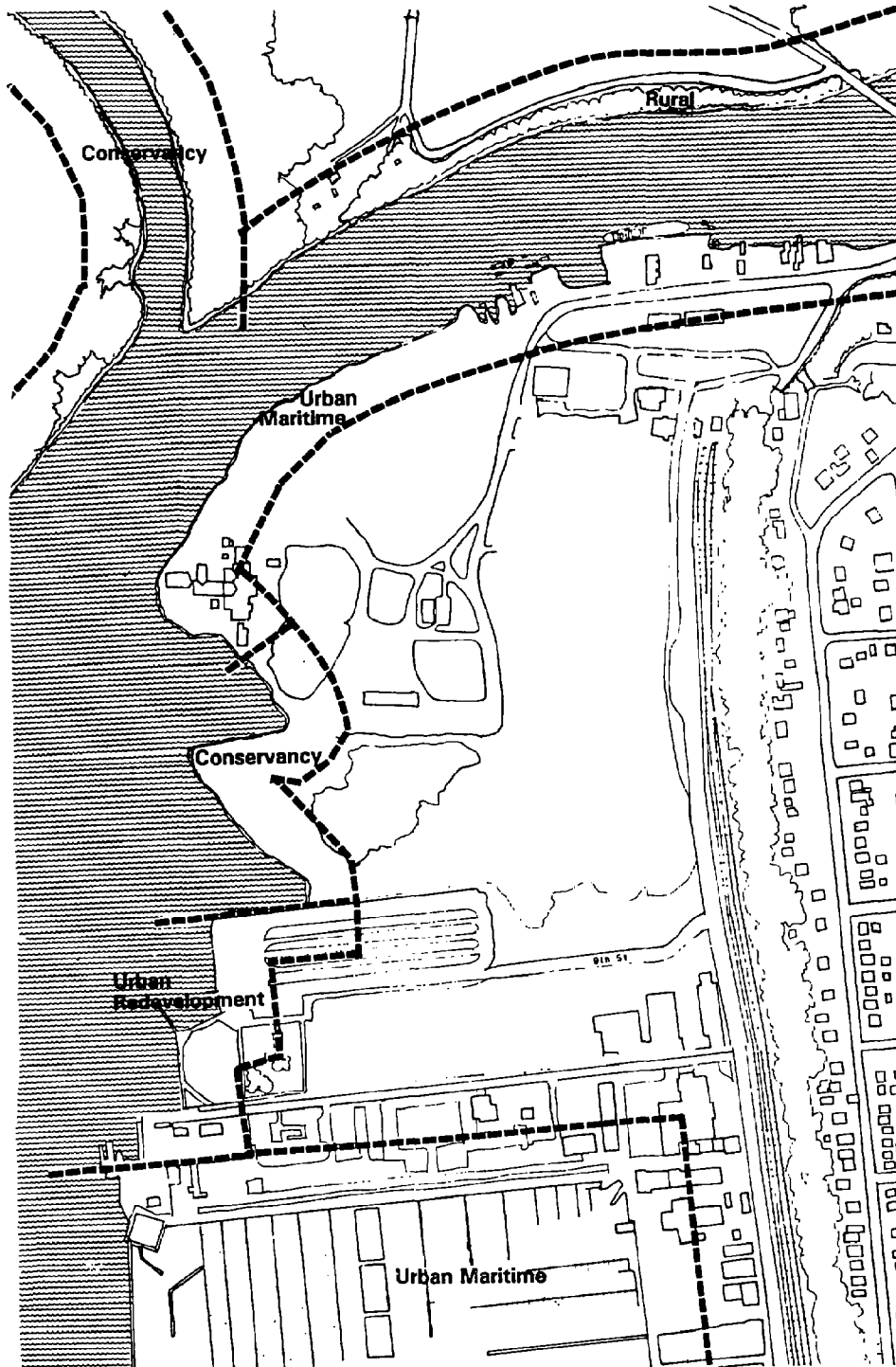
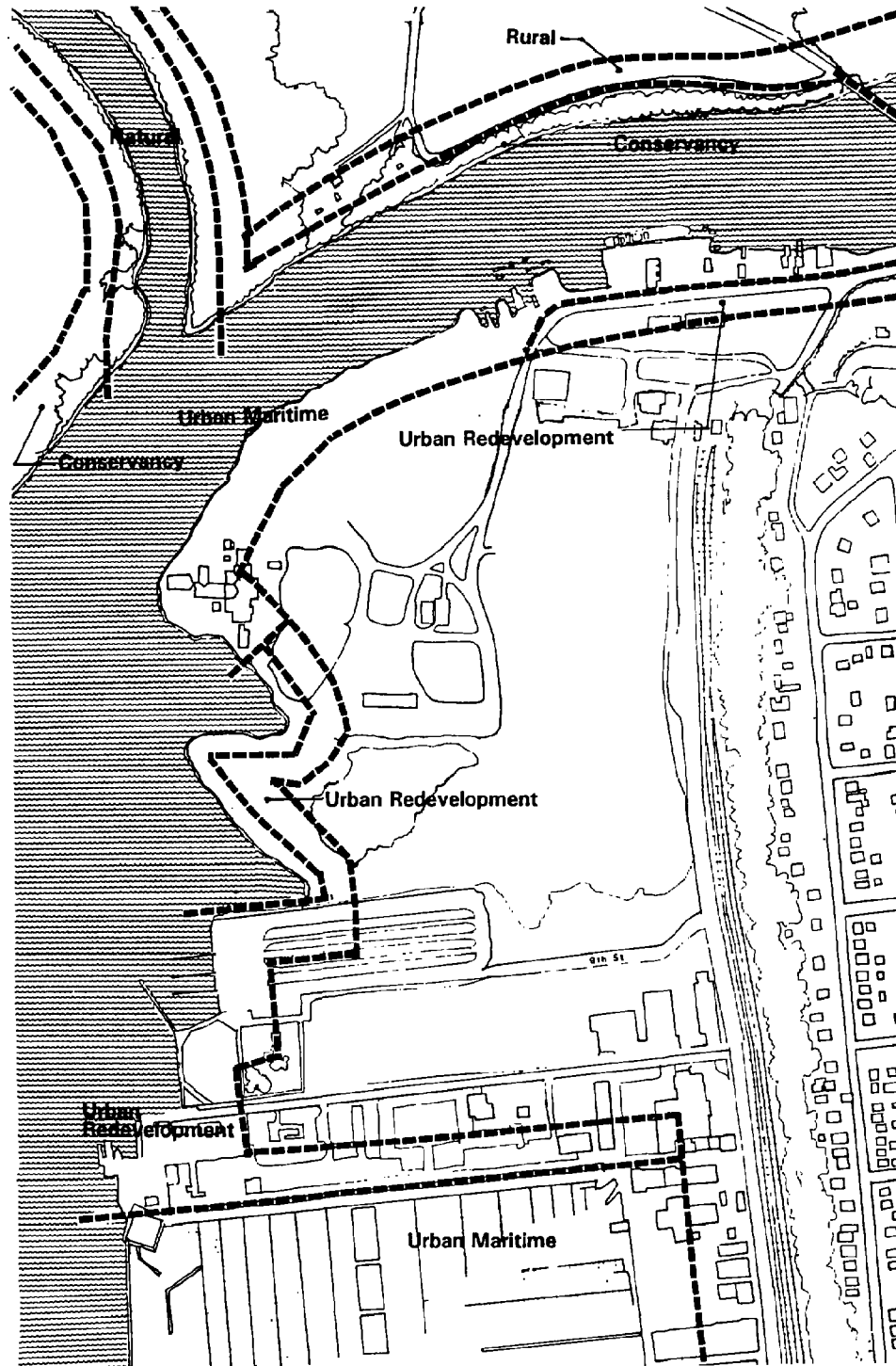
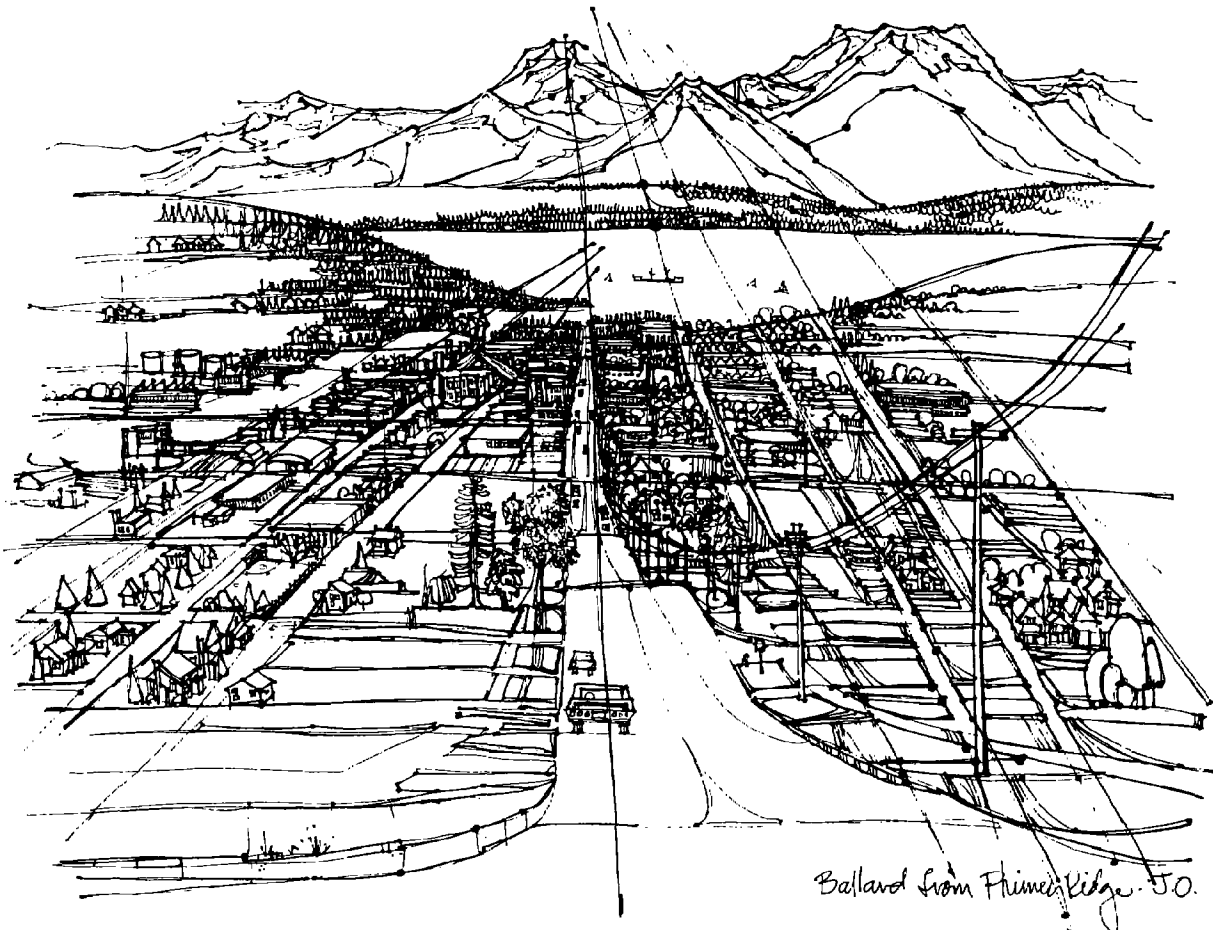


Figure 6-10. Use of parallel environments to achieve better resource protection and redevelopment opportunities.



Sample Environment Designation Provisions

Following are sample provisions relating to six common environment designations. Each environment begins with a statement of purpose, followed by a list of designation criteria used to apply the environment designation on the shoreline. Management policies are later provided as the basis for determining which uses are allowed in each shoreline environment and for setting site development standards.



Urban Environment

Purpose

The Urban environment is an area of high-intensity land use including residential, commercial and industrial development. The purpose of this environment is to ensure optimum utilization of shorelines which are either presently urbanized or planned for urbanization. Development in urban areas should be managed so that it enhances and maintains the shorelines for a variety of urban uses, with priority given to water-dependent, water-related and water-enjoyment uses.

Designation Criteria

Areas to be designated Urban should meet one or more of the following criteria.

1. Shoreline used or designated for high-intensity commercial, industrial or recreational use or for multi-family residential development;
2. Shorelines of lower intensity use, where surrounding land use is urban and urban services are available;
3. Shorelines used for water-oriented and port activities; and
4. Shorelines without biophysical limitations to development such as floodplains, steep slopes, slide hazard areas, marshes, bogs or swamps, and/or sensitive areas.

Management Policies

1. Because shorelines are a finite resource and because urban use tends to preclude other shoreline uses, emphasis should be given to directing new development into already developed areas consistent with this master program.
2. Full utilization of existing urban areas should be achieved before further expansion is allowed.
3. Reasonable long range projections of regional economic need should guide the amount of shoreline designated Urban.

4. Priority should be given to "water-dependent", "water-related" and "water-enjoyment" uses over other uses. Uses which derive no benefit from a water location (e.g. non-water-oriented uses) should be discouraged or prohibited.
5. Existing non-water-oriented commercial and industrial uses should be encouraged to relocate to nonwaterfront property.
6. Visual and physical public access should be required. Where possible, industrial and commercial facilities should be designed to permit pedestrian waterfront activities. Planning for the acquisition of land for permanent public access to the water in the Urban environment should be encouraged and implemented.
7. Aesthetic considerations should be actively promoted by means such as sign control regulations, appropriate development siting, screening and architectural standards, planned unit developments and maintenance of natural vegetative buffers.
8. In order to make maximum use of the available shoreline resource and to accommodate future water-oriented uses, the redevelopment and renewal of substandard, degraded or obsolete urban shoreline areas should be encouraged.
9. Developments within the Urban environment should be compatible with uses and activities in adjacent (including aquatic) environments.



Notes to Master Programmers

Urban Area Subcategories

Many jurisdictions have found the Urban environment to be too general to address the wide range of uses and considerations affecting urban waterfronts. The Urban designation allows so many uses that it does not provide much guidance for development. Some jurisdictions have tailored the Urban environment to their shoreline by creating special subcategories. If more than one urban designation is established allowing residential development, appropriate housing densities for each environment should be set. Following are descriptions of several approaches commonly used in designating Urban subcategories.

1. General Urban vs. Urban Residential

One approach is to differentiate primarily residential areas in the Urban environment areas from urban areas with extensive commercial and industrial development. Development controls and requirements are then

tailored to the special needs of residential areas vs. commercial-industrial waterfronts.

2. *Subcategories for Specific Geographic Areas*

Another approach used in some jurisdictions is to develop urban subcategories for specific portions of the shoreline with varying physical or development characteristics. Seattle's Master Program uses this approach, for example, to differentiate Lake Union and the Central Waterfront from other "Urban Stable" shorelines. For Lake Union, greater emphasis is placed on preserving the mixed-use character and restoring blighted areas, while the central Waterfront emphasizes promoting tourist activity and preserving the historic maritime heritage.

3. *General Urban Uses vs. Water-dependent Commercial and Industrial Uses*

Special subcategories may be established to differentiate areas with a full range of urban uses from areas reserved specifically for water-dependent uses. This approach ensures that the most valuable areas for water-dependent commercial and industrial uses will be reserved for, and not be consumed by, residential or other non-water-dependent/related development.

4. *Developed Urban vs. Future Urban*

Finally, master programs sometimes differentiate areas which are characterized by existing urban development from those which are designated for future urban expansion. Special considerations for existing developed areas may include: encouraging redevelopment or in-fill of blighted or under-utilized urban areas, and establishing flexible development standards keyed to the actual pattern and characteristics of existing development. In future urban areas, management policies may emphasize the need for compatibility with adjacent shorelines, and stricter requirements relating to utility infrastructure public access and preservation of significant natural and cultural features.

Suburban or Rural Residential Environment

Some jurisdictions establish an additional environment to bridge the gap between Urban and Rural environments. The Suburban or Rural Residential designation may be appropriate in areas with medium-density residential development — higher than that allowed in the Rural environment, but less intense than the range and scale of uses allowed in the Urban environment.

While this environment can address important local objectives, Suburban or Rural Residential environments must be used with caution. The Shoreline Management Act calls for the prevention of uncoordinated and piecemeal development of the state's shorelines. The Growth Management Act also establishes the goal of reducing sprawling and low-density development through appropriate conversion of undeveloped land.

When deciding whether to apply a Suburban or Rural Residential environment to a given shoreline, the long term consequences and costs of such action must be considered. Local governments should consider impacts on the shoreline environment, transportation, public facilities and services and the community's future vision and ability to manage and maintain development at planned densities.

In recent years, local governments have found that serving Suburban or Rural Residential areas can be costly to both local government and, ultimately, shoreline property owners. Suburban densities increase the cost of providing public facilities and services. Suburban shoreline areas may have adverse cumulative impacts on shoreline resources. These can include loss of habitat from extensive land clearing and alteration, proliferation of docks and boat houses and water pollution from stormwater runoff and failing septic tanks. In marine settings, water pollution is a serious problem because such developments are often in close proximity to commercial shellfish beds. In marine settings, suburban shorelines can also result in salt water intrusion due to excessive ground water withdrawals from individual wells. On lakes, water pollution can cause eutrophication with its negative impacts on swimming, boating and fishing.

Unless carefully managed, suburban or rural residential shorelines may experience infill and the development of secondary and tertiary lots which cumulatively impact the water body. This often requires the costly retrofitting of such areas with urban level services including water, sewer and stormwater facilities. These impacts may be mitigated by maintaining densities which do not require future expanded services, clustering development, providing for joint use docks, piers and swimming areas, or by designing lots and siting structures such that lots can be resubdivided at greater densities in the future when low cost urban services can be installed and maintained. This last strategy can only be used in areas which can sustain urban or near urban densities. Suburban environments should not be used to subvert the Growth Management Act's concurrency requirements by allowing the development of areas which will demand increased future services, but which are not planned for these needed services. An example follows:

Suburban Environment

Purpose

The application of the Suburban environment should be limited to areas intended to serve as a transition between urban and rural areas or intended to serve shoreline areas which will be developed at greater intensity than rural areas due to their suitability as significant recreational shorelines. This designation includes shoreline areas that presently support low- to medium-intensity uses, where existing densities permit space for small numbers of livestock, gardens or wood lots. The Suburban environment is designed to provide for permanent residential and recreational needs outside urban areas, where adequate facilities for sewage disposal and water supply can be provided. Suburban designations should not be applied to shoreline areas that satisfy the criteria for Urban environment designations.

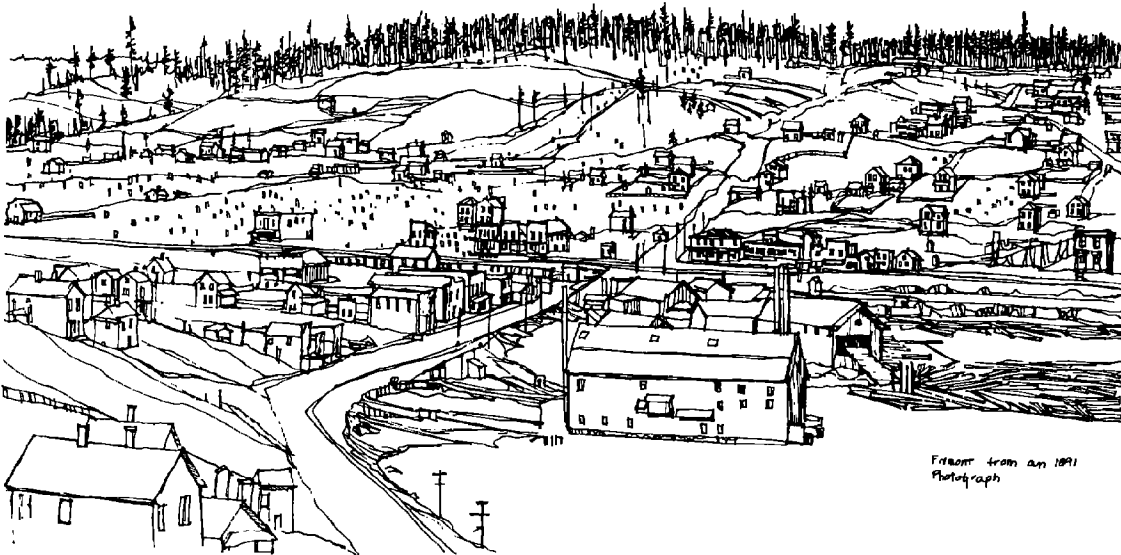
Designation Criteria

Areas to be designated Suburban should meet one or more of the following criteria:

1. Areas presently developed or platted for low-density residential uses;
2. Areas zoned for residential development with lot sizes ranging from 1/4 acre (with public sewer and water) to 5 acres. Also included are existing extensive small, single-lot shoreline developments;
3. Areas which could support and serve the needs of planned unit residential developments;
4. Areas which could serve as transition zones between urban and rural, conservancy or natural shoreline areas;
5. Areas having the physical ability to support low- to medium-density residential uses and associated commercial, recreational and public service facilities;
6. Areas which are appropriate for low- to medium- intensity recreational uses compatible with residential and/or small scale agricultural activities (grazing, small scale crops or gardens);
7. Areas which can provide and have the capabilities to support the necessary public services, utilities and access to accommodate low- to medium-density development. Sewage disposal and water supply facilities may be provided on an individual or community basis or could possibly be provided via future regional sewer or water systems.

Management Policies

1. Residential and recreational activities of medium intensity in appropriate shoreline locations are preferred over other land and resource consumptive development or uses.
2. Developments should be permitted only in those shoreline areas that are environmentally capable of supporting the proposed use in a manner which protects and enhances the shoreline environment and its resources.
3. Residential and other developments should be located, sited, designed and maintained to protect, enhance and be compatible with the subject shoreline environment.
4. Public access opportunities to shorelines and/or water bodies should be encouraged for single-family residences and required for other residential development including short subdivisions, subdivisions and planned unit developments.
5. Residential and recreational developments should provide shoreline areas for joint use community, or public open space.
6. Access, utilities and public services should be available and adequate to serve existing needs and/or planned future development.
7. Commercial development should be limited to uses that serve the surrounding residential, recreational or agricultural activities and should not conflict with these activities.
8. Developments within the suburban environment should be compatible with uses and activities in adjacent (including aquatic) environments.



Rural Environment

Purpose

The rural environment is intended to protect agricultural land from urban expansion, restrict intensive development along undeveloped shorelines, function as a buffer between urban areas and maintain open spaces and opportunities for recreational uses compatible with agricultural and forestry uses.

Designation Criteria

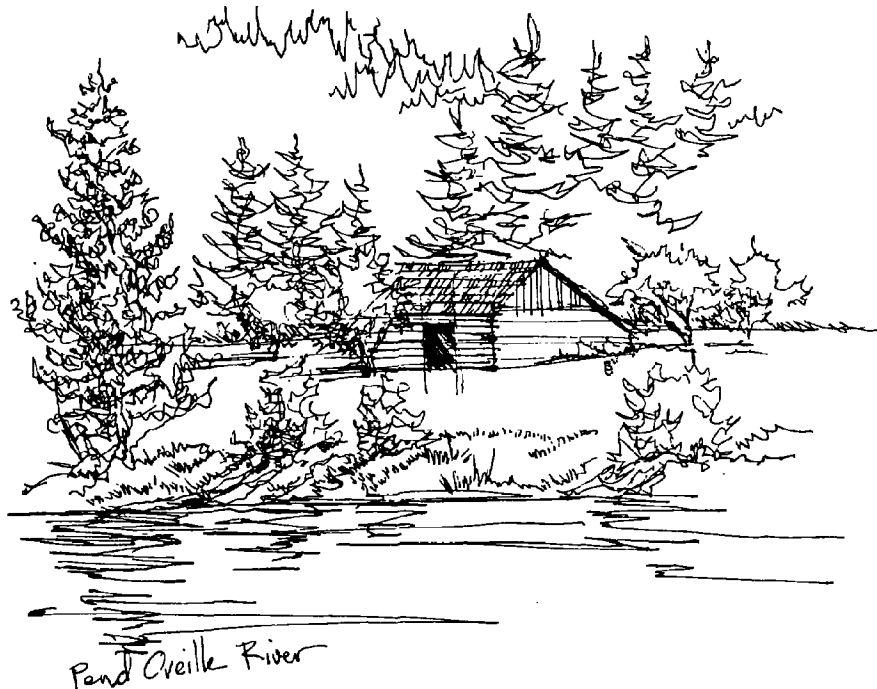
Areas to be designated rural should meet one or more of the following criteria:

1. Areas dominated by agricultural, forestry or low-intensity recreational uses;
2. Areas possessing a high capability of supporting agricultural uses and compatible forms of development;
3. Areas modified from their natural vegetative cover and surface drainage patterns but generally supporting low-density development;
4. Areas where residential development is or should be low-density because of important biological or physical values and functions or limitations, utility capabilities, access problems and/or potential incompatibility with other uses;
5. Areas of undeveloped land not appropriate for Natural or Conservancy environment designations and not planned for significant urban or suburban development;
6. Areas which serve as buffers between shoreline areas supporting greater and lesser intensities of use; and
7. Areas possessing valuable sand, gravel and mineral deposits.

Management Policies

1. Areas with a high capability of supporting agricultural or forestry uses should be protected from incompatible patterns of development and should be maintained for those uses.

2. New developments in a Rural environment should reflect the character of the surrounding area by limiting residential density, providing permanent open space and by maintaining adequate building setbacks from the water and wetlands.
3. Public and private recreational facilities and uses which are compatible with agriculture and forestry should be encouraged.
4. Intensive development should not be permitted.
5. Low-density residential development should be allowed when self-contained or supporting public facilities such as sewer, water and power are available and where allowing such development will not lead to higher densities in the future.
6. Sand, gravel and mineral extracting should be allowed in suitable areas not designated as prime agricultural land.
7. Medium- and high-density residential, and industrial and commercial uses (except agriculture, forestry and mining) should be prohibited.
8. Sensitive shorelines in the Rural environment should be protected through vegetation management, maintenance and erosion control regulations.
9. Developments within the Rural environment should be compatible with uses and activities in adjacent (including aquatic) environments.



Conservancy Environment

Purpose

The intent of the Conservancy environment is to protect, conserve and manage existing natural resources and valuable historic and cultural areas in order to achieve sustained resource utilization and provide recreational opportunities. The Conservancy environment is also intended to protect environmentally sensitive areas which are not suitable for intensive use, such as steep slopes, flood-prone areas, unstable bluffs, wetlands and areas which cannot provide adequate sewage disposal. Examples of uses that are appropriate in a Conservancy environment include dispersed outdoor recreation activities, timber harvesting on a sustained yield basis, passive agricultural uses such as pasture and range lands and other related low-intensity uses and activities.

Designation Criteria

Areas to be designated Conservancy should meet one or more of the following criteria:

1. Areas containing natural resources which lend themselves to management on a sustained-yield basis, such as commercial forest land and agricultural land;
2. Areas subject to severe biophysical limitations such as:
 - a. Steep slopes and landslide hazard areas;
 - b. Areas subject to severe erosion and feeder bluffs;
 - c. Unstable banks or bluffs;
 - d. Flood-prone areas;
 - e. Areas with soils that have poor drainage; and
 - f. Geohydraulic shoreforms (e.g. accretion beaches, point bars, spits, etc.).
3. Areas which play an important part in maintaining the regional ecological balance such as:

- a. Areas rich in quality and quantity of life forms;
 - b. Areas important to the maintenance of natural water quality and flow; and
 - c. Areas important to maintaining the food chain process (i.e. estuaries, wetlands, riparian corridors).
4. Areas free from extensive development;
 5. Areas where intensive development or use would interfere with natural processes and result in significant damage to other resources;
 6. Areas of high recreational value; and
 7. Areas with extensive or unique historic or cultural resources.

Management Policies

1. Preferred uses in the Conservancy environment are those which are non-consumptive of the physical and biological resources of the area and activities and uses of a nonpermanent nature which do not substantially degrade or alter the existing character of the area. Nonconsumptive uses are those uses which utilize resources on a sustained yield basis while minimally reducing opportunities for other existing and future uses of the resources of the area.
2. Activities and uses which would substantially degrade or permanently deplete the physical or biological resources of the area should be prohibited.
3. New development should be restricted to that which is compatible with the natural and biological limitations of the land and water and will not require extensive alteration of the land-water interface.
4. Development in the Conservancy environment should be designed to protect the shore process corridor and its operating systems.
5. Activities or uses which would strip the shoreline of vegetative cover, cause substantial erosion or sedimentation or adversely affect wildlife or aquatic life should be prohibited.

6. Aquacultural, agricultural and recreational activities which will not be detrimental to the shoreline character, scenic quality and natural systems such as littoral drift and geohydraulic processes should be encouraged. Residential development should be severely restricted to protect such uses and features.
7. Commercial and industrial uses other than low-intensity agricultural practices, commercial forestry and extraction of renewable sand, gravel and mineral resources should be prohibited.
8. Construction of structural shoreline stabilization and flood control works should be minimized. New developments should be designed to preclude the need for such works and should be compatible with shoreline characteristics and limitations.
9. Preservation of resources should have priority over public access recreation and development objectives whenever a conflict exists.
10. Developments within the Conservancy environment should be compatible with uses and activities in adjacent (including aquatic) environments.

long billed
curlew



American Avocet
Potholes WA

Natural Environment

Purpose

The Natural environment is intended to preserve and restore those natural resource systems existing relatively free of human influence and those shoreline areas possessing natural characteristics intolerant of human use or unique historical, cultural or educational features. These systems require severe restrictions on the intensities and types of uses permitted so as to maintain the integrity of the shoreline environment.

Designation Criteria

Areas to be designated Natural should meet one or more of the following criteria:

1. Wildlife Habitats
 - a. A shoreline area that provides food, water or cover and protection for any rare, endangered or diminishing species, or for significant populations of flora or fauna during critical stages of their life cycle; and
 - b. A seasonal haven for concentrations of native animals, fish or fowl, such as a migration route, breeding site, larval rearing grounds, or spawning site.
2. Areas of Scientific and Educational Value
 - a. Areas considered to best represent basic ecosystems and geologic types that are of particular scientific and educational interest;
 - b. Shoreline areas which best represent undisturbed natural areas; and
 - c. Shoreline areas with established histories of scientific research.
3. Areas of Scenic or Recreational Value
 - a. Those shoreline areas having an outstanding or unique scenic feature in their natural state;
 - b. Shoreline areas having a high value for wilderness experience; and

- c. Areas having a high value in their natural states for low-intensity recreational use.
4. Other Criteria
- a. Areas where human influence and development are minimal;
 - b. Areas which have been degraded but which are capable of easily being restored to a natural or near natural condition or are capable of natural regeneration if left undisturbed; and
 - c. Other unique natural features relatively intolerant of human use or development such as: marshes, bogs and swamps, Class I beaches, spits, white water rapids and waterfalls, virgin timber stands and wilderness areas.

Management Policies

1. Any use or development which would potentially degrade the natural value or significantly alter the natural character of the shoreline area should be severely restricted or prohibited.
2. Limited access should be permitted for scientific, historical, educational and low-intensity recreational purposes, provided that no significant adverse impact on the area will result.
3. Uses which are consumptive of physical, visual and biological resources should be prohibited.
4. Physical alterations should only be considered when they serve to protect a significant, unique or highly valued feature which might otherwise be degraded or destroyed.
5. Uses and activities permitted in locations adjacent to shorelines designated Natural should be compatible and should ensure that the integrity of the Natural environment will not be compromised.
6. Developments within the Natural environment should be compatible with uses and activities in adjacent (including aquatic) environments.

Aquatic Environment

Purpose

The purpose of this designation is to protect the unique characteristics of the aquatic environment by managing use activities and by assuring compatibility between upland and aquatic uses. It is designed to promote the wise use of the natural features and resources of water areas which are substantially different in character from those of adjoining uplands.

Note: The aquatic environment does not typically include associated marshes, bogs and swamps because the aquatic environment promotes water-dependent uses and activities that may conflict with protection of sensitive wetland areas. Such areas are better suited to a Natural or Conservancy environment designation.

Designation Criteria

1. Aquatic areas include:
 - a. All marine water areas seaward of the ordinary high water mark including estuarine channels, sloughs and associated marshes, bogs and swamps;
 - b. All lakes subject to this program waterward of the ordinary high water mark; and
 - c. All rivers and streams designated shorelines of the state.

Management Policies

1. Structures which are not water-dependent and uses which will substantially degrade the existing character of the area should be prohibited.
2. Developments within the Aquatic environment should be compatible with the adjoining upland environment.
3. Diverse public access opportunities to water bodies should be encouraged and developed and should be compatible with the existing shorelines and water body uses and environment.

4. Aquaculture practices should be encouraged in those tidelands, waters and beds most suitable for such use.
5. Multiple industries using the same tideland facilities shall be given preference over single-industry use.
6. In appropriate areas, fishing and recreational uses of the water should be protected against competing uses that would interfere with these activities.
7. All developments and activities using navigable waters or their beds should be located and designed to minimize interference with surface navigation, to minimize adverse visual impacts and to allow for the safe, unobstructed passage of fish and animals, particularly those whose life cycles are dependent on such migration.
8. Deep draft uses, if allowed, should not occur in areas requiring extensive initial or maintenance dredging.
9. Filling operations should be accomplished in such a manner as not to create a substantial environmental impact.
10. With exceptions for boat launching areas and other permitted water-dependent uses, motorized vehicular travel should be discouraged on all tideland areas.
11. Development of underwater pipelines and cables on first and second class tidelands will be discouraged except where adverse environmental impacts can be shown to be less than the impact of upland alternatives; when permitted, such facilities should include adequate provisions to insure against substantial or irrevocable damage to the environment.
12. Where the State owns the abutting uplands, priority will be given to joint development of the uplands and second class tidelands for public use.
13. Abandoned and neglected structures which cause adverse visual impacts or are a hazard to public health safety and welfare should be removed or restored to a usable condition consistent with the provisions of this program.

CHAPTER 7

Shoreline Use Policies & Regulations

Introduction

Background and Purpose

Shoreline use provisions are more detailed than the general shoreline policies and regulations. The use policies and regulations apply to specific shoreline use categories, providing a greater level of detail in addressing shoreline uses and their impacts. Use policies establish the shoreline management principles applicable to each use category and serve as a bridge between SMP goals in the elements section and the use regulations that follow. Use regulations set physical development and management standards for development of that type of use.

For planning purposes, it is recommended that master programs make the distinction between shoreline "uses" which are the ongoing functional result of development and shoreline modification "activities" which are construction elements (e.g. landfill, dredging, breakwaters, etc.) that change the physical character of the shoreline in preparation for or continuance of a use. For legal purposes both uses and activities are considered "development" (see Chapter 8).

Format and Content

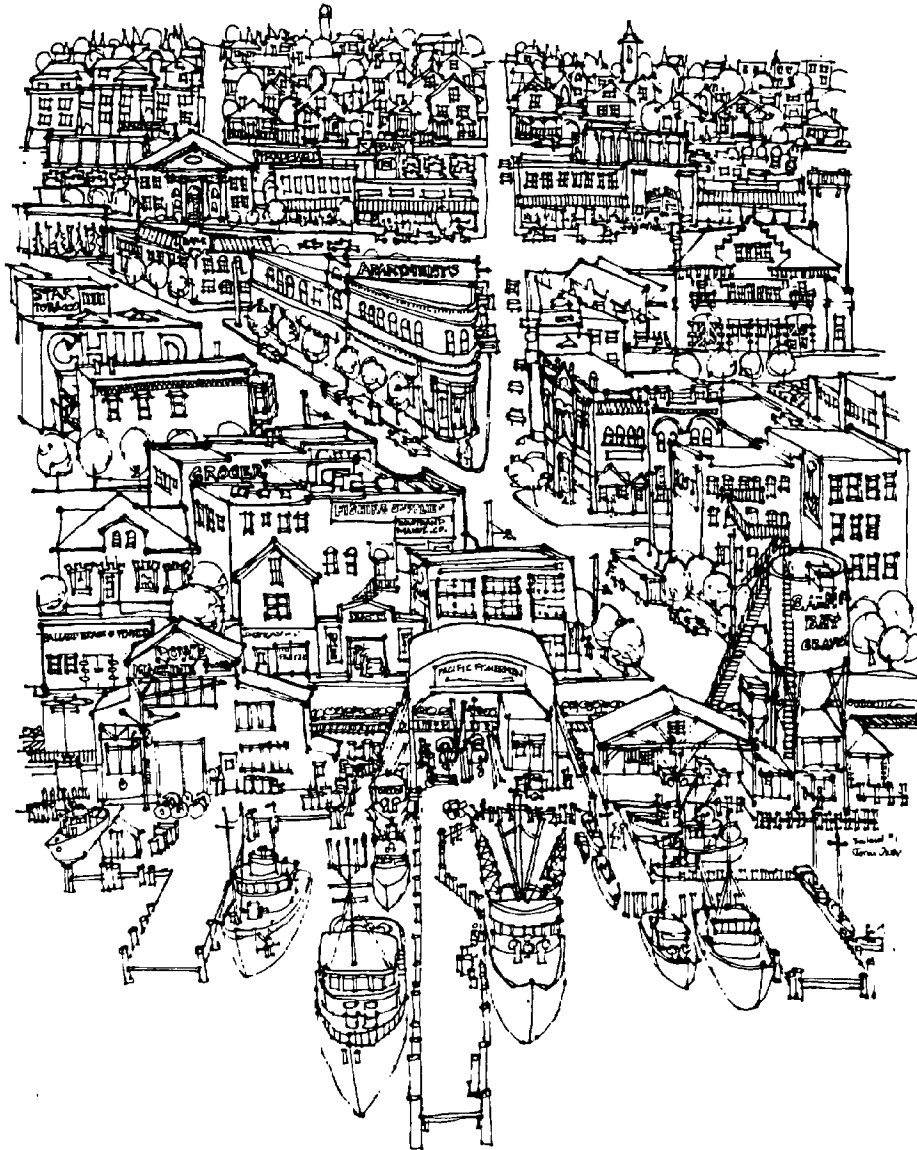
Provisions for shoreline uses are listed according to the individual use categories, which typically consist of the following:

1. Agriculture
2. Aquaculture
3. Boating Facilities (marinas, launch ramps, moorage, etc.)
4. Commercial Development (retail, restaurants, offices, etc.)
5. Flood Hazard Management
6. Forest Practices
7. Industry (manufacturing, shipbuilding, wholesale warehousing, cargo transfer, construction yards, etc.)
8. Instream Structures
9. Mining
10. Recreational Development - non boating (parks, trails, golf courses, etc.)
11. Residential Development
12. Transportation Facilities - roads, ferries, private air strips, helipads, etc.
13. Primary use utilities (wastewater treatment, electrical substations, etc.)

Regulations stating where the uses may be located (e.g. over water) on the site can be stated in this section if applicable. Also, the use section may include a listing of the environment designation where the use is permitted and special requirements that vary from environment to environment. However, in most cases, it will be advantageous to describe where specific uses are allowed as permitted uses, or as conditional uses, and where special requirements apply in a matrix in the environment designation section of the SMP (see Chapter 6).

Model Language

Sample language based on best practices standards for each shoreline use category is presented below. These sample provisions have been developed with input from Ecology and other state resource agencies as well as from a variety of master programs presently being implemented throughout the state. Local governments can modify the provisions as needed to fit with their particular needs.



Agriculture

Applicability

Agriculture refers to all methods of livestock, crop, vegetation and soil management. These include but are not necessarily limited to the related activities of tilling, fertilizer application, soil preparation and maintenance, harvesting and the control of weeds, plant diseases and insect pests. Also included are animal husbandry practices associated with the feeding, housing, maintenance and marketing of animals such as beef cattle, milk cows, breeding stock, horses and poultry and their by-products. Facilities contained within this category include, but are not limited to, storage, feed lots, fences and ditches. Excluded are agricultural processing industries. Uses and activities associated with agriculture which are identified as separate use activities in this program, such as Industry, Shoreline Stabilization and Flood Hazard Management, are subject to the regulations established for those uses in addition to the standards established in this section.



Notes to Master Programmers

The Shoreline Management Act exempts from the substantial development permit requirement the construction and practices normal or necessary for farming, irrigation and ranching activities, including agricultural service roads and utilities on wetlands, 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 wetlands by leveling or filling other than that which results from normal cultivation, is not considered normal or necessary farming or ranching activities (see RCW 90.58.030 and WAC 173-14). A feedlot is an enclosure or facility used or capable of being used for feeding livestock hay, grain, silage or other livestock feed, but does not include "land for growing crops or vegetation for livestock feeding and/or grazing, nor does it include normal livestock wintering operations." Finally, the Act exempts the 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 a part of an agricultural drainage or diking system.

Although these structures are exempt from obtaining a substantial development permit, compliance with all prohibitions, regulations and development standards of this chapter is still required, including conditional use and variance permit requirements.

Note: Diking, ditching or draining activities valued over \$2,500 and undertaken after 09/08/75 are not exempt. Such activities require a substantial development permit.

Policies

1. Valuable agricultural lands should be protected from incompatible and preemptive patterns of development so that they may remain in productive agricultural use.
2. The creation of new agricultural lands by diking, draining or filling tidelands, tidal marshes and associated marshes, bogs and swamps should be prohibited.
3. Farm management techniques, operations and control methods should protect the productivity of the land base by maintaining or improving soil quality and minimizing soil losses through erosion in accordance with applicable Soil Conservation Service conservation practice guidelines.
4. A vegetative buffer should be maintained between agricultural lands and water bodies or wetlands in order to reduce harmful bank erosion and resulting sedimentation, enhance water quality by slowing and filtering runoff and maintain habitat for fish and wildlife.
5. Animal feeding operations, retention and storage ponds, feed lot waste and manure storage should be located out of shoreline jurisdiction and constructed to prevent contamination of water bodies and degradation of the adjacent shoreline environment.
6. Appropriate farm management techniques should be utilized to prevent contamination of nearby water bodies and adverse effects on valuable plant, fish and animal life from fertilizer and pesticide use and application.
7. Cooperative arrangements should be encouraged between farmers and public recreation agencies to allow public use of shorelines where it does not conflict with agricultural operations.
8. The scenic beauty of natural shorelines as well as the historic value of many rural agricultural landscapes should be protected in agricultural development.
9. Dairy, poultry and feed lot operators should be encouraged to recycle animal wastes.

Regulations

1. Agricultural development shall conform to applicable state and federal policies and regulations including but not limited to the following:
 - a. Erosion control guidelines and standards of the Soil Conservation Service and U.S. Department of Agriculture;
 - b. Feedlot control guidelines of the U.S. Environmental Protection Agency; (see "Guidelines for Handling Livestock Wastes for Western Washington", distributed by the Washington State Department of Ecology in conjunction with the United States Environmental Protection Agency for the Cooperative Extension Service).
 - c. Washington Pesticide Application Act (Chapter 17.21 RCW);
 - d. Washington Pesticide Act (Chapter 15.57 RCW);
 - e. Intrastate Water Quality Standards (Chapter 372.64);
 - f. Interstate Water Quality Standards (Chapter 372.12);
 - g. State Board of Health Water Supply Rules and Regulations; and
 - h. Cooperative Extension Service guidelines cited in the SMA WAC's for agriculture.
2. Manure lagoons shall maintain a minimum 100-foot setback from any water body, river, creek, marsh, bog or swamp, and if located in the floodplain shall be constructed to an elevation 1 foot above the base flood level occurring at the site and, if possible, adequately covered.
3. Manure spreading shall be setback from the shoreline a sufficient distance, no less than 25 feet from the floodway boundary or OHWM whichever is further landward and otherwise conducted in a manner that prevents animal wastes from entering water bodies or wetlands adjacent to water bodies.
4. Confinement lots, feeding operations, lot wastes, stockpiles of manure solids and storage of noxious chemicals are prohibited in the floodway or within 200 feet landward of the ordinary high water mark, whichever is greater.
5. Within 100-year floodplain boundaries, all liquid manure storage shall be diked and, if feasible, adequately covered.

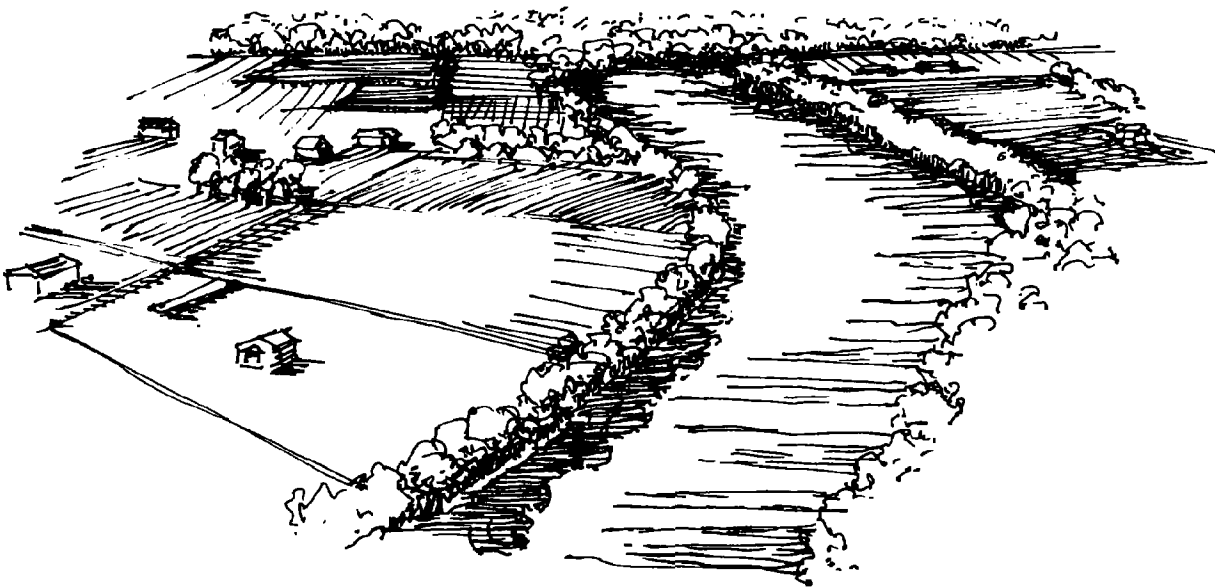
6. A buffer of natural or planted permanent native vegetation shall be maintained between areas used for crops or intensive grazing and adjacent waters and marshes, bogs and swamps. The plant composition and width of the buffer shall be based on site conditions, including type of vegetation, soils types, drainage patterns and slope, but shall not be less than 25 feet measured from the ordinary high water mark. The buffer shall be sufficient to retard surface runoff and reduce siltation and provide adequate riparian habitat. New or redeveloped cultivation or grazing sites shall submit a map indicating buffers.
7. Stream banks and water bodies shall be protected from damage due to concentration and overgrazing of livestock by providing the following:
 - a. Suitable bridges, culverts or ramps for stock crossing;
 - b. Ample supplies of clean fresh water in tanks on dry land for stock watering; and
 - c. Fencing or other grazing controls to prevent bank compaction, bank erosion or the overgrazing of or damage to buffer vegetation.
8. Agricultural practices shall prevent and control erosion of soils and bank materials within shoreline areas and minimize siltation, turbidity, pollution and other environmental degradation of watercourses and wetlands.
9. The burning of weed and grass growth along drainage ditches shall be allowed if conducted in accordance with the guidelines and regulations of appropriate agencies.
10. The application of agricultural chemicals shall prevent the direct runoff of chemical laden waters into water bodies or aquifer recharge areas. Adequate provision shall be made to minimize their entry into any body of water.
11. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in the master program.

Prohibited

The following uses are prohibited:

1. The disposal of farm wastes, chemicals, fertilizers and associated containers and equipment within shoreline jurisdiction is prohibited. However, organic wastes may be used for fertilization or soil improvement. The disposal of solid waste, including junk vehicles and equipment, debris and brush, is also prohibited within shoreline jurisdiction.

2. The application of agricultural fertilizers, including animal waste, herbicides and pesticides, shall be prohibited within 100 feet landward of OHWM.
3. Aerial spraying of fertilizers, chemical pesticides or herbicides over water bodies, wetlands, within a floodway and within 200 feet landward of OHWM is prohibited.



Aquaculture

Applicability

Aquaculture is the farming or culturing of food fish, shellfish or other aquatic plants and animals in lakes, streams, inlets, estuaries and other natural or artificial water bodies. Activities include the hatching, cultivating, planting, feeding, raising and harvesting of aquatic plants and animals and the maintenance and construction of necessary equipment, buildings and growing areas. Cultivation methods include but are not limited to fish pens, shellfish rafts, racks and long lines, seaweed floats and nets and the culture of clams and oysters on tidelands and subtidal areas. When consistent with control of pollution and prevention of damage to the environment, aquaculture activities are a preferred shoreline use (see WAC 173-16-060(2)).



Notes to Master Programmers

Potential locations for aquacultural enterprises are relatively restricted because of water quality, temperature, oxygen content, current and in marine waters, salinity requirements. The technology associated with some forms of aquaculture is still experimental and in its formative stages. Therefore the policies and regulations for aquaculture reflect both the necessity for some latitude in the development of this emerging economic water use as well as its potential impact on existing uses and natural systems.

For the purpose of this section, related uses such as wholesale and retail sales, processing and product storage facilities are not considered aquaculture practices. These uses are subject to the commercial use regulations in addition to the standards established in this section.

Policies

1. Areas with high aquacultural use potential should be identified and encouraged for aquacultural use and protected from degradation by other types of land and water uses.
2. Aquaculture activities should be given flexibility to experiment with new aquaculture techniques.

3. Consideration should be given to both the possible positive impacts and the possible detrimental impacts aquacultural development might have on the physical environment, on other existing and approved land and water uses, including navigation, tribal "usual and accustomed fishing grounds", public access and on the aesthetic qualities of the project area.
4. Aquaculture should not be allowed in the following areas:
 - a. Areas that have little natural potential for the type(s) of aquaculture under consideration.
 - b. Areas that have water quality problems that make the areas unsuitable for the type(s) of aquaculture under consideration.
 - c. Areas devoted to established uses of the aquatic environment with which the proposed aquacultural method(s) would substantially and materially conflict. Such uses would include but are not limited to navigation, moorage, sport or commercial fishing, log rafting, underwater utilities and active scientific research.
 - d. Areas where the design or placement of the facilities would substantially degrade the aesthetic qualities of the shoreline.
 - e. Areas where an aquacultural proposal will result in any significant adverse environmental impacts that cannot be eliminated or adequately mitigated through enforceable conditions of approval.
 - f. Areas near national wildlife refuges or critical habitats (as defined in Chapter 5) where the proposed activity will adversely affect the refuge/habitat use or value.
5. Preference should be given to those forms of aquaculture that involve lesser environmental and visual impacts. In general, projects that require no structures, submerged structures or intertidal structures should be given preference over those that involve substantial floating structures. Projects that require few land-based facilities should be given preference over those that require extensive facilities. Projects that involve little or no substrate modification should be given preference over those that involve substantial modification.
6. In instances where a choice of aquacultural methods are available, or where two or more incompatible aquacultural projects are proposed in the same area, the relative environmental impacts of each method or proposal should be considered. In general, preference should be given to methods listed in subsection (a), below, over those listed in subsection (b):

- a. Methods involving no submerged, intertidal or floating structures or facilities and minimal substrate modification; methods involving submerged subtidal structures or facilities; methods involving intertidal structures or facilities.
 - b. Methods involving floating structures or facilities; methods involving floating structures with artificial feeding and/or substantial substrate modification.
7. The countywide density of net-pen and raft culture operations should be limited as necessary to minimize cumulative environmental impacts.
 8. Experimental aquaculture projects should be limited in scale and should be approved for a limited (specified) period of time.
 9. New shoreline proposals in the vicinity of an experimental aquacultural project should be restricted or denied if they might compromise the monitoring and data collection required under the experimental project permit. All permitted aquacultural projects should be protected from new development that would be likely to damage or destroy them.

Regulations

1. Applicants shall include in their applications all information needed to conduct thorough evaluations of their aquaculture proposals, including but not limited to the following:
 - a. Species to be reared;
 - b. Aquaculture method(s);
 - c. Anticipated use of any feed, pesticides, herbicides, antibiotics or other substances and their predicted impacts;
 - d. Manpower/employment necessary for the project;
 - e. Harvest and processing location, method and timing;
 - f. Location and plans for any shoreside activities, including loading and unloading of the product and processing;
 - g. Method of waste management and disposal;
 - h. Environmental assessment, including best available background information on water quality, tidal variations, prevailing storm wind conditions, current flows, flushing rates, aquatic and benthic organisms

and probable impacts on water quality, biota, currents, littoral drift and any existing shoreline or water uses. Further baseline studies may be required depending upon the adequacy of available information, existing conditions, the nature of the proposal and probable adverse environmental impacts. Baseline monitoring shall be at the applicant's expense unless otherwise provided for;

- i. Method(s) of predator control;
 - j. Use of lights and noise generating equipment over water that minimizes interference with surrounding uses; and
 - k. Other pertinent information deemed necessary by the City/County.
2. The location of floating and submerged aquaculture structures shall not unduly restrict navigation to or along the shoreline or interfere with general navigation lanes and traffic or "usual and accustomed fishing locations". Floating structures shall remain shoreward of principal navigation channels. Other restrictions on the scale of aquaculture activities in order to protect navigational access may be necessary based on the size and shape of the affected water body.
 3. No aquatic organism shall be introduced into City/County salt or fresh waters without prior written approval of the Washington Department of Fisheries or the appropriate regulatory agency for the specific organism proposed for introduction. The required approval shall be submitted in writing to the City/County Planning Department prior to the introduction or the granting of the permit, whichever comes first.

Unless otherwise provided in the shoreline permit issued by the County, the repeated introduction of an approved organism in the same location shall require approval by the City/County only at the time the permit is issued. Introduction for purposes of this section shall mean the placing of any aquatic organism in any area within the waters of City/County regardless of whether it is a native or resident organism and regardless of whether it is being transferred from within or without the waters of the City/County.

4. Aquacultural structures and activities that are not water-dependent (e.g., warehouses for storage of products, parking lots) shall, be located inland of the ordinary high water mark, upland of water dependent portions of the project and shall minimize detrimental impacts to the shoreline.
5. Aquacultural structures and equipment shall be of sound construction and shall be so maintained. Abandoned or unsafe structures and equipment shall be removed or repaired promptly by the owner. Where any structure might constitute a potential hazard to the public in the future, the

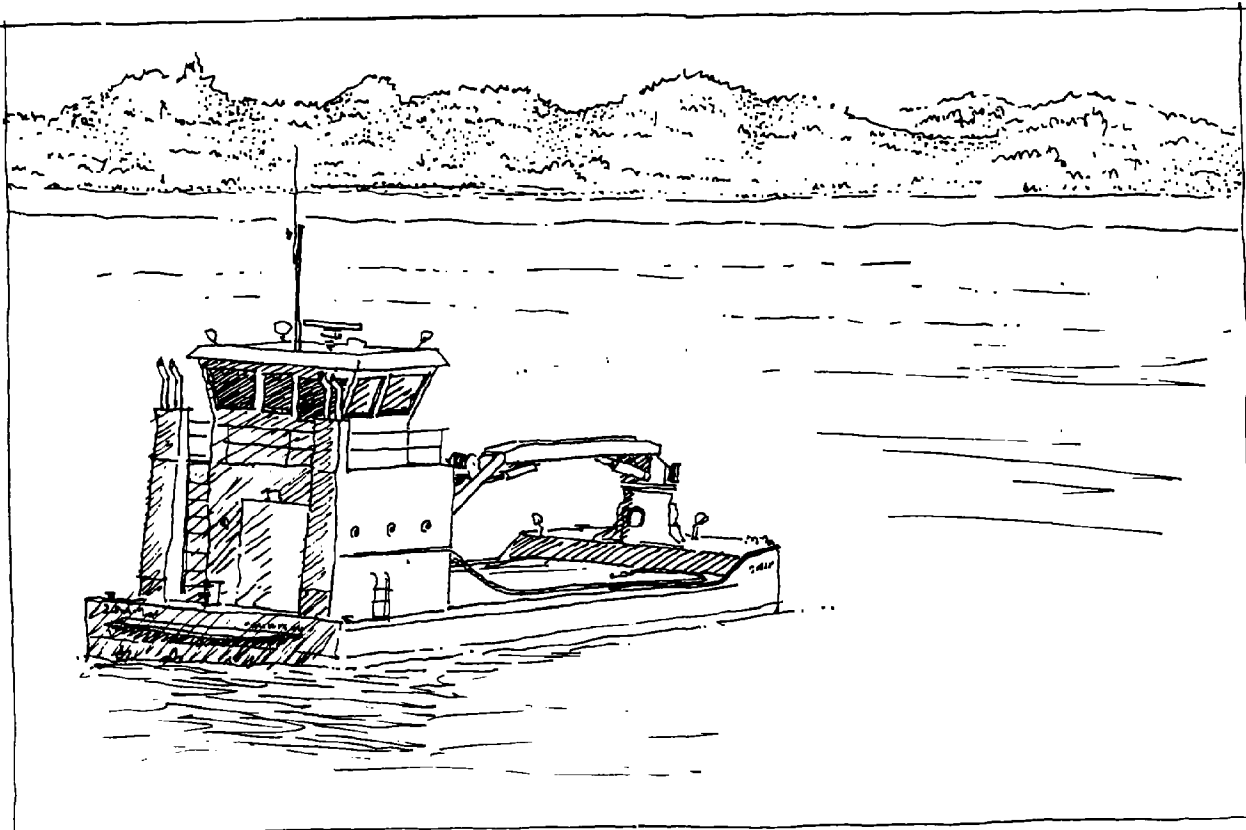
City/County shall require the posting of a bond commensurate with the cost of removal or repair. The City/County may abate an abandoned or unsafe structure, following notice to the owner, if the owner fails to respond in thirty days and may impose a lien on the related shoreline property or other assets in an amount equal to the cost of the abatement. Bonding requirements shall not duplicate requirements of other agencies.

6. Legally established aquacultural enterprises, including authorized experimental projects, shall be protected from incompatible uses which may seek to locate nearby. Demonstration of a high probability that such an adjacent use would result in damage to, or destruction of, such an aquacultural enterprise shall be grounds for the denial of that use.
7. Operational monitoring may be required if and to the extent that it is necessary to determine, ensure or confirm compliance with predicted or required performance. Such monitoring requirements shall be established as a condition of the permit and shall be conducted at the applicant's (operator's) expense.
8. No processing of any aquacultural product, except for the sorting or culling of the cultured organisms and the washing or removal of surface materials or organisms, shall occur in or over the water after harvest, unless specifically approved by permit. All other processing and processing facilities shall be located on land and, in addition to these provisions shall be governed by the policies and regulations of other applicable sections of this master program, in particular provisions addressing commercial and industrial uses.
9. Aquacultural wastes shall be disposed of in a manner that will ensure compliance with all applicable governmental waste disposal standards. No garbage, wastes or debris shall be allowed to accumulate at the site of any aquaculture operation.
10. Aquacultural uses and facilities shall be located at least 600 feet from any national wildlife refuge lands and/or habitats of special significance for birds or mammals (as identified in recognized reference documents such as the Washington State Department of Ecology publication, "Washington Coastal Areas of Major Biological Significance," and/or as determined by the Washington State Department of Wildlife); provided that fish net-pens and projects involving substantial substrate modification shall be located 1,500 feet or more from such areas; provided further that lesser distances may be authorized by permit other than a variance if it is demonstrated by the applicant that the wildlife resource will be protected and if the change is supported by the reviewing resource agencies. Greater distances also may be required if supported by the reviewing resource agencies.

11. Hatchery and other aquaculture operations shall be required to maintain a minimum 50-foot wide vegetated buffer zone along the affected streamway, PROVIDED that clearing of vegetation shall be permitted for essential water access points.
12. Onshore support structures shall meet the height and setback standards established (see Chapter 6, Figure 6-3 Use-related Development Standards) except that reduced setbacks may be permitted where necessary for the operation of hatcheries and rearing ponds.
13. Predator control shall not involve the killing or abusive harassment of birds or mammals. Approved controls include but are not limited to double netting for seals, overhead netting for birds and 3-foot high fencing or netting for otters. The use of other nonlethal, nonabusive predator control measures shall be contingent upon receipt of written approval from the National Marine Fisheries Service and/or the U.S. Fish and Wildlife Service, as required.
14. Permit applications shall identify all pesticides, herbicides, antibiotics, vaccines, growth stimulants, anti-fouling agents or other chemicals that the applicant anticipates using. No such materials shall be used until approval is obtained from all appropriate state and federal agencies, including but not limited to the U.S. Food and Drug Administration, the Washington State Departments of Ecology, Fisheries and Agriculture, as required, and proof thereof is submitted to the City/County. When feasible, the cleaning of nets and other apparatus shall be accomplished by air drying, spray washing or hand washing, rather than chemical treatment and application.
15. For aquacultural projects using over-water structures, storage of necessary tools and apparatus seaward of the ordinary high water mark shall be limited to containers of not more than 3 feet in height, as measured from the surface of the raft or dock; provided that in locations where the visual impact of the proposed aquaculture structures will be minimal, the City/County based upon written findings and without requiring a variance may authorize storage containers of greater height. In such cases, the burden of proof shall be on the applicant. Materials which are not necessary for the immediate and regular operation of the facility shall not be stored seaward of the ordinary high water mark.
16. Proposals for mechanical clam harvesting or other activities that involve substantial substrate modification through dredging, trenching, digging or adverse sedimentation shall not be allowed in existing kelp beds or in beds of native eel grass (*Zostera marina*) containing more than 2 turions per 1/4 square meter in winter or 3 turions per 1/4 square meter in summer.

17. Fish net-pens shall meet, as a minimum, state-approved administrative guidelines for the management of net-pen cultures; where any conflict in requirements arises, the more stringent requirement shall prevail.
18. Fish net-pens shall not occupy more than 2 surface acres of water area, excluding booming and anchoring requirements.
19. Aquacultural proposals that include net pens or rafts shall not be located closer than one nautical mile to any other aquacultural facility that includes net pens or rafts, provided that a lesser distance may be authorized by the City/County if the applicant can demonstrate to the City/County satisfaction that the navigational, environmental and aesthetic concerns expressed in this master program will be protected. If a lesser distance is requested, the burden of proof shall be on the applicant to demonstrate that the cumulative impacts of the existing and proposed operations would not be contrary to the policies and regulations of this master program.
20. Except as provided in Regulation #18 above, aquacultural developments approved on an experimental basis shall not exceed 5 acres in area (except anchorage for floating systems) and five years in duration; provided that the City/County may issue a new permit to continue an experimental project as many times as is deemed necessary and appropriate.
21. Where necessary to preserve the integrity of any research data collected, aquaculture developments which would be likely to jeopardize an experimental aquaculture development shall not be allowed within the same bay, harbor, or cove with any such aquaculture development (or within 1 mile of such a development if the water body is larger than 1 square mile in area) until after the experimental project is granted nonexperimental status or terminated.
22. For floating culture facilities the City/County shall reserve the right to require a visual impact analysis consisting of information comparable to that found in the Department of Ecology's "Aquacultural Siting Study" 1986. Such analysis may be prepared by the applicant, without professional assistance, provided that it is competently prepared.
23. Any shoreline designated a "shoreline of state-wide significance" with aquacultural activities proposed in that area shall be first subject to the policies and priorities contained in Section XXX, shorelines of state-wide significance, and second to the policies and regulations contained in this section.

24. All aquaculture facilities and accessory uses must conform to the General Provisions (see Chapter 5) and Environment Designation Provisions (see Chapter 6), including setback, height and open space standards, stated in this master program.



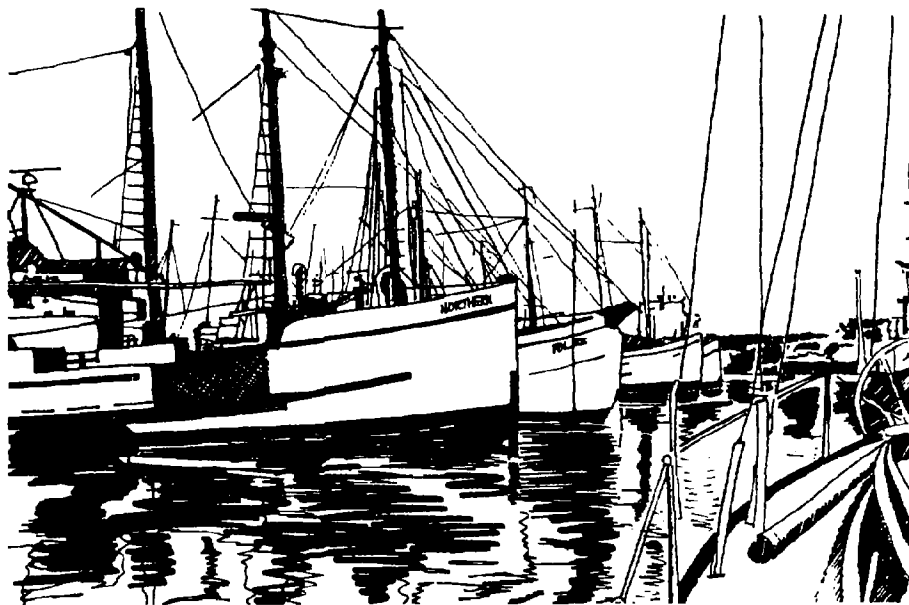
Oyster Boat

Boating Facilities

Applicability

Boating facilities include marinas, both backshore and foreshore, dry storage and wet-moorage types, boat launch ramps, covered moorage, boat houses, mooring buoys and marine travel lifts (refer to Glossary for definitions). See also Chapter 8, Shoreline Modification Activity Policies and Regulations, "Piers and Docks" for nonmarina associated boating facility provisions.

A marina is a water-dependent use that consists of a system of piers, buoys, or floats to provide moorage for ten or more boats. For regulatory purposes, large community moorage facilities, yacht club facilities and camp or resort moorage areas would also be reviewed as marinas. Boat launch facilities and supplies and services for small commercial and/or pleasure craft may be associated with marinas. **Backshore** marinas are located landward of the OHWM. There are two common types of backshore marinas, one with wet-moorage that is dredged out of the land to artificially create a basin; and the other, a dry moorage which has upland storage with a hoist, marine travel lift or ramp for water access. **Foreshore** marinas are located in the intertidal or offshore zone and may require breakwaters of open type construction (floating breakwater and/or open pile work) and/or solid type construction (bulkhead and landfill), depending on the location.



Accessory uses found in marinas may include fuel docks and storage, boating equipment sales and rental, repair services, public launching, bait and tackle shops, potable water, waste disposal, administration, parking, groceries and dry goods.

Uses and activities associated with boating facilities which are identified in this section as separate uses (i.e., Piers and Docks, Bulkheads, Breakwaters, Commercial Development, Industrial Development [ncluding ship and boat building and repair yards] Jetties and Groins, Dredging, Landfill, Utilities and Transportation Facilities) are subject to the regulations established for those uses in addition to the standards for boating facilities established in this section.



Notes to Master Programmers

Marinas affect wildlife, fish and shellfish habitats. The degree of impact depends on such factors as the type of construction and design, variety and number of boats using the facility and their density and operation characteristics. WAC 173-16-060-5(a) provides that "in locating marinas, special plans should be made to protect the fish and shellfish resources that may be affected by construction and operation of the facility." WAC 173-16 and its revisions point to the need for "best management practices" to control runoff and prevent pollution from marinas, fuel facilities and boatyards.

A growing problem for our state's waters is the increase in boater sewage. Since 1972, federal marine sanitation standards issued by the EPA have prohibited overboard discharge of untreated sewage wastes into navigable waters. The U.S. Coast Guard certifies marine sanitation devices, requiring the discharged effluent to have a fecal coliform bacteria count no greater than 1,000 organisms per 100 milliliters, and suspended solids no greater than 150 milligrams per liter. It is illegal to discharge untreated sewage anywhere in waters of Washington State. Presently there are moneys available for installing boat sewage disposal facilities from the Washington State Centennial Clean Water Fund, State Parks and Recreation Commission and IAC.

Another growing concern affecting state waters involves increased residential use in marinas and other water areas. Over-water residential uses are not considered preferred shoreline uses and are therefore discouraged. Shoreline Management Act Guidelines for Development of Master Programs, specifically WAC 173-16-060(8)(d), state that "Residential development over water should not be permitted." Accordingly, master programs should contain specific policies and regulations that effectively manage such uses. Clear definitions (see Glossary) of "houseboat", "liveaboard", "floating home", "vessel" and "boathouse" are needed to clarify the policies and regulations that do apply.

Although new over-water residential uses are strongly discouraged, there are some situations where existing floating homes and liveaboards represent an established historic use along the waterfront. In those limited circumstances where such uses are found to be appropriate, they must comply with policies and regulations contained in the local master program. (For regulations specific to floating homes, see "Regulations - Residential Uses" in this section and "Floating Homes - where permitted" in the Residential development section).

Policies

1. Boating facilities should be located, designed and operated to provide maximum feasible protection and enhancement of all forms of aquatic, littoral or terrestrial life including animals, fish, shellfish, birds and plants, their habitats and their migratory routes. To the extent possible and without undermining other considerations, marinas should be located in areas of low biologic productivity.
2. Boating facilities should be located and designed to minimize adverse effects upon, and to enhance if possible, beneficial shoreline features and processes including erosion, littoral transport and accretion shoreforms, as well as scarce and valuable shore features including riparian habitat and wetlands.
3. Areas which have been identified as hazardous due to storm tides, high winds or flooding, should not be considered as potential marina sites.
4. Embayments with poor flushing action should not be considered for marina sites.
5. Regional as well as local needs should be considered when determining the location of marinas and launch ramps, identifying potential ideal sites near high-use or potentially high-use areas.
6. Marinas should be located so as to minimize the consumption of limited shoreline resources by encouraging:
 - a. The expansion of existing marinas over the addition of new marina sites;
 - b. Marinas and launch ramps over the development of individual docking facilities for numerous private, noncommercial pleasure craft; and

- c. The use of boat launching ramps and dry storage of recreational boats as a favorable alternative to sheltered, year-round wet-moorage of watercraft.
7. Boating facilities should be located and designed so their structures and operations will be aesthetically compatible with the area visually affected, and will not unreasonably impair shoreline views.
8. New marina facilities should be designed to accommodate public access and enjoyment of the shoreline including provisions for walkways, view points, rest room facilities and other recreational uses according to the scale of the facility.
9. Foreshore marinas, wherever possible, should use open-type construction (floating breakwater and/or open pile work) to prevent degradation of fish and/or shellfish resources and habitat.
10. Installation and maintenance of accessible boat sewage disposal (pump-out) facilities should be required and available in convenient locations to all boaters.
11. Floating homes, houseboats and liveaboards should only be allowed in those limited circumstances where their environmental and use impacts can be substantially avoided.

Regulations -- General

1. Boating facility development and/or renovations shall comply with all other applicable state agency policies and regulations including, but not limited to: the Department of Fisheries criteria for the design of bulkheads, landfills and marinas; Federal Marine Sanitation standards (EPA 1972) requiring water quality certification from the U.S. Army Corps of Engineers (Section 10); U.S. Army Corps of Engineers dredging standards (Section 404); and state and federal standards for the storage of fuels and toxic materials.

Note: Ecology's Water Quality Program provides technical guidance governing the installation of waste disposal facilities at new or expanding marinas. Contact the Water Quality Program at your local Ecology regional office for a copy.

2. The City/County shall require and utilize the following information in its review of marina proposals:
 - a. Existing natural shoreline and backshore features and uses, bathymetric contours (1-foot increments);

- b. Geohydraulic processes and flushing characteristics, volume, rates and frequencies;
 - c. Biological resources and habitats for the backshore, foreshore and aquatic environments;
 - d. Area of surface waters appropriated and leased areas;
 - e. Site orientation; exposure to wind, waves, flooding or tidal/storm surges; type and extent of shore defense works or shoreline stabilization and flood protection necessary;
 - f. Impact upon existing and created demand for shoreline and water uses including public access and recreation and views;
 - g. The regional need for additional facilities; and
 - h. The design of the facilities, including sewage disposal, water quality controls, provisions for the prevention and control of fuel spillage and a landscaping plan.
3. Accessory uses at marinas or public launch ramps shall be limited to those which are water-dependent, water-related or water-enjoyment. Accessory uses shall be consistent in scale and intensity with the marina and/or launch ramp and surrounding uses.
 4. Shoreline permits for marinas shall be conditioned to require boater education addressing boater impacts on water quality and other shoreline resources as well as boater safety.
 5. All boating facilities and accessory uses must conform to the General Provisions (see Chapter 5) and Environment Designation Provisions (see Chapter 6), including setback, height and open space standards, stated in this master program.

Regulations -- Location

1. Marinas catering to a large regional demand for permanent moorage shall locate in heavily populated areas where shorelines are already developed.
2. When new sites are considered, sufficient evidence must be presented to show that existing marinas are inadequate and cannot be expanded to meet regional demand.

3. Deteriorated urban waterfront areas in need of restoration and where channel depths are such that commercial activity is no longer feasible shall be given priority consideration for potential marina sites.
4. Marinas shall be sited to prevent any restrictions in the use of commercial and recreational shellfish beds. The specific distance shall be determined in conjunction with the Washington State Department of Ecology and other agencies with expertise. Criteria for determining the specific distance may include:
 - a. the size and depth of the water body;
 - b. tidal flushing action in the project area;
 - c. size of the marina and projected intensity of use;
 - d. whether fuel will be handled or stored;
 - e. expected number of liveaboards;
 - f. existence of a fully operational pump-out or sewer hook-up; and
 - g. expected or planned changes in adjacent land uses that could result in additional water quality impacts or sanitary treatment requirements.
5. Marinas and public launch ramps shall locate on stable shorelines where water depths are adequate to eliminate or minimize the need for offshore or foreshore channel construction dredging, maintenance dredging, spoil disposal, filling, beach enhancement and other river, lake, harbor and channel maintenance activities.
6. Marinas and launch ramps shall locate in areas where there is adequate water mixing and flushing and shall be designed so as not to retard or negatively influence flushing characteristics. Marinas are permitted in a constricted body of salt water (width at the entrance less than one-half the distance from the entrance to the inner most shoreline) only if there is 1 surface acre of water within the constricted body, measured at mean low water, for each boat moorage (including buoys) within said constricted body.
7. Boat launches and marina entrances shall not be located closer than 1,000 feet from beaches commonly used for swimming or valuable areas for commercial or recreational fishing or shellfish collection.
8. Marine railways for boat launching shall be located on existing grade, avoiding landfill where feasible, and shall not obstruct access to and along the shoreline.

Marine Shores

9. Marinas and launch ramps **shall not** locate at or along:
 - a. significant littoral drift sectors, including resource material areas, such as feeder bluffs and accretion beaches, points, spits and hooks;
 - b. marshes, bogs, swamps and lagoons;
 - c. estuaries;
 - d. significant fish and shellfish spawning and rearing areas; or
 - e. poorly-flushed lagoons and backwaters.
10. Foreshore marinas and launch ramps may be located on or along low energy drift sectors.
11. Backshore marinas and launch ramps may be located behind closed accretion beaches, points or low energy driftways. Connecting channels and their jetties should be designed to protect natural littoral drift processes.
 - a. In the event a marina is constructed landward of the natural preexisting beach line, there shall be no less than two openings to open water for ingress/egress and water circulation.
12. When located in designated port areas, marinas shall not extend waterward of the outer harbor line.

Lake Shores

13. Marinas or launch ramps shall not be permitted on lake beaches (accretion beach shores) because such natural features are uncommon on lakes and highly valuable for swimming and general recreation.
14. Backshore lake marinas or launch ramps may be permitted on low-bank areas if most of the beach and backshore is preserved in its natural vegetated condition for recreational uses.

Rivers and Stream Banks

15. Marinas shall not locate along braided or meandering river channels where the channel is subject to change in alignment, or on point bars and other accretion beaches.

16. River marinas and launch ramps shall be located so as not to adversely affect flood channel capacity or otherwise create a flood hazard.

Regulations -- Design/Renovation/Expansion

1. Backshore marinas or launch ramps shall generally be preferred over foreshore marinas because they have substantially less impact on shoreline natural features, vegetation and uses, fisheries and shellfish resources, as well as less irreversible appropriation of navigable waters.
2. Proposals for marinas shall include launch facilities unless the applicant can demonstrate the unfeasibility of providing such facilities.
3. Marina design shall provide thorough flushing of all enclosed water areas and shall not restrict the movement of aquatic life requiring shallow water.
4. The marina design shall minimize interference with geohydraulic processes and disruption of existing shore forms.
5. Boating facilities shall be designed so their structures and operations will be aesthetically compatible with or will enhance existing shoreline features and uses. Boating facilities shall mitigate for adverse development impacts on-site and to adjacent properties.
6. The perimeter of parking, dry moorage and other storage areas shall be landscaped to provide a visual and noise buffer between adjoining dissimilar uses or scenic areas. The permit application shall identify the size, location and species list of landscaping that will be used stressing native vegetation.
7. All signs shall adhere to the policies and regulations for signs; EXCEPT that a marina or launch ramp facility may add no more than one advertising sign oriented to the water, not exceeding 15 feet in total height (as measured from OHWM). Signs for fueling facilities shall not exceed 15 feet in total height. Signs incorporating the pump-out logo, shall be provided identifying the location of waste disposal facilities, if available.
8. Public access, both visual and physical, shall be an integral part of all marina development and design commensurate with the particular proposal and must include the following:
 - a. Views from upland lots and public view corridors shall be preserved and or provided with the view corridor not less than 35 percent of the width of water frontage; EXCEPT that one-half of such requirement may be satisfied by an abutting street or waterway.

- b. Marinas and public launch ramps shall be designed so that existing or potential public access along beaches is not unnecessarily blocked nor made dangerous and public use of the waters below the ordinary high water mark is not unduly impaired.
 - c. Covered moorage in marinas **shall not** be constructed where visual access from public access areas and/or significant numbers of residences is blocked.
9. Foreshore marinas that must involve solid bulkhead, breakwater, and/or land fill construction shall meet the following design criteria:
- a. Breakwaters built waterward in a perpendicular plane to the shoreline shall not be allowed as a continuous one-piece structure.
 - b. The toe of the breakwater may not extend waterward of the 0.0 MLLW tide level or more than 250 lineal feet from MHHW.
 - c. Breakwaters shall be built so that the side slopes shall not be steeper than 1-1/2-foot horizontal to 1-foot vertical slope.
 - d. The opening between a shore breakwater and an isolated breakwater shall be not less than 20 feet in width as measured at the toe of the slope.
 - e. Openings must be maintained at project depth at all times in order to insure proper circulation and fish passage.
 - f. Openings may be either offset or in-line design.
 - g. Openings may also be used as navigational channels.
 - h. In the event a marina is constructed landward of the natural preexisting beach line, there shall be no less than two openings to open water for ingress/egress and water circulation.
 - i. The opening must be sized (depth and/or width) so as to insure proper circulation inside the marina configuration and exchange with the outside bay. To facilitate this exchange, the volume of the tidal prism (water present between mean low and mean high tide) shall be not less than 50 percent of the total volume of the basin.
 - j. The depth of the openings shall be at least as deep as the average depth of the marina.

- k. Openings may be baffled to protect the marina against wave action but in no instance should the baffling impede water circulation or fish movement.
10. Location of fueling stations on docks, floats, and/or the shore shall be considered on an individual basis and recommendations will be made as to its location by the Washington Departments of Fisheries and/or Wildlife.
11. Location of boat waste disposal facilities (pump-outs, dump stations and toilets) shall be considered on an individual basis with consultation with Departments of Health, Ecology and Parks as needed.
12. The discharge of untreated sewage and/or toxic material from boats and/or shore installations shall be prohibited within any marina. Toxic material herein defined as any material damaging marine life includes but is not limited to paints, varnishes, detergents, petroleum, bilge waste water, etc.
13. No commercial or sport fish and/or shellfish processing discharge or discarding of unused bait, scrap fish or viscera shall be permitted within any marina.
14. Washington State Water Quality Standards shall be strictly adhered to at all times.
15. Owners and/or operators of marinas shall be liable at all times for any and all marine life and/or habitat losses incurred during construction and/or operation of any marina.
16. Approval of general construction practices, including but not limited to construction methods, timing and materials must be obtained from the Washington State Departments of Fisheries and/or Wildlife.
17. Upland facilities shall be designed and managed in compliance with stormwater BMPs in order to minimize or prevent negative impacts to water quality.
18. Boating facilities shall locate stationary boat waste disposal facilities in close proximity to boat refueling locations.

Regulations -- Construction and Materials

1. Dredging in coastal waters for boating facilities shall be limited to the minimum necessary for new entrance channels to reach basins dredged out of dry upland areas; for deepening water a few feet in existing and

proposed berthing areas; and for maintenance dredging. Dredging marshes, bogs and swamps to accommodate new or expanded boating facilities is prohibited.

2. Landfill in water bodies or marshes, bogs or swamps to create usable land space for accessory marina uses is prohibited.
3. Where foreshore marinas are permitted:
 - a. Open-pile or floating breakwater designs are preferred over rip rap or other solid construction because they cause less damage to natural shore features and are reversible; and
 - b. Solid structures shall not be permitted to extend without openings from the shore to 0.0 tide level (Mean Lower Low Water [MLLW]) and shall provide for fish passage along the shoreline.
4. Shoreline embankments of all boating facilities shall be stabilized both landward and waterward of OHWM both during and after construction.

Regulations -- Parking and Storage

1. Over-water parking facilities are prohibited.
2. No overnight parking shall be permitted in the floodway during the wet season between November 1 and May 1.
3. Short-term loading areas may be located at ramps or near berthing areas. Long-term parking, paved storage and dry moorage areas shall be located away from berthing areas and at a minimum 100 feet from the OHWM.
4. To the maximum extent possible, marinas and accessory uses shall share parking facilities, with marina usage given preference.
5. The following parking requirements shall apply:
 - a. Parking facilities shall provide at a minimum one vehicle space for every four moorage spaces and for every 400 square feet of interior floor space devoted to accessory retail sales or service use.
 - b. Where liveboards are permitted, parking facilities shall provide at a minimum one vehicle space for each liveboard moorage space.
 - c. At each public or quasi-public launch ramp, ten car and trailer spaces at least 10 feet by 40 feet shall be provided for each ramp lane.

Regulations -- Circulation

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

Regulations -- Utilities

1. Where moorage is offered in new, expanded or renovated existing marinas, pump-out, holding and/or treatment facilities shall be provided for sewage contained on boats and/or vessels. Such facilities shall be located so as to be conveniently accessible to all boats. The responsibility for the adequate and approved collection and disposal of marina originated sewage, solid waste and petroleum waste is that of the marina operator.
2. All marinas shall provide rest rooms and showers for boaters' use. They shall be kept clean and at a minimum be located within 200 feet from the dock or pier; there shall be one toilet and hand washing facility for each sex per fifty moorage sites; signs shall be posted so that the rest rooms are easily identifiable to the boating public.
3. All pipes, plumbing, wires and cables at a marina site shall be placed at or below ground and dock levels.
4. Public boat launch facilities shall provide and maintain rest rooms or portable toilets and dump stations.

Regulations -- Residential Uses

1. Moorage of floating homes is prohibited, except as provided for under Residential Development "Regulations - Floating Homes - where permitted", if applicable.

2. No more than 10 percent of total moorage slips in a marina shall accommodate liveaboard vessels and houseboats. Where permitted, each liveaboard or houseboat mooring slip shall be connected to utilities that provide potable water and wastewater conveyance to an approved disposal facility.

Regulations -- Management and Operations

1. Marinas shall have adequate facilities and establish posted operational procedures for fuel and sewage handling and storage in order to prevent and minimize accidental spillage.
2. Marinas shall have facilities, equipment and established posted procedures for the containment, recovery and mitigation for spilled petroleum, sewage and toxic products and debris from maintenance and repair (see Chapter 7, "Industry", for more specific criteria).
3. Marina operators shall post the following signs where they are readily visible to all marina users:
 - a. Regulations pertaining to handling and disposal of waste, including gray water, sewage and toxic materials;
 - b. Regulations prohibiting the use of marine toilets while moored unless these toilets are self-contained or have an approved treatment device; and
 - c. Regulations prohibiting the disposal of fish and shellfish cleaning wastes, scrap fish, viscera or unused bait in or near the marina waters.
 - d. Rules and BMPs for boat maintenance and repairs on site.
4. Garbage or litter receptacles shall be provided and maintained by the marina operator at several locations convenient to users in sufficient numbers to properly store all solid waste generated on site. This should include separate receptacles for waste oil and other potentially hazardous or toxic waste.
5. The dock facilities shall be equipped with adequate lifesaving equipment such as life rings, hook and ropes.
6. Adequate fire protection shall be required as per the Washington State Fire Code.
7. Swimming shall be prohibited within marina facilities unless the swimming area is adequately separated, protected and posted.

8. If dredging at marina entrances changes the littoral drift processes and adversely affects adjacent shores, the marina operator shall be required to periodically replenish these shores with the appropriate quantity and quality of aggregate as determined by a geohydraulic study paid for by the operator and completed to the satisfaction of the Administrator.
9. Ten percent of total slips shall be provided for "transient moorage" (less than two week stay) when at least one of the following apply:
 - a. The marina is owned, operated or franchised by a governmental agency such as a port authority for use by the public;
 - b. If the marina provides more than 3,000 lineal feet of moorage then 100 lineal feet of transient moorage shall be provided for every 1,000 lineal feet of moorage.
 - c. The marina is part of a mixed-use development which includes restaurants or other water-enjoyment uses.

Regulations -- Boat Launches

1. Launch ramps may be permitted on marine or riverine accretion shoreforms, provided any necessary grading is not harmful to affected resources and any accessory facilities are located out of the floodway.
2. Where ramps are permitted, parking and shuttle areas shall not be located on scarce accretion shoreforms which have high value for general shore recreation.
3. Launch ramps shall be permitted only on stable nonerosional banks, where no or a minimum number of current deflectors or other stabilization structures will be necessary.
4. Boat launch ramps may be permitted for individual residences where the upland slope within 25 feet of the OHWM does not exceed 25 percent and/or where substantial cutting, grading, filling or stabilization structures are not necessary.
5. Boat launching ramps, minor accessory buildings and haul out facilities shall be designed to be in character and scale with the surrounding shoreline.
6. Ramp structures shall be built from flexible, hinge-segmented pads which can adapt to changes in beach profiles unless a solid structure is demonstrated to be more appropriate for the intended level of use.

7. Ramps shall be placed and kept near flush with the foreshore slope to minimize the interruption of geohydraulic processes.
8. Boat ramps shall be signed to alert users to the danger of spreading milfoil and how to control it.

Regulations -- Covered Moorage

1. Marina developers are required to provide a detailed plan for covered moorage development before permits are granted. Such a plan must indicate: (a) covered moorage location, size and general design; (b) impact on shoreline views in the marina and from adjacent private and public properties; and (c) that the structures will be built to conform to the City/County building code, withstand stresses from storms and weather or damage by fire, and that exterior wall and roof coverings shall be of noncombustible or fire-retardant-treated material and so certified or labeled.
2. The maximum height for covered moorage is 20 feet above the extreme high tide level. Maximum allowable area of covered moorage within the over-water portion of the marina is limited to 10 percent of the over-water area.
3. Covered moorage is not permitted in areas determined by the City/County to be of high scenic value or where open water views are important.
4. All covered moorage at a specific marina shall be of similar and/or compatible design, materials, color, length and height (unless they exceed the present height limits); and shall be constructed in contiguous groups or modules as part of the overall project.
5. Where covered moorage is utilized, a public dock shall be provided for viewing the water and for fishing.
6. All covered moorage shall be constructed of nonreflective neutral material and colors.

Regulations -- Mooring Buoys

1. Mooring buoys shall be located as close to the shore as possible. They shall not be located farther waterward than existing mooring buoys unless the drift of the boat dictates it.

2. Buoys must be discernible under normal daylight conditions at a minimum of 100 yards and must have reflectors for night time visibility.
3. Only one mooring buoy will be allowed per waterfront lot unless the Administrator determines and documents with written findings that there is a demonstration of greater need. Such demonstration may include a community park or residential development where lot owners both on and away from the shoreline share a shoreline open space area.



Commercial Development

Applicability

Commercial development means those uses which are involved in wholesale, retail, service and business trade. Examples include hotels, motels, grocery markets, shopping centers, restaurants, shops, offices and private or public indoor recreation facilities. Excluded from this category are residential or recreational subdivisions, boating facilities and industry.

Uses and activities associated with commercial development which are identified as separate use activities in this program such as Mining, Industry, Boating Facilities, Transportation Facilities, Utilities, Solid Waste Disposal, Piers and Docks, Bulkheads and Shoreline Stabilization and Flood Protection are subject to those regulations in addition to the standards for commercial development established herein.

The General Policies and Regulations (Chapter 5) also apply to all commercial uses unless otherwise stated.

Policies

1. New commercial development located in shoreline areas should be limited to those which are water-oriented uses and activities as defined herein. Commercial development in shoreline areas should be encouraged in descending order of preference as follows:
 - a. Water-dependent uses;
 - b. Water-related uses; and
 - c. Water-enjoyment uses.

Non-water-oriented development is strongly discouraged; however, when permitted, it should not displace water-oriented development in shoreline areas.
2. Commercial developments should be prohibited over water unless the use is water-oriented.
3. No commercial development should be allowed in marshes, bogs or swamps.

4. New commercial development on shorelines should be encouraged to locate in those areas with existing consistent commercial uses and in a manner that will minimize sprawl and the inefficient use of shoreline areas.
5. Commercial development should be encouraged to utilize existing transportation corridors and minimize the number of ingress/egress points. Ingress/egress should be designed to minimize potential conflicts with and impact on regular corridor traffic.
6. Commercial development should be required to provide physical or visual access to the shoreline or other opportunities for the public to enjoy the shorelines of the state.
7. Multiple use concepts which include open space and recreation should be encouraged in commercial developments.
8. Commercial development should be aesthetically compatible with the surrounding area. Structures should not significantly impact views from upland properties, public roadways or other public areas, and from the water.
9. The location of commercial developments along shorelines should insure the protection and preservation of natural areas or systems identified as having geological, ecological, biological or cultural significance.
10. Commercial development should be discouraged within the 100-year floodplain.

Regulations -- General

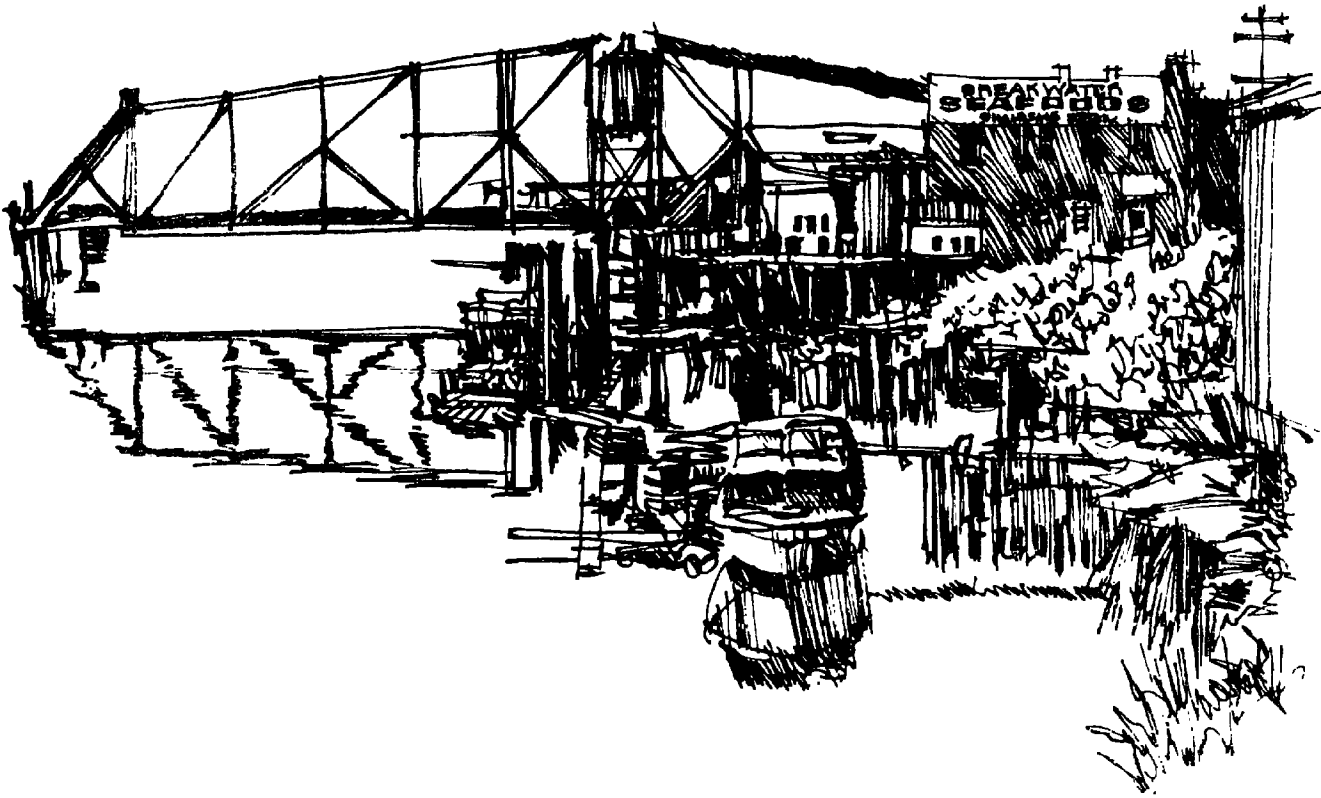
1. The City/County shall require and utilize the following information in its review of commercial development proposals:
 - a. Nature of the commercial activity, (e.g. water-dependent, water-related, water-enjoyment, non-water-oriented, mixed-use) including a breakdown of specific components;
 - b. Need for shoreline location;
 - c. Special considerations for enhancing the relationship of the activity to the shoreline;
 - d. Provisions for public visual and physical access to the shoreline;
 - e. Provisions to ensure that the development will not cause adverse environmental impacts; and

- f. For mixed-use proposals, present alternative mixes of water-oriented and non-water-oriented uses and activities, structural locations, site designs and bulk considerations, alternative enhancements for physical and visual public access to the shoreline (both public and private space) and other considerations which address the goals and policies of the SMP.
2. Water-oriented commercial developments may be permitted as indicated in Chapter 6, Figure 6-2 Shoreline Use and Modification Activity Matrix. In accordance with said matrix and other provisions of this SMP non-water-oriented commercial developments may be permitted by CUP only where it can be demonstrated that:
 - a. A water-oriented use is not reasonably expected to locate on the proposed site due to topography, surrounding land uses, physical features or due to the site's separation from the water;
 - b. The proposed use does not usurp or displace land currently occupied by a water-oriented use and will not interfere with adjacent water-oriented uses; and
 - c. The proposed use will be of appreciable public benefit by increasing public use, enjoyment or access to the shoreline.
3. Commercial parking as a primary use is prohibited within 200 feet of the shoreline.
4. Public access provisions shall conform to the requirements in this program.
5. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program .

Regulations -- Design

1. Commercial development shall be designed and maintained in a neat, orderly and environmentally compatible manner, consistent with the character and features of the surrounding area. To this end, the City/County may adjust the project dimensions and setbacks (so long as they are not relaxed below minimum standards without a shoreline variance permit), and/or prescribe operation intensity and screening standards as deemed appropriate. Need and special considerations for landscaping and buffer areas shall also be subject to review.

2. All commercial loading and service areas shall be located on the upland side of the commercial activity or provisions must be made to setback and screen the loading and service area from the shoreline and water body.
3. Commercial development and accessory uses must conform to the setback and height standards established in Chapter 6, Environment Designations.



Flood Hazard Management

Applicability

Flood hazard management projects are those actions taken with the primary purpose of preventing or mitigating damage due to flooding. Flood hazard management projects or programs may employ any or several physical or regulatory controls including dikes, dams, lakes, engineered floodways, bioengineering, planning and zoning (land use management). These provisions also apply to repair and maintenance of flood hazard management systems if the systems are enlarged or otherwise modified.



Notes to Master Programmers

RCW 90.58.100(2)(h) requires shoreline master programs to include an element that implements the statewide interest in preventing and minimizing flood damages. When local governments revise their shoreline master programs, they need to include an element to prevent and minimize flood damages. Local government may be able to meet this requirement by referencing other flood hazard plans and regulations done for the community such as Comprehensive Flood Hazard Management Plans (referred to as Comprehensive Flood Control Management Plans in Chapter 86.26 RCW), floodplain regulations adopted under Chapter 86.16 RCW and critical areas planning under the Growth Management Act.

When conducting flood hazard management planning, local governments should consider both structural and nonstructural measures to prevent and reduce flood damages. The social, economic and environmental impacts of proposed measures should be evaluated. As part of this evaluation, local governments should consider whether structural flood control measures may lead to additional development in floodplains and reduced flood storage, resulting in a net increase in potential flood damages.

When local governments develop flood hazard management plans they should update their shoreline master programs to reflect this information. Updating SMPs to take into account these plans can help local governments obtain permits for necessary flood reduction measures by insuring that they are consistent with the SMP. Of course, any amendments to the shoreline master program must be consistent with the Shoreline Management Act and the regulations adopted to implement the Shoreline Management Act.

Local governments should also consider adopting the following policies and regulations. Including this element in shoreline master programs can help reduce flood damages and reduce the environmental impacts of flood hazard management projects.

All cities and counties within the Puget Sound Basin are required to adopt a stormwater program which complies with the applicable requirements of the Stormwater Management Manual for the Puget Sound Basin by July 1, 1994. This requirement is mandated by the 1992 amendments to the 1991 Puget Sound Water Quality Management Plan. This program will help prevent increases in flood damage by requiring new developments which discharge stormwater directly or indirectly into streams to retain stormwater runoff on site to maintain the predevelopment peak runoff rate during the 100-year, 24-hour design storm. Reducing runoff peaks can reduce downstream flooding during events which are more frequent than the design storm. Local governments outside the Puget Sound Basin should also consider adopting similar provisions to minimize increased flood damage downstream from new developments.

Policies

1. Flood hazard management planning should be undertaken in a coordinated manner among affected property owners and public agencies and should consider entire drainage systems or sizable stretches of rivers, lakes or marine shorelines. Thus, planning should consider the off-site erosion and accretion or flood damage that might occur as a result of stabilization or protection structures or activities. Flood hazard management planning should fully consider nonstructural approaches to minimizing flood damage.
2. Nonstructural solutions are preferred over structural flood control devices, and should be used wherever possible, including prohibiting or limiting development in historically flood prone areas, regulating structural design and limiting increases in peak stormwater runoff from new upland development, public education and land acquisition for additional flood storage. 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. Flood hazard management works should be located, designed, constructed and maintained to provide:
 - a. Protection of the physical integrity of the shore process corridor and other properties which may be damaged by interruptions of the geohydraulic system;

- b. Protection of water quality and natural ground water movement;
 - c. Protection of fish, vegetation and other life forms and their habitat vital to the aquatic food chain; and
 - d. Protection of recreation resources and aesthetic values such as point and channel bars, islands and other shore features and scenery.
4. Substantial stream channel modification, realignment and straightening should be discouraged as a means of flood protection.
5. Structural flood control works should not be allowed where they will result in any of the following:
 - a. Increased residential, commercial, or industrial development in undeveloped 100-year floodplains;
 - b. Loss of significant flood storage capacity in undeveloped 100-year floodplains;
 - c. Deflecting or constricting flood flows to a degree which will result in significantly increased flood heights on unprotected properties.
6. In design of publicly financed or subsidized works, consideration should be given to providing public pedestrian access to the shoreline for low-intensity outdoor recreation.
7. SSWS priorities (see RCW 90.58.020) should be considered in the review of all flood hazard management developments along shorelines of state-wide significance.
8. Wetlands should be protected to maintain their capacity to store flood waters and recharge ground water.
9. Natural drainage ways, creeks, streams and rivers should be protected to maintain their capacity to convey stormwater and flood water.
10. City/County should adopt and implement a stormwater management program which meets the requirements of the *Stormwater Management Manual for the Puget Sound Basin* (Washington State Department of Ecology Publication #91-75).
11. City/County should consider amending the floodplain regulations adopted under Chapter 86.16 RCW to include zero rise floodway provisions.
12. Residential, commercial and industrial uses should be discouraged within undeveloped floodplain areas.

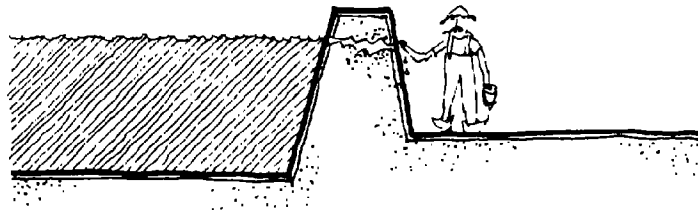
13. Uses which are less likely to be damaged by flooding should be encouraged in undeveloped floodplains. These uses include forestry uses, agricultural uses, open space, overflow parking and recreational uses which do not require substantial buildings.

Regulations

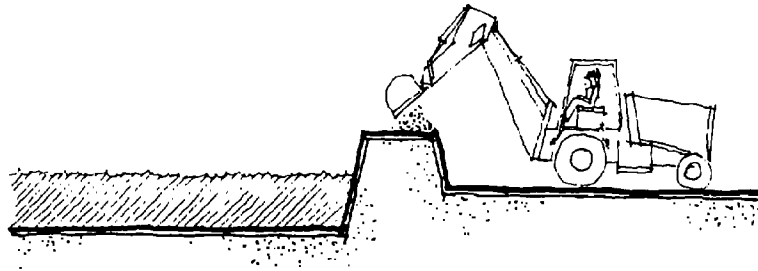
1. The City/County shall require and utilize the following information during its review of shoreline flood management projects and programs.
 - a. River channel hydraulics and floodway characteristics up and downstream from the project area;
 - b. Existing shoreline stabilization and flood protection works within the area;
 - c. Physical, geological and soil characteristics of the area;
 - d. Biological resources and predicted impact to fish, vegetation and animal habitat associated with shoreline ecological systems;
 - 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 structural and nonstructural.
2. Conditions of Hydraulic Project Approval, issued by Washington State Department of Fisheries or Wildlife, may be incorporated into permits issued for flood protection.
3. The City/County shall require professional design of flood protection works where such projects may cause interference with normal river geohydraulic processes, lead to erosion of other upstream and downstream shoreline properties or adverse effects to shoreline resources and uses.
4. Groins on rivers, streams and lakes may be permitted as a conditional use subject to environment designation provisions, PROVIDED the applicant can demonstrate the appropriateness of the designed structure and that alternative shore protection measures would prove more detrimental to the geohydraulics and natural resources within the water body.
5. Diking, flood walls and similar structures may be permitted as a conditional use subject to environment designation provisions PROVIDED:
 - a. Diking is set back to the edge of the floodway and OHWM;

- b. Timing and construction shall be coordinated with the Washington Department of Fisheries and Washington Department of Wildlife;
 - c. Diking shall be designed and constructed to meet Soil Conservation Service technical manual standards and shall, at a minimum, include (1) layered compaction, (2) removal of debris (i.e. tree stumps, tires, etc.) and (3) revegetation and maintenance until ground cover is established; and
 - d. Appropriate vegetation management actions are undertaken.
- 6. Flood protection measures shall be planned and constructed based on a state-approved comprehensive flood control management plan, when available, and in accordance with Chapter 86.16 RCW and the National Flood Insurance Program.
 - 7. Flood protection measures that alter, reroute or change the natural water course of the shoreline may be approved as a conditional use only if it is demonstrated that other flood protection and planning measures would be insufficient. Alternative measures to be analyzed shall include bioengineering techniques, restrictions to development, shoreline setbacks and comprehensive land use planning.
 - 8. Development and redevelopment within shoreline jurisdiction shall comply with the applicable provisions of the City/County floodplain regulations adopted under Chapter 86.16 RCW.
 - 9. Development and redevelopment within shoreline jurisdiction shall comply with the applicable requirements of the City/County stormwater management program.
 - 10. Residential, commercial and industrial uses which may be damaged by flooding are prohibited in undeveloped 100-year floodplains. In determining whether a use may be damaged, the local government should consider its location, its design and the extent to which development has occurred in the floodplain, and whether access will be available to the use during flood events.
 - 11. Hospitals, health care facilities, nursing homes and retirement homes are prohibited within 100-year floodplains.
 - 12. Residential, commercial and industrial subdivisions and short subdivisions shall be designed so that each lot will have a building site outside the 100-year floodplain. Where possible, the building site should be located outside the 500-year floodplain. The subdivision's internal street system should be laid out to provide access to each lot which is passable by passenger car during a 100-year flood event.

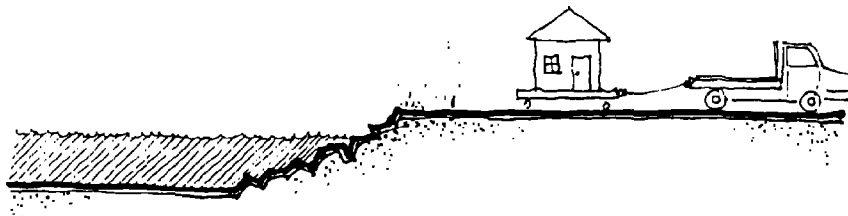
13. Bridges, culverts and other river, stream and waterway crossings shall be designed and constructed so they do not restrict flood flows such that flood elevations are increased. Where a bridge, culvert or other waterway crossing replaces an existing crossing, the replacement structure shall not increase flood heights over that caused by the original structure.
14. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.



Short-term solution; high risk



Another solution; less risk; high cost

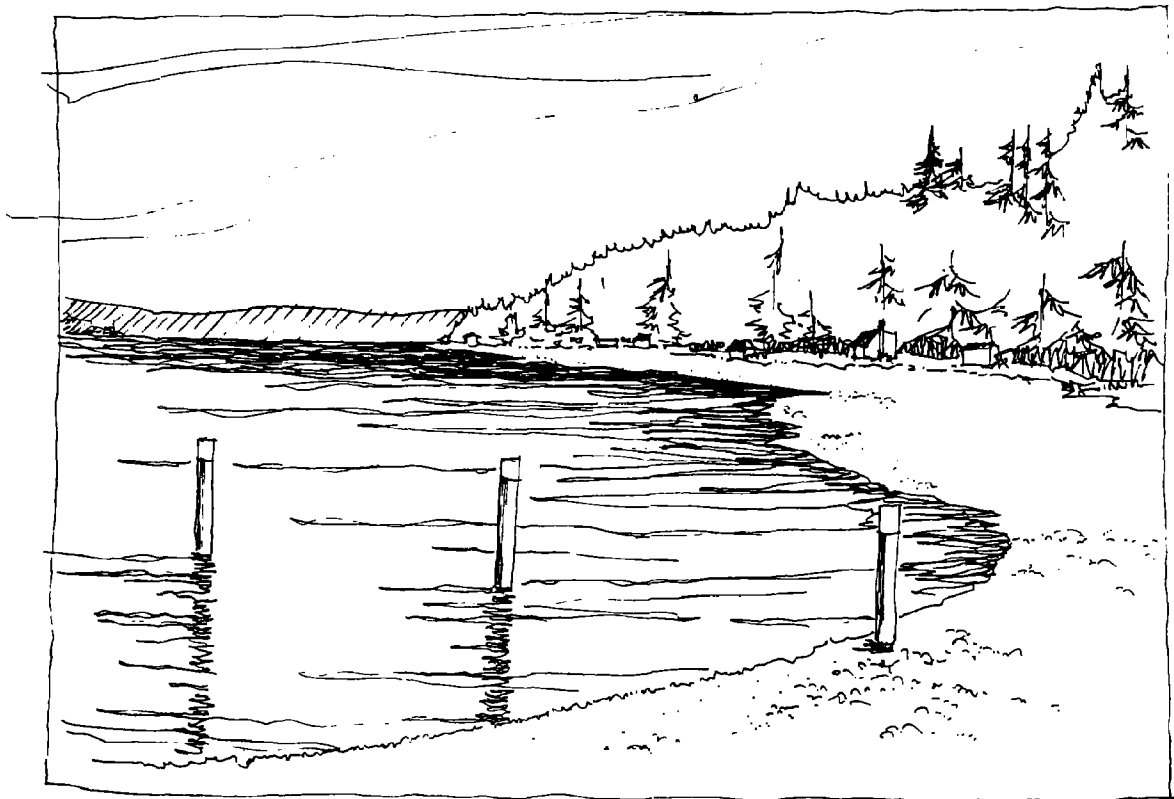


Permanent solution; good flood plain management

Forest Practices

Applicability

Forest Practices are uses and activities relating to the growing, harvesting and limited processing of timber. This includes, but is not limited to, (1) site preparation and regeneration; (2) protection from insects, fire and disease; (3) silviculture practices such as thinning, fertilization and release from competing vegetation; and (4) harvesting. Forest practices do not include log storage (see section on Industrial Activities). Timber cutting, alone, is not a development subject to a substantial development permit. However, road building or grading for landings or major fire trails are developments and may require substantial development permits (see Chapter 7 "Transportation"). Although some forest practices may not be developments or substantial developments, all forest practices are uses which must comply with the policies and regulations of the SMP, including applicable conditional use and variance permit requirements.





Notes to Master Programmers

Forest practices are primarily regulated by the Department of Natural Resources through the Forest Practices Act and Regulations. The Forest Practices Act, Chapter 76.09 RCW, substantially limits local government authority to regulate forest practices. In Weyerhaeuser v. King Co., 91 Wn. 2d 721, 733 (1979), the Washington State Supreme Court held that the Forest Practices Act limitations do not apply to local government regulations adopted under the Shoreline Management Act. So local governments can use their shoreline master programs to manage and regulate forest practices within shoreline jurisdiction.

Policies

1. Timber harvesting practices should be conducted so as not to degrade existing water quality, quantity and fish habitat and to avoid adverse impacts to upland wildlife habitat.
2. Logging should be avoided on shorelines with slopes of such grade and/or soil type that would likely cause serious sediment runoff, unless adequate restoration and erosion control can be expeditiously accomplished.
3. Special attention should be directed in logging and thinning operations to prevent the accumulation of slash and other debris in contiguous waterways.
4. Skid roads and fire trails should be located to minimize the disturbance to shoreline resources. They should be rehabilitated as necessary to prevent erosion and import of sediments into contiguous waterways.
5. Shorelines having outstanding scenic views should be left in a substantially natural condition. Timber harvest in such areas should be limited to selective cutting which protects scenic views. Such scenic view areas should be identified in the shoreline inventory.
6. Timber harvest in unique and fragile areas should be prohibited. To the extent possible, these areas should be identified in the shoreline inventory or sensitive areas provisions.
7. Reforestation in shorelines should be accomplished as quickly as possible. Replanting or seeding should be done with native species common to the area.

Regulations -- General

1. All timber harvesting shall be done in compliance with the current rules and regulations adopted under the Forest Practices Act and the Timber/Fish/Wildlife Agreement or their successor.
2. Cutting in marshes, bogs and swamps is prohibited. Trees shall be directionally felled away from water, marshes, bogs and swamps. (See Forest Practice Regulations, WAC 222-16, for timber cutting in wetlands [adopted in 1992]).
3. Except for snag removal required by the Department of Labor and Industries, all snags, nonmerchantable trees, down timber and understory vegetation within a minimum of 50 feet, measured horizontally, of the ordinary high water mark, or marshes, bogs and swamps shall be left intact.
4. Buffer strips on steep slopes shall be protected by leaving stumps high enough to prevent any subsequently felled upslope trees from sliding or rolling into the strips.
5. Wheeled and tractored equipment shall not be allowed within a minimum of 50 feet of the ordinary high water mark and marshes, bogs or swamps with one exception. Should logs or debris enter the water, and removal be required by the Departments of Fisheries or Wildlife, equipment may be used as necessary. Local government shall be notified prior to action and impacts shall be restricted to the minimum area possible. Disturbed areas shall be stabilized as required in Regulation #7 below.
6. Site preparation by burning shall be prohibited. Scarification piles are prohibited. Scarification shall not occur within 50 feet of marshes, bogs, swamps and the ordinary high water mark.
7. Skid roads, fire trails, abandoned roads and other erosion-prone conditions caused by timber harvest operations shall be water-barred, as needed, on completion of the activity. Such areas within 50 feet of a water course or on slopes exceeding 40 percent shall also be replanted and stabilized, as necessary, within one year of harvest.
8. Replanting or seeding required under the Forest Practice Rules and Regulations shall be accomplished within eighteen months of harvest.
9. When timberland is to be converted to another use, such conversion shall be clearly indicated on the Forest Practice application. Failure to indicate the intent to convert the timberland to another use on the application will result in subsequent development proposals being reviewed as a conditional use. Such failure to declare intent to convert on the application

shall provide adequate grounds for denial of subsequent development proposals for a period of six years from date of Forest Practices application approval (see RCW 76.09.060(3)(b)(i)). Timber harvest for conversion purposes shall not be permitted until any required shoreline permits have been issued for the proposed land divisions or intended subsequent uses.

10. Application of herbicides shall be prohibited within the riparian management zone (RMZ) as determined on-site under the current Forest Practices Rules.
11. Application of insecticides shall be allowed within the RMZ only by conditional use. Permit application shall include documentation of the need for insecticide and shoreline consequences of no application.
12. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Regulations -- Shorelines of State-wide Significance

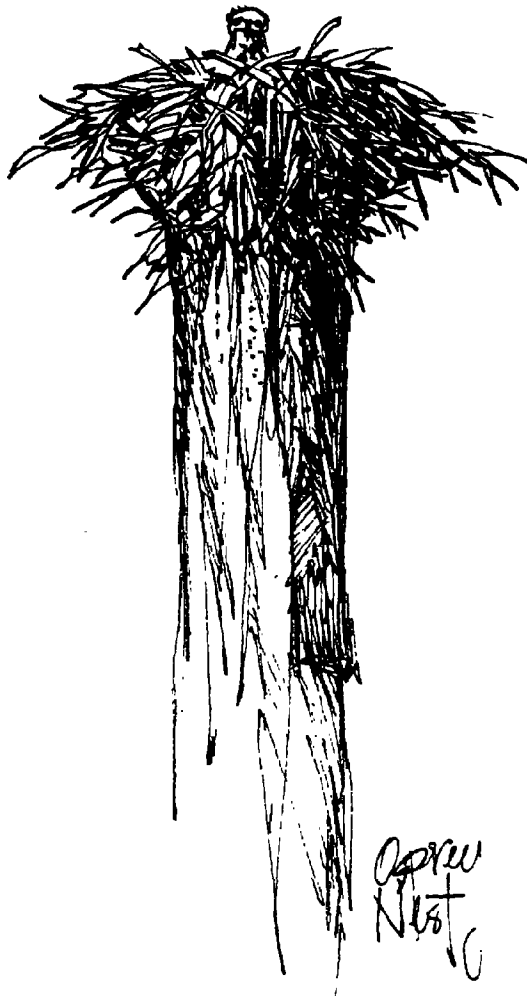
Commercial timber cutting within 200 feet of the ordinary high water mark shall be by selective cutting and shall not exceed 30 percent of the merchantable trees in any ten-year period. Remaining trees shall be distributed evenly throughout the shoreline area and shall be representative of the size and species distribution in the stand prior to cutting. Cutting methods other than selective cutting shall be by conditional use permit and shall meet the following additional criteria:

1. Documentation that topography, soil conditions or silviculture practices necessary for regeneration cause selective logging to be ecologically detrimental.
2. Other harvest methods which result in clear-cut patches or swaths are prohibited within 75 feet of the ordinary high water mark, and shall average no less than 100 feet from the OHWM. Documentation of the stocking density of merchantable trees throughout the 200-foot shoreline area shall be provided. This is necessary to show that proposed cutting will not remove more than 30 percent of merchantable trees.

Note: When stocking densities are fairly uniform throughout the shoreline area, the leave strip will generally be about 140 feet deep measured from the OHWM and the cutting line will parallel the shoreline. Where stocking densities for a clear-cut proposal and topography vary, the

cutting line may meander to accommodate the 30 percent figure as well as the appropriate logging system as long as it meets the requirements above.

3. Documentation that the remaining trees shall be representative of the size and species present in the stand prior to cutting shall be provided.
4. Cutting more than 30 percent of the merchantable trees is prohibited.
5. Within the remaining stand, all snags (except for snag removal required by the Department of Labor and Industries), nonmerchantable trees, down timber and understory vegetation shall be left intact.



Industry

Applicability

Industry located along the waterfront is typically thought of as port development but can also include all types of non-water-oriented industrial uses as well as other water-dependent and water-related uses and activities. Ports are a specialized subcategory of general industrial uses.

Ports are centers for waterborne traffic and as such have become gravitational points for industrial/manufacturing firms. The availability of a variety of transportation options found in ports is particularly attractive to heavy industry even though they may not specifically require a waterfront location. Because of the impacts that such activities have on the shoreline environment, industry and ports are both covered in this section.

Industrial developments are facilities for processing, manufacturing and storage of finished or semifinished goods. Ports are public enterprises providing services and facilities for waterborne commerce, airborne commerce and industrial development dependent upon waterfront locations or attracted to a port because of the variety of available transportation. Included in ports and industry are such activities as container ship terminals, log storage, log rafting, petroleum storage, hazardous waste generation, transport and storage, ship building, concrete and asphalt batching, tug and barge operations, etc. Excluded from this category and covered under other sections of the SMP are boating facilities, piers and docks, mining (including on-site processing of raw materials), utilities, solid waste disposal and transportation facilities.



Activities associated with port and industrial development which are identified as separate use activities in this program, such as Dredging, Landfill, Transportation Facilities, Utilities, Piers and Docks, Bulkheads, Breakwaters, Jetties and Groins, Shoreline Stabilization and Flood Protection and Signs, are subject to the regulations established for those in addition to the provisions for ports and industry established in this section.

Policies

1. Regional and state-wide needs for industrial facilities should be carefully considered in reviewing new proposals as well as in allocating shorelines for such development. Such reviews or allocations should be coordinated with port districts, adjacent counties and cities and the state in order to minimize new industrial development which would unnecessarily duplicate under-utilized facilities elsewhere in the region or result in unnecessary adverse impacts on other jurisdictions.
2. The few shoreline sites particularly suitable for development such as deep-water harbors adjacent to firm, dry and level land with access to adequate rail, highway and utility systems should be reserved for water-dependent or water-related industrial development compatible with other appropriate uses and adopted environmental standards.
3. Expansion or redevelopment of existing legally established industrial areas, facilities and services with the possibility of incorporating mixed-use development should be encouraged over the addition and/or location of new or single-purpose industrial facilities.
4. Joint use of piers, cargo handling, storage, parking and other accessory facilities among private or public entities should be strongly encouraged or required in waterfront industrial areas.
5. Industrial development should not be located on sensitive and ecologically valuable shorelines such as natural accretion shoreforms, marshes, bogs, swamps or estuaries, wildlife habitat areas, nor on shores inherently hazardous for such development, such as flood-prone and erosion-prone areas and steep or unstable slopes.
6. New industrial development should be required to provide physical and/or visual access to shorelines and visual access to facilities whenever possible and when such access does not cause significant interference with operations or hazards to life and property.
7. Dry land log storage is preferred over water storage.

8. Wherever practical and environmentally beneficial, paved log storage yards should be encouraged over aggregate-surfaced yards to reduce waste disposal problems and control and treat resultant runoff.

Regulations -- General

1. Proposed industrial developments or major expansions shall be consistent with an officially adopted comprehensive waterfront plan and/or long-range port development plan if one exists, or, if not, be accompanied by a regional feasibility analysis.
2. Only water-dependent and water-related industries shall be permitted in the shoreline jurisdiction.
3. Water-dependent and/or water-related portions of industries shall locate in legally established and existing, developed port and harbor areas and/or on Department of Natural Resources - designated first class shorelands and harbor areas whenever feasible. Proposed developments shall maximize the use of legally established existing industrial facilities and avoid duplication of pier and dock facilities before expanding into undeveloped areas or building new facilities. Proposals for new industrial developments shall demonstrate the need for expansion into an undeveloped area.
4. New facilities for shallow draft shipping shall not be allowed to preempt scarce deep draft port sites.
5. Accessory development which does not require a shoreline location shall be located upland of the water-dependent portions of the development and set back from the OHWM as set forth in Chapter 6 Environment Designation; this category includes parking, warehousing, open air storage, waste storage and treatment or storm runoff control facilities, utilities and land transportation development.
6. Existing industrial development on shorelines which is neither water-dependent nor water-related may be permitted as a conditional use to expand inland from existing structures but not parallel to or waterward of the OHWM. Waterward expansion of existing non-water-oriented industry is prohibited.
7. The developer must demonstrate that adequate consideration has been given to and plans made to mitigate negative environmental impacts including but not limited to air, water, aesthetics, noise pollution and the loss of fish and wildlife habitat.

8. Water-dependent industry shall be located and designed to minimize the need for initial and/or continual dredging, filling, spoil disposal and other harbor and channel maintenance activities.
9. Piers, moorage, slips, floats and launching facilities may be permitted accessory to industrial development, provided:
 - a. The facility will serve a water-dependent or water-related use;
 - b. The facility does not constitute a hazard to navigation; and
 - c. All other provisions pertaining to these uses are met.
10. Offshore facilities, floating docks and artificial islands for deep water port expansion shall not be permitted except by conditional use permit, provided it can be demonstrated that such development or expansion will not adversely impact the marine environment or diminish the natural productivity of the estuarine or aquatic system.
11. Sewage treatment, water reclamation and desalinization plants 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 shorelands.
12. Storage and/or disposal of industrial wastes is prohibited within shoreline jurisdiction, PROVIDED that waste water treatment systems may be allowed in shoreline jurisdiction only if alternate, inland areas have been adequately proven infeasible. A performance bond of at least 150 percent of the fair market value of the estimated cost of a cleanup or rehabilitation effort may be required.
13. New or expanded facilities for water transport of bulk crude or other forms of petroleum in vessels over 125,000 dwt shall be prohibited within Puget Sound.
14. At new or expanded port and/or industrial developments, the best available facilities practices and procedures shall be employed for the safe handling of fuels and toxic or hazardous materials to prevent them from entering the water and optimum means shall be employed for prompt and effective cleanup of those spills that do occur.
15. Port authorities and industries are encouraged to recycle dredged material when feasible in areas suitable for disposal of such materials for agricultural, forestry storage, stockpiling or beautification purposes, with the intent of restoring natural vegetation or transfer for agricultural, forestry or landscaping purposes. Such materials may be spread on existing

resource lands or may be used to create new agricultural resource land only if it is demonstrated that spoils are not contaminated with heavy metals or other toxins.

16. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Regulations -- Design

1. The determinations of which lands are best suited for water-dependent/water-related industry shall be made on the basis of the following location criteria:
 - a. Channel access;
 - b. Rail access;
 - c. Major road access;
 - d. Size of land area;
 - e. Physical characteristics of site (e.g. grade, soil type, hydrology, etc.);
 - f. Size of ownership units;
 - g. Present use and projected growth patterns; and
 - h. Environmental factors.
2. All new or expanded upland industrial development shall be set back and buffered from adjacent shoreline properties which are used for nonindustrial purposes. Buffers shall be of adequate width, height and plant and soil composition to protect shorelines and such other properties from visual or noise intrusion, minimize erosion and protect water quality. New or expanded industrial development shall be set back and buffered from the shoreline (see Chapter 6) except those water-dependent portions of the development which require direct access to the water or shoreline and where any adverse impacts are minimized.
3. Buffers shall not be used for storage of industrial equipment or materials, nor for waste disposal, but may be used for outdoor recreation if consistent with public access and other provisions of the SMP.

4. Onshore port and/or industrial development on marine shores (less than 20 feet above mean sea level) shall be flood-proofed for protection against flood damage from storm tides and surges, and in consideration of long-term sea level rise.
5. Consistent with other provisions of this SMP, ports and/or water-dependent industry shall provide public access to the shoreline and/or provide opportunities for public viewing of the industrial activity whenever feasible and safe.
6. Display and other exterior lighting shall be designed, shielded and operated to minimize glare, avoid illuminating nearby properties and prevent hazards for public traffic.
7. Stormwater BMPs shall be followed, see Ecology's *Stormwater Management Manual for the Puget Sound Basin*.

Regulations -- Log Storage

1. 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.
2. 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 State water quality standards and/or criteria will not be violated by such runoff under any conditions of flow leaving the site and entering into nearby water courses. If such demonstration is not possible, treatment facilities for runoff shall be provided, meeting State and Federal standards.
3. Offshore log storage, when allowed, shall be located where natural tidal or current flushing and water circulation is optimal to disperse polluting wastes.
4. Log storage shall not be permitted in public waters where water quality standards cannot be met at all times or where these activities are a hindrance to other beneficial water uses such as small craft navigation.
5. The free-fall, violent dumping of logs into water shall be prohibited. Easy let-down devices shall be employed for placing logs in the water.

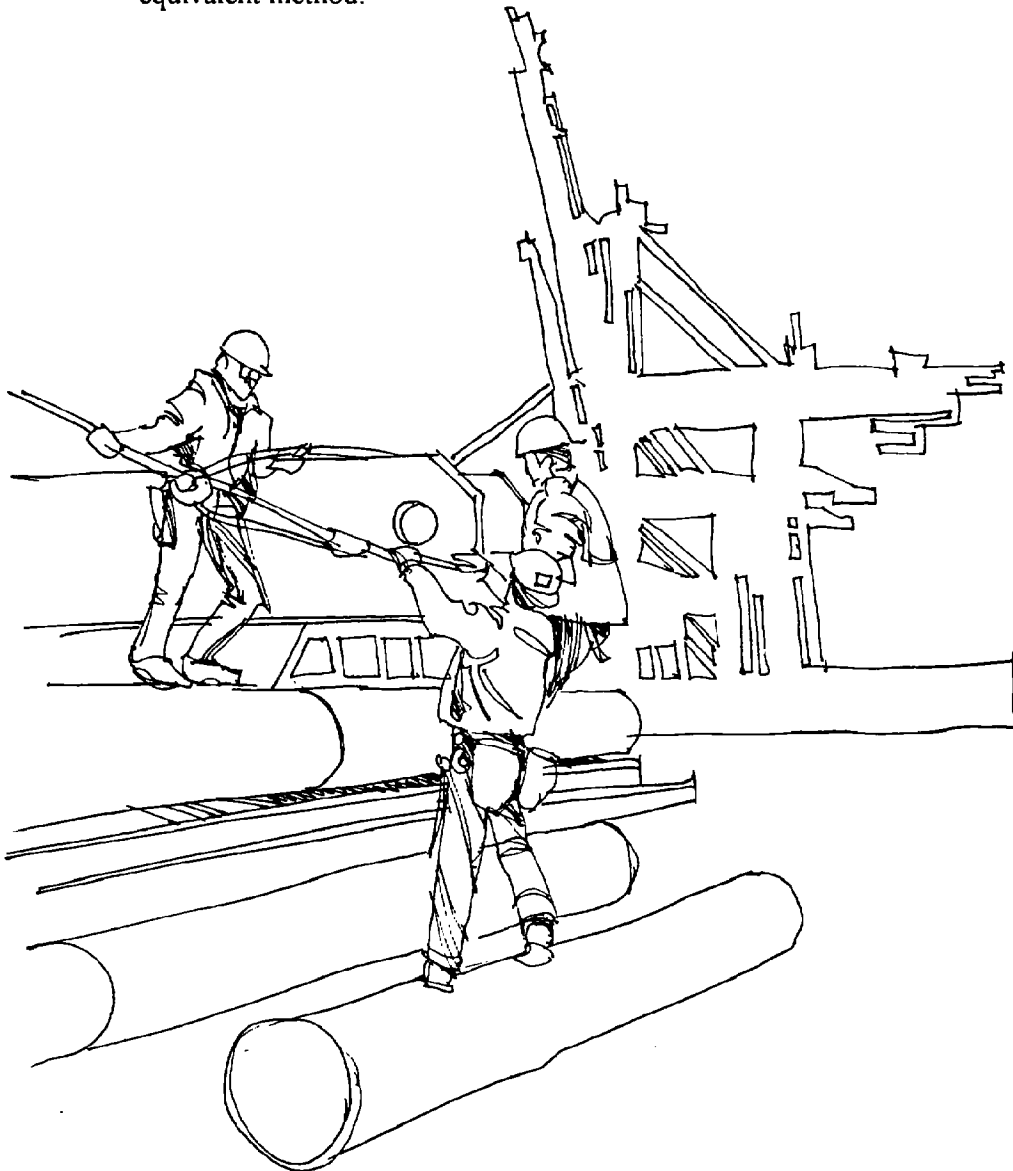
6. Positive bark and wood debris control, collection and disposal methods shall be employed at log dumps, raft building areas and mill-side handling zones. This shall be required for both floating and sinking particles.
7. Log dumps shall not be located in rapidly flowing waters or other water zones where bark and debris controls cannot be effectively provided.
8. Bark and other debris shall be kept out of the water and immediately removed if accidentally allowed to enter the water.
9. Logs shall not be dumped, stored or rafted where grounding will occur.
10. Where water depths will permit the floating of bundled logs, they shall be secured in bundles on land before being placed in the water. Bundles shall not be broken again except on land or at millside.

Regulations -- Ship and Boat Building and Repair Yards

1. The yard shall employ best management practices (BMPs) concerning the various services and activities they perform and their impacts on the surrounding water quality. Standards for BMPs are found in *Water Quality Manual: Best Management Practices* (see Chapter 19 for complete references) and will be referred to in the following text as BMP. The following are required:
 - a. The yard shall be cleaned on a regular basis to minimize loss of accumulated debris and sandblasting material to adjacent waters;
 - b. Catch basins in the drainage system shall be inspected on a monthly basis and cleaned as necessary;
 - c. Containers storing dangerous wastes or other liquid shall be placed inside a building unless impractical due to site constraints. If placed outside, BMP 1.50 (described in Part III) shall be used.
 - d. Cleanup of spills shall begin immediately. No emulsifier or dispersant is to be used. Oil and hazardous spills are to be cleaned according to the Spill Prevention Control and Countermeasure Plan (BMP R.8 and Part V). Oil containment booms shall be available for immediate usage.
 - e. Drip pans or other equivalent protective devices shall be required for all transfers of oil, solvents and paints and for paint mixing (BMP 1.30 in Part III).

- f. Paints and solvents shall not be mixed on floats.
- g. Floatable and low-density waste such as wood, plastic, insulation, etc. shall be removed from the dry-dock floor prior to flooding or sinking, and from the marina railway carriage and ramp before launching. Large density items may remain in place when between the wing walls of the dry-dock.
- h. To the degree feasible, dust and overspray shall be prevented from falling into the water during abrasive blasting and spray painting. Feasible methods include plastic barriers beneath the hull, between the hull and dry-dock wingwalls or plastic barriers hung from the flying bridge of the dry-dock, from the bow or stern of the vessel or from temporary structures erected for that purpose.
- i. The bottom edge of the tarpaulins and plastic sheeting shall be weighted during a light breeze. When sandblasting, plywood and/or plastic sheeting shall be used to cover openings and open areas between decks, including but not limited to scuppers, railings, freeing ports, ladders and doorways.
- j. Prior to flooding of the dry-dock when a vessel is to be removed, accessible areas of the dry-dock are to be swept clean of debris. After a vessel has been removed and the dock raised, the remaining shall be cleaned.
- k. Shipboard cooling and process water shall be directed so as to minimize contact with spent abrasive, paint and other debris. Dock hosing shall be minimized when debris is present. When hosing occurs, methods shall be incorporated to prevent accumulation of debris in the drainage system.
- l. Leaking connections, valves, pipes, hoses and soil chutes carrying either water or waste water shall be replaced or repaired immediately.
- m. Bilge and ballast water discharges shall not cause any visible sheen on receiving waters and shall not exceed an oil and grease concentration of 15 milligrams per liter.
- n. Ballast water shall not be discharged to state waters if solvents, detergents, or other additives have been added unless a state water quality variance has been granted specific to that instance.
- o. To the maximum extent practical, all activities are to be enclosed or covered. All interior drains shall discharge to the sanitary sewer under pretreatment conditions defined by Metro (BMP R.2 in Part V).

- p. Above ground storage tanks shall incorporate BMPs to prevent contamination of surface and ground waters (BMP 1.40 in Part III).
 - q. Signs shall be painted on storm drain inlets to indicate that they are not to receive liquid or solid wastes.
 - r. Businesses generating Dangerous Wastes shall properly segregate and dispose the wastes as required by Ecology (BMP R.4 in Part V).
2. Mobile services shall abide by the applicable BMPs described above. Any cleaning, surfacing or resurfacing operation occurring over water that may result in the entry of debris such as paint chips, shall employ tarps temporarily affixed to the hull above the water line. Prior to removing the tarps, the accumulated contents shall be removed by vacuuming or an equivalent method.



Instream Structures

Applicability

Instream structures function for the impoundment, diversion or use of water for hydroelectric generation and transmission (including both public and private facilities), flood control, irrigation, water supply (both domestic and industrial), recreational or fisheries enhancement. 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.

Policies

1. Location and Design Features

- a. Instream structures and associated facilities should provide for the protection and preservation of natural and cultural resources including, but not limited to, fish, wildlife and water resources, sensitive areas such as marshes, bogs and swamps, sensitive geologic and geohydraulic areas and waterfalls, erosion and accretion shoreforms and natural scenic vistas.
- b. Careful consideration should be given to avoiding or minimizing land and water use conflicts to properties in shoreline jurisdiction and to properties both adjacent to, upstream and downstream of the proposed site.
- c. Proposals for instream structures and associated facilities should give careful consideration to the design, location, security and construction of access roads, impoundment structures and reservoirs, penstocks and power houses to minimize adverse impacts to the shoreline and the surrounding area.
- d. 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.
- e. All diversion structures should be designed to permit natural transport of bed load materials.

- f. Instream structures and their support facilities should be designed to minimize removal of riparian vegetation and the necessity for massive shore defense structures.
- g. The expansion of legally existing hydroelectric facilities or the integration of hydroelectric facilities within existing flood control, irrigation or water supply facilities is preferred over the development of new facilities. When new sites are considered, sufficient evidence should be presented to demonstrate that existing facilities are fully utilized or are not practicably available.
- h. All non-water oriented facilities such as staging and storage areas, switching yards, utility transmission lines and in many cases, power houses, should be located outside of shoreline jurisdiction. Where shoreline jurisdiction includes the entire 100-year floodplain, non-water-oriented facilities should be located at least 200 feet landward of the OHWM.
- i. In determining the appropriateness of a stream or river for hydroelectric development, the recommendations and conclusions of the Northwest Power Planning Council (1988) or equivalent state-adopted site-ranking study should be considered.
- j. Mitigation should be required for loss of fisheries and wildlife resources, natural systems including wetlands and sensitive areas. No net loss in function or value of acreage should occur as a result of instream structures. When required, mitigation measures should be properly planned and monitored to ensure their effectiveness.
- k. Documentation of water right should be provided where applicable.
- l. Instream structures and associated facilities should be located and designed so they do not interfere with public navigation of the water course including commercial and recreational navigation. Such uses include barging, rafting, sailboarding, kayaking and canoeing.
- m. Instream structures and associated facilities should not be located where they will adversely impact publicly owned lands or waters used extensively for recreation. Impacts that should be avoided include the visual impact of the structure or facilities, the intrusion of roads or utility corridors into undeveloped area used for recreation, reduced water noise and significant visual impacts from reduced water flows.

2. Public Access and Recreational Considerations

- a. 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 SMP. Existing public access and recreational opportunities should be retained, enhanced or replaced.
- b. Instream structures should provide trails and other access links as well as appropriate ancillary facilities, such as parking and sanitary facilities, etc., if recreational opportunity is created.
- c. The nature, time, number of people and area open to public access should be regulated for the purposes of habitat protection and/or public safety.

Regulations

- 1. All permit applications shall contain, at a minimum, the following:
 - a. A site suitability analysis which provides sufficient justification for the proposed site. The analysis must fully address alternative sites for the proposed development.
 - b. Proposed location and design of powerhouse, penstocks, accessory structures, utility corridors and access/service roads. Said locations shall be marked on the ground, and an on-site open public meeting may be required to facilitate public and other review and comments.
 - c. Provision for public access to and along the affected shoreline and proposed recreational features at the site, where applicable.
 - d. A plan which describes the extent and location of vegetation which is proposed to be removed to accommodate the proposed facility, and any site revegetation plan required by this SMP.
 - e. A hydraulic analysis prepared by a licensed professional engineer which sufficiently describes the project's effects on streamway hydraulics, including potential increases in base flood elevation, changes in stream velocity and the potential for redirection of the normal flow of the affected stream.
 - f. Biological resource inventory and analysis which sufficiently describe the project's effects on fisheries and wildlife resources, prepared by a professional biologist.

- g. Provision for erosion control, protection of water quality and fishery and wildlife resources during construction.
 - h. Long-term management plans which describe, in sufficient detail, provisions for protection of instream resources during construction and operation. The plan shall include means for monitoring its success.
2. Public Access Requirements - In addition to the general public access requirements in Chapter 5 the following apply:
- a. Instream structures may be required to provide public access, provided public access improvements do not create additional adverse environmental impacts to and along the affected shoreline, nor create a safety hazard to the public. Public access provisions shall include, but not be limited to, any combination of trails, vistas, parking and any necessary sanitation facilities. Required public access sites shall be dedicated for public use through fee acquisition, or recorded easement.
3. Site Development
- a. Erosion and Drainage Control
 - i. Temporary and emergency erosion control drainage measures, such as, but not limited to, silt curtains, berms and stormwater catch basins shall be utilized during construction to prevent shoreline erosion and siltation of the water body.
 - ii. Temporary erosion and drainage control devices may be removed following construction completion, provided that an approved erosion control and maintenance plan has been implemented by the contractor(s).
 - iii. Materials adequate to immediately correct emergency erosion situations shall be maintained on-site.
 - b. Clearing/Excavation Management
 - i. All debris, overburden and other waste materials from construction shall be disposed of in such a manner as to prevent their entry into a water body by erosion, from drainage, high water or other vectoring mechanisms.
 - ii. All disposal sites shall be identified by the developer or contractor prior to construction and shall be approved by appropriate local authorities.

c. Staging and Storage Areas

- i. All heavy construction equipment as well as fuel storage and repair areas shall be located greater than 200 feet from ordinary high water.
- ii. Construction material staging areas shall be located greater than 200 feet from the ordinary high water mark, EXCEPT during construction and assembly periods.
- iii. Service roads shall be of a size which is minimally necessary to safely accomplish maintenance and repair of the facility, and shall be designed and located to minimize vegetation removal and erosion and sedimentation impacts.
- iv. Hazardous and/or toxic materials storage shall be prohibited within shoreline jurisdiction and shall be prevented from entering the water through accidental spillage at staging or storage areas located outside immediate shoreline jurisdiction.

4. Structural Development

a. Powerhouses/penstocks

- i. These shall be designed, located and constructed in such a manner as to avoid extensive topographical alteration and to minimize or avoid, as much as possible, impacts to the natural features of the shoreline.
- ii. These structures shall be designed and located to minimize removal of riparian vegetation and return flow to the stream in as short a distance as possible.
- iii. Penstocks shall be designed, located and constructed so as to present as low a profile as possible.
- iv. Facilities shall be located so as not to adversely impact sites having historic, cultural, scientific or educational value, as identified by the appropriate authorities.
- v. All diversion structures shall be designed to permit the natural transport of bedload materials.
- vi. Powerhouses shall be located a minimum of 50 feet from the OHWM, provided that this does not apply to raceways.

- b. Improvements
 - i. On run-of-the-river developments, impoundments shall be located in such a manner as to minimize impacts to natural scenic values.
 - ii. Subject to the approval of the appropriate state authority, instream structures shall provide for adequate upstream and downstream migration of anadromous fish, where applicable.
- c. Utility Transmission Lines
 - i. Where practicable, transmission lines shall be located underground.
 - ii. Utilities and transmission lines shall be located so as to minimize obstruction or degradation of a scenic view.
- d. Mitigation
 - i. Mitigation shall be required of the proponent for the loss of fish and wildlife resources and natural systems including wetlands and sensitive areas. The mitigation required shall be commensurate to the value and type of resource or system lost. No net loss in function, value or acreage shall occur from such development.
 - ii. Where mitigation for loss of natural systems and resources is required, a mitigation plan shall be prepared by the proponent, and subject to the approval of the Washington Department of Wildlife and/or Fisheries, that details the objectives of the mitigation activities.
 - iii. Mitigation activities shall be monitored to determine the effectiveness of the mitigation plan. Monitoring shall be accomplished by a third party, subject to the approval of the City/County and shall have the concurrence of the Washington Department of Wildlife and/or Fisheries. Results of monitoring shall be publicly available.
 - iv. If mitigation is found to be ineffective, corrective action which satisfies the mitigation objectives will be required of the proponent.
 - v. If the mitigation is found to be inadequate or if adequate mitigation is determined to be impossible, then the application will be denied.
- 5. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Mining

Applicability

Mining is the removal and primary processing of naturally occurring materials from the earth for economic use. For purposes of this definition, "processing" includes screening, crushing, stockpiling, all of which utilize materials removed from the site where the processing activity is located. Mining activities also include in-water dredging activities related to mineral extraction. Processing does not include general manufacturing, such as the manufacture of molded or cast concrete or asphalt products, asphalt mixing operations, or concrete batching operations (see "Industry" for standards relating to these uses).

Policies

1. Mining should not be allowed in unique and fragile areas, in prime agricultural areas or on marine beaches.
2. All practical measures should be taken to protect water bodies from all sources of pollution, including but not limited to sedimentation and siltation, chemical and petrochemical use and spillage and storage or disposal of mining wastes and spoils. Maximum protection should be provided for anadromous fisheries resources.
3. Mining activities should allow the natural shoreline systems to function with a minimum of disruption during their operations and should return the site to as near natural a state as possible upon completion.
4. Mining operations should minimize adverse visual and noise impacts on surrounding shoreline areas.
5. Mining activities should be encouraged to locate outside shoreline jurisdiction.

Regulations -- General

1. Excavation of sand, gravel and other minerals shall be done in strict conformance to the Washington State Surface Mining Reclamation Act, Chapter 78.44 RCW, and applicable provisions of the City/County code.

2. Mining proposals shall provide the following information as part of an application for a shoreline permit:
 - a. Materials to be mined;
 - b. Quantity of materials to be mined, by type;
 - c. Quality of materials to be mined, by type. For certain minerals, a qualified geologist's evaluation may be required;
 - d. Mining technique and equipment to be utilized;
 - e. Depth of overburden and proposed depth of mining;
 - f. Lateral extent and depth of total mineral deposit;
 - g. Cross section diagrams indicating present and proposed elevations and/or extraction levels;
 - h. Existing drainage patterns, seasonal or continuous, and proposed alterations thereof including transport and deposition of sediment and channel changes that may result;
 - i. Proposed means of controlling/handling surface runoff and preventing or minimizing erosion and sedimentation including impacts to banks both upstream and downstream of the excavation;
 - j. The location and sensitivity of any affected flood hazard areas and wetlands;
 - k. Subsurface water resources, aquifer recharge areas: origin, depth and extent;
 - l. Quality analysis of overburden, excavation material and tailings with plans for storage, usage or disposition;
 - m. Mining plan and scheduling, including seasonal, phasing and daily operation schedules;
 - n. Reclamation plan that meets the requirement of this chapter and, at a minimum, Chapter 78.44 RCW (for surface mining operations only);
 - o. Screening, earthen berm buffering and/or fencing plans that meet the requirements of this master program; and
 - p. Impacts to aquatic and riparian habitat.

3. Mining operations shall comply with all local, state and federal water quality standards and pollution control laws. Operations shall utilize effective techniques to prevent or minimize surface water runoff, erosion and sedimentation; prevent reduction of natural flows; protect all shoreline areas from acidic or toxic materials; and maintain the natural drainage courses of all streams. Surface water runoff shall be impounded as necessary to prevent accelerated runoff and erosion.
4. Overburden, mining debris and tailings shall not be placed in water bodies or floodways and shall be stored and protected in such a manner so as to prevent or minimize erosion or seepage to surface and ground waters.
5. Mining operations shall provide maximum protection for anadromous fisheries resources, including but not limited to limitations on the periods of the year during which mining activities may occur.
6. If substantial evidence indicates that mining operations are causing, or continuation of operation would cause, significant adverse impacts to water quality or to the geohydraulic functioning of a river, the City/County may terminate the mining permit or impose further conditions on the mining operation.
7. In no case shall mining operations impair lateral support and thereby result in earth movements extending beyond the boundaries of the site.
8. Precautions shall be taken to insure that stagnant or standing water, especially that of a toxic or noxious nature, does not develop, and that flooding and evaporation will not lead to the stranding of fish in open pits.
9. Scalping gravel from streamway bars may be permitted as a conditional use. No more than one-half of the material may be removed in one mining season than will predictably be replaced by natural processes during the subsequent wet season.
10. Excavation of sand, gravel and other minerals by the open pit method (not including the scalping of streamway bars) is **prohibited** within floodways.
11. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Regulations -- Setbacks and Buffers

1. A minimum 100-foot buffer of undisturbed soils and native vegetation shall be maintained and/or planted between the mining site (including all accessory facilities) and adjacent properties and abutting bodies of water or wetlands, provided that the water body buffer requirement may be waived for approved streamway bar scalping operations. If vegetative screening is not possible, the City/County may require artificial screening or fencing to suit the site, operations and shoreline area.
2. Mining activities, other than mining of river point-bar material, shall be set back a sufficient distance from water bodies and wetlands to minimize erosion, protect water quality from all possible sources of pollution and preserve the natural vegetation and aesthetics of the shoreline environment.
3. Mining equipment, works and structures shall be sited and stored as far landward as feasible from the ordinary high water mark. Minimum setbacks and buffer areas are established in Chapter 6, Environment Designations. Any facilities located within the 100-year floodplain must be able to withstand a 100-year flood without becoming hazardous.

Regulations -- Reclamation

1. Reclamation plans shall be submitted with each permit application and shall provide for reclamation of the site into a use which is permitted by this program and shall also indicate when reclamation shall occur. See Washington State Surface Mining Reclamation Act Chapter 78.44 RCW.
2. In order to insure the future use and viability of shoreline areas subsequent to mining activities, the reclamation plan shall include the following provisions to be fulfilled within one year of completed mining operations:
 - a. All equipment, machinery, buildings and structures not involved in reclamation activities shall be removed from the site. All equipment utilized for reclamation shall be removed from the site upon review and approval of the reclamation as required by state and local agencies.
 - b. No stagnant or standing water shall be allowed to collect or remain except as provided in an approved site reclamation plan. Such areas shall be flood-proofed.
 - c. Backfill material shall be of natural, compatible materials. Combustible, flammable, noxious, toxic or solid waste materials are **prohibited** as backfill.

- d. All overburden, waste and nontoxic material storage piles and areas shall either be leveled, sodded and planted or returned to the excavated area for reuse as backfill and subsequently sodded and planted.
 - e. The site shall be rehabilitated so as to prevent erosion and sedimentation during and after reclamation.
3. Suitable drainage systems approved by the City/County engineer shall be installed and maintained if natural, gradual drainage is not possible. Such systems should collect, treat and release surface runoff, as close to original flow patterns as possible, and in such a manner as to prevent erosion and sedimentation.
 4. To the extent possible, topography of the site shall be restored to the contours existing prior to mining activity. Contours of the reclaimed site shall be compatible with the surrounding land and shoreline area.
 5. All banks, slopes and excavation areas containing unconsolidated materials shall be sloped to no steeper than 2-1/2 feet horizontal to 1-foot vertical. All slopes shall be sodded or surfaced with appropriate soil to at least the depth of the surrounding, undisturbed soil and subsequently revegetated.
 6. All banks, slopes and excavated areas of consolidated material shall be sloped to no steeper than 1-foot horizontal to 1-foot vertical.
 7. Slopes of quarry walls shall not have a prescribed slope unless a hazardous condition is created, whereupon the quarry shall be backfilled and sloped according to General Regulation #6 above.
 8. Revegetation shall consist of compatible, native, self-sustaining trees, shrubs, legumes or grasses.
 9. All toxic and acid-forming mining refuse and materials shall be either treated so as to be nonpolluting prior to on-site disposal, or removed and properly disposed of away from shoreline areas.
 10. The amount of land and shoreline area being excavated or lying disturbed and unreclaimed at any time without simultaneous reclamation being undertaken shall not exceed 10 acres.

Recreational Development

Applicability

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, golf courses and other outdoor recreation areas. 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.



Notes to Master Programmers

The recreational aspects common to each of these uses are identified and addressed. For example, a resort will probably contain characteristics of, and be reviewed under, both the Commercial Development and the Recreational Development sections. Primary activities such as boating facilities, subdivisions, motels are not addressed directly in this category.

Uses and activities associated with recreational developments which are identified as separate use activities in this program, such as Boating Facilities; Piers and Docks; Residential Development and Commercial Development, are subject to the regulations established for those uses in addition to the standards for recreation established in this section.

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. The location and design of shoreline recreational developments should relate to local population characteristics, density and special activity demands. Acquisition priorities should consider these needs demands and special opportunities as well as public transit access and access for the physically impaired, where planned or available.

3. Recreational developments and plans should promote the primacy of preserving the natural character, resources and ecology of shorelines of state-wide significance (see use preferences, Chapter 95.58.020 RCW).
4. Recreational developments should be located, designed and operated to be compatible with, and minimize adverse impacts on, environmental quality and valuable natural features as well as on adjacent and surrounding land and water uses. Favorable consideration should be given to proposals which compliment their environment and surrounding land and water uses, and which leave natural areas undisturbed and protected.
5. Shoreline areas with a potential for providing recreation or public access opportunities should be identified for this use and acquired by lease or purchase and incorporated into the public park and open space system.
6. A variety of compatible recreational experiences and activities should be encouraged to satisfy diverse recreational needs.
7. The concentration of recreation use pressure at a few points along the shoreline should be avoided by encouraging development of smaller, dispersed recreation areas.
8. The linkage of shoreline parks, recreation areas and public access points with linear systems, such as hiking paths, bicycle paths, easements and/or scenic drives, should be encouraged.
9. Recreational developments should be located and designed to preserve, enhance or create scenic views and vistas. Such scenic views should be identified in the shoreline inventory.
10. Where appropriate, nonintensive recreational uses may be permitted in floodplain areas.
11. Artificial marine life habitats should be encouraged in order to provide increased aquatic life for recreation. Such habitats should be constructed in areas of low habitat diversity and in consultation with the Department of Fisheries.
12. The use of shoreline street ends and publicly owned lands for public access and development of recreational opportunities should be encouraged.
13. The use of off-road vehicles should be prohibited in all shoreline areas EXCEPT where special areas have been set aside for this purpose, and then only if demand for such use and its location in shoreline areas can be sufficiently demonstrated through a CUP (see Chapter 6, Figure 6-2 Shoreline Use and Modification Activity Matrix).

14. The use of jet skis and similar recreational equipment should be restricted to special areas. This activity should be allowed only where no conflict with other uses and wildlife habitat exists.
15. All recreational developments should make adequate provisions for:
 - a. Vehicular and pedestrian access, both on-site and off-site;
 - b. Proper water supply and solid and sewage waste disposal methods;
 - c. Security and fire protection;
 - d. The prevention of overflow and trespass onto adjacent properties, including but not limited to landscaping, fencing and posting of property; and
 - e. Buffering of such development from adjacent private property or natural area.
16. Trails and pathways on steep shoreline bluffs should be located, designed and maintained to protect bank stability.

Regulations -- General

1. State and local health agencies have broad regulations which apply to recreation facilities and ocean beaches which shall be consulted by local governments when issuing permits (see WAC 173-16-060-21(k)).
2. Valuable shoreline resources and fragile or unique areas such as marshes, bogs, swamps, estuaries and accretion beaches shall be used only for nonintensive and nonstructural recreation activities.
3. All permanent substantial recreational structures and facilities shall be located outside officially mapped floodways provided the City/County may grant administrative exceptions for nonintensive minor accessory uses (e.g., picnic tables, tennis courts, etc.).
4. Substantial accessory use facilities, such as rest rooms, recreation halls and gymnasiums, commercial services, access roads and parking areas shall be setback from the OHWM unless it can be shown that such facilities are essentially shoreline-dependent (see Chapter 6 for applicable setback requirements). These areas may be linked to the shoreline by walkways.
5. For recreation developments that require the use of fertilizers, pesticides or other toxic chemicals, such as golf courses and play fields, the applicant shall submit plans demonstrating the methods to be used to prevent these

applications and resultant leachate from entering adjacent water bodies. Buffer strips and, if practical, shade trees shall be included in the development. The City/County shall determine the maximum width necessary for buffer strips but in no case shall the buffer strip be less than 25 feet. The developer shall also be required to leave a chemical-free swath at least 100 feet in width next to water bodies and wetlands.

6. The use of time-release fertilizers and herbicides shall be preferred over liquid or concentrate application for lawns grown within shoreline jurisdiction.
7. Signs indicating the public's right of access to shoreline areas shall be installed and maintained in conspicuous locations at the point of access and the entrance thereto.
8. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Regulations -- Design

1. In approving shoreline recreational developments, the City/County shall ensure that the development will maintain, enhance or restore desirable shoreline features including unique and fragile areas, scenic views and aesthetic values. To this end, the City/County may adjust and/or prescribe project dimensions, location of project components on the site, intensity of use, screening, parking requirements and setbacks, as deemed appropriate to achieve this intent.
2. Recreational developments shall provide facilities for nonmotorized access to the shoreline such as pedestrian and bicycle paths. Motorized vehicular access is prohibited on beaches, bars, spits and stream beds, EXCEPT for boat launching and maintenance activities.
3. To protect natural resources and adjacent properties, recreational facility design and operation shall prohibit the use of all-terrain and off-road vehicles in the shoreline area, EXCEPT where specific areas for such use are set aside and controlled, and then only when it can be demonstrated that demand is sufficient to warrant such activity.
4. Proposals for developments shall include a landscape plan that utilizes primarily native, self-sustaining vegetation. The removal of on-site native vegetation shall be limited to the minimum necessary for the development of campsites, selected view points or other permitted structures or facilities (see Chapter 5 "Clearing and Grading").

5. No recreational buildings or structures shall be built over water, EXCEPT water-dependent and/or public access structures such as piers, docks, bridges or viewing platforms may be permitted as a CUP.
6. Proposals for recreational development shall include adequate facilities for water supply, sewage and garbage disposal. Where sewage treatment facilities are not available, the appropriate reviewing authority shall limit the intensity of development to meet city, county and state on-site sewage disposal requirements.
7. Underwater parks and artificial reefs established in cooperation with state agencies shall include safety provisions to warn boating traffic of their location.
8. Artificial reefs shall not contain materials toxic or otherwise hazardous to humans or fish and wildlife.
9. Recreational facilities shall make adequate provisions, such as screening, buffer strips, fences and signs, to prevent overflow and to protect the value and enjoyment of adjacent or nearby private properties and natural areas.



Notes to Master Programmers

Often golf courses are proposed in proximity to shorelines of state-wide significance, as defined in the Shoreline Management Act. Golf course proponents and developers often perceive the shoreline location as an amenity enhancing the attractiveness of golf courses. In the past, golf courses were generally viewed as park-like and environmentally benign, relative to other land use. More recently the negative environmental impacts of golf course development and operation have become widely recognized and studied. Most often these include ground and surface water contamination with chemical fertilizers and biocides, and destruction of wildlife habitat. Public access to shorelines may also be lost or significantly reduced. Many of these impacts can be eliminated or minimized through appropriate design, development and management.

Golf course design, construction and maintenance, along with all other recreational development, is subject to the General Goals set forth in this document. Impacts should not negatively effect the natural character, resources, or ecology of the shoreline, or public access to shorelines of the state or shorelines of state-wide significance. On degraded shorelines, where significant components of native riparian vegetation have been eliminated and/or where banks are eroding due to loss of vegetation, bank and riparian enhancement should be included in the golf course design. The chemical management of golf courses should also be addressed in specific policies.

Regulations -- Golf Courses

1. Golf courses are a conditional use of shorelines, requiring both shoreline conditional use and substantial development permits.
2. Golf courses shall be designed with 100-foot setbacks from the ordinary high water mark (OHWM), as measured on a horizontal plane, for all tees, greens and fairways.
3. Along shorelines of state-wide significance, fairways, tees and greens shall be set back 200 feet from the OHWM. Roughs may extend to within 100 feet of the OHWM, as measured on a horizontal plane.
4. Non-water-oriented structures associated with golf courses, such as clubhouses and maintenance buildings, shall be set back 100 feet from OHWM.
5. Golf course fairways shall not cross streams which are within SMA jurisdiction. Courses which are proposed to occupy both sides of such streams should be designed to minimize bridge crossings.
6. Degraded shorelines (as defined in the General Policies section) shall be revegetated with native grasses, forbs and woody species representative of undisturbed riparian communities in the immediate area, or those in the same or similar ecological zones. This revegetation shall occur in, but not be limited to, the 100-foot setback area.
7. Snags and living trees (i.e. large cottonwoods) shall not be removed within the 100-foot (50-foot in urban environments) setback unless a professional forester and the Washington Department of Wildlife area biologist have determined them to be extreme hazards and likely to fall into a fairway, tee or green. Snags and living trees within the setback which do not present an extreme hazard shall be retained.
8. Golf cart routing shall be set back 200 feet from the OHWM, unless combined with a public access trail system. If golf cart routing is combined with public access trails, it shall be located no closer than 100 feet from the OHWM, as measured on a horizontal plane.
9. Water hazards and stormwater drainage basins shall be managed for wildlife, through appropriate plantings.
10. Wildlife resting or feeding on golf courses located within SMA jurisdiction shall not be harassed. Signs reminding users of this shall be posted as needed.

11. A chemical management plan designed to eliminate the possibility of damage to riparian vegetation, wildlife, surface and ground water quality shall be prepared and implemented for golf courses located in SMA jurisdiction.
12. Broadleaf and broad spectrum (capable of killing all vegetation) herbicides shall be used only for spot application with wicking or small spray equipment on noxious weeds on the applicable (insert name of City/County noxious weed list) within the 200-foot setback. Hand and mechanical control of noxious weeds shall be encouraged in the chemical management plan. All other applicable local, state and federal regulations and label requirements shall be adhered to in the use of such chemicals.
13. Public access for passive dispersed recreation (as defined in the General Goals) shall be provided within SMA jurisdiction.



Residential Development

Applicability

Residential development means one or more buildings, structures, lots, parcels or portions thereof which are designed for and used or intended to be used to provide a place of abode for human beings, including single-family residences, duplexes, other detached dwellings, floating homes, multi-family residences, apartments, townhouses, mobile home parks, other similar group housing, condominiums, subdivisions and short subdivisions, together with accessory uses and structures normally applicable to residential uses including but not limited to 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.



Notes to Master Programmers

The popularity of waterfront property along our marine, river and lake shores is increasing. Impacts of clearing and grading on fragile riparian habitats and shorelines, septic systems on water quality and leaching and runoff from lawn and garden chemical applications have a cumulative impact on our shorelines and associated water bodies. Although an owner-occupied single-family residence is exempt from the substantial development permit process, it still must comply with all of the provisions of this section and of the master program. Subdivisions and short subdivisions must also comply with all of the provisions of this section and the master program. All development is subject to the variance and conditional use requirements and permit process, when indicated.

Uses and facilities associated with residential development which are identified as separate use activities in this program, such as Boating Facilities, Piers and Docks, Bulkheads, Shoreline Stabilization and Flood Protection, Utilities, Landfill and Clearing and grading, are subject to the regulations established for those uses in addition to any special conditions relating to residential areas established in this section. The General Provisions (Chapter 5) and Environment Designation Provisions (Chapter 6) also apply.

Exemptions

Although a substantial development permit is not required for construction within shoreline jurisdiction by an owner, lessee or contract purchaser of a single-family residence for his own use or the use of his family, such construction and all normal appurtenant structures must otherwise conform to this master program. An "appurtenant" means a structure that is necessarily connected to the use and enjoyment of a single-family residence and includes a garage, deck, driveway, utilities, fences and grading which does not exceed 250 cubic yards (see WAC 173-14-040 (1g)).



Notes to Master Programmers

Each jurisdiction can establish an expanded list of local "normal appurtenances" with supporting documentation.

The Shoreline Management Act exempts **from the requirement to obtain a substantial development permit** the construction of any structure with a fair market value less than \$2,500. Although these structures are exempt from obtaining a substantial development permit, compliance with the provisions, prohibitions, regulations and development standards of this program is still required and may include variance and conditional use permits. Developments other than a single-family residence including multi-family residential development, all subdivisions, floating homes and nonexempt accessory structures are required to obtain a substantial development permit.

Policies

1. Residential development should be permitted only where there are adequate provisions for utilities, circulation and access.
2. Residential development should be prohibited in environmentally sensitive areas including but not limited to marshes, bogs and swamps, steep bluffs, floodways, etc.
3. The overall density of development, lot coverage and height of structures should be appropriate to the physical capabilities of the site.
4. Recognizing the single purpose, irreversible and space consumptive nature of shoreline residential development, new development should provide adequate setbacks and natural buffers from the water and ample open space among structures to provide space for outdoor recreation, protect natural features, preserve views and minimize use conflicts.

5. Adequate provisions should be made for protection of ground water supplies, erosion control, drainage systems, aquatic and wildlife habitat, preservation of geohydraulic processes and open space.
6. Residential development should be designed so as to preserve existing shoreline vegetation, control erosion and protect water quality, shoreline aesthetic characteristics, views and normal public use of the shoreline and the water.
7. Residential developments should provide dedicated and improved public access to the shoreline in a manner which is appropriate to the site and the nature and size of the development (see Chapter 5 "Public Access").
8. New residential development and accessory uses should be **prohibited** over water, in marshes, bogs or swamps, in floodways and in geologic hazard areas.
9. New residential development should be encouraged to cluster dwelling units in order to preserve natural features, minimize physical impacts and reduce utility and road costs.
10. Residential development should not cause significant adverse impacts to or result in the displacement of other nearby shoreline uses including but not limited to forestry, agriculture, aquaculture or recreation.
11. Sewage disposal facilities, as well as water supply facilities, should be provided in accordance with appropriate state and local health regulations. Storm drainage facilities should be separated from sewage disposal systems.
12. Preference should be given to joint-use community piers and docks (in lieu of individual piers and docks for each waterfront lot) in all new subdivisions and planned residential developments. Joint-use shoreline facilities should be encouraged (including piers and docks, stair towers and other facilities).
13. Structures or other developments accessory to residential uses 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.

Regulations -- Location and Design

1. Residential development shall not be approved where flood control, shoreline protection measures or bulkheading will be required to create residential lots or site area. Residential development shall be located and designed to avoid the need for structural shore defense and flood protection works in the foreseeable future.
2. If marshes, bogs, swamps or other unique and fragile features are located on a development site, clustering (or similar design) of residential units shall be required in order to avoid any development in such areas.
3. All residential structures, accessory uses and facilities shall be arranged and designed so as to preserve views and vistas to and from shorelines and water bodies and be compatible with the aesthetic values of the area.
4. Storm drainage and treatment facilities shall be required by the City/County for proposals involving five or more dwellings, drainage facilities shall be separate from sewage disposal and transport facilities and shall include provisions to prevent uncontrolled and untreated direct entry of surface water runoff into adjacent waters. Storm drainage facilities may include, but not be limited to retention ponds, vegetated swales and artificial wetlands, PROVIDED no adverse impacts to the receiving existing wetlands would occur.
5. Prior to issuance of a building permit, plat or short plat or other shoreline development approval, the developer shall submit adequate plans for preservation of shore vegetation and for control of erosion during and after construction, resulting in permanent shoreline stabilization. Such plans shall be a part of the shoreline permit, if one is required.
6. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Prohibited

8. Residential development shall be prohibited within floodways, marshes, bogs and swamps and within other hazardous areas such as steep slopes and areas with unstable soils or geologic conditions.
9. New residential structures and accessory structures shall be prohibited over water or floating on the water.

Regulations -- Common-Line Setback Standards

1. Residential development shall meet the standards established in Chapter 6, Environment Designations, except as provided in Regulation #2 below.
2. For the purpose of accommodating shoreline views in developed residential areas, setbacks for residential structures established in Chapter 6 (Figure 6-3 Use-related Development Standards) may be reduced in the Urban, Suburban and Rural environments (only), consistent with the following:
 - a. Where there are existing (legally nonconforming) residences that encroach on the established setback within 50 feet of either side of the proposed building site, the required setback of the proposed structure may be reduced by review and approval of the Administrator. In such cases, proposed residential structures may be set back (from OHWM) common to the average of the setbacks of the existing adjacent residences (see Figure 7-1).
 - b. In those instances where only one existing nonconforming single family residence is within 50 feet of the proposed building site, the setback of the proposed structure may be reduced (with approval of the Administrator) to the average of the setbacks for the existing adjacent residence and the applicable setback for the adjacent vacant parcel (see Figure 7-1).
 - c. In no case shall the reduced setbacks applied above be less than 15 feet landward of the OHWM (see Figure 7-1).
 - d. Any further setback reduction beyond that allowed in this section shall require approval of a shoreline variance permit.

Regulations -- Public Access

1. Subdivisions and planned unit developments of five or more waterfront lots/units shall dedicate, improve and provide maintenance provisions for a pedestrian easement which 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 25 feet in width and shall be in compliance with public access standards contained herein (see Chapter 5, "Public Access").

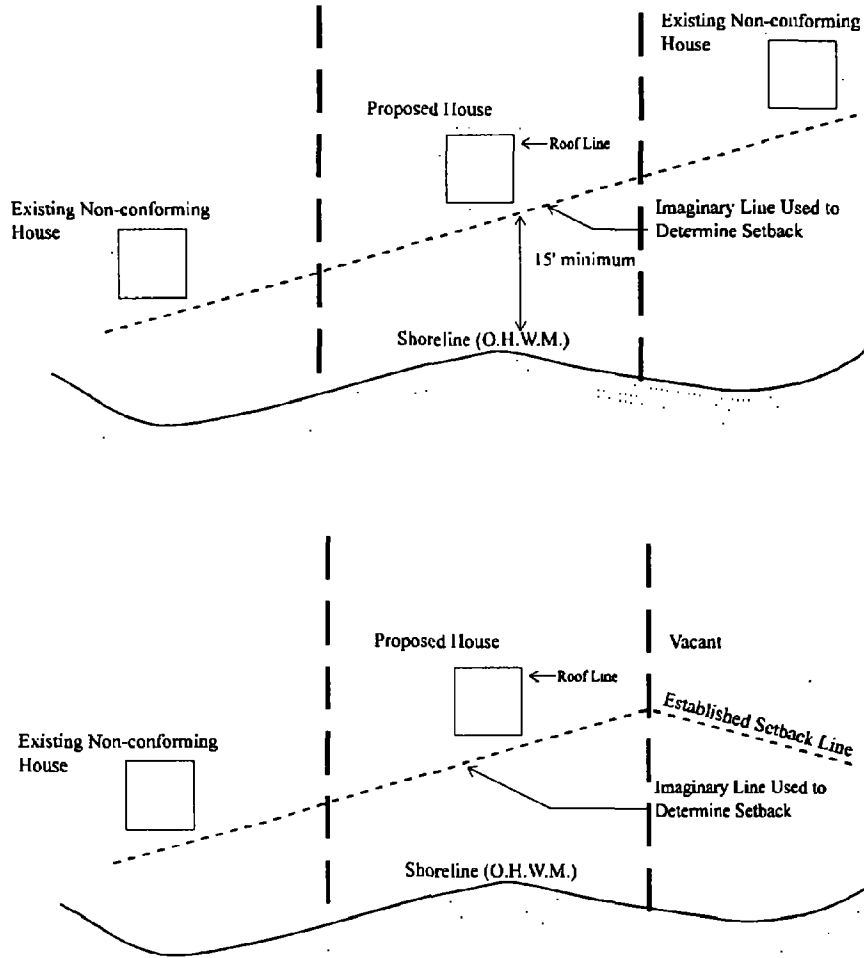


Figure 7-1. "Common-line" Setback Adjustments for Residential Development

Regulations -- Accessory Uses

See also regulations pertaining to bulkheads, shore defense works and piers and docks.

1. Accessory uses that are not appurtenant structures shall be reasonable in size and purpose and compatible with on-site and adjacent structures, uses and natural features (see WAC 173-14-040(2)).
2. No accessory structure except swimming pools shall cover more than 150 square feet.
3. New residential subdivision or planned developments containing five or more waterfront lots, as part of plat approval, shall provide for resident access to and a location for a joint-use community pier or dock. In the event any pier or dock facility is provided within a residential waterfront development, only one joint-use facility shall be constructed. This condition of approval with required access easements and dedications shall be identified on the face of the plat. In addition, the community dock easement shall be recorded with the County Auditor. Where community dock facilities are provided with plat approval, single-use docks and piers serving individual waterfront lots shall be prohibited.
4. Accessory structures which are not water-dependent are prohibited waterward of the principal residence.

Regulations -- Floating Homes (where permitted)

1. Minimum area for an individual floating home moorage shall be 2,000 square feet.
2. Floating homes shall not cover in excess of 1,200 square feet of water area, inclusive of float, decks and roof overhang; and shall not exceed 18 feet in height.
3. Floating homes shall be connected to an approved sanitary sewer or other approved upland waste disposal system to ensure compliance with state water quality standards. Such connection shall convey all gray water (i.e. galley, bath and shower wastewater) and black water (i.e., sewage) discharges resulting from floating home operation. All overboard discharge of wastewater from floating houses is prohibited.
4. Floating homes shall be located only in marinas, within areas specifically designated as floating home moorage.

5. In order to preserve shallow water habitat, floating homes shall be located so as to maintain at least 5 feet of water (depth) between the float and the underlying bedlands at low water.
6. Floating homes shall be prohibited in or adjacent to Natural and Conservancy environment designations.
7. Floating homes shall also be subject to the applicable regulations for docks and floats.
8. Floating homes shall comply with Hydraulic Project Approval requirements.
9. Floating home moorages existing prior to the effective date of this master program, that do not meet the above regulations, shall have three years from the effective date of these SMP amendments to comply with the subject floating home regulations.



Notes to Master Programmers

Over-water residential use is not a preferred shoreline use and is to be discouraged throughout the state (see WAC 173-16-060(8)(d)). Existing over-water residential use, however, may be allowed to continue in certain locations due to demonstrated historic use and where water quality standards are fully complied with. Where existing over-water residential use is allowed to continue in a particular location, careful consideration must be given to insuring that other water-dependent uses are not unreasonably displaced by such use, that adequate protection of water quality and fish and wildlife habitat is provided, and that the rights of navigation, public access and safety are protected. Existing floating homes should be allowed only in very specific and defined shoreline locations.



Transportation Facilities

Applicability

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, ferry terminals, float plane terminals, heliports and other related facilities.



Notes to Master Programmers

The various transport facilities that can impact the shoreline cut across all environmental designations and all specific use categories. The policies and regulations identified in this section pertain to any project, within any environment, that is effecting some change in present transportation facilities.

Policies

1. New roads, railroads and bridges in shoreline jurisdiction should be minimized, and allowed only when related to and necessary for the support of permitted shoreline activities. Major new highways, freeways and/or railways should be located out of shoreline jurisdiction.
2. Road and railroad locations should be planned to fit the topographical characteristics of the shoreline such that minimum alteration of natural conditions results. New transportation facilities should be located and designed to minimize the need for shoreline protection measures and minimize the need to modify natural drainage systems. The number of waterway crossings should be limited to the maximum extent possible.
3. Trail and bicycle paths should be encouraged along shorelines where they are compatible with the natural character, resources and ecology of the shoreline.
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.

6. Abandoned or unused road or railroad rights-of-way which offer opportunities for public access to the water should be acquired and/or retained for such use.
7. All debris, overburden and other waste materials from transport facility construction should be handled, contained and disposed of in a manner which prevents their entry into adjacent water bodies.

Regulations -- General

1. Transportation facilities and services shall utilize existing transportation corridors whenever possible, provided that facility additions and modifications will not adversely impact shoreline resources and are otherwise consistent with this program. If expansion of the existing corridor will result in significant adverse impacts, then a less disruptive alternative shall be utilized.
2. Transportation and primary utility facilities shall be required to make joint use of rights-of-way and to consolidate crossings of water bodies where adverse impact to the shoreline can be minimized by doing so.
3. Landfills for transportation facility development are **prohibited** in water bodies, marshes, bogs and swamps and on accretion beaches, **EXCEPT** when all structural and upland alternatives have been proven infeasible and the transportation facilities are necessary to support uses consistent with this program, such landfill may be permitted as a CUP.
4. The following regulation applies to shoreline road ends:
 - a. RCW 37.79.035 and RCW 35.87.130 prohibits the City/County from vacating any City/County road which abuts a body of salt or fresh water unless the street or road is not currently used or suitable for boat moorage or launching site or for a park, viewpoint, recreation, education or other public purposes (see RCW legal procedure to vacate streets).
5. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Regulations -- Location and Design

1. Major new highways, freeways and railways shall be located outside shoreline jurisdiction, EXCEPT where water crossing is required. These roads shall cross shoreline areas and water bodies by the shortest, most direct route feasible unless such route would cause more damage to the environment.
2. New transportation facilities shall be located and designed to prevent or minimize the need for shoreline protective measures such as riprap or other bank stabilization, landfill, bulkheads, groins, jetties or substantial site grading. Transportation facilities allowed to cross over water bodies, marshes, bogs and swamps shall utilize elevated, open pile or pier structures whenever feasible. All bridges must be built high enough to allow the passage of debris and provide 3 feet of freeboard above the 100-year flood level.
3. 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.
4. Cut and fill slopes shall be designed at the normal angle of repose or less.
5. Cut, fill and sidecast slopes shall be protected from erosion by mulching, seeding, compacting, riprapping, benching or other suitable means.
6. Transportation corridors shall, if possible, be located parallel to existing surface drainage flow.
7. Waterway crossing shall be designed to provide minimal disturbance to banks.
8. Roads and railroads shall be located to minimize the need for routing surface waters into and through culverts.
9. Culverts and similar devices shall be designed with regard to the 50-year storm frequencies.
10. Culverts shall be located so as to avoid relocation of the stream channel.
11. Bridges, crossings, debris grates, culverts and similar devices used by fish shall meet all requirements set by the State Department of Fisheries and Wildlife.

12. All transportation facilities shall be designed, constructed and maintained to contain and control all debris, overburden, runoff, erosion and sediment generated from the affected areas. Relief culverts and diversion ditches shall not discharge onto erodible soils, fills or side cast materials.
13. Bridge abutments and necessary approach fills shall be located landward of wetlands or the OHWM for water bodies without wetlands, PROVIDED bridge piers may be permitted in a water body as a conditional use.
14. Any soil or debris accidentally placed in a water channel during bridge construction shall be immediately removed by approved methods. All exposed soils shall be stabilized and revegetate following completion of construction.
15. Both commercial and individual private float plane and heliport facility services shall conform to FAA standards, which include fuel, oil spill clean up, safety and fire fighting equipment and vehicle and pedestrian separation.

Prohibited

16. Transportation facilities are prohibited in:
 - a. hazardous areas such as steep slopes or areas with soils subject to severe erosion or landslides;
 - b. front of feeder bluffs, over driftways or on accretion shoreforms; or in
 - c. areas where river channel direction and alignment is subject to change.
17. Roads, railroads and other transportation facilities are prohibited over water, EXCEPT to serve water-dependent or public uses consistent with this program when inland alternatives are infeasible, including unavoidable water crossings.

Regulations -- Setbacks

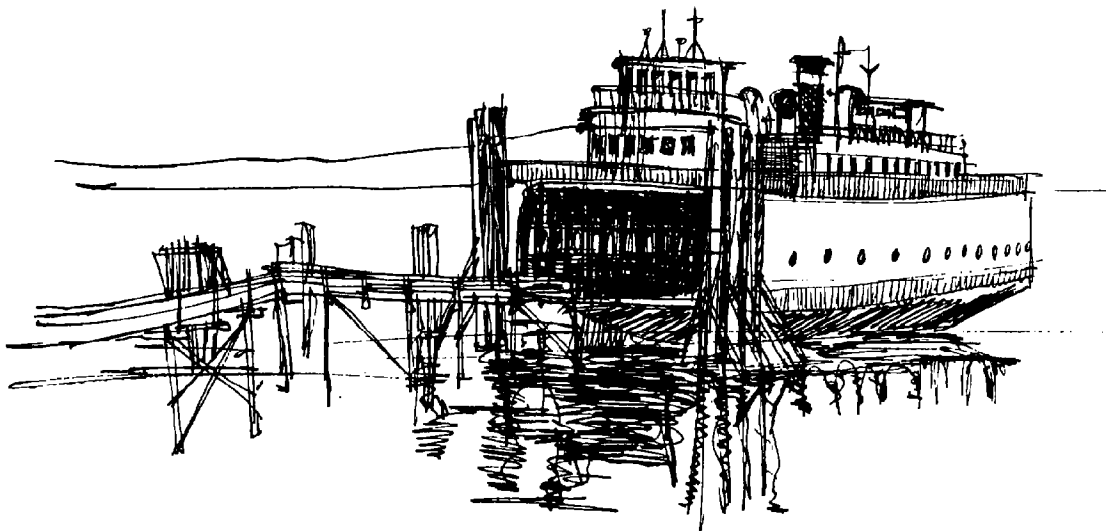
1. Except where water crossing is necessary, roads, railroads and other transportation facilities permitted shall be located landward of:
 - a. estuaries and their wetlands;
 - b. erosion or accretion shoreforms and associated drift sectors and backshore marshes; and
 - c. officially designated fish, shellfish and wildlife habitats.

2. All roads and railroads, if permitted parallel to shoreline areas, shall be adequately setback from water bodies (see Chapter 6) and shall provide buffer areas of compatible, self-sustaining vegetation. Shoreline scenic drives and viewpoints may provide breaks periodically in the vegetative buffer to allow open views of the water.

Regulations -- Construction and Maintenance

1. Overburden, debris and other waste materials from both construction and maintenance activities, including drainage ditch clearing, shall not be deposited into or sidecast on the shoreline side of roads or in water bodies, wetlands, estuaries, tidelands, accretion beaches and other unique natural areas. Such materials shall be deposited in stable locations where reentry and erosion into such areas is prevented.
2. All shoreline areas disturbed by facility construction and maintenance shall be replanted and stabilized with compatible, self-sustaining vegetation by seeding, mulching or other effective means immediately upon completion of the construction or maintenance activity. Such vegetation shall be maintained until established by the agency or developer constructing or maintaining the road.
3. The City/County shall give preference to mechanical means rather than the use of herbicides for roadside brush control on City/County roads in shoreline jurisdiction. If the situation requires the use of herbicides, they shall be applied to noxious weeds only, so that chemicals do not enter adjacent water bodies or damage or kill beneficial native shoreline vegetation.
4. No machinery shall operate within a stream bed except in compliance with a hydraulics permit issued by the Washington State Department of Fisheries and/or Washington State Department of Wildlife.
5. The following design and construction methods shall be followed for road building during forestry operations and/or other low technology road construction: (See also Forest Practice Regulations, Chapter 222-24 WAC.)
 - a. Roads shall be designed to minimize the number of waterway crossings and avoid unnecessary duplication of road systems by making maximum use of existing rights-of-way. Where roads traverse land in another ownership, but could adequately serve the operation, attempts shall be made to negotiate with the owner for use of such roads before constructing new roads

- b. Running surface widths shall be kept to a minimum, not exceeding 26 feet for two-lane roads and not more than 20 feet for single-lane roads.
- c. All culverts shall be adequate in size and design to carry the maximum anticipated flow and shall be kept clear of obstructions. The minimum size for culverts shall be 15 inches in diameter.
- d. Embankment fills shall:
 - i. be constructed and compacted in layers no more than 2 feet thick;
 - ii. consist of inorganic material with no buried slash or debris beneath the running surface; and
 - iii. not encroach upon a 100-year floodplain so as to reduce its storage capacity or disturb riparian vegetation.
- e. End-haul construction is required whenever side casting would deposit materials within a 100-year floodplain.
- f. All bridges shall be high enough to allow all anticipated debris and high water flows to pass freely beneath.
- g. Where aggregate earthen materials are used for paving or accumulate on bridges, curbs shall be installed when necessary to contain the surface materials.
- h. At least one end of each stringer bridge shall be secured to prevent it from being washed away during high water.



Utilities (Primary)

Applicability

Utilities are services and facilities that produce, transmit, carry, store, process or dispose of electric power, gas, water, sewage, communications, oil and the like. The provisions in this section apply to primary use and activities such as solid waste handling and disposal, sewage treatment plants and outfalls, public high-tension utility lines on public property or easements, power generating or transfer facilities, gas distribution lines and storage facilities. See Chapter 5, "Utilities" for on-site accessory use utilities.

Solid waste disposal means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid or hazardous waste on any land area on or in the water.

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 (see Chapter 7 "Landfill", "Dredging", "Forest Management" and "Agriculture").

Policies

1. Utilities should utilize existing transportation and utility sites, rights-of-way and corridors whenever possible, rather than creating new corridors. Joint use of rights-of-way and corridors should be encouraged.
2. Utilities should be **prohibited** in marshes, bogs and swamps, estuaries, critical wildlife areas or other unique and fragile areas unless no feasible alternatives exist.
3. New utility facilities should be located so as not to require extensive shoreline protection works.
4. Utility facilities and corridors should be located so as to protect scenic views. Whenever possible, such facilities should be placed underground or alongside or under bridges.

5. Utility facilities and rights-of-way should be designed to preserve the natural landscape and to minimize conflicts with present and planned land uses.
6. Solid waste disposal activities and facilities should be **prohibited** in shoreline areas.

Regulations -- General

1. Applications for installation of utility facilities shall include the following:
 - a. Description of the proposed facilities;
 - b. Reason(s) 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 facilities of 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 primary utility's useful life;
 - 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. Such uses include shoreline access points, trail systems and other forms of recreation and transportation, providing such uses will not unduly interfere with utility operations, endanger public health and safety or create a significant and disproportionate liability for the owner.
3. Utility lines shall utilize existing rights-of-way, corridors and/or bridge crossings whenever possible and shall avoid duplication and construction of new or parallel corridors in all shoreline areas. Proposals for new corridors or water crossings must fully substantiate the infeasibility of existing routes.

4. Existing solid waste disposal and transfer facilities shall be expeditiously phased out and rehabilitated.
5. The following utility facilities, which are not essentially water-dependent, are prohibited in shoreline jurisdiction unless authorized by conditional use permit and where it can be shown that no alternatives exists:
 - a. water system treatment plants;
 - b. sewage system lines, interceptors, pump stations and treatment plants;
 - c. electrical energy generating plants (except for instream structures), substations, lines and cables;
 - d. petroleum and gas pipelines; and
6. New solid waste disposal sites and facilities are **prohibited**.
7. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Regulations -- Location and Design

1. New utility lines including electricity, communications and fuel lines shall be located underground, except where the presence of bedrock or other obstructions make such placement infeasible. Existing above ground lines shall be moved underground during normal replacement processes.
2. 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.
3. Utility facilities requiring withdrawal of water from streams or rivers shall be located only where minimum flows as established by the Washington Department of Fisheries can be maintained.
4. Utility developments shall be located and designated so as to avoid or minimize the use of any structural or artificial shore defense or flood protection works.
5. Where major facilities must be placed in a shoreline area, the location and design shall be chosen so as not to destroy or obstruct scenic views.

6. Utility development shall utilize required setback areas (see Chapter 6) to provide screening of facilities from water bodies and adjacent properties. Type of screening required shall be determined by the City/County on a case-by-case basis.
7. Underground (or water) utility lines shall be completely buried under the river bed in all river or stream crossings EXCEPT where such lines can be affixed to a bridge structure and EXCEPT for appropriate water or sewage treatment plant intake pipes or outfalls.
8. 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 limited instances when permitted by conditional use, automatic shut-off valves shall be provided on both sides of the water body.
9. Construction of utilities under water or in adjacent wetlands shall be timed to avoid fish migratory and spawning periods.
10. Landfilling in shoreline jurisdiction for utility facility or line development purposes is **prohibited**. Permitted crossings shall utilize pier or open pile techniques.
11. Power generating facilities must comply with all provisions stated in this master program (see Chapter 7 "Instream Structures").
12. Power generating facilities shall be a conditional use in all shoreline environments.
13. Clearing of vegetation for the installation or maintenance of utilities shall be kept to a minimum and upon project completion any disturbed areas shall be restored to their preproject condition.

CHAPTER 8

Shoreline Modification Activity Policies & Regulations

Introduction

Background and Purpose

Shoreline modification activities, referred to in this *Handbook* as "activities" are those actions that modify the physical configuration or qualities of the shoreline area. Typically, activities are related to construction of a physical element such as a dike, breakwater, dredged basins, landfill, etc., but they can include other actions such as clearing, grading, application of chemicals, etc. Shoreline modification activities usually are undertaken in support of or in preparation for a shoreline "use." For example, landfill (activity) required for a cargo terminal (industrial use) or dredging (activity) to allow for a marina (boating facility use). A single use may require several different shoreline modification activities. For example, a marina and boatyard development may involve a breakwater, dredging, clearing and grading and landfill.

Activity policies and regulations are intended to prevent or mitigate the negative environmental impacts of proposed shoreline modification consistent with the goals of the SMA. A proposed development must meet all of the regulations for both applicable uses and activities as well as the general and environment designation regulations. Speculative shoreline modifications **not** tied to or required for a specific proposed use are generally prohibited in shoreline management.

The distinction between shoreline uses and modification activities has proven a useful one because uses generally are ongoing and the policies and regulations related to them must deal with functional relationships inherent in the individual uses. Activities represent a physical alteration of the shoreline so activity regulations deal with physical impacts.

In the 1992 session, the Legislature amended RCW 90.58.100(6) to require that shoreline master programs include standards for the protection of single family residences and appurtenant structures from damage or loss due to shoreline erosion. The standards are to govern decisions on substantial development permits for bulkheads and nonstructural methods of erosion protection. The standards must provide for shoreline erosion protection methods which achieve effective and timely protection against damage to single family residences and appurtenant structures. The standards must include a preference for measures to protect single family residences occupied before January 1, 1992 where the proposed erosion control measure is designed to minimize harm to the natural shoreline environment. The Legislature apparently wants uniform standards for erosion protection. It is important to note that the provisions of 90.58.100(6) are principles local governments must use in developing shoreline master program amendments, not standards for reviewing individual permits or exemptions.

If bulkheads or other measures to protect single family residences and their appurtenant structures from shoreline erosion require substantial development permits, local governments must expeditiously process the permit application. The public comment period is reduced from 30 to 20 days. The local government must decide whether to approve or deny the substantial development permit within 21 days of the last day of the public comment period. The local government must send a copy of the permit decision to anyone who requests a copy within 2 days of the decision. Any local government appeals must be decided within 30 days. These requirements are contained in RCW 90.58.140(13)(a). These requirements only apply to substantial development permits. Conditional use permits and variances must follow the generally applicable time periods in RCW 90.58.140(4).

Ecology is responding to the law in three ways. First, Ecology is conducting a three year study of marine shoreline erosion and methods of controlling erosion. This study was requested by Thurston, Pierce and Mason counties.

This study also responds to the legislative direction to develop master program standards. The study is funded by a special grant from the National Oceanic and Atmospheric Administration (NOAA) under the Coastal Zone Management Act. Contractors have been hired and the study is underway. For more information on this study or to get on the study newsletter mailing list, please contact Doug Canning or Hugh Shipman, Shorelands and Coastal Zone Management Program, Washington Department of Ecology, P. O. Box 47600, Olympia, WA 98504-7689. Doug Canning's number is (206) 407-6781. Hugh Shipman's number is (206) 407-6780.

Second, when the study is complete, Ecology will develop recommended standards. Ecology does not recommend that local governments adopt any new standards until the study is complete in 1995.

Third, Ecology will develop regulations implementing this change in the Shoreline Management Act.

Local governments should do the following:

1. Process permits for erosion control for single family dwellings expeditiously.

RCW 90.58.030(3)(e)(ii) and WAC 197-14-040(1)(c) exempt normal protective bulkheads common to single family dwellings from the requirement to obtain a shoreline permit. These exempt bulkheads must still comply with the requirements in WAC 197-14-040(1)(c) and local government shoreline master programs. A bulkhead can comply with these requirements and protect appurtenant structures when the bulkhead is needed to protect a single family residence, the bulkhead is located at or near the ordinary high water mark, and the appurtenant structures are located near the single family residence.

However, if a bulkhead or other erosion control measure to protect a single family residence or appurtenant structure requires a substantial development permit because it is not exempt, the local government must follow the expedited permit processing procedures in RCW 90.58.140(13)(a) and summarized above. These requirements supersede the time limits in local government shoreline master programs and were effective on July 11, 1992.

2. Adopt new single family and appurtenant structure erosion protection standards when the study is done. Ecology will prepare model standards. After the standards are prepared, local governments must amend their master programs to include the standards with appropriate changes to account for local needs.

Format and Contents

The format for the shoreline modification activities section parallels that of the use provisions, namely:

- **Applicability Statement:** Defining terms and describing the conditions and activities under which the provisions apply.
- **Policies:** Setting broad guidelines on which regulations are based. These should be written to assist in the interpretation of the regulations.
- **Regulations:** Definitive development standards describing the physical and procedural requirements to which the applicable activity must conform.



Model Language

Below is presented sample language for a typical SMP shoreline modification activities section. Local governments are encouraged to modify the sample provisions as appropriate to fit their particular conditions.

General Shoreline Modification Provisions

Applicability

Shoreline stabilization and flood protection are actions taken primarily to address erosion impacts to upland property and improvements caused or associated with current, flood, wake or wave action. These actions include structural and nonstructural methods including but not limited to: riprap, bulkheads, jetties, groins, beach nourishment and bioengineering/vegetative management methods. These provisions should be used for all shoreline modifications activities whether such proposals address a single property or multiple properties. Flood hazard management activities should also be reviewed under the provisions of the Flood Hazard Management section of Chapter 7, Shoreline Use Policies and Regulations.

Policies

1. Riprapping and other bank stabilization measures should be located, designed and constructed primarily to prevent damage to existing development. All new development should be located and designed to prevent or minimize the need for shoreline stabilization measures and flood protection works. New development requiring shoreline stabilization should be discouraged.
2. Stabilization and protection works which are more compatible with ongoing shore processes and more flexible for long-term streamway management and more natural in appearance such as vegetative stabilization should be encouraged over structural means such as concrete revetments or extensive riprap.

3. 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.
4. Use of car bodies, demolition debris, concrete rubble, scrap building equipment or appliances for shoreline stabilization should be prohibited.
5. Substantial stream channel direction modifications, realignment and/or straightening should be discouraged as a means of shoreline stabilization and flood protection.
6. The design of stabilization or protection works should provide for the long term multiple use of streamway resources and public access to public shorelines. In the design of publicly financed or subsidized works, consideration should be given to providing public pedestrian access to shorelines for low-intensity outdoor recreation.
7. Natural features such as snags, stumps or uprooted trees which support fish and other aquatic systems, should be left undisturbed.
8. Shorelines existing in their natural state should be preserved in their natural state, free of shoreline modification.
9. All flood protection measures should be placed landward of the natural floodway boundary, including marshes, bogs and swamps which are associated with the water body proper.
10. Beach restoration/enhancement using naturally regenerating systems for the prevention and control of beach erosion should be required rather than bulkheads and other structures where:
 - a. The length and configuration of the beach will accommodate such systems;
 - b. Such protection is a reasonable solution to the needs of the specific site; and
 - c. Beach restoration/enhancement will accomplish one or more of the following objectives:
 - i. Recreate or enhance natural shoreline conditions;
 - ii. Create or enhance natural habitat;
 - iii. Reverse otherwise erosion prone conditions;
 - iv. Enhance access to the shoreline, especially to public shorelines.

Regulations

1. All applicable federal and state permits shall be obtained and complied with in the construction and operation of shoreline stabilization and flood protection works.
2. All new development activities shall be located and designed to prevent or minimize the need for shoreline stabilization and flood protection works, such as bulkheads, riprap, landfills, levees, dikes, groins, jetties, or substantial site grading.
3. The City/County shall require and utilize the following information, in addition to the standard permit information requirements contained in WAC 173-14-110, during its review of shoreline stabilization and flood protection proposals:
 - a. Purpose of project;
 - b. Hydraulic characteristics of the shore within 1/2 mile on each side of the proposed project;
 - c. Existing shoreline stabilization and flood protection devices within 1/2 mile on each side of the proposed project;
 - d. Construction material and methods;
 - e. Physical, geological and/or soil characteristics of the area;
 - f. Predicted impact upon area shore and hydraulic processes, adjacent properties, shoreline and water uses; and
 - g. Alternative measures (including nonstructural) which will achieve the same purpose.
4. The City/County shall require and utilize the following information, in addition to the standard permit information requirements contained in WAC 173-14-110, in its review of all shoreline modification proposals:
 - a. Construction materials (e.g. type, dimensions, design);
 - b. Method of construction (e.g. source of backfill, erosion controls);
 - c. Location of project relative to toe and crest of uplands and upland structures;

- d. For marine waters: the ordinary high water mark, mean higher high and extreme high water levels such as the highest recorded level or the 100-year flood elevation. For freshwater: the ordinary high water mark of the 100-year flood level.
 - e. Net direction of littoral drift changes and tidal currents (if any);
 - f. General direction and speed of prevailing winds;
 - g. Profile rendition of beach and uplands;
 - h. Beach type, slope and material;
 - i. Uplands type, slope and material;
 - j. Soil types (S.C.S.);
 - k. Physical or geologic stability of uplands; and
 - l. Potential impact upon area shore processes, adjacent properties and upland stability.
5. Shoreline stabilization and flood protection measures shall not be designed and constructed in such a manner as to result in increased channelization of normal stream flows.
 6. River and stream channel direction modification, realignment and straightening are prohibited unless they are essential to uses that are consistent with this program and the only feasible method available.
 7. Flood control diking shall be landward of the floodway (100-year frequency) and any marshes, bogs, swamps, associated or directly interrelated and interdependent with the river.
 8. Upon project completion, all disturbed shoreline areas shall be restored to as near preproject configuration as possible and replanted with native grasses, shrubs, and/or trees in keeping with existing bank vegetation. If native species cannot be obtained, acceptable substitutes may be used for stabilization purposes.
 9. Shoreline stabilization and flood protection works are prohibited in wetlands and on point and channel bars. They are also prohibited in salmon and trout spawning areas except for fish or wildlife habitat enhancement.
 10. Dikes and levees shall be limited in size to the height required to protect adjacent lands from the predictable annual flood.

11. The City/County shall require dedication and improvement of linear public access along new dikes when it determines such access to be in the public interest.
12. Use of car bodies, scrap building materials, asphalt from street work, or any discarded pieces of equipment or appliances for the stabilization of shorelines shall be prohibited.
13. All shoreline modification activities (or state the particular, e.g. breakwaters) must be in support of an allowable shoreline use that is in conformance with the provisions of this master program. All shoreline modification activities not in support of a conforming allowable use are prohibited, unless it can be demonstrated that such activities are necessary and in the public interest for the maintenance of shoreline environmental resource values.
14. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.



Shoreline Stabilization

The following shoreline stabilization methods are organized from "soft" to "hard". The use of "soft" methods is the preferred "best practices" choice when considering shoreline stabilization.

Policies and regulations are included for the following shoreline stabilization measures:

1. Beach Restoration and Enhancement
2. Bioengineering
3. Revetments (Riprap)
4. Bulkheads
5. Breakwaters, Jetties, Rock Weirs and Groins
6. Dikes and Levees



*swimmers on the
Columbia*

Beach Restoration and Enhancement

Applicability

Beach enhancement is the alteration of terrestrial and tidal shorelines along with submerged shorelines for the purpose of stabilization, recreational enhancement, and aquatic habitat creation or restoration using native or similar material. The materials used are dependent on the intended use. For recreation purposes various grades of clean sand or pea gravel is often used to create a beach. To restore or recreate a shore feature or an underwater aquatic environment such as a reef may require a rock matrix and/or combination of other materials appropriate for the intended environment.

Policies

1. All beach enhancement projects should ensure that aquatic habitats, water quality and flood holding capacity are not degraded by the action.
2. Where possible, choose self maintaining enhancement designs over those dependent on regular maintenance.
3. Require supplementary beach nourishment where structural stabilization works are likely to increase impoverishment of existing beach materials at or downdrift from the project site.
4. Beach enhancement should not extend waterward more than necessary to achieve the intended results.

Regulations

1. Beach enhancement may be permitted when the applicant has demonstrated that no significant change in littoral drift or river currents will result which will adversely affect adjacent properties or habitat.
2. Natural Beach Restoration/Enhancement
 - a. Design Alternatives. Design alternatives shall include the best available technology such as, but not limited to:
 - i. Gravel berms, drift sills, beach nourishment and beach enhancement when appropriate;
 - ii. Planting with short-term mechanical assistance, when appropriate. All plantings provided shall be maintained.

- b. Design Criteria. Natural beach restoration/enhancement shall **not**:
 - i. Detrimentially interrupt littoral drift, or redirect waves, current or sediments to other shorelines;
 - ii. Result in any exposed groin-like structures; Provided: small "drift sill" groins may be used as a means of stabilizing restored sediment where part of a well planned beach restoration program;
 - iii. Extend waterward more than the minimum amount necessary to achieve the desired stabilization;
 - iv. Create "additional dry land"; and
 - v. Disturb significant amounts of valuable shallow water fish/wildlife habitat without appropriate mitigation of the impacts.
- c. Natural Beach Restoration Construction Standards.
 - i. The size and/or mix of new materials to be added to a beach shall be as similar as possible to that of the natural beach sediment, but large enough to resist normal current, wake or wave action at the site.
 - ii. The restored beach shall approximate, and may slightly exceed, the natural beach width, height, bulk or profile (but not as much as to obviously create additional dry land);
- 3. Beach enhancement is prohibited within spawning, nesting or breeding habitat that would be adversely effected by it and also where littoral drift of the enhancement materials adversely effects adjacent spawning grounds or other areas of biological significance.
- 4. Beach enhancement is prohibited if it significantly interferes with the normal public use of the navigable waters of the state without proper mitigation of the identified impacts.
- 5. All shoreline modification activities shall be in support of a shoreline use that is in conformance with the provisions of this master program unless it can be demonstrated that such activities are necessary and in the public interest for the maintenance of shoreline environmental resources.
- 6. All shoreline modification activities must conform to the General provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Bioengineering

Applicability

Bioengineering is the term given to the practice of using natural vegetative materials to stabilize shorelines and prevent erosion. This may include use of bundles of stems, root systems, or other living plant material; soft gabions, fabric or other soil stabilization techniques; and limited rock toe protection where appropriate. Bioengineering projects often include fisheries habitat enhancement measures such as anchored logs or root wads in project design. Such techniques may be applied to creeks, rivers, lakes, reservoirs, and marine waters. Bioengineering may also be applied in upland areas away from the immediate shoreline.

The use of bioengineering as a shoreline stabilization technique is seen as an alternative to riprap, concrete and other structural solutions. It provides habitat while maintaining and preserving the natural character of the shoreline. Bioengineering is the preferred "best practices" choice when considering shoreline stabilization. Combining bioengineering techniques with armored revetments is also encouraged over singularly employing riprap or other types of armored revetment. Many jurisdictions are considering enhancement of existing riprap shorelines to restore lost riparian/shoreline habitat and public values.

Policies

1. All bioengineering projects should ensure that water quality, fish and wildlife habitats and flood holding capacity are not degraded.
Bioengineering projects should be designed and scheduled to minimize impacts to natural resources and to optimize survival of new plantings.
2. Whenever possible, the design of bioengineering projects should incorporate self-maintaining vegetation and materials over those requiring routine maintenance.
3. Bioengineering projects should extend no further waterward than is necessary to achieve intended results.
4. Shoreline stabilization through bioengineering should use native vegetation wherever possible.
5. Bioengineering projects should include buffers, fencing and/or other measures to avoid disturbance of the project site by livestock and vehicles.

6. Structural soil stabilization components including riprap, should be kept to a minimum in such projects and designed to last only until vegetation is well established. Bioengineering projects do not typically rely on long-term structural (bank hardening) measures.
7. Bioengineering projects should follow recommended best management practices for establishing/restoring vegetation in shoreline and riparian areas. Guidance from the Soil Conservation Service, the State Departments of Wildlife, Fisheries, and Ecology and local Conservation Districts should be considered in project designs.

Regulations

1. The City/County shall require and utilize the following information, in addition to the standard permit information requirements contained in WAC 173-14-110, in its review of all bioengineering projects.
 - a. proposed timing of all construction phases of the project,
 - b. flow analysis, addressing hydrology and hydraulics and identifying expected flood flows compared with proposed timing of construction activities,
 - c. existing soil types, bank materials and analysis of slope stability,
 - d. proposed materials that will be used on-site including rock size, shape and quantity, plant materials, soil preparations that provide optimal planting mediums for the vegetation proposed, areas to be seeded, and fencing,
 - e. existing and proposed slope profiles, including location of ordinary high water mark,
 - f. design of transition areas between bioengineering site and adjacent properties (both up and downstream of project),
 - g. documentation (including photos) of existing pre-construction shoreline characteristics.
2. All bioengineering projects shall use a diverse variety of native plant materials including trees, shrubs and grasses, unless demonstrated infeasible for the particular site.

3. All cleared areas shall be replanted following construction and irrigated (if necessary) to ensure that within three years time all vegetation is fully reestablished. Areas which fail to adequately reestablish vegetation shall be replanted with approved plant materials until such time as the plantings are viable.
4. Bank protection in the form of a buffer zone shall be provided for a minimum of three years. The buffer zone shall exclude livestock, vehicles, and/or other activities that could disturb the site. The most effective buffer zone protection measure is fencing.
5. All bioengineering projects shall be monitored and maintained as necessary. Areas damaged by pests and/or the elements shall be promptly repaired.
6. All construction and planting activities shall be scheduled to minimize impacts to water quality and fish and wildlife aquatic and upland habitat and to optimize survival of new vegetation.



Revetments (Riprap)

Applicability

A revetment is a sloped shoreline structure built to protect an existing eroding shoreline or newly placed fill against waves, wakes, currents, or weather. 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, are:

1. Heavy armor layer;
2. Filter layer; and
3. Toe protection.

This section deals specifically with the modification activity of revetments. For additional policies and regulations see Shoreline Stabilization, "General Shoreline Modification Provisions" in this chapter.

Policies

1. The use of armored structural revetments should be limited to situations where it is demonstrated that nonstructural solutions such as bioengineering, setbacks and buffers or any combination thereof will not provide sufficient shoreline stabilization.
2. The construction and maintenance of revetments should not result in the loss or reduction of shoreline environmental resource values. If a loss or reduction cannot be avoided, mitigation should be provided.
3. Revetments should be designed, improved and maintained to provide public access whenever possible.

Regulations -- General

1. All forms of revetments shall be constructed and maintained in a manner that does not reduce water quality and/or fisheries habitat.
2. Design of the proposed revetment shall incorporate proper consideration of:
 - a. Data on local geophysical conditions;

- b. Data on stream flow, velocity, and/or flood capacity; and
 - c. Effects on adjacent properties.
3. Bank revetments, where permitted, shall be placed at the extreme edge or bank of the shoreline.
4. Design of revetments shall include and provide improved access to public shorelines whenever possible and appropriate.
5. Revetments must be in support of an allowable shoreline use that is in conformance with the Provisions of this master program, unless it can be demonstrated that such activities are necessary and in the public interest for the maintenance of shoreline environmental resources.
6. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Regulations -- Riprap

1. Riprap shall be constructed using techniques and materials that will enhance natural shoreline values and functions, including fish and wildlife habitat, water quality, vegetation and aesthetics. The following techniques and materials shall be used:
 - a. Riprap material shall consist of clean quarried rock, free of loose dirt and any pollutants, and shall be of sufficient size and weight to prevent movement by wave or current action. Tires, automobile bodies, scrap metal, paper products and other inappropriate solid waste materials, shall not be used for riprap.
 - b. Use of downed logs, snags or rock-work to enhance habitat and to provide a more natural appearance to the shoreline shall be incorporated into the design where appropriate.
 - c. Where on-site environmental conditions allow, vegetation shall be integrated into the riprap design to reduce erosion, provide cover, shade and habitat and improve the natural appearance of the shoreline, consistent with the applicable vegetation management provisions of this master program.

Regulations -- Design

1. When permitted, the siting and design of revetments shall be performed using appropriate engineering principles, including guidelines of the U.S. Soil Conservation Service and the U.S. Army Corps of Engineers.

2. If an armored revetment is employed the following design criteria shall be met (see Figure 8-1):
 - 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; and
 - c. The toe reinforcement or protection must be adequate to prevent a collapse of the system from river scouring or wave action for the anticipated life of the project.
3. The area shall be restored as nearly as possible to preproject condition including replanting with native species and maintenance care until the newly planted vegetation is established.

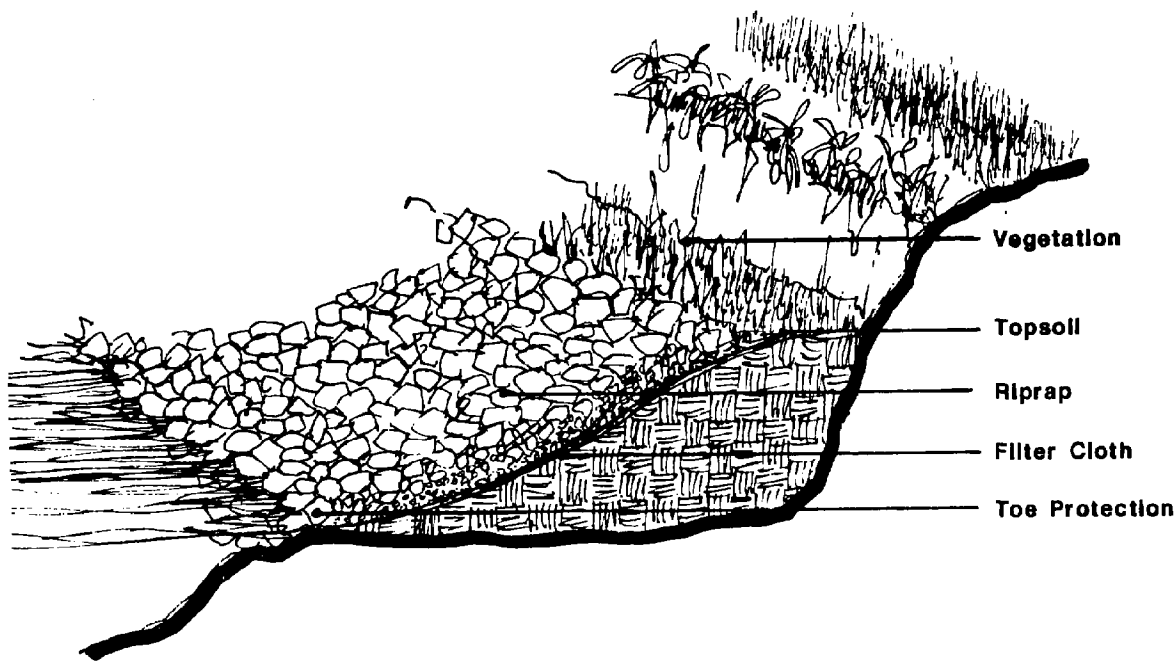


Figure 8-1. Example design criteria for riprap revetments

Bulkheads

Applicability

Bulkheads are walls usually constructed parallel to the shore whose primary purpose is to contain and prevent the loss of soil caused by erosion or wave action. Bulkheads may also be termed seawalls, however in common usage, the term seawall is generally reserved for more massive public works structures along the open coast. Bulkheads are generally lighter in structure and are either public or private.

They are typically constructed of poured-in-place or precast concrete, steel or aluminum sheet piling, wood or wood and structural steel combinations. Bulkheads may either be thin structures penetrating deep into the ground or more massive structures resting on the surface. A typical rock bulkhead is shown in Figure 8-2. A typical concrete bulkhead is illustrated in Figure 8-3.

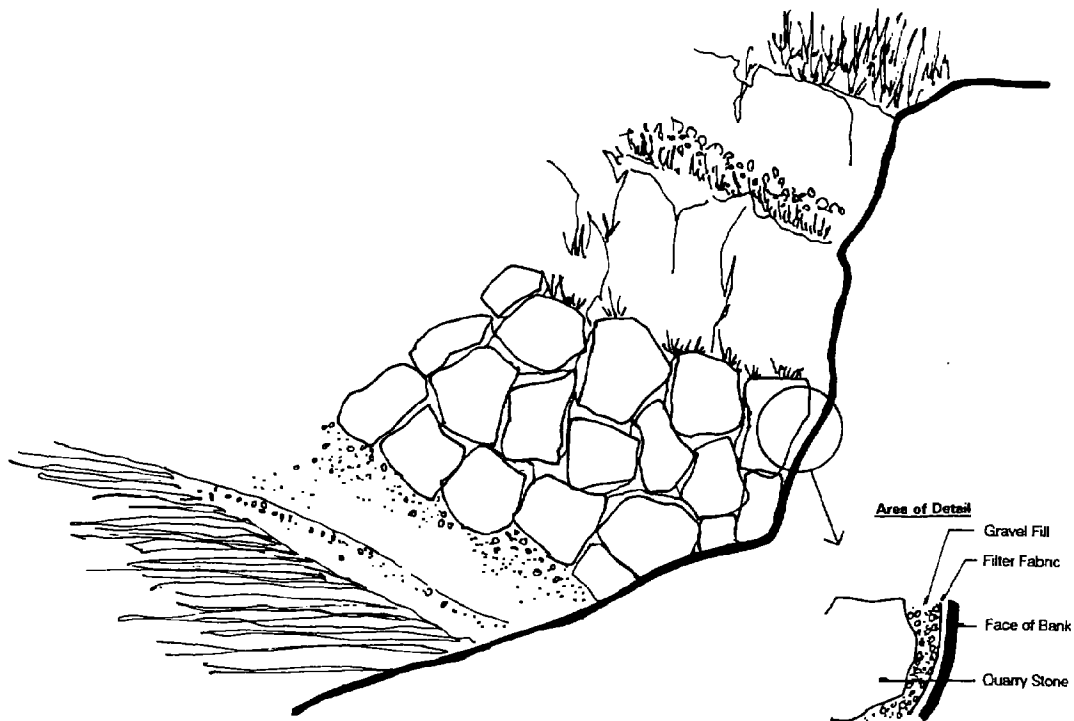


Figure 8-2. Typical Rock Bulkhead

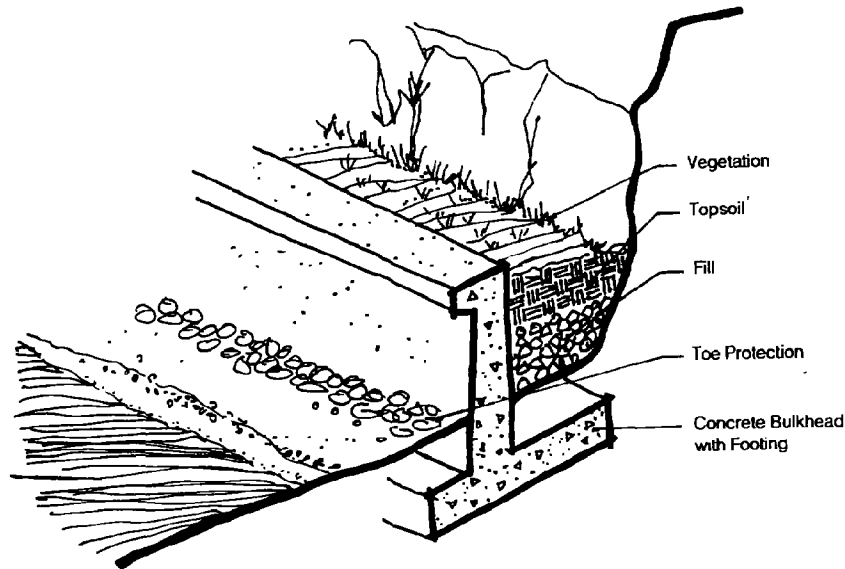


Figure 8-3. Typical Concrete Bulkhead

Uses and activities related to bulkheads which are identified as separate use activities in this program, such as Flood Control Management, Landfill, Residential Development, Commercial Development and Industry, are subject to the regulations for those uses in addition to the standards for bulkheads established in this section.

Exemptions

The Shoreline Management Act exempts the construction of a normal protective bulkhead common to an existing single family residence from the substantial development permit requirement. However these structures are required to comply with all the policies, prohibitions and development standards of this master program and of this section. To qualify for the RCW 90.58.030 (3)(e)(ii) and WAC 173-14-040 (1)(c) exemption from the shoreline substantial development permit requirement, and to assure that such bulkheads will be consistent with this program, a statement of exemption should be

obtained from the City/County before commencing construction of any bulkhead (see Chapter 9, Administration and Enforcement, for a general discussion of exemptions). WAC 173-14-040 (1)(c) states that:

A "normal protective" bulkhead is constructed at or near the ordinary high water mark to protect an existing single family residence and is for protecting land from erosion not for the purpose of creating land. Where an existing bulkhead is being replaced, it shall be constructed no further waterward of the existing bulkhead than is necessary for construction of new footings.

Policies

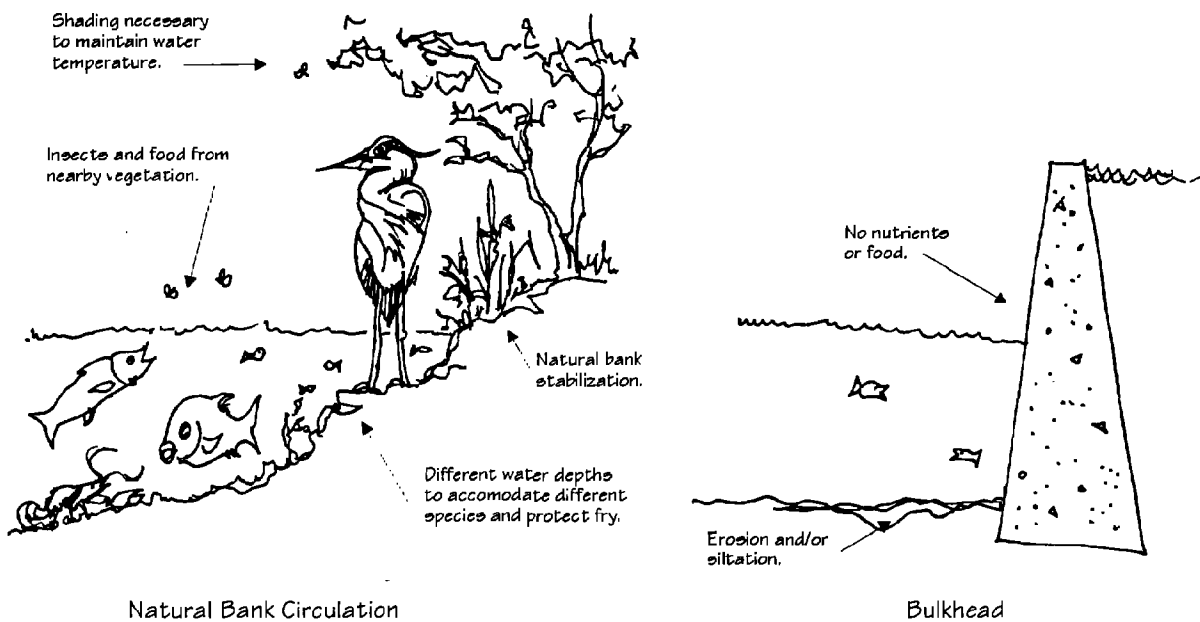
1. Defense works of natural materials such as protective berms, beach enhancement or vegetative stabilization are strongly preferred over structural defense works, of materials such as steel, wood, or concrete, because the former have less adverse and cumulative impacts on shore features and habitats. Proposals for structural solutions including bulkheads should demonstrate that natural methods are unworkable (see Chapter 7 "Flood Hazard Management" for regulations relating to nonstructural defense works).
2. Owners of property containing feeder bluffs should generally be discouraged from constructing bulkheads, particularly in areas not already developed or not already subject to shoreline modification.
3. Bulkheads should be located, designed and constructed primarily to prevent damage to existing development and minimize adverse impacts to natural processes. New development requiring bulkheads and/or similar protection should be discouraged.
4. Shoreline uses should be located in a manner so that bulkheading is not likely to become necessary in the future.
5. Where bulkheading is necessary and appropriate, affected property owners and public agencies should be encouraged to coordinate bulkhead development for an entire drift sector or homogeneous reach in order to avoid exacerbating erosion on adjacent properties.
6. The cumulative effects of allowing bulkheads along segments of shoreline should be evaluated prior to granting individual permits or exemptions.
7. Bulkheads should not be approved as a solution to geohydraulic or geophysical problems such as mass slope failure, sloughing, landslides, etc. caused by factors with an upland origin.

Regulations -- General

1. Bulkhead design and development shall conform to all other applicable state agency policies and regulations including the Department of Fisheries criteria governing the design of bulkheads.
2. Natural materials and processes such as protective berms, drift logs, brush, beach feeding or vegetative stabilization shall be utilized to the maximum extent possible.
3. The City/County shall require and utilize standards found in the "General Shoreline Modifications Provisions" Regulations section of this chapter in its review of bulkhead proposals.
4. Bulkheads shall be allowed only when evidence is presented which conclusively demonstrates that one of the following conditions exist:
 - a. Serious wave erosion threatens an established use or existing building(s) on upland property;
 - b. Bulkheads are necessary to the operation and location of water-dependent and water-related activities consistent with this master program, PROVIDED that all alternatives have proven infeasible (i.e. use relocation, use design, nonstructural shore stabilization options) and that such bulkheads meet other policies and regulations of this chapter; or
 - c. Proposals for bulkheads have first demonstrated that use of natural materials and processes and nonstructural solutions to bank stabilization are unworkable in protecting existing development.
5. Gabions (wire mesh filled with concrete or rocks) shall not be used in bulkhead construction where alternatives more consistent with this program are feasible, because of their limited durability and the potential hazard to shore users and the shoreline environment.
6. The construction of a bulkhead for the primary purpose of retaining or creating dry land that is not specifically authorized as a part of the permit shall be prohibited.
7. Use of a bulkhead to protect a platted lot where no structure presently exists is prohibited.
8. Bulkheads are prohibited for any purpose if they will cause significant erosion or beach starvation.

9. All bulkheads must be in support of an allowable shoreline use that is in conformance with the provisions of this master program unless it can be demonstrated that such activities are necessary and in the public interest for the maintenance of shoreline environmental resources.
10. All bulkheads must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Note: If erosion is part of the natural ecology of the shoreline then stabilization will not be permitted.



Bulkheads and other engineered structures significantly degrade fish and wildlife habitat as well as other features of shoreline ecology.

Regulations -- Location Criteria

1. Bulkheads shall not be located on shores where valuable geohydraulic-hydraulic or biological processes are sensitive to interference and critical to shoreline conservation, such as feeder bluffs, marshes, wetlands or accretion shoreforms such as spits, hooks, bars or barrier beaches.
2. Bulkheads are to be permitted only where local physical conditions such as foundation bearing material, surface and subsurface drainage are suitable.
3. On all shorelines, bulkheads shall be located landward of the OHWM, landward of protective berms (artificial or natural) and generally parallel to the natural shoreline. In addition:
 - a. On marine accretion beaches, bulkheads shall be set back a minimum of 25 feet landward of the OHWM, and shall parallel the natural shoreline.
 - b. On bluff or bank shorelines where no other bulkheads are adjacent, the construction of a bulkhead shall be as close to the bank as possible and in no case shall be more than 3 feet from the toe of the natural bank.
 - c. Bulkheads may tie in flush with existing bulkheads on adjoining properties, provided that (1) the adjoining bulkheads were built at or near the OHWM and (2) the new bulkhead does not extend more than three feet waterward of OHWM at any point. If there is an existing bulkhead on only one of the adjacent properties, the proposed bulkhead may tie in flush with the adjacent bulkhead at or landward of the OHWM and shall be contoured to minimize the land area waterward of the required setback, which shall be met on the side not abutting an existing bulkhead.
4. Replacement bulkheads may be located immediately in front of and abutting (sharing a common surface) an existing bulkhead provided that replacement bulkheads shall not be authorized abutting an abandoned or neglected bulkhead or a bulkhead in serious disrepair that is located more than three feet waterward of OHWM. Replacement of such bulkheads shall be located at OHWM.

Regulations -- Design

1. Bulkheads shall be sited and designed consistent with appropriate engineering principles.
2. When a bulkhead is required at a public access site, provision for safe access to the water shall be incorporated into bulkhead design.

3. Bulkheads shall be designed with the minimum dimensions necessary to adequately protect the development for the expected life of the development.
4. Stairs or other permitted structures may be built into a bulkhead but shall not extend waterward of it.
5. Bulkheads shall be designed to permit the passage of surface or ground water without causing ponding or saturation of retained soil/materials.
6. Adequate toe protection consisting of proper footings, a fine retention mesh, etc., shall be provided to ensure bulkhead stability without relying on additional riprap.
7. Materials used in bulkhead construction shall meet the following standards:
 - a. Bulkheads shall utilize stable, nonerosional, homogeneous materials such as concrete, wood, rock riprap or other suitable materials which will accomplish the desired end with the maximum preservation of natural shoreline characteristics.
 - b. Beach materials shall not be used for fill behind bulkheads unless it is specifically authorized by the permit and then only when it is demonstrated that leaving the material on the beach would be detrimental to shoreline resources.
8. Fill behind bulkheads shall be limited to an average of 1 cubic yard per running foot of bulkhead. Any filling in excess of this amount shall be considered landfill and shall be subject to the provisions for landfill and the requirement for obtaining a shoreline substantial development permit.

Breakwaters, Jetties, Rock Weirs and Groins

Applicability

Breakwaters are protective structures usually built off shore to protect harbor areas, moorage, navigation, beaches and bluffs from wave action. Breakwaters may be fixed (e.g., rubble mound or rigid wall), open-pile or floating.

Jetties are structures generally built singly or in pairs perpendicular to the shore at harbor entrances or river mouths to prevent the shoaling or accretion of littoral sand drift. Jetties also protect channels and inlets from storm waves and cross-currents.

Rock weirs and groins are structures built seaward perpendicular to the shore for the purpose of building or preserving an accretion beach by trapping littoral sand drift. Generally narrow and of varying lengths, groins may be built in a series along the shore. Jetties are built to prevent accretion in channels and/or inlets while groins preserve and promote accretion to occur along stretches of shoreline.

Policies

1. Professional design is required because of the complexity of modifying water movement and littoral drift systems that extend well beyond the project boundaries.
2. Breakwaters, jetties and groins should provide public access or multiple use opportunities to increase public use and enjoyment of the shorelines where such access is safely compatible with the structure.
3. To the extent practicable, breakwaters should be open-pile or floating structures anchored in place so as not to impede longshore sand and gravel transport and fish movement or destroy subtidal habitat.
4. Jetties should generally be discouraged because they partially or totally block shore processes, are generally irreversible in nature and often require an ongoing and costly dredging or beach feeding program to alleviate erosion or accretion problems.

5. Rock weirs and groins not designed as part of an overall system approach should generally be discouraged because they purposefully trap and accrete beach forming materials yet erode downdrift beaches or banks which may have adverse effects on other shore resources and users. However, rock weirs or groins may have a beneficial effect when designed as part of a larger planned system intended to minimize the overall need for shore modification activities.
6. Proposals not requiring the use of jetties, breakwaters or groins should be preferred over developments requiring the use of breakwater, jetty or groin structures.
7. Protection of the area's scenic and aesthetic resources should be given serious consideration in the review of proposals for breakwaters, jetties, rock weirs and groins.
8. Jetties and groins should be located, designed and constructed primarily to prevent damage to existing developments. New development requiring such structures should be discouraged.

Regulations -- General

1. The design of breakwaters, jetties, rock weirs and groins shall conform to all applicable requirements established by the Washington Departments of Fisheries and Wildlife and the U.S. Army Corps of Engineers.
2. The City/County shall require and use the following information during its review of proposals for breakwaters, jetties, rock weirs and groins:
 - a. Purpose of the structure;
 - b. Net and seasonal direction and quantities of littoral drift, tidal currents (if any); and
 - c. Seasonal wind data, wind rose.

The following additional information is required for groins:

- d. Profile of uplands;
- e. Beach type, slope and materials;
- f. Uplands types, slope and materials;
- g. Soils types (S.C.S.);
- h. Physical or geological stability of uplands; and

- i. Predicted impact on area shore processes, adjacent properties and upland stability.
3. Proposals for groins, jetties and solid breakwaters shall notify, by registered mail, all shoreline landowners within the same drift sector. If it is not possible to make a reasonable determination of the drift sector, all shoreline land owners within 1 mile of the project proposal shall be notified.
4. All breakwaters, jetties, rock weirs and groins must be in support of an allowable shoreline use that is in conformance with the provisions of this Master program unless it can be demonstrated that such activities are necessary and in the public interest for the maintenance of shoreline environmental resources.
5. All breakwaters, jetties, rock weirs and groins must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Breakwaters

6. Breakwaters shall be prohibited in lakes.
7. Breakwaters shall only be permitted by conditional use for navigational purposes, industrial activities and marinas as an integral component of a harbor, marina or port where water-dependent uses are located seaward of the existing shoreline and where protection from strong wave action is essential.
8. Open-pile or floating breakwaters shall be the only type allowed unless it can be shown that solid breakwaters will have no significant adverse effect on the aquatic biology and shore processes or that such adverse effects can be adequately mitigated.

Jetties, Rock Weirs and Groins

9. Jetties, rock weirs and groins shall only be permitted by conditional use for navigational purposes, industrial activity, marinas, erosion control, fisheries or habitat enhancement and public beach management as integral components of an overall resource management plan.
10. Jetty, rock weir, or groin development which would result in a net adverse impact on adjacent and nearby properties and shorelines shall be prohibited.
11. Groins are **prohibited** for the purpose of gaining access across tidal areas to deep water unless integral to a public access project.

Regulations -- Design

1. Proposed designs for new or expanded breakwaters, jetties, rock weirs and groins shall be designed and certified by a registered civil engineer.
2. Breakwaters, jetties, rock weirs and groins shall be designed and constructed in a manner which will prevent detrimental impacts on water circulation, sand movement and aquatic life. The design shall also minimize impediments to navigation and to visual access from the shoreline.
3. The design of new breakwaters, groins and jetties shall incorporate provisions for public access such as sightseeing and public fishing if it is determined such access is feasible and desirable.
4. Materials used for the construction of breakwaters, jetties, rock weirs and groins shall exhibit the qualities of long-term durability, ease of maintenance and compatibility with local shore features processes and aesthetics. The use of solid waste, junk or abandoned automobiles, asphalt or any building demolition debris is prohibited.
5. Floating breakwaters shall be used in place of solid, rubble mound types wherever they can withstand anticipated wave action in order to maintain sand movement and protect fish and aquatic habitat.
6. The effect of proposed breakwaters, jetties, rock weirs and groins on sand movement shall be evaluated during permit review. The beneficiaries and/or owners of large scale defense works which substantially alter, reduce or block littoral drift and cause new erosion of downdrift shores shall be required to establish and maintain an adequate long term beach feeding program either by artificially transporting sand to the downdrift side of an inlet with jetties or by artificial beach feeding in the case of groins, breakwaters and rock weirs.

Dikes and Levees

Applicability

Dikes and levees are manmade earthen embankments utilized for the purpose of flood control, water impoundment projects, or settling basins.

Exemptions

The SMA exempts the 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 a part of an agricultural drainage or diking system from substantial development permit requirements (RCW 90.58.030 (x)).

Note: See also Chapter 7 "Flood Hazard Management" for relevant policies and regulations pertaining to systems of dikes and levees.

Policies

1. Dikes and levees should be located, designed, constructed and maintained so that they will not cause significant damage to adjacent properties or valuable resources, and so that the physical integrity of the natural shore process is maintained.
2. Dikes and levees should be permitted only when the purpose or primary use being protected is consistent with this program and when they can be developed in a manner compatible with the multiple use of the floodway and associated resources, such as wildlife habitat, water quality, aesthetics, recreational resources and public access.

Regulations -- General

1. Dikes and levees shall be designed, constructed and maintained in accordance with Hydraulic Project Approval and in consideration of requirements resource agency recommendations.
2. Dikes and levees shall protect the natural processes and resource values associated with streamways and deltas including but not limited to wildlife habitat.
3. Dikes and levees shall be limited in size to the minimum height required to protect adjacent lands from the protected flood stage as identified in the applicable comprehensive flood control management plan.
4. Dikes and levees shall not be constructed with material dredged from the adjacent wetland or streamway area unless part of a comprehensive flood and habitat plan and then only by conditional use.

5. Dikes and levees shall not be placed in the floodway except for current deflectors necessary for protection of bridges and roads.
6. Public access shall be provided in accordance with public access policies and regulations contained herein. Improved trail systems along diked or leveed shorelines are preferred.
7. Dikes and levees shall only be authorized by conditional use permit and shall be consistent with the comprehensive flood control management plan, or if no plan yet exists, with an overall watershed and drainage basin management systems approach.
8. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Regulations -- Design

1. Dikes and levees shall be setback at convex (inside) bends to allow streams to maintain point bars and associated aquatic habitat through normal accretion. Where bank dikes have already cut off point bars from the edge of the floodway, consideration should be given to their relocation in order to lower flood stages and current velocities.
2. Where dikes are necessary in intermediate gradient floodways to protect fringe areas, tangent diking is preferred over bank levees. Dikes and levees shall be located near the tangent to outside meander bends so that the stream can maintain normal meander progression and utilize most of its natural flood water storage capacity.
3. Proper diversion of surface discharge shall be provided to maintain the integrity of the natural streams, wetlands and drainages.
4. Underground springs and aquifers shall be identified and protected.
5. The outside face of dikes shall be sloped at 1-1/2 to 1 (horizontal to vertical) or flatter and seeded with grass and/or native vegetation. Landscaping and buffer areas may be required.

Dredging and Dredge Material Disposal

Applicability

Dredging is the removal or displacement of earth or sediments such as gravel, sand, mud or silt and/or other materials or debris from any stream, river, lake or marine water body and associated shorelines and wetlands. Dredging is normally done for specific purposes or uses such as for constructing and maintaining canals, navigation channels, turning basins, harbors and marinas, for installing submarine pipelines or cable crossings, or for dike or drainage system repair and maintenance. Dredging may also be used to mine for aggregates such as sand and gravel.

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 for other uses or disposing of the by products of dredging.

Note: Dredge material disposal on land within shoreline jurisdiction is also subject to the landfill policies and regulations of this program.

Exemptions

Pursuant to WAC 173-14-040, the following actions are exempt from the requirement for a shoreline substantial development permit, but may still require a conditional use or variance permit.

1. Operations, 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 from the irrigation of lands;
2. 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.
3. Normal maintenance and repair of an existing facility which may include maintaining an existing navigational channel or other dredged facility for the purpose of periodically restoring a previously authorized configuration.

Note: Actions exempt from Substantial Development Permits are still required to comply with the Shoreline Management Act and all of the applicable provisions of City/County Shoreline Master Program. Dredging proposals should be carefully reviewed by the City/County to determine whether or not the activity is exempt from the requirement for a Substantial Development Permit and to insure that the proposed action is consistent with the intent, policies and regulations of the Act and this program.

Policies

1. Dredging and dredge material disposal should be located and conducted in a manner which minimizes damage to existing ecological values and natural resources of the area to be dredged and of the disposal site.
2. Dredging of bottom materials for the primary purpose of obtaining the material for fill or other purposes is strongly discouraged.
3. Dredging operations should be planned and conducted to minimize interference with navigation and adverse impacts to other shoreline uses, properties and values.
4. Dredge material disposal in water bodies should be discouraged, except for habitat improvement or where depositing dredge material on land would be more detrimental to shoreline resources than deposition in water areas.
5. Long range regional plans should be developed for the disposal and use of dredged material particularly in areas where maintenance of navigation channels is routine and continuous. Dredge disposal sites in water areas should be identified in cooperation with the U.S. Army Corps of Engineers, U.S. EPA and the State Departments of Ecology, Natural Resources, Wildlife and Fisheries.
6. Selection of unconfined, open water disposal sites should follow the process developed in the Puget Sound Dredged Disposal Analysis (PSDDA) and be incorporated into DNR WAC 332-30-166 Open Water Disposal Sites, where applicable.
7. The long-term environmental impact of disposal at open water disposal sites should be monitored by the shoreline management permittee of a site. The permittee should provide for long-term environmental monitoring and any necessary remedies. Periodic reports on site use and environmental impact should be submitted to the local shoreline administrator.

8. When dredge material has suitable organic and physical properties, dredging operations should be encouraged to recycle dredged material for beneficial use in beach enhancement, habitat creation, aggregate or clean cover material at a landfill (where appropriate).
9. Dredging and dredge material disposal operations should be periodically reviewed for consistency with the SMP.
10. Dredged material containing chemicals at concentrations high enough to cause significant harm to resident biota should not be placed at unconfined open-water disposal sites.

Regulations -- General

1. Applications for shoreline dredging and dredge material disposal shall provide the following types of information:
 - a. Physical, chemical and biological assessment of the proposed dredged material applicable to the particular dredging site. Information needed will vary depending upon:
 - ii. Existing biological communities or resources in the area;
 - iii. The possibility of significant sediment contamination; and
 - iv. The suitability of the proposed dredge disposal site.
 - b. Specific data to be considered include:
 - i. Physical - Grain size, clay, silt, sand or gravel as determined by sieve analysis.
 - ii. Chemical - Including conventional parameters, metals and organics.
 - iii. Biological - Bioassays useful in determining the suitability of dredged material for a selected disposal option.
 - b. Dredging volumes, methods, schedule, frequency, hours of operation and procedures;
 - c. Method of disposal, including the location, size, capacity and physical characteristics of the disposal site, transportation method and routes, hours of operation, schedule;
 - d. Stability of bedlands adjacent to proposed dredging area;

- e. Hydraulic analyses, including tidal fluctuation, current flows, direction and projected impacts. Hydraulic modeling studies are required for large scale, extensive dredging projects, particularly in estuaries, in order to identify existing geohydraulic-hydraulic patterns and probable effects of dredging;
 - f. Assessment of water quality impacts; and
 - g. Biological assessment including migratory, seasonal and spawning use areas.
2. In evaluating permit applications for any dredging project, the adverse effects of the initial dredging, subsequent maintenance dredging and dredge disposal that will be necessary shall be considered. Dredging and dredge disposal shall be permitted only where it is demonstrated that the proposed actions will not:
 - a. Result in significant and/or ongoing damage to water quality, fish, shellfish and other essential marine biological elements; and
 - b. Adversely alter natural drainage and circulation patterns, currents, river and tidal flows or significantly reduce flood water capacities.
 3. Proposals for dredging and dredge disposal shall include all feasible mitigating measures to protect marine habitats and to minimize adverse impacts such as turbidity, release of nutrients, heavy metals, sulfides, organic material or toxic substances, dissolved oxygen depletion, disruption of food chains, loss of benthic productivity and disturbance of fish runs and important localized biological communities.
 4. Dredging and dredge disposal shall not occur in marshes, bogs or swamps, except as authorized by conditional use permit provided the wetland does not serve any of the valuable functions of wetlands identified in this master program or during the permit review process including, but not limited to, wildlife habitat and natural drainage functions, and/or enhances the wildlife habitat, natural drainage and/or other valuable functions.
 5. Dredging and dredge disposal shall be carefully scheduled to protect biological productivity (e.g. fish runs, spawning, benthic productivity, etc.) and to minimize interference with fishing activities. Dredging activities shall not occur in areas used for commercial fishing (e.g. drift net, crabbing, etc.) during a fishing season unless specifically addressed and mitigated for in the permit.

6. Dredging and dredge disposal shall be **prohibited** on or in archaeological sites which are listed on the Washington State Register of Historic Places until such time that they have been released by the State Archaeologist.
7. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Regulations -- Dredging

1. Dredging waterward of the ordinary high water mark shall be permitted only:
 - a. For navigation or navigational access;
 - b. In conjunction with a water-dependent use of water bodies or adjacent shorelands;
 - c. As part of an approved habitat improvement project;
 - d. To improve water quality;
 - e. For mining and/or mineral extraction, as provided in the regulations on mining; or
 - f. In conjunction with a bridge, navigational structure or wastewater treatment facility for which there is a documented public need and where other feasible sites or routes do not exist.
 - g. To improve water flow and/or manage flooding only when consistent with an approved flood/stormwater comprehensive management plan.
2. When dredging is permitted, the dredging shall be the minimum necessary to accommodate the proposed use.
3. Dredging shall utilize techniques that cause minimum dispersal and broadcast of bottom material.
4. New dredging activity is prohibited in the following locations:
 - a. In estuaries except by conditional use permit;
 - b. Along net positive drift sectors and where geohydraulic-hydraulic processes are active and accretion shore forms would be damaged, altered or irretrievably lost;

- c. In shoreline areas with bottom materials that are prone to significant sloughing and refilling due to currents or tidal activity, which result in the need for continual maintenance dredging;
 - d. In habitats identified as critical to the life cycle of officially designated or protected fish, shellfish or wildlife; or
5. Dredging for the primary purpose of obtaining material for landfill is prohibited.
 6. Dredging to construct canals or small basins for boat moorage or launching, water ski landings or swimming holes is prohibited.

Regulations -- Dredge Material Disposal

1. Disposal of dredged material may be accomplished at approved contained upland disposal sites.
2. Individual disposal operations shall comply with Department of Natural Resources leasing practices, Ecology Water Quality Certification process and the U.S. Army Corp. of Engineers permit requirements.
3. Unconfined, open-water disposal of dredged material in Puget Sound shall only occur at sites identified through the process defined in the PSDDA report and incorporated in DNR WAC 332-30-166 Open-Water Disposal Sites.
4. Review of applications for use of a disposal site shall be based upon the criteria and guidelines established in the PSDDA report, where applicable. It shall be the responsibility of the disposal permittee to assure that disposal of dredged material and management of the disposal site comply with permit conditions and with the PSDDA report, where applicable.
5. Yearly status reports shall be prepared and submitted by the dredge disposal permittee to the local shoreline administrator. The reports shall state the quantity of material dumped, characterize the quality of the material, and review any factors necessary to verify continued compliance with the shoreline permit.
6. Depositing dredge materials in water areas shall be allowed only by conditional use permit for one or more of the following reasons:
 - a. For wildlife habitat improvement;
 - b. To correct problems of material distribution adversely affecting fish and shellfish resources;

- c. For permitted beach enhancement;
 - d. When the alternative of depositing material on land is demonstrated to be more detrimental to shoreline resources than depositing it in water areas, or
 - e. In approved open-water disposal site as identified in (cite applicable disposal plan [e.g. PSDDA]).
7. New in-water disposal sites shall be identified consistent with the following criteria:
- a. The site is in an area protected from significant storms, tidal and submarine currents, stratification and turbulence that would cause shifting and dispersal of dredged material, unless specifically designed and permitted as a dispersal site;
 - b. The area is proven to be biologically, chemically and physically degraded by past dredge disposal or other activities, and water quality and biological productivity will not be degraded further;
 - c. Disposal will not interfere with geohydraulic-hydraulic processes;
 - d. The dredged material has been analyzed by qualified personnel and found to be minimally or nonpolluting;
 - e. Dredge disposal will not impede water and tidal current flows or adversely affect flood water flows and capacities;
 - f. Aquatic life will not be adversely affected; and
 - g. The site and method of disposal meet all requirements and qualifications of applicable regulatory agencies.
8. Disposal, if allowed in water, shall utilize techniques that cause the least dispersal and broadcast of materials unless specifically designed and approved as a dispersal site.
9. Use of dredge materials for beach enhancement shall be conducted so that:
- a. Except where specifically designed and intended, erosion or deposition downstream from the disposal site is minimized. Erosion of the dredged material shall not smother marsh or other shallow productive areas.

- b. To the extent possible, the volume and frequency of dredged material disposal maintains a stable beach profile. Dredged material shall be graded at a uniform slope and contoured to reduce cove and peninsula formation and to minimize stranding of juvenile fish (see also "Beach Enhancement").
10. Ocean disposal shall be conducted so that:
- a. The material deposited at a site is compatible with the benthic populations and other uses of the area;
 - b. Interference with commercial fishing and other established uses is minimized; and
 - c. Disposal is strictly confined to the designated disposal sites.
11. Flow-lane disposal shall be conducted so that:
- a. Disposal shall not occur under freshwater flow and tidal conditions where the predominant sediment transport at a site is up river; and
 - b. Use of the disposal site does not interfere with fishing activities by causing major changes in the circulation patterns or bottom configuration of the disposal site.
12. Land disposal sites shall adhere to the following conditions:
- a. Containment dikes and adequate settling basins shall be built and maintained so that the site's discharge water carries a minimum of suspended sediment. Required basins shall be designed to maintain at least 1 foot of standing water at all times to encourage proper settling;
 - b. Proper diversion of surface discharge shall be provided to maintain the integrity of the natural streams, wetlands and drainages;
 - c. Runoff water shall be controlled so as to enter a waterway through grassy swales or other treatment features that assures protection of water quality and other environmental resources.
 - d. Underground springs and aquifers shall be identified and protected;
 - e. The outside face of dikes shall be sloped at 1-1/2 to 1 (horizontal to vertical) or flatter and seeded with grass and/or native vegetation. Landscaping and buffer areas may be required;
 - f. Sites shall be adequately screened from view. Dredge disposal in shoreline areas shall not impair scenic views; and

- g. Dredge materials deposited upland and **not** part of a permitted dike or levee shall constitute landfill, and when deposited within the jurisdiction of this master program, shall comply with the landfill regulations.
13. Near shore or upland disposal of dredge materials shall not be located upon, adversely affect, or diminish:
- a. Estuaries, wetlands, or significant plant communities;
 - b. Prime agricultural land except as enhancement;
 - c. Natural resources including but not limited to sand and gravel deposits, timber, or natural recreational beaches and waters except for enhancement purposes;
 - d. Designated or officially recognized wildlife habitat and concentration areas;
 - e. Water quality, quantity and drainage characteristics; and
 - f. Public access to shorelines and water bodies.
14. Where required, revegetation of land disposal sites shall occur as soon as possible in order to retard wind and water erosion and to restore the wildlife habitat value of the site. Native species and other compatible plants shall be used.
15. Proposals for disposal in shoreline jurisdiction must show that the site will ultimately be suitable for a use permitted by this master program.
16. Disposal of dredged materials shall occur on the smallest possible land area consistent with the standards above in order to minimize the quantity of land that is disturbed, unless dispersed disposal is authorized as a condition of permit approval (e.g. soil enhancement, etc.).
17. The City/County may impose reasonable limitations on dredge disposal operating periods and hours and may require provision for buffer strips at land disposal or transfer sites in order to protect the public safety and other shore users' lawful interests from unnecessary adverse impacts.

Landfill

Applicability

Landfill is the placement of soil, sand, rock, gravel, existing sediment or other material (excluding solid waste) to create new land, tideland or bottom land area along the shoreline below the OHWM, or on wetland or upland areas in order to raise the elevation. Any landfill activity conducted within shoreline jurisdiction must comply with the following provisions.



Notes to Master Programmers

If this definition is used it is important to clarify when in-water and upland landfill is allowed and to define the limits of backfill allowed relative to bulkhead projects, etc. See Chapter 5, "Clearing and Grading" for further discussion of dry on dry fill or "raising land elevation".

Policies

1. Landfills waterward of OHWM should be allowed only when necessary to facilitate water-dependent and/or public access uses which are consistent with this master program.
2. Shoreline fills should be designed and located so that there will be no significant damage to existing ecological systems or natural resources, and no alteration of local currents, surface water drainage or flood waters which would result in a hazard to adjacent life, property and natural resource systems.
3. In evaluating fill projects, such factors as potential and current public use of the shoreline and water surface area, navigation, water flow and drainage, water quality and habitat should be considered and protected to the maximum extent feasible. Further, the City/County should assess the overall value of the landfill site in its present state versus the proposed shoreline use to be created to ensure consistency with the Act and this master program.

4. The perimeter of landfills should be designed to avoid or eliminate erosion and sedimentation impacts, both during initial landfill activities and over time. Natural appearing and self-sustaining control methods are preferred over structural methods.
5. Where permitted, landfills 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 this master program. Speculative landfill activity should be prohibited.
6. Sanitary landfills should not be located in shoreline jurisdiction.

Regulations -- General

1. Applications for landfill permits shall include the following:
 - a. Proposed use of the landfill area;
 - b. Physical, chemical and biological characteristics of the fill material;
 - c. Source of landfill material;
 - d. Method of placement and compaction;
 - e. Location of landfill relative to natural and/or existing drainage patterns and wetlands.
 - f. Location of the landfill perimeter relative to the OHWM;
 - g. Perimeter erosion control or stabilization means; and
 - h. Type of surfacing and runoff control devices.
2. Landfill waterward of OHWM or in marshes, bogs and swamps shall be permitted as a conditional use only and:
 - a. In conjunction with a water-dependent or public use permitted by this master program;
 - b. In conjunction with a bridge 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 beach restoration project; or
 - d. For fisheries, aquaculture, or wildlife habitat enhancement projects.

3. Pile or pier supports shall be utilized whenever feasible in preference to landfills. Landfills for approved road development in floodways or wetlands shall be permitted only if pile or pier supports are proven infeasible.
4. Landfills are **prohibited** in floodplains except where it can be clearly demonstrated that the geohydraulic characteristics and floodplain storage capacity will not be altered to increase flood hazard or other damage to life or property. Landfills are **prohibited** in floodway, except when approved by conditional use permit and where required in conjunction with a proposed water-dependent or other use, specified in Regulation #2 above.
5. Environmental review of proposed landfills shall be accomplished concurrently with review of the intended use, and the threshold determination concerning the need for an environmental impact statement shall be based on this combined project review.
6. Landfill shall be permitted only where it is demonstrated that the proposed action will not:
 - a. Result in significant damage to water quality, fish, shellfish and/or wildlife habitat; or
 - b. Adversely alter natural drainage and circulation patterns, currents, river and tidal flows or significantly reduce flood water capacities.
7. Landfills may be permitted only in conjunction with a specific development already permitted by this master program or as proposed (i.e. permit applied for) simultaneously with such development. Speculative landfills are **prohibited**.
8. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Regulations -- Design and Construction

1. Where landfills are permitted, the landfill shall be the minimum necessary to accommodate the proposed use.
2. Where existing public access is reduced, greater public access as part of the development project shall be provided.

3. Landfills shall be designed, constructed and maintained to prevent, minimize and control all material movement, erosion and sedimentation from the affected area. Perimeters of permitted land fill projects shall be designed and constructed with silt curtains, vegetation buffer areas or other methods and appropriately sloped to prevent erosion and sedimentation both during initial landfill activities and afterwards. Such containment practices shall occur during the first growing season following completion of the landfill. Design shall incorporate use of natural appearing and self sustaining control methods unless they can be demonstrated to be infeasible due to existing environmental conditions such as currents, tides and weather.
4. Fill materials shall be sand, gravel, soil, rock or similar material. Use of polluted dredge spoils, solid waste and sanitary landfill materials are **prohibited**.
5. Landfills shall be designed to allow surface water penetration into ground water supplies where such conditions existed prior to fill.
6. The timing of landfill construction shall be regulated so as to minimize damage to water quality and aquatic life.
7. Landfill on dry land shall not result in substantial changes to surface water drainage patterns off the project site and onto adjacent properties.



Piers, Docks, Floats & Buoys

Applicability

Piers and docks are structures which abut the shoreline and are used as a landing or moorage place for commercial and pleasure craft. Piers are built on fixed platforms above the water, while docks float upon the water.

Recreational floats are also addressed in this section. These floats are anchored off shore platforms used for water-dependent recreational activities such as swimming and diving.

Piers and docks are utilized for commercial, industrial and recreational purposes. Often they are mixed serving several uses. Because of this, regulations concerning specific uses that may employ a pier or dock will be located in that specific section. For instance, piers and docks containing more than 10 moorage spaces are considered marinas and are addressed in the "Boating Facilities" Provisions.

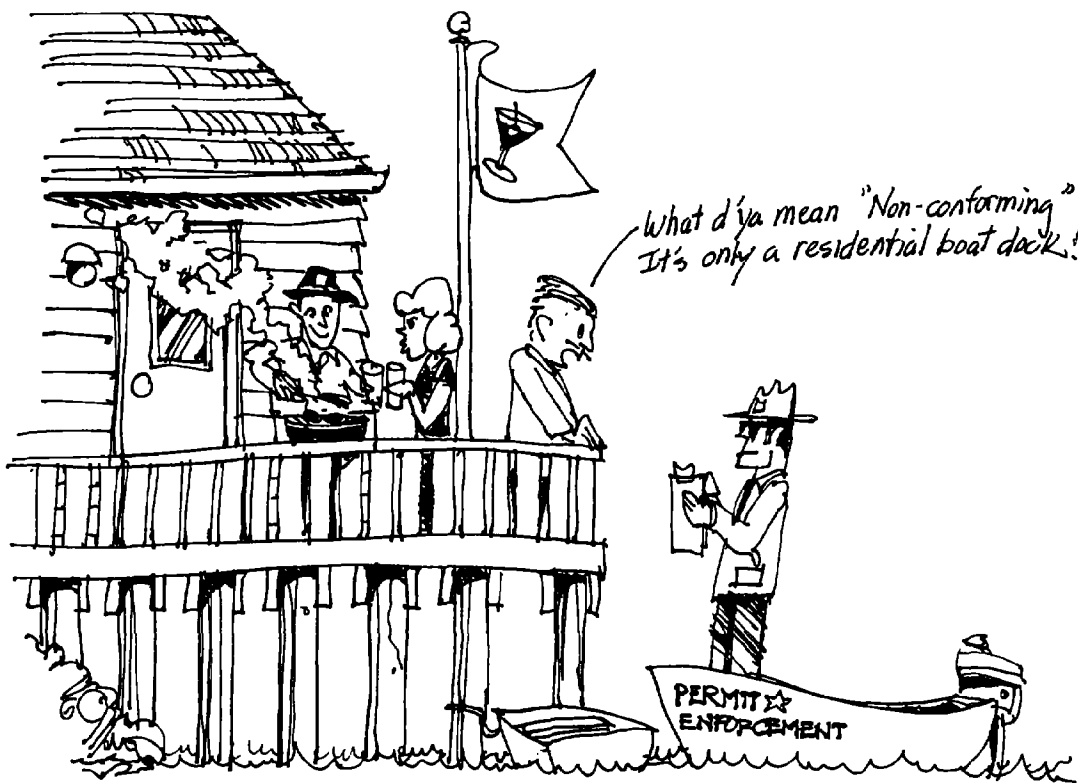
In limited instances where floating homes are allowed outside marinas, piers, docks, floats and buoys associated with a floating home are regulated by this section.

Exemptions

Docks for private, non commercial pleasure craft, common to a single family residence, and costing less than 2,500 dollars are exempt from the requirement for a shoreline substantial development permit pursuant to RCW 90.58.030(3-e-vii) and WAC 173-14-040(h). The City/County will review all proposals for piers and docks to determine if:

1. The proposal is or is not exempt from the requirement for a substantial development permit;
2. The proposal is suitably located and designed and that all potential impacts have been recognized and mitigated; and
3. The proposal is consistent with the intent, policies and regulations of the Act, RCW 90.58.140(1), and this master program.

Note: Littoral drift is a significant factor affecting the design and location of piers and docks. Piers are often preferred over docks in areas where there is a high-level of littoral drift. Some cities and counties have completed drift sector analyses to identify these areas in advance, and thereby facilitate project review.



Restricting the size of residential boat docks insures that they won't be used as a loop hole to build over-water residences.

Policies

1. Multiple use and expansion of existing consistent piers, wharves and docks should be encouraged over the addition and/or proliferation of new facilities. Joint-use facilities are preferred over new single-use piers, docks and floats.
2. The use of mooring buoys should be encouraged in preference to either piers or docks (see Chapter 7 "Boating Facilities").
3. Piers, docks, floats and mooring buoys should be designed to cause minimum interference with navigable waters and the public's use of the shoreline.
4. Piers, floats and docks should be sited and designed to minimize possible adverse environment impacts, including potential impacts on littoral drift, sand movement, water circulation and quality and fish and wildlife habitat.
5. Piers and docks should allow for a maximum of littoral drift and should minimize interference with basic geohydraulic-hydraulic processes.
6. Pier and dock projects are encouraged to provide for public docking, launching and recreational access.
7. Local programs and coordinated efforts among private and/or public agencies should be initiated to remove or repair failing, hazardous or nonfunctioning piers and docks and restore such facilities and/or shore resources to a natural and/or safe condition.
8. Use of natural nonreflective materials in pier and dock construction should be encouraged. When plastics and other non biodegradable materials are used, precautions should be taken to ensure their containment.
9. The proposed size of the structure and intensity of use or uses of any dock, pier, and/or float should be compatible with the surrounding environment and land and water uses.

Regulations -- General

1. Proposals for piers or docks shall include at a minimum the following information:
 - a. Description of the proposed structure, including its size, location, design and any shoreline stabilization or other modification required by the project;
 - b. Ownership of tidelands, shorelands and/or bedlands;
 - c. Proposed location of piers, floats, buoys or docks relative to property lines and OHWM; and
 - d. Location width, height and length of piers or docks on adjacent properties within 300 feet.
2. In areas identified as having a high environmental value for shellfish, fish life or wildlife, piers and docks shall not be allowed except where functionally necessary to the propagation, harvesting, testing or experimentation of said marine fisheries or wildlife, unless approved by conditional use permit and only when it can be conclusively established that the dock or pier will not be detrimental to the natural habitat or species of concern.
3. Piers, floats, buoys and docks shall not significantly interfere with use of navigable waters.
4. The length of piers and docks shall be limited in constricted water bodies to assure navigability and protect public use. Piers and docks may be prohibited where necessary to protect navigation, public use or habitat values.
5. Piers and docks on river shores are **prohibited** along braided or meandering river channels or where the river channel is subject to change in direction or alignment.
6. All piers and docks shall be constructed and maintained in a safe and sound condition. Abandoned or unsafe docks and piers shall be removed or repaired promptly by the owner. Where any such structure constitutes a hazard to the public, the City/County may, following notice to the owner, abate the structure if the owner fails to do so within ninety days and may impose a lien on the related shoreline property in an amount equal to the cost of the abatement.

7. All shoreline development must conform to the General Provisions (see Chapter 5) and the Environment Designation Provisions (see Chapter 6) stated in this master program.

Regulations -- General Design and Construction Standards

1. Pilings must be structurally sound prior to placement in the water.
2. Piles, floats or other members in direct contact with water shall not be treated or coated with biocides such as paint, or pentachlorophenol. Use of arsenate compounds or creosote treated members is discouraged and shall only be used in accordance with the following provisions:
 - a. In freshwater, untreated wood, precast concrete or other nontoxic alternatives shall be used unless the applicant can demonstrate that no feasible alternative to toxic treatments is available which will provide the structural characteristics necessary for the project.
 - b. In saltwater areas characterized by significant shellfish populations or in shallow embayments with poor flushing characteristics, untreated wood, precast concrete or other nontoxic alternatives shall be used unless the applicant can demonstrate that no feasible alternative to toxic treated wood is available which will provide the structural characteristics necessary for the project. In all cases where toxic treated products are allowed, products, methods of treatment and installations shall be limited to those that are demonstrated as likely to result in the least possible damage to the environment based on current information.
3. No over-water field applications of paint, preservative treatment or other chemical compounds shall be permitted except in accordance with best management practices set forth in the marina section of this master program.
4. Piers shall utilize the minimum number of pilings necessary, favoring large spans on fewer pilings over smaller spans on more pilings.
5. Pilings employed in piers or any other structure shall have a minimum vertical clearance of 1 foot above extreme high water.
6. All docks shall include stops which serve to keep the floats off the bottom of tidelands at low tide or water level.

7. If a bulkhead-like base is proposed for a fixed pier or dock where there is net positive littoral drift, the base shall be built landward of the ordinary high water mark or protective berms.
8. When plastics or other nonbiodegradable materials are used in float, pier or dock construction, precautions shall be taken to insure their containment.
9. Overhead wiring or plumbing is not permitted on piers or docks.
10. Lighting should be the minimum necessary to locate the dock at night and should focus downward to minimize glare.

Regulations -- Joint-Use Community Recreational Piers, Docks and Floats

1. All hotels, motels and multi-family residences proposing to provide moorage facilities shall be required to construct a single, joint-use moorage facility provided that the City/County may authorize more than one joint use moorage facility if a single facility would be inappropriate or undesirable given the specific conditions of the site. No more than one slip for every two units shall be allowed.
2. Joint-use facilities are encouraged in-lieu of individual moorage facilities.
3. Proposals for joint-use community piers and docks shall demonstrate and document by contract or covenant that adequate maintenance of the structure and the associated upland area will be provided by identified responsible parties.
4. Recreational floats shall be located as close to the shore as possible. They shall not be located farther waterward than existing floats and established swimming areas.
5. Floats must be built so that the deck surface is 1 foot above the water's surface and they must have reflectors for nighttime visibility.
6. Single property owner recreational floats shall not exceed 64 square feet.
7. Multiple property owners floats shall not exceed 96 square feet.

Regulations -- Commercial/Industrial Facilities

These standards apply to piers and docks intended for any commercial or industrial use other than commercial moorage of boats in marinas (see Chapter 7 "Boating Facilities", "Commercial Development" and "Industry").

1. Piers and docks will be permitted to the outer harbor line or combined U.S. Pier head/Bulkhead Line for water-dependent and for multiple use facilities if the majority use is water-dependent and public access can safely be provided. The length should be no more than that required for the draft of the largest vessel expected to moor at the facility. Maximum size of the pier or dock shall be no greater than necessary to serve the intended use, and will be determined by the City/County on a case-by-case basis.
2. Substantial development permits for docks or piers serving single commercial or industrial enterprises shall not be granted until adjacent commercial and/or industrial enterprises have been contacted regarding their water access needs and could realistically make use of a single moorage facility. Where joint use is feasible, permits for individual facilities shall not be granted.
3. Facilities and procedures for receiving, storing, dispensing and disposing of oil and other toxic products shall be designed to insure that such oil and other toxic products are not introduced into the water body.
4. Bulk storage for gasoline, oil and other petroleum products for any use or purpose is **prohibited** on piers and docks. Bulk storage means non portable storage in fixed tanks.
5. Storage for boat fueling facilities shall be located landward of the OHWM and meet the applicable policies and regulations for utilities (accessory and primary), commercial and industrial development.
6. Spill clean up facilities shall be available for prompt response and application at all piers and docks involved in oil and hazardous products transfer.

Regulations -- Residential

1. Number

- a. New subdivisions with shoreline frontage shall be required to provide community use docks if any docks are proposed.
- b. For lots existing at the time this program is adopted, no more than one private, non commercial dock for residential or recreational purposes is permitted for each shoreline lot or parcel or contiguous group of lots or parcels in one ownership.

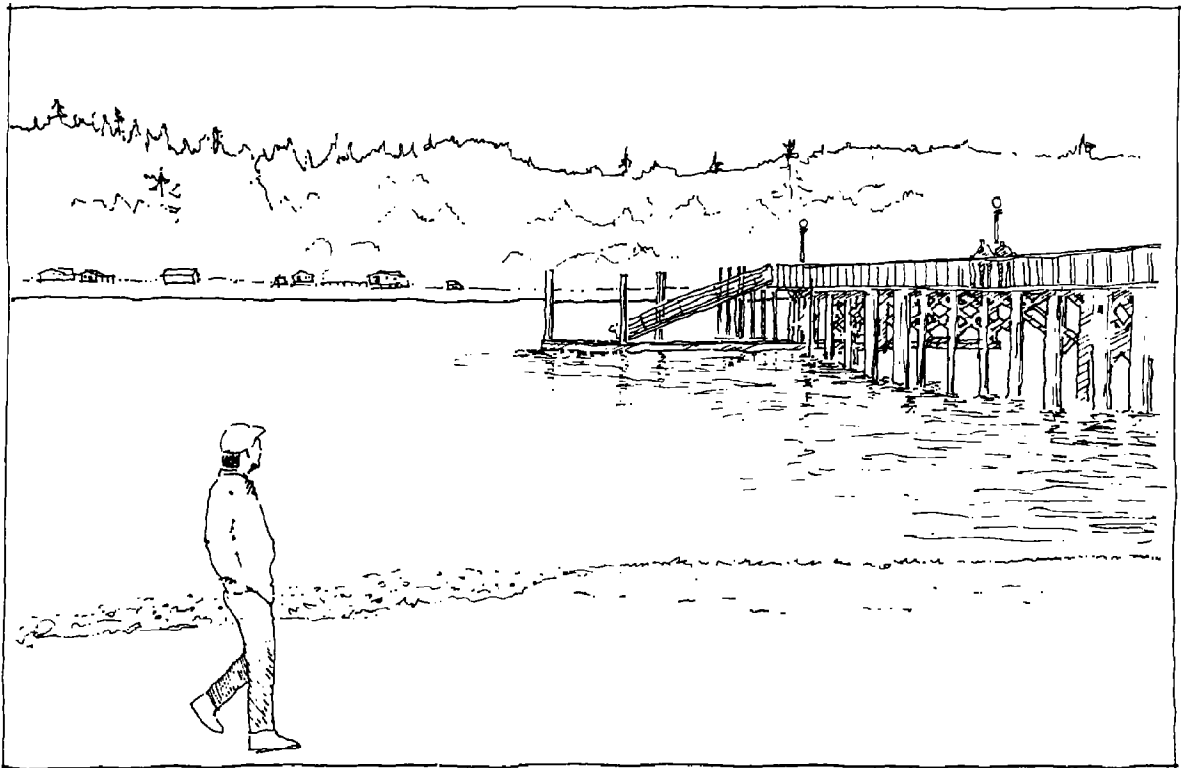
2. Use of Piers vs. Docks

- a. On river shorelines, only docks shall be permitted. Such facilities shall be securely anchored to pilings to allow for changes in river level and shall be able to withstand 100-year frequency flooding, or be seasonably removable.
- b. The use of docks shall be required in preference to piers in areas where scenic values are high.

3. Size

- a. **Length:** Maximum length of a pier or dock shall be the minimum necessary to accomplish moorage for the intended boating use and shall be only so long as to obtain a depth of 4 feet of water as measured at mean low water in marine waters or as measured at ordinary low water in fresh water shorelines at the landward limit of the moorage slip.
- b. **Width:** For private, single use docks, maximum length parallel to shore of the "T" end shall not exceed 10 feet. Maximum width of the walkway shall not exceed 4 feet and eight 8 feet at the immediate landing area deck.
- c. For community piers and docks, maximum width and length will be as determined by the City/County on a case-by-case basis.
- d. **Height:** Dock shall not exceed 3 feet in height above OHWM on the landward side and shall extend above the water surface one 1 foot at all other locations.

4. **Side yard Setbacks:** Docks shall be setback a minimum of 10 feet from side property lines, **EXCEPT** that community piers and docks may be located adjacent to or upon a side property line when mutually agreed to by contract/covenant with the owners of the adjacent property, a copy of which must be recorded with the County Auditor and filed with the application for permit.
5. **Density** (see also Boating Facilities regulations for facilities with more than ten moorage spaces).
 - a. Community docks and piers shall include no more than one moorage space per dwelling unit or lot.



CHAPTER 9

Administration & Enforcement

Introduction

The best shoreline master program is of little use if it is not effectively administered. The more clearly that responsibilities and procedures can be spelled out in this section, the more smoothly existing and new staff can "pick up the ball and run". There will be less chance for major procedural glitches and, most importantly, it will help insure more thorough review and evaluation of proposed actions or violations.

Local government has the primary responsibility for administering the SMA (see RCW 90.58.050). Consequently, specific details can vary greatly from one jurisdiction to the next.

In setting permit procedures, local governments should take into account many important needs. They include environmental protection, efficient permitting, public involvement, protection of public and private rights, protection of nearby properties and the staff and expertise available to the community. Local governments use different procedures for various types of uses and activities to appropriately balance these needs. For example, many local government shoreline master programs provide that the planning staff (e.g. the Shoreline Administrator) decides permits for uses and

activities with little potential for environmental impact and community concern. No hearing is usually required for such projects.

Developments and uses with greater potential adverse impacts are classified as conditional uses. Conditional uses require a hearing and are decided by a hearing examiner, a local shorelines hearings board or board of adjustment, or the city or county legislative body. In deciding which body to give the decision making responsibility for conditional uses and variances, local governments should consider the following: First, city and county legislative bodies are typically very busy. Requiring them to review and approve all conditional use permits and variances, particularly in a large jurisdiction, may result in substantial permitting delays and additional work for an already overworked legislative body. Second, city and county legislative bodies are primarily policy makers. They establish policy by adopting shoreline master programs (SMPs) and approving SMP amendments. Deciding permits is an administrative function. It may be better to assign the responsibility for conditional uses and variances to an existing body with permitting expertise, such as a hearing examiner. Ultimately, the decision on which body should decide permits is a local decision, and one that Ecology will respect.

Some communities also have a local appeals process. Local governments have the authority to provide for appeals from local permit decisions. However, it is important to remember that the Shoreline Management Act provides a built in appeals process to the Washington State Shorelines Hearings Board. This appeal is available in the case of all decisions to approve or deny shoreline permits.

Local appeals provide additional protection to residents and property owners. They also give local legislative authorities the power to review the decisions of staff or hearings examiners. On the down side, they can introduce additional delays into the permitting process.

So local appeals processes must be carefully considered. Local appeals are preferable to having every permit approved by both staff or a hearing examiner and a city council or county commission. If a local government decides to adopt a local appeals process they should limit the appeal period to a short period of time, five days is suggested. Only one level of local appeal should be provided.

By appropriately classifying uses, streamlining permitting for uses and activities with minor environmental and social impacts, and ensuring that uses and activities with the potential for significant impact receive more intense review, local governments can speed permitting and concentrate resources where intense review is necessary. The uses designated as substantial development

permits and conditional uses will vary from community to community, as will the processes, but it is important that each community achieve a balance that makes sense for that community and that protects the state-wide interest in shoreline areas.

Model Provisions

General

There is hereby established an administrative system designed to assign responsibilities for implementation of the shoreline master program ("master program" or "SMP") and shoreline permit review, to prescribe an orderly process by which to review proposals and permit applications, and to ensure that all persons affected by this master program are treated in a fair and equitable manner.

Administrator

- A. The City/County Manager, Planning Director, Public Works Director, etc., or his/her designee, hereinafter known as the Administrator, is vested with:
1. Overall administrative responsibility for this shoreline master program;
 2. Authority to approve, approve with conditions or deny shoreline substantial development permits and permit revisions in accordance with the policies and provisions of this master program;
 3. Authority to grant statements of exemption from shoreline substantial development permits; and
 4. Authority to determine compliance with RCW 43.21C, State Environmental Policy Act.
- B. The duties and responsibilities of the Administrator shall include:
1. Specifying the required application forms and submittal requirements including the type, details and number of copies for substantial development, conditional use and variance permits. At a minimum, the application shall include the information required in WAC 173-14-110 or its successor.
 2. Advising interested citizens and applicants of the goals, policies, regulations and procedures of this program.

3. Making administrative decisions and interpretations of the policies and regulations of this program and the Shoreline Management Act.
4. Collecting applicable fees.
5. Determining that all applications and required information and materials are provided.
6. Making field inspections, as necessary.
7. Reviewing, insofar as possible, all provided and related information deemed necessary for appropriate application needs.
8. Determining if a shoreline substantial development permit, conditional use permit or variance permit is required.
9. Conducting a thorough review and analysis of shoreline Substantial Development Permit applications making written findings and conclusions and approving, approving with conditions, or denying such permits.
10. Submitting variance and conditional use permit applications and making written recommendations and findings on such permits to the City/County Council for their consideration and official action.
11. Assuring that proper notice is given to appropriate persons and the public for all hearings.
12. Providing technical and administrative assistance to the City/County Council as required for effective and equitable implementation of this program and the Act.
13. Providing a summary report of the shoreline management permits issued during the past calendar year to the City/County Council in February of each year. The report should include findings and conclusions on significant administrative determinations and appeals, identification of problem areas, emerging issues and recommendations on how the master program can be improved.
14. Investigating, developing and proposing amendments to this program as deemed necessary to more effectively and equitably achieve its goals and policies.
15. Seeking remedies for alleged violations of this program, the provisions of the Act, or of conditions of any approved Shoreline Permit issued by the City/County.

16. Coordination of information with affected agencies.
17. Forwarding shoreline permits to Ecology for filing or Ecology action.

City/County Hearings Examiner/City or County Legislative Body

- A. The City/County Hearings Examiner/Legislative Body is vested with authority to:
 1. Approve, approve with conditions, or deny shoreline variance and conditional use permits after considering the findings and recommendations of the Administrator; PROVIDED that any decisions on this matter made by the Hearings Examiner/Legislative Body may be further appealed to the State Shorelines Hearings Board as provided for in the Act;
 2. Decide local administrative appeals of the Administrator's actions and interpretations; and
 3. Approve any revisions or amendments to the master program in accordance with the requirements of the Act and related WACs.
- B. The duties and responsibilities of the Hearings Examiner/Legislative Body shall include:
 1. Consideration of variances, conditional uses and administrative appeals of the Administrator's actions on regular meeting days or public hearings.
 2. Review of the findings and conclusions for permit applications or appeals of the Administrator's actions and interpretations.
 3. Approval, approval with conditions, or denial of shoreline variance and conditional use permits.
 4. Conducting public hearings on appeals of the Administrator's actions, interpretations and decisions.
 5. Basing all decisions on shoreline permits or administrative appeals on the criteria established in this master program.
 6. At the discretion of the Council, requiring any applicant granted a shoreline permit to post a bond or other acceptable security with the City/County conditioned to assure that the applicant and/or his

successors in interest shall adhere to the approved plans and all conditions attached to the shoreline permit. Such bonds or securities shall have a face value of at least 150 percent of the estimated development cost including attached conditions. Such bonds or securities shall be approved as to form by the City/County Attorney.

7. Reviewing and acting upon any recommendations of the Administrator for amendments to or revisions of this Program. The Council shall enter findings and conclusions setting forth the factors it considered in reaching its decision. To become effective any amendments to the Program must be reviewed and adopted by the Department of Ecology, pursuant to RCW 90.58.190 and Chapter 173-19 WAC.

County Tax Assessor

As provided for in RCW 90.58.290, the restrictions imposed upon the use of real property through the implementation of the policies and regulations of the ACT and this master program shall be duly considered by the County Assessor and the County Board of Equalization in establishing the fair market value of such properties.

Permit or Exemption Required before Undertaking Development or Activities

A. Permits Required.

1. A development, use, or activity shall not be undertaken within the jurisdiction of the Shoreline Management Act, Chapter 90.58 RCW, and this shoreline master program unless it is consistent with the policy and procedures of the Shoreline Management Act, applicable state regulations and this shoreline master program.
2. A substantial development shall not be undertaken within the jurisdiction of the Shoreline Management Act, Chapter 90.58 RCW and this shoreline master program unless a shoreline substantial development permit has been obtained and the appeal period has been completed and any appeals have been resolved and/or the applicant given permission to proceed by the proper authority. "Substantial Development" shall be defined as it is defined by the Shoreline Management Act and supplementing provisions of the Washington Administrative Code. The following developments shall not require a substantial development permit:

- a. Any development where the total cost or fair market value, whichever is greater, is less than \$2,500 and does not materially interfere with the normal public use of the waters or shorelines of the State.
- b. Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. "Normal maintenance" includes those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition. "Normal repair" means to restore a development to a state comparable to its original condition within a reasonable period after decay or partial destruction except where repair involves total replacement which is not common practice or the total replacement would cause substantial adverse effects to the shoreline resource or environment.
- c. Construction of the normal protective bulkhead common to single-family residences. A "normal protective" bulkhead is constructed at or near the ordinary high water mark to protect a single family residence and is for protecting land from erosion, not for the purpose of creating land. Where an existing bulkhead is being replaced, it shall be constructed no farther waterward of the existing bulkhead than is necessary for the construction of new footings.
- d. Emergency construction necessary to protect property from damage by the elements. An "emergency" is an unanticipated and imminent threat to the public health, safety, or the environment which requires immediate action within a time too short to allow full compliance with this chapter.
- e. Construction and practices normal or necessary for farming, irrigation and ranching activities, including agricultural service roads and utilities on wetlands, construction of a barn or similar agricultural structure 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 wetlands 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.

- f. Construction or modification of navigational aids such as channel markers and anchor buoys.
- g. Construction on wetlands by an owner, lessee or contract purchaser of a single family residence for his or her own use or for the use of his/her family, which residence does not exceed a height of 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 this Ordinance. "Single-family residence" means a detached dwelling designed for and occupied by one family including those structures and developments within a contiguous ownership which are a normal appurtenance. An "appurtenance" is necessarily connected to the use and enjoyment of a single-family residence and is located landward of the perimeter of a marsh, bog, or swamp. Normal appurtenances include a garage; carport; deck; patio; driveway; utilities; fences; and grading which does not exceed 250 cubic yards (except to construct a conventional drainfield when additional filling and grading may be allowed). Construction authorized by this exemption shall be located landward of the ordinary high water mark.
- h. Construction of a dock designed for pleasure craft only, for the private, non-commercial use of the owner, lessee, or contract purchaser of a single-family residence, the cost of which does not exceed \$2,500.
- i. 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 from the irrigation of lands.
- j. 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.
- k. 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 a part of an agricultural drainage or diking system.
- l. Any project with a certification from the Governor pursuant to Chapter 80.50 RCW.

3. If a development, use or activity is listed as a conditional use by this shoreline master program, such development, use, or activity shall not be undertaken within the jurisdiction of the Shoreline Management Act, Chapter 90.58 RCW and this SMP unless a shoreline conditional use permit has been obtained and the appeal period has been completed and any appeals have been resolved and/or the applicant given permission to proceed by the proper authority.
 4. If a development, use or activity cannot comply with the regulations of this SMP, a shorelines variance must be obtained before commencement of development or construction or beginning the use or activity.
 5. If a project includes uses or activities that include both permitted and conditional uses or a variance is required, the permit shall be heard and decided by the Hearing Examiner/City or County Legislative Body using the procedures, requirements and criteria for a conditional use and/or variance.
 6. See WAC 173-14-050 or its successor for a description of how the permit requirements apply to developments undertaken prior to the passage of the Shoreline Management Act of 1971.
 7. See WAC 173-14-062 or its successor for a description of how the permit requirements apply to Federal Agency projects.
- B. Exempt Developments, Uses and Activities.**
1. No exempt development, use, or activity shall be undertaken within the jurisdiction of the Shoreline Management Act, Chapter 90.58 RCW and this SMP unless a statement of exemption has been obtained from the Administrator.
 2. The request for the statement of exemption shall be in writing, on forms required by the Administrator, and include the information required by the Administrator. In the case of an emergency, the Administrator may waive this requirement and authorize the use or activity orally or in writing.
 3. The Administrator shall decide a request for a statement of exemption within ten calendar days of receiving the request.
 4. The statement of exemption shall be in writing unless an oral emergency statement of exception is given as proved in B(2) above. If an oral emergency statement of exemption is given, the Administrator shall reduce it to writing and send it to the applicant as soon as possible.

5. The Administrator shall decide requests for a statement of exemption based on the provisions of the Shoreline Management Act, the applicable provisions of the Washington Administrative Code and the provisions of this SMP. If there are any conflicts between the Shoreline Management Act or the Washington Administrative Code and this SMP, the Shoreline Management Act or the Washington Administrative Code shall control except that where the Washington Administrative Code grants local governments the authority to more specifically define exempt uses and activities those definitions contained in subpart A(2) of this section shall control.
6. Those uses and activities which are exempted from the requirement to obtain a substantial development permit by subpart A(2) of this section above are exempt from the requirement to obtain a shoreline permit unless they are listed as conditional uses or cannot comply with the regulations of this SMP, then a shorelines conditional use permit or variance is required.
7. The exemptions in subpart A(2) above are to be construed narrowly.
8. Exempt developments and activities shall comply with the Shoreline Management Act and the SMP. The Administrator shall condition statements of exemption to ensure the exempt development or activity complies with the Shoreline Management Act and the SMP.
9. Whenever a development falls with the exemptions from the requirement to obtain a shorelines permit and development is subject to a U.S. Corps of Engineers Section 10 permit under the Rivers and Harbors Act of 1899 or a Section 404 permit under the Federal Water Pollution Control Act of 1972, the Administrator shall prepare a letter addressed to the applicant and Ecology, exempting the development from the substantial development permit requirements of chapter 90.58 RCW. The exemption shall be in substantially the same form as the exemption format in WAC 173-14-115 or its successor. This letter shall substitute for the statement of exemption required by B(1) above.

Fees

A filing fee in an amount established by the City/County Legislative Body by resolution shall be paid to the City/County at the time of application. After the fact permit fees will be triple the normal amount.

Permit Application

The Administrator shall provide the necessary application forms for shoreline substantial development, conditional use and variance permits. The applicant shall provide, at a minimum, the following information as required in WAC 173-14-110:

- A. Site Plan drawn to scale and including:
1. Site boundary;
 2. Property dimensions in vicinity of project;
 3. Ordinary high water mark;
 4. Typical cross section or sections showing:
 - a. existing ground elevation
 - b. proposed ground elevation
 - c. height of existing structures
 - d. height of proposed structures
 5. Where appropriate, proposed land contours using five-foot intervals in water area and 10-foot intervals on areas landward of ordinary high water mark, if development involves grading, cutting, filling, or other alteration of land contours;
 6. Show dimensions and location of existing structures which will be maintained;
 7. Show dimensions and locations of proposed structures; parking and landscaping;
 8. Identify source, composition and volume of fill material;
 9. Identify composition and volume of any extracted materials, and identify proposed disposal area;
 10. Location of proposed utilities, such as sewer, septic tanks and drain fields, water, gas and electricity;
 11. If the development proposes septic tanks, they must comply with local and state health regulations;
 12. Shoreline designation according to the master program; and

13. Show which areas are shorelines and which are shorelines of state-wide significance.

B. Vicinity Map

1. Indicate site location using natural points of reference (roads, state highways, prominent landmarks, etc.).
2. If the development involves the removal of any soils by dredging or otherwise, identify the proposed disposal site on the map. If 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 nearest city or town.
3. Give brief narrative description of the general nature of the improvements and land use within 1,000 feet in all directions from development site.

C. Adjacent Land Owners

1. Provide names and addresses of all real property owners within 300 feet of property where development is proposed.

D. Completed Application

1. Completed application and supporting documents for each shoreline permit shall be submitted to the Administrator for processing and review. Any deficiencies in the application or documents shall be corrected by the applicant prior to further processing.

Shoreline Substantial Development Permit Process

- A. **Applicability.** This section applies to all applications for shorelines substantial development permits.
- B. **Purpose.** A shoreline substantial development permit is a mechanism through which the City/County can determine if a proposed project complies with the State of Washington Shoreline Management Act (SMA), Chapter 90.58 RCW and the City/County Shoreline Master Program. To ensure compliance with the SMA and the SMP, special conditions on the development may be required.
- C. **Shoreline Substantial Development Permit Review Procedure.**

1. The applicant shall submit a completed application, a site plan, the required fees and a SEPA Checklist, if required, to the Administrator. The applicant may be any natural or artificial person.
2. The Administrator shall review the application and determine if it is complete. The application shall not be deemed filed until the Administrator determines the application is complete and all required fees are paid. If the application is not complete, the Administrator shall contact the applicant and request the needed information or fee.
3. Within five days of the filing of the application, the Administrator shall provide a copy of the application to the SEPA responsible official who makes SEPA determinations for shoreline permit applications.
4. SEPA review shall be conducted as provided by the City/County SEPA policies and regulations. To make permitting more efficient, the required SEPA notices should be included with the shorelines notice when possible. The SEPA documents should be circulated with permit documents where possible as provided in 5(c) below.
5. After a SEPA exemption, SEPA Determination of Nonsignificance, or SEPA Final Environmental Impact Statement is issued for an application; the Administrator shall publish a notice of the shorelines application on same day of the week for two consecutive weeks.
 - a. The notices shall include the information required by WAC 173-14-070 or its successor.
 - b. If the application is not exempt from SEPA and no prior SEPA notice has been given, the notices shall include the SEPA determination and a note to the effect that comments on the SEPA determination and SEPA documents may be made at the hearing.
 - c. The Administrator shall mail notice of the application to the applicant, the property owner and each person identified by the real property records of City/County as the owner of real property within 300 feet of any boundary of the subject property and of any contiguous property owned by the owner of the land on which the proposal will be sited.
 - d. Failure to receive a properly mailed notice shall not affect the validity of any testimony or the legality of any action taken.
 - e. The Administrator shall send a copy of the SEPA documents, the application and site plan to State of Washington Department of Ecology, Environmental Review Section, P. O. Box 47703, Olympia, Washington, 98504-7703. The Administer shall also send

a copy of the SEPA documents and the application and site plan to any local, state, or federal agency which, in the opinion of the administrator, may be affected by the project or is an agency with jurisdiction under SEPA. The application shall be circulated to the agencies on or before the day of the second publication of the notice of shorelines application. If the SEPA documents have already been circulated, this step is not required.

- f. An affidavit or affidavit(s) attesting that the notice has been properly published and properly mailed shall be completed and included in the application file.



Notes to Master Programmers

RCW 90.58.140(4) provides that notice of shoreline substantial developments shall be given by publishing notice of the application on the same day of the week for two consecutive weeks in a legal newspaper of general circulation within the area in which the development is proposed and any one of the following:

- 1. Mailing notice of the application to all persons who own property within 300 feet of the project;*
- 2. Posting the notice in a conspicuous manner on property on which the project is proposed; or*
- 3. Any other manner deemed appropriate by local authorities.*

The local government shoreline master program should specify the notice the local government will use. These sample procedures provide for mailing notice to property owners within 300 feet (see Item 5c above), but any other method authorized by RCW 90.58.140(4) may be included in the SMP and used by the local government.

6. On the day of the second publication of the notice of the shoreline application, the public comment period begins. During this comment period, the City/County will receive written comments on the proposed application. The City/County will not make a decision on the permit until after the end of the comment period.
 - a. A thirty-day public comment period shall be given for shoreline permits, except as provided in b below.

- b. The public comment period shall be twenty days for substantial development permits for limited utility extensions or erosion protection measures to protect a single-family residence and appurtenant structures. RCW 90.58.140(13)(b) defines a limited utility extension as the extension of natural gas, electricity, telephone, water, or sewer service where all of the following are met:
 - i. The extension is categorically exempt under the Washington State Environmental Policy Act (SEPA) (see WAC 197-11-800(24) for the utility improvements which are categorically exempt under SEPA);
 - ii. The extension will serve existing uses that are in compliance with the Shoreline Management Act; and
 - iii. The project does not involve the construction of more than 2,500 linear feet of utility lines or pipes within shoreline jurisdiction.
- 7. After the thirty-day comment period has ended, the Administrator shall decide the application.
 - a. The Administrator shall decide the application within fifteen days of the end of the comment period unless the applicant and any adverse parties agree in writing to an extension of time. All extensions must be to a specific date.
 - b. For substantial development permits for limited utility extensions or erosion protection measures to protect a single-family residence and appurtenant structures, the Administrator shall decide whether to approve or deny the application within twenty-one days of the last day of the public comment period whether or not the applicant has granted a time extension.
 - c. Decisions on applications for shorelines substantial development permits shall be based on the decision criteria in subsection G below. The applicant has the burden of proof to show the proposal complies with the decision criteria and all applicable requirements. See RCW 90.58.140(7).
 - d. The Administrator may place conditions on the proposal.
 - e. The Administrator may require additional information if necessary to decide the permit.

- f. The Administrator shall adopt findings of fact and conclusions which support the decision and any required conditions. The findings of fact and conclusions should be included in the Administrator's final order.
 - g. The permit, whether approved or denied, shall be in the form required by WAC 173-14-120 or its successor.
8. The decision of the Administrator and the findings of fact and conclusions shall be reduced to writing and mailed to the applicant, Ecology and the Washington State Attorney General. The permit must be received by Ecology within eight days of the date of the decision.
- a. The Administrator shall mail the applicant the original of the completed permit form and the findings of fact and conclusions.
 - b. The Administrator shall mail Ecology and the Attorney General the completed permit form, the findings of fact and conclusions and the other information required by WAC 173-14-090 or its successor. The required information is listed in a separate section below.
 - c. Within eight days of the date of the decision, the Administrator shall also mail the completed permit form and the findings of fact and conclusions to any person who requested notice of the decision on the permit.
 - d. **For a limited utility extension or erosion protection measure to protect a single-family residence and appurtenant structures only:** If anyone requests a copy of the permit decision during the twenty-day comment period for the substantial development permit, the Administrator shall mail the completed permit form and the findings of fact and conclusions to any persons requesting it within two days of the decision.
- D. Thirty-Day Appeal Period.
- 1. On the day the permit or variance (whether approved or denied) and other information required by WAC 173-14-090 or its successor are received by Ecology and the Attorney General, the thirty-day appeal period begins. Ecology generally sends a letter to the Administrator and the applicant informing them of the date the application was received.
 - 2. During the thirty-day appeal period, the local government decision on the permit may be appealed to the Washington State Shorelines Hearings Board as provided by RCW 90.58.180 and Chapter 461-08 WAC.

- E. Commencement of Activity.** If a permit is approved, the applicant or any other party authorized to conduct activities or uses by the decision shall not begin construction, development, or any authorized use or activity until after the thirty-day appeal period established by subsection D above is over and any appeals concluded. Construction or use may occur during the time a judicial appeal is underway provided: (1) the permit was approved by the local government and the State of Washington Shorelines Hearings Board and (2) permission is granted for the construction, use or activity under RCW 90.58.140(5)(b) or its successor.
- F. Effect of Decision.**
1. The decision of the Administrator on the application is the final decision of the City/County.
 2. The Administrator's decision shall not be reconsidered, except as a new application.
- G. Shoreline Substantial Development Permit Decision Criteria.** The Administrator may approve or approve with conditions or modifications an application for a shoreline substantial development permit if the Administrator finds the development proposal is consistent with all of the following criteria.
1. The proposal is consistent with the policies and procedures of the Shoreline Management Act of 1971, as amended.
 2. The proposal is consistent with the provisions of WAC 173-14 or its successor.
 3. The proposal is consistent with the City/County Shoreline Master Program.
 4. The cumulative impact of additional past and future requests for like actions in the area will not result in substantial adverse effects on the shoreline environment and shoreline resources.
 5. The proposal complies with all other applicable requirements, criteria and standards of the City/County.



Notes to Master Programmers

The Washington Supreme Court held that the Shoreline Management Act requires local governments to consider the cumulative impacts of the proposed development and similar developments on the environment when deciding and conditioning permits. Hayes v. Yount, 87 Wash. 2d 280, 284-88, 552 P.2d 1038, 1043 (1976).

Shoreline Conditional Use Permit and Variance Review Process

A. This section applies to all applications for shoreline conditional use permits and shoreline variances. Where a development includes several uses or activities and one or more uses or activities require a shoreline conditional use permit, all uses and activities shall be processed and decided following the shoreline conditional use procedures.

B. Purposes.

1. The purpose of a shoreline conditional use permit is to allow greater flexibility in the application of the use regulations of the shoreline master program in a manner consistent with the policies of RCW 90.58.020. Conditional use permits should be granted in a circumstance where denial of the permit would result in a thwarting of the policy enumerated in RCW 90.58.020. Where necessary, special conditions may be required on the development or on the use of land or water.
2. The purpose of a variance is strictly limited to granting relief from specific bulk, dimensional or performance standards set forth in the applicable SMP where there are extraordinary or unique circumstances relating to the property such that the strict implementation of the master program will impose unnecessary hardships on the applicant or thwart the policies set forth in RCW 90.58.020.

C. Conditional Use Permit and Variance Review Procedure.

1. The applicant shall submit an application, any required fees, and a SEPA Checklist, if required, to the Administrator. The applicant may be any natural or artificial person, including associations.
 - a. The Administrator shall review the application and determine if it is complete. The application shall not be deemed filed until the

- Administrator determines the application is complete and all required fees are paid.
- b. The Administrator may establish deadlines for applications.
 - c. The Hearing Examiner/City or County Legislative Body may limit the number of applications to be considered at a meeting as part of the rules of procedure.
2. Within five days of the filing of the application, the Administrator shall provide a copy of the application to the SEPA responsible official who makes SEPA determinations for shorelines conditional use permit and shorelines variance applications.
 3. SEPA review shall be conducted as provided by the City/County SEPA policies and procedures.
 - a. To make permitting more efficient, the required SEPA notices should be included with the shorelines notices when possible. The SEPA documents should be circulated with permit documents where possible as provided in 5(c) below.
 - b. For conditional uses and variances, Ecology is an agency with jurisdiction. This means that a SEPA Determination of Nonsignificance requires a fifteen-day comment period. The fifteen-day comment period shall be given during the thirty-day shoreline permit public comment period.



Notes to Master Programmers

Having the SEPA and shoreline permit public comment periods run during the same time allows the local government to include the SEPA notice in the shoreline notice, to reduce permit processing time over having separate SEPA and shoreline public comment periods, and to save money because of reduced staff time for giving notice and reduced publication costs.)

4. After a SEPA exemption, SEPA Determination of Nonsignificance, or SEPA Final Environmental Impact Statement is issued for an application; the Administrator shall schedule a public hearing for the next Hearing Examiner/City or County Legislative Body meeting where the application can be accommodated, notice given and the thirty-day comment period allowed to occur.
5. The Administrator shall publish a notice of the shorelines application on the same day of the week for two consecutive weeks.

- a. The notices shall include the information required by subsection G(1).
 - b. The Administrator shall mail notice of the application to the applicant, the property owner and each person identified by the real property records of City/County as the owner of real property within 300 feet of any boundary of the subject property and of any contiguous property owned by the owner of the land on which the proposal will be sited.
 - c. The Administrator shall send a copy of the SEPA documents, the application and site plan to State of Washington Department of Ecology, Environmental Review Section, P. O. Box 47703, Olympia, Washington, 98504-7703. The Administrator shall also send a copy of the SEPA documents and the application and site plan to any local, state, or federal agency which, in the opinion of the administrator, may be affected by the project or is an agency with jurisdiction under SEPA. The application shall be circulated to the agencies on or before the day of the second publication of the notice of shorelines application. If the SEPA documents have already been circulated, this step is not required.
6. On the day of the second publication of the notice of shorelines application, a thirty-day comment period begins. During this comment period, the City/County will receive written comments on the proposed application. The City/County will not make a decision on the permit until after the end of the comment period.
 7. The Administrator shall prepare a staff report identifying the approval criteria, providing available information on the application, analyzing the proposal, making a recommendation on the proposal, making recommended findings of fact and conclusions and including any other information or recommendations which the Administrator believes are appropriate. The Administrator shall send a copy of the staff report to the applicant and the Hearing Examiner/City or County Legislative Body at least seven days before the public hearing on the application.



Notes to Master Programmers

While not required by law or regulation, staff reports are valuable aids to applicants and decisions makers because they identify the approval criteria and whether the proposal fits the criteria. Considering staff reports in permit processing procedures is important if a local government has staff available to prepare the reports.

8. After the thirty-day comment period has ended, the Hearing Examiner/City or County Legislative Body shall conduct a public hearing on the application. The public hearing shall be conducted as provided in subsection H. At the hearing, the Hearing Examiner/members of the City or County Legislative Body may request such additional information as is reasonably necessary to evaluate the application.
9. After the public hearing has concluded, the Hearing Examiner/City or County Legislative Body shall decide the application.
 - a. The decision may be made at the same public meeting as the public hearing or at another public meeting. The Hearing Examiner/City or County Legislative Body shall decide the application within thirty-two days of the initial public hearing date unless the applicant and any adverse parties agree in writing to an extension of time.
 - b. Decisions on applications for shorelines conditional use permits shall be based on the decision criteria in subsection D. Decisions on applications for shorelines variances shall be based on the decision criteria in subsection E and the limitation on the authority to grant shoreline variances in subsection F.
 - c. The applicant has the burden of proof to show the proposal complies with the decision criteria and all applicable requirements. See RCW 90.58.140(7).
 - d. The Hearing Examiner/City or County Legislative Body may condition the proposal.
 - e. The Hearing Examiner/City or County Legislative Body shall adopt findings of fact and conclusions which support the decision and any required conditions. The findings of fact and conclusions should be included in the final order.
10. The decision of the Hearing Examiner/City or County Legislative Body and the findings of fact and conclusions shall be reduced to writing and mailed by the Administrator to the applicant, Ecology and the Washington State Attorney General. The permit must be received by Ecology within eight days of the date of the decision.
 - a. The permit, whether approved or denied, shall be in the form required by WAC 173-14-120 or its successor.
 - b. The Administrator shall mail the applicant the original of the completed permit form and the findings of fact and conclusions.

- c. The Administrator shall mail Ecology and the Washington State Attorney General the completed permit form, the findings of fact and conclusions and the other information required by WAC 173-14-090 or its successor. The required information is listed in a separate section below.
- d. Within eight days of the date of the decision, the Administrator shall also mail the completed permit form and the findings of fact and conclusions to any person who requested notice of the decision on the permit.

11. Department of Ecology Review of Approved Permits/Variations.

Ecology shall approve, approve with conditions, or deny all shoreline conditional use permits and shoreline variations approved by local governments. Ecology's decision must be made within thirty days of the date the permit or variation and other information required by WAC 173-14-090 or its successor are received by Ecology and the Washington State Attorney General. Ecology will send a letter to and the applicant informing them of the decision on the permit or variation.

12. Thirty-day Appeal Period.

- a. If the permit or variation was denied by the local government, the thirty-day appeal period begins on the day the denied permit or variation and other information required by WAC 173-14-090 or its successor are received by Ecology and the Washington State Attorney General. Ecology generally sends a letter to the Administrator and the applicant informing them of the date the application was received.
- b. If the permit or variation was approved by the local government, the thirty-day appeal period begins on the day the permit or variation is approved or denied by Ecology.
- c. During the appeal period, the local government and/or Department of Ecology decision on the permit may be appealed to the Washington State Shorelines Hearings Board as provided by RCW 90.58.180 and Chapter 461-08 WAC.

13. Commencement of Activity.

If a permit is approved, the applicant or any other party authorized to conduct activities or uses by the decision shall not begin construction, development, or any authorized use or activity until after the thirty-day appeal period established by subsection 11(b) above is over and any appeals concluded. Construction or use may occur during the time a

court appeal is underway provided: (1) the permit was approved by the local government and the State of Washington Shorelines Hearings Board and (2) permission is granted for the construction, use or activity under RCW 90.58.140(5)(b) or its successor.

14. Effect of Decision.

- a. The decision of the Hearing Examiner/City or County Legislative Body on the application is the final decision of the City/County.
- b. The Hearing Examiner/City or County Legislative Body decision shall not be reconsidered, except as a new application.

D. Conditional Use Permit Decision Criteria.

1. For uses which are listed in this SMP as conditional uses in the environment in which they are proposed to be located; the Hearing Examiner/City or County Legislative Body may approve or approve with conditions or modifications an application, subject to approval by Ecology, if the decision maker finds the applicant has demonstrated the development proposal is consistent with all of the following criteria.
 - a. The proposed use or activity is consistent with the policies of RCW 90.58.020 and the policies of the SMP: provided, that conditional use permits should also be granted in a circumstance where denial of the permit would result in a thwarting of the policy enumerated in RCW 90.58.020.
 - b. The proposed use or activity will not interfere with the normal public use of public shorelines.
 - c. The proposed use of the site and design of the project is compatible with other allowed uses with the area.
 - d. That the proposed use will cause no unreasonably adverse effects to the shoreline environment in which it is to be located.
 - e. The public interest will suffer no substantial detrimental effect.
 - f. 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.

- g. The proposal complies with all other applicable requirements, criteria and standards of the City/County.
 - 2. For uses which are not listed as permitted or conditional uses in this SMP, the Hearing Examiner/City or County Legislative Body may approve or approve with conditions or modifications an application, subject to approval by Ecology, if the decision maker finds the applicant has demonstrated the development proposal is consistent with all of the following criteria.
 - a. The proposed development meets all of the criteria in subsection (1) above.
 - b. Extraordinary circumstances preclude reasonable use of the property in a manner consistent with the use regulations of the SMP.
 - c. The use is not specifically prohibited by the SMP.

E. Variance Decision Criteria.

- 1. The Hearing Examiner/City or County Legislative Body should approve variances in a circumstance where denial of the application would result in a thwarting of the policy enumerated in RCW 90.58.020. In all instances extraordinary circumstances shall be shown and the public interest shall suffer no substantial detrimental effect.
- 2. Applications for variances where the development authorized by the variance will be located landward of the ordinary high water mark, except within marshes, bogs or swamps, may be approved or approved with conditions or modifications by the Hearing Examiner/City or County Legislative Body, subject to approval by Ecology, if the decision maker finds the applicant has demonstrated compliance with all of the following criteria and subsections (1) and (4) of this section.
 - a. That the strict application of the bulk, dimensional or performance standards set forth in this SMP precludes or significantly interferes with a reasonable use of the property not otherwise prohibited by the SMP.
 - b. That the hardship described in 2(a) above is specifically related to the property, and is a result of unique conditions such as irregular lot shape, size, or natural features and the application of the SMP, and not, for example, from deed restrictions or the applicant's own actions.

- c. That the design of the project is compatible with other allowed activities and uses in the area and will not cause adverse effects to adjacent properties or the shoreline environment.
 - d. The variance will not constitute a grant of special privilege not enjoyed by the other properties in the area, and is the minimum necessary to afford relief.
 - e. The public interest will suffer no substantial detrimental effect.
3. Applications for variances where the development authorized by the variance will be located either waterward of the ordinary high water mark or within marshes, bogs or swamps, may be approved or approved with conditions or modifications by the Hearing Examiner/City or County Legislative Body, subject to approval by Ecology, if the decision maker finds the applicant has demonstrated compliance with all of the following criteria and subsections (1) and (4) of this section.
 - a. That the strict application of the bulk, dimensional or performance standards set forth in this SMP precludes a reasonable use of the property not otherwise prohibited by the SMP.
 - b. That the proposal is consistent with the criteria established under (2)(b) through (e) of this section.
 - c. That the public rights of navigation and use of the shorelines will not be adversely affected.
4. In the granting of all variances, the Hearing Examiner/City or County Legislative Body shall consider the cumulative impact of additional requests for like actions in the area. For example, if variances were granted for other developments in the area where similar circumstances exist, the total of the variances shall also remain consistent with the policies of RCW 90.58.020 and shall not produce substantial adverse effects to the shoreline environment.

F. Limitation on Authority to Grant Variances.

The Hearing Examiner/City or County Legislative Body shall not grant a variance for the following purposes.

1. To allow a use other than a use specifically listed as a permitted use or conditional use in the shoreline environment in which the subject property is located. Variances shall not be approved to allow an unlisted or unclassified use in any location. A conditional use permit may be used to allow an unlisted use. See subsection D(2).

2. Any provision of the SMP which by the terms of the SMP regulations is not subject to a variance.
3. Any administrative or procedural provision of the SMP.

G. Notice of Application and Public Hearing.

1. Content of the Public Notice.
 - a. The notice shall include the information required by WAC 173-14-070 or its successor.
 - b. If the application is not exempt from SEPA and no prior SEPA notice has been given, the notices shall include the SEPA determination and a note to the effect that comments on the SEPA determination and SEPA documents may be made at the hearing.
 - c. The date, time and place of the public hearing.
 - d. A statement of the right of any person to participate in the public hearing as provided in Section 11.65.120 and the ways they may participate.
2. Failure to receive a properly mailed notice shall not affect the validity of any testimony or the legality of any action taken.
3. Affidavits of Public Notice. An affidavit or affidavit(s) attesting that the notice has been properly published and properly mailed shall be completed and included in the application file.
4. If the hearing date is changed for any reason and the hearing has not been opened by the Hearing Examiner/City or County Legislative Body, a new notice shall be given which includes the date, time and place of the public hearing. The notice shall be mailed and published at least ten days before the new hearing. Notice shall be given in the same manner as the notice for the original hearing.

H. Conduct of Public Hearings.

1. Who may participate? Any person may participate in the public hearing.
2. How to Participate. Any person may participate in the public hearing in either or both of the following ways.
 - a. By submitting written comments to the Administrator before the public hearing. The Administrator shall transmit all written

comments received before the public hearing to the Hearing Examiner/City or County Legislative Body no later than the public hearing.

- b. By submitting written comments or making oral comments to the Hearing Examiner/City or County Legislative Body at the public hearing.

3. Hearing Record.

- a. The Administrator shall make an electronic sound recording of each hearing. The Administrator shall retain the electronic sound recording of the hearing for six months.
- b. When ever practicable, all documentary evidence presented at a hearing as well as all other types of physical evidence shall be made a part of the record of the proceedings and shall be kept by the Administrator for six months.

4. Continuation of Hearing.

The Hearing Examiner/City or County Legislative Body may continue the hearing until a subsequent meeting and may keep the hearing open to take additional information up to the point the decision is made. No further notice of a continued hearing need be given unless a period of nine weeks or more elapses between hearing dates.

5. Time Limits.

The Hearing Examiner/City or County Legislative Body may place reasonable and equitable limitations on testimony, the presentation of evidence and arguments and questions so the matter at issue may be heard and decided without undue delay.

Required Information When Forwarding Permits to Ecology and Attorney General

The Administrator shall mail Ecology and the Washington State Attorney General the following information for each permit application (whether the permit is approved or denied):

- A. A copy of the original application.
- B. A copy of the affidavits of public notice.
- C. A copy of the site plan.

- D. A copy of the vicinity map.
- E. A copy of the completed permit form (whether the permit is approved or denied).
- F. A copy of the Hearing Examiner/City or County Legislative Body's final order, which should include the findings of fact and conclusions. If the findings of facts and conclusions are in a separate document, that should be included as well.
- G. Any SEPA documents for the project.
- H. Any staff report prepared for the permit.

Permit Time Limits

The City/County may issue permits with termination dates of up to five years, with the option to extend a permit for an additional year. If a permit does not specify a termination date, the following requirements apply.

- A. **Substantial Progress Towards Completion of Project Required within Two Years.**
 - 1. Substantial progress towards completion of a permit shall be undertaken within two years of the date the local government approves the permit. Substantial progress shall include all of the following, where applicable: The making of contracts; signing of notice to proceed; completion of grading and excavation; and the laying of major utilities; or, where no construction is involved, commencement of the activity.
 - 2. The Administrator may authorize one time extension of up to one year. The decision shall be based on reasonable factors which would justify the extension. The request for the extension must be filed with the Administrator before the end of the time limit. Before deciding the request for the extension, the City/County shall give notice to the applicant, all parties of record and Ecology.
- B. **Approved Permits Terminate in Five Years.**
 - 1. The authorization granted by an approved permit to construct any structure or conduct any use or activity shall terminate five years after the date the permit is approved by the City/County.
 - a. Where an approved permit authorizes the construction of a structure or facility, the use and maintenance of the structure or

facility may continue after the five period provided the structure was completed during the five year time limit or any approved extension.

- b. Where an approved permit authorizes a use or activity which does not require a structure, such as mining or maintenance dredging, the use or activity shall cease at the end of the five year limit or any extension granted under subsection B(2) of this section below.
2. The Administrator may authorize one time extension of up to one year. The decision shall be based on reasonable factors which would justify the extension. The request for the extension must be filed with the Administrator before the end of the time limit. Before deciding the request for the extension, the Administrator shall give notice to the applicant, all parties of record and Ecology.
- C. Time Periods Do Not Run During Appeals. The time periods in subsections A and B of this section shall not include the time during which a use or activity was not actually pursued due to the pendency of reasonably related administrative appeals or litigation.
 - D. Revisions to permits may be authorized after the original permit has expired under subsection B of this section, provided that this procedure shall not be used to extend the original permit time requirements.
 - E. Where a permit is conditioned, the conditions shall be satisfied prior to occupancy or use of a structure or prior to commencement of a nonstructural activity provided that an alternative compliance limit may be specified in the permit.

Revision of Permits

When an applicant desires to revise a permit, the applicant must submit detailed plans and text describing the proposed changes. If the Administrator determines that the revisions proposed are within the scope and intent of the original permit, consistent with WAC 173-14-064, the Administrator may approve the revision. "Within the scope and intent of the original permit" means all of the following:

- A. No additional over-water construction is involved, except that pier, dock or float construction may be increased by 500 square feet or 10 percent, whichever is less;
- B. Ground area coverage and height is not increased more than 10 percent;
- C. Additional structures do not exceed a total of 250 square feet;

- D. The revision does not authorize development to exceed height, setback, lot coverage, or any other requirement of the City/County Shoreline Master Program;
- E. Additional landscaping is consistent with conditions (if any) attached to the original permit;
- F. The use authorized pursuant to the original permit is not changed; and
- G. No Substantial 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 which was conditioned by the Department of Ecology, the revision also must be reviewed and approved by the Department of Ecology (see WAC 173-14-064).

A City/County or Department decision on revision to the permit may be appealed within thirty days of such decision, in accordance with RCW 90.58.180 and WAC 173-14-064.

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.

Assurance Device

In appropriate circumstances, the decision makers approving a permit may require a reasonable performance assurance device to assure compliance with the provisions of the Shoreline Management Act, the SMP, any permit conditions and the permit application as approved.

- A. The assurance device may be a bond, non-revocable letter of credit, set-aside letter, assignment of funds, certificate of deposit, deposit account, or other readily accessible source of funds in a form acceptable to the City/County Attorney. Interest from any interest-bearing form of assurance device will accrue to the benefit of the depositor.
- B. The assurance device shall specify the date and time by which the work which it guarantees shall be completed. The assurance device shall specify the date and time by which the City/County can negotiate the device to obtain the funds to do the work it guarantees. In all cases the date and time for negotiation shall be at least sixty days after the deadline for the completion of the work.

C. Amount of Assurance Device. The Public Works Department shall determine the amount of the assurance device as follows:

1. For a performance device the amount will be one 150 percent of the cost of the work or improvements covered by the assurance device based on estimated costs immediately following the expiration of the device together with the City's/County's cost of obtaining funds from the assurance device and administering the project.
2. For a maintenance device the amount will not be less than 20 percent of the cost of replacing the material covered by the assurance device based on estimated costs on the last day covered by the device together with the City's/County's cost of obtaining funds from the assurance device and administering the project.
3. In each case where the City/County requires or allows an applicant to establish an assurance device, the owner of subject property shall give the City/County a signed notarized irrevocable license to run with the property to allow the employees, agents, or contractors of the City/County to go on the subject property for the purpose of inspecting and, if necessary, doing the work or making the improvements covered by the assurance device. The applicant shall file this license with the Administrator.

D. Release of Assurance Device.

1. After the work or improvements covered by a performance assurance device have been completed to the satisfaction of the City/County or, at the end of the time covered by a maintenance assurance device, the applicant may request the City/County to release the device.
2. The City/County shall release such device as expeditiously as possible after receipt of a request for release, if the work or maintenance time period is finished.

E. Use of Proceeds – Notice to Property Owner.

If during the period of time covered by a maintenance assurance device or after the date by which the required work or improvements are to be completed under a performance assurance device, the Administrator determines that the work or improvements have not been complied with, he/she shall notify the applicant. The notice must include the following information:

1. The work that must be done or the improvement that must be made to comply with the requirements and permit assurance device.

2. The amount of time that the applicant has to commence and complete the required work or improvements.
3. That, if the work or improvements are not commenced and completed within the time specified, the City/County will use the proceeds of the assurance device to have the required work or improvements completed.

F. Use of Proceeds –Work by the City/County.

If the work or improvements covered by the assurance device are not completed within the time specified in the notice given under subsection E above, the City/County shall obtain the proceeds of the device and do the work or make the improvements covered by the device. The City/County may either have employees of the City/County do the work or make the improvements or have a contractor do the work or make the improvements.

G. Use of Proceeds – Refund of Excess, Charge for all Costs.

The property owner is responsible for all costs incurred by the City/County in doing the work and making the improvements covered by the assurance device. The City/County shall release or refund any proceeds of a performance device after subtracting all costs for doing the work covered by the device and the costs of obtaining the proceeds of the device. The owner of subject property shall reimburse the City/County for any amount expended by the City/County that exceeds the proceeds of the device. The City/County shall have a lien against the subject property for the amount of any excess.

H. Itemized Statement.

In each case where the City/County uses any of the proceeds of the device, it shall give the owner of the subject property an itemized statement of all proceeds and funds used.

Appeals of Administrative Decisions

A. Applicability and Limitation on Appeals.

1. This chapter applies to all requests to review administrative decisions and orders made by the Administrator and all other City/County staff under the SMP.
2. Decisions by the Administrator to approve, deny or to approve substantial development permits with conditions are not administrative

decisions under the terms of this section, and shall not be appealable to the Hearing Examiner/City or County Legislative Body. These decisions may be appealed to the Washington State Shorelines Hearings Board as provided in RCW 90.58.180 and Chapter 461-08 WAC.

B. Appeal Process.

1. Any person adversely affected by any administrative decision (e.g. determinations if permits are required, interpretation of regulations, identifying required fees, etc.) may appeal such decision to the Hearing Examiner/City or County Legislative Body. The appellant shall submit the following to the Administrator:
 - a. A brief written statement containing the following information.
 - i. The statement must indicate the facts that establish the appellant's right to appeal the decision.
 - ii. The statement must identify explicit exceptions and objections to the decision being appealed or identify specific errors in fact or conclusion.
 - iii. The statement must state the requested relief from the decision being appealed.
 - iv. The name and address of the person(s) appealing the decision.
 - v. Give the address and use, if any, of any property involved in the appeal.
 - b. Any fee set for appeals.
 - c. Any other information as is reasonably necessary to make a decision on the appeal.
 - d. Time within which an Administrative Appeal must be Filed.

A written statement appealing the decision must be filed with the Administrator no more than ten days from the date the decision is mailed or otherwise becomes effective. Activity commenced before the expiration of this appeal period based on an appealable decision or action is at the sole risk of the person taking the action. City/County and any of the City/County's officers, agents, or employees shall not incur any liability or risk.

e. Appeal Stays All Enforcement of Decision or Order Appealed.

The filing of an appeal stays all actions by the Administrator or other City/County official seeking enforcement or compliance with the order or decision being appealed, unless the Administrator certifies to the Hearing Examiner/City or County Legislative Body that (because of the facts stated in the certificate) a stay would, in the opinion of the Administrator, cause imminent peril to life or property. In that case, proceedings shall not be stayed except by order of the Hearing Examiner/City or County Legislative Body or a court, issued on application of the party seeking the stay, for due cause shown after notice to the Administrator. The stay is lifted after the decision of the Hearing Examiner/City or County Legislative Body.

2. The Administrator shall review the submittal and determine if it is complete. The appeal shall be considered filed when the statement is submitted and all required fees are paid. If incomplete, the appeal statement may be completed by the appellant after it is filed.
3. After the request for review is filed and complete, the Administrator shall schedule a public hearing for the next Hearing Examiner/City or County Legislative Body meeting where the appeal request can be accommodated and notice given. The Administrator shall provide notice of the hearing as provided in Subsection D below.
4. The Administrator shall prepare a written report on the decision being appealed setting forth the facts and conclusions on which the decision is based. The Administrator shall mail the written report to the appellant at least ten days before the hearing date. The Administrator shall mail the appellant's written statement and the Administrator's written report to the Hearing Examiner/City or County Legislative Body at least five days before the hearing date.
5. The Hearing Examiner/City or County Legislative Body shall conduct a public hearing on the application. All written material received shall be presented to the board and members of the public shall have the right to present written and oral testimony. At the hearing, members of the Hearing Examiner/City or County Legislative Body may request such additional information as is reasonably necessary to evaluate the appeal. The Hearing Examiner/City or County Legislative Body may place reasonable and equitable limitations on testimony, the presentation of evidence and arguments and questions so the matter at issue may be heard and decided without undue delay.

6. After the public hearing has concluded, the Hearing Examiner/City or County Legislative Body shall decide the appeal.
 - a. The decision may be made at the same public meeting as the public hearing or at another public meeting. The Hearing Examiner/City or County Legislative Body shall vote on the appeal within thirty-two days of the initial public hearing date unless the appellant agrees in writing to an extension of time.
 - b. Decisions on appeals shall be based on the decision criterion in subsection C.
 - c. The Hearing Examiner/City or County Legislative Body may reverse or affirm (wholly or partly) or may modify the order, decision, requirement, or determination appealed and may condition the relief granted on an appeal to ensure compliance with the City/County Shoreline Master Program.
 - d. The Hearing Examiner/City or County Legislative Body shall adopt findings of fact and conclusions which support the decision on the appeal and any required conditions.
7. The decision of the Hearing Examiner/City or County Legislative Body and the findings of fact and conclusions shall be reduced to writing and mailed to the appellant by the Administrator within seven days of the date of the decision.
8. Effect of Decision.
 - a. The decision of the Hearing Examiner/City or County Legislative Body on the appeal is the final decision of the City/County.
 - b. The Hearing Examiner/City or County Legislative Body decision shall not be reconsidered, except as a new appeal.
 - c. The decision of the Hearing Examiner/City or County Legislative Body on the appeal may be appealed to the Superior Court within thirty days of the date the Hearing Examiner/City or County Legislative Body makes the decision.

9. Commencement of Activity.

The appellant or any other party authorized to conduct activities or uses by the decision may commence activity or obtain other required approvals authorized by the decision of the Hearing Examiner/City or County Legislative Body on the appeal immediately after decision on the appeal by the Hearing Examiner/City or County Legislative Body. Activity commenced before the expiration of the appeal period provided in subsection 8 above is at the sole risk of the applicant or other party. City/County and any of the City/County's officers, agents, or employees shall not incur any liability or risk.

C. Appeal Decision Criterion.

In deciding appeals, the Hearing Examiner/City or County Legislative Body shall consider only the merits of the appeal as it relates to the specific terms, phrases, or sections of the SMP in question and shall not consider the merits of the proposal or the property affected by the decision.

D. Public Hearing Notice.

1. Content of the Public Notice. The Administrator shall prepare notice for all public hearings and include the following information.
 - a. The name of the appellant and, if applicable, the project name.
 - b. If the appeal involves specific property, the street address of the subject property and a description of the property in non-legal terms sufficient to identify the location.
 - c. A brief description of the decision which is being appealed.
 - d. A brief description of the issues as stated in the appeal.
 - e. The date, time and place of the public hearing.
 - f. A statement of the right of any person to participate in the public hearing and the ways they may participate.
2. Time of Notice. The Administrator shall mail and publish the notice at least ten days before a hearing.
3. Means of Notice. The Administrator shall provide notice for all public hearings in the following manner.
 - a. Publishing notice of the public hearing in a legal newspaper of general circulation within the City/County.

- b. Mailing notice of the public hearing to the appellant and any affected project proponent.
 - c. Failure to receive a properly mailed notice shall not affect the validity of any testimony or the legality of any action taken.
- E. **Limitation on Refiling Appeals.** After a final decision on an appeal, the Administrator shall not accept any further appeals for substantially the same property involving substantially the same issues within one year from the date of the decision.

Permit Revocation

- A. This section applies to requests or decisions to revoke shorelines substantial development permits, conditional use permits and variances.
- B. The Hearing Examiner/City or County Legislative Body shall have the power to revoke or modify approved shorelines substantial development permits, conditional use permits and variances.
- C. **Decision Procedure for Revocation.**
 - 1. City/County staff or any other persons who are aggrieved by activities undertaken under a shoreline permit may request in writing that the Hearing Examiner/City or County Legislative Body revoke or modify the permit.
 - 2. The Administrator shall schedule a public hearing for the next Hearing Examiner/City or County Legislative Body meeting where the review can be accommodated and the required notice given.
 - 3. **Notice of Public Hearing.**
 - a. The Administrator shall publish a notice of the revocation hearing at least ten days before the hearing date.
 - b. The Administrator shall mail notice of the hearing to the party to which the permit was issued, the owner of the property for which the permit was issued, the person or persons who requested the Hearing Examiner/City or County Legislative Body revoke the permit and any persons who requested notice of the hearing in writing at least ten days before the hearing date.
 - c. The notice shall include the following information.

- i. The name of the permit holder and, if applicable, the project name.
 - ii. The street address of the subject property and a description of the property in non-legal terms sufficient to identify the location.
 - iii. A brief description of the issues.
 - iv. The date, time and place of the public hearing.
 - v. A statement of the right of any person to participate in the public hearing by providing written statements before or at the hearing and orally at the hearing.
4. The Hearing Examiner/City or County Legislative Body shall hold a public hearing before deciding whether to revoke or add conditions to the permit or variance. Any person can submit written statements or speak. The duration of public comments may be equitably limited. At the hearing, members of the Hearing Examiner/City or County Legislative Body may request such additional information as is reasonably necessary to evaluate the whether the permit or variance should be revoked.
5. After the public hearing has concluded, the Hearing Examiner/City or County Legislative Body shall decide whether to revoke modify, or add conditions to the permit.
 - a. The decision may be made at the same public meeting as the public hearing or at another public meeting. The Hearing Examiner/City or County Legislative Body shall vote on the revocation within thirty-five days of the initial public hearing date.
 - b. The decision shall be based on the decision criteria in subsection D.
 - c. If the Hearing Examiner/City or County Legislative Body decides to revoke the permit, the decision maker may require restoration or reclamation of the property and may set time limits for the completion of these activities.
 - d. The Hearing Examiner/City or County Legislative Body shall adopt findings of fact and conclusions which support the decision and any required conditions.

6. The decision of the Hearing Examiner/City or County Legislative Body and the findings of fact and conclusions shall be reduced to writing and mailed by the Administrator to the permit holder, the property owner, Ecology and the Washington State Attorney General within seven days of the date of the decision.
7. Effect of Decision.
 - a. The decision of the Hearing Examiner/City or County Legislative Body on the application is the final decision of the City/County.
 - b. The decision of the Hearing Examiner/City or County Legislative Body on the revocation may be appealed to the Washington State Shorelines Hearings Board as provided in RCW 90.58.180 and Chapter 461-08 WAC.
 - c. If the Hearing Examiner/City or County Legislative Body revokes the permit, all activity authorized by the shall immediately cease, unless the decision maker grants a period of time to complete the activity or reclaim the site or a court authorizes continued operation during an appeal.

D. Criteria for Revocation.

The Hearing Examiner/City or County Legislative Body may revoke or modify a permit if the decision maker finds that one or more of the following criteria are met.

1. The permit approval was obtained by fraud.
2. The permit is being exercised contrary to the terms or conditions of approval or in violation of law.
3. The use or activity for which approval was granted is being exercised so as to be detrimental to the public health, safety, or welfare.

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.

- A. Nonconforming development may be continued provided that it is not enlarged, intensified, increased, or altered in any way which increases its nonconformity;
- B. A nonconforming development which is moved any distance must be brought into conformance with the master program and the Act;
- C. If a nonconforming development is damaged to an extent not exceeding 75 percent replacement cost of the original 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 75 percent replaced if the building permit is obtained within one year of the date of damage.
- D. If a nonconforming use is discontinued for twelve consecutive months or for twelve 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;
- E. A nonconforming use shall not be changed to another nonconforming use, regardless of the conforming or non-conforming status of the building or structure in which it is housed; and
- F. An undeveloped lot, tract, parcel, site, or division which was established prior to the effective date of the act and the master program 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.

Enforcement and Penalties

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. The City/County may take enforcement alone or jointly with Ecology. Ecology may also act alone.

A. Civil Penalty

1. Action.

The City/County Attorney shall bring such injunctive, declaratory, or other actions as are necessary to insure that no uses are made of the

shorelines of the state in conflict with the provisions of the Act and this master program and to otherwise enforce the provisions of the Act and the master program.

2. Non-Compliance.

Any person who fails to conform to the terms of a permit issued under this master program or who undertakes a development or use on the shorelines of the state without first obtaining any permit required under the master program or who fails to comply with a cease and desist order issued under regulations shall also be subject to a civil penalty not to exceed \$1,000 for each violation. Each permit violation or each day of continued development without a required permit shall constitute a separate violation.

3. Aiding and Abetting.

Any person who, through an act of commission or omission proceeds, aids, or abets in the violation shall be considered to have committed a violation for the purposes of the civil penalty.

4. Notice of Penalty.

The penalty provided for in this section shall be imposed by a notice in writing, either by certified mail with return receipt requested or by personal service, to the person incurring the same from the City/County. The notice shall include the "content of order" specified in subsection F. Regulatory Order.

5. Remission and Joint Order.

Within thirty days after the notice is received, the person incurring the penalty may apply in writing to the City/County for remission or mitigation of such penalty. Upon receipt of the application, the City/County may remit or mitigate the penalty only upon a demonstration of extraordinary circumstances, such as the presence of information or factors not considered in setting the original penalty. Any penalty imposed pursuant to this section by the City/County shall be subject to review by the City/County Council. In accordance with RCW 90.58.050 and RCW 90.58.210(4), any penalty jointly imposed by the City/County and the Department of Ecology shall be appealed to the Shorelines Hearings Board. When a penalty is imposed jointly by the City/County and the Department of Ecology, it may be remitted or mitigated only upon such terms as both the City/County and the Department agree.

6. Regulatory Order.

Content of order shall set forth and contain:

- a. A description of the specific nature, location, extent and time of violation and the damage or potential damage; and
- b. A notice that the violation or the potential violation cease and desist or, in appropriate cases, the specific corrective action to be taken within a given time. A civil penalty under this section may be issued with the order and same shall specify a date certain or schedule by which payment will be complete.

7. Effective Date.

The cease and desist order issued under this subsection shall become effective immediately upon receipt by the person to whom the order is directed.

8. Compliance.

Failure to comply with the terms of a cease and desist order can result in enforcement actions including, but not limited to, the issuance of a civil penalty.

B. Delinquent Permit Penalty.

Permittees applying for a permit after commencement of a use or activity may, at the discretion of the City/County be required, in addition, to pay a delinquent permit penalty not to exceed three times the appropriate permit fee paid by the permittee. A person who has caused, aided, or abetted a violation within two years after the issuance of a regulatory order, notice of violation, or penalty by the City/County or the Department against said person may be subject to a delinquent permit penalty not to exceed ten times the appropriate permit fee paid by the permittee. Delinquent permit penalties shall be paid in full prior to resuming the use or activity.

C. Property Lien.

Any person who fails to pay the prescribed penalty as authorized in this section shall be subject to a lien upon the affected property until such time as the penalty is paid in full. The City/County Attorney shall file said lien against the affected property at the office of the County Assessor.

D. Mandatory Civil Penalties.

Issuance of civil penalties is mandatory in the following instances:

1. The violator has ignored the issuance of an order or notice of violation.
2. The violation causes or contributes to significant environmental damage to shorelines of the state as determined by the City/County.
3. A person causes, aids, or abets in a violation within two years after issuance of a similar regulatory order, notice of violation, or penalty by the City/County or the Department against said person.

E. Minimum Penalty Levels

1. Regarding all violations that are mandatory penalties, the minimum penalty is \$250.
2. For all other penalties, the minimum penalty is \$100.

F. General Criminal Penalty.

In addition to incurring civil liability under Section A, any person found to have willfully engaged in activities on the shorelines of the state in violation of the provisions of the Act or the master program shall be guilty of a gross misdemeanor and shall be punished by a fine of not less than \$100 nor more than \$1,000 or by imprisonment in the county jail for not more than ninety days for each separate offense, or by both such fine and imprisonment. Provided, that the fine for each separate offense for the third and all subsequent violations in any five-year period shall be not less \$500 nor more than \$10,000.

G. Violator Liabilities - Damages, Attorney's Fees/Costs.

Any person subject to the regulatory program of the Act or the master program who violates any provision thereof or permit issued pursuant thereto shall be liable for all damage to public or private property arising from such violation, including the cost of restoring the affected area to its condition prior to violation. The City/County Attorney shall bring suit for damages under this section on behalf of the City/County. Private persons shall have the right to bring suit for damages under this section on their own behalf and on the behalf of all persons similarly situated. If liability has been established for the cost of restoring an area affected by a violation, the court shall make provisions to assure that restoration will be accomplished within reasonable time at the expense of the violator. In addition to such relief, including money damages, the court in its discretion may award attorney's fees and costs of the suit to the prevailing party.

H. Development and Building Permits.

No building permit, septic tank permit, or other development permit shall be issued for any parcel of land developed or divided in violation of the master program. All purchasers or transferees of property shall comply with provisions of the Act and the master program and each purchaser or transferee may recover his damages from any person, firm, corporation, or agent selling, transferring, or leasing land in violation of the Act or the master program, including any amount reasonably spent as a result of inability to obtain any development permit and spent to conform to the requirements of the Act or the 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 his property to these requirements, rescind the sale, transfer, or lease and recover cost of investigation and reasonable attorney's fees occasioned thereby from the violator.

Master Program Review

This master program shall be reviewed not less than every five years 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 173-19 requirements and shall include a local citizen involvement effort and public hearing to obtain the views and comments of the public.

Amendments to the Shoreline Master Program

The provisions of this shoreline master program may be amended as provided in RCW 90.58.120, 90.58.200 and Chapter 173-19 WAC. Any person, including the City/County, may submit an application for an amendment to the Administrator together with any required fee. Any amendment to local SMPs must satisfy the requirements of the State Environmental Policy Act (Chapter 43.21C RCW) and Chapter 197-11 WAC. The City/County Legislative Body shall approve, modify, or deny applications for amendments. The applicant has the burden of proof. As provided by state law, amendments or revisions to shoreline master programs are not effective unless approved by the Washington State Department of Ecology.

The proponent must demonstrate that proposed amendments to shoreline master program environments (i.e. shoreline master program environment redesignations) are consistent with the criteria set forth in the shoreline environment designation criteria of this SMP and WAC 173-16-040(4).

The Administrator shall send a copy of any locally approved amendment and the information required by WAC 173-19-062 or its successor to Ecology within fourteen days of the date of the City or County Legislative Body decision. If Ecology denies or modifies the proposed amendment, the local government may appeal the decision to the State of Washington Shorelines Hearings Board as provided in RCW 90.58.190 and Chapter 461-08 WAC.

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.

Conflict of Provisions

Should a conflict occur between the provisions of this SMP or between this SMP and the laws, regulations, codes or rules promulgated by any other authority having jurisdiction within the City/County, the most restrictive requirement shall be applied, except when constrained by federal or state law, or where specifically provided otherwise in this SMP.

Inspections

Whenever it is necessary to make an inspection to enforce any of the provisions of this ordinance or whenever the Administrator has reasonable cause to believe that there exists in any building, or upon any premises, any condition which makes such a building or premises nonconforming the Administrator may enter such building or premises. If the building or premises is occupied, the Administrator shall first present proper credentials and demand entry, and if the building or premises is unoccupied, the Administrator shall first make reasonable effort to locate the owner or other persons having charge or control of the building or premises and demand entry. If such entry is refused, the Administrator shall have recourse to every remedy provided by law to secure entry, including administrative search warrants. The City/County Attorney shall provide assistance to the Administrator in obtaining administrative search warrants or other legal remedies.

Employees Not Personally Liable for Enforcement Acts

Any employee charged with the enforcement of this SMP, acting in good faith and without malice for the City/County in the discharge of duties, shall not hereby render himself/herself liable personally and is hereby relieved from all personal liability for any damage that may accrue to persons or property as a result of any act required or by reason of any act or omission in the discharge of duties. Any suit brought against the employee, because of such act or omission performed by him/her in the enforcement of any provisions of this SMP, shall be defended by the City/County until final termination of the proceedings.

Determining Days for Time Limits in this SMP

1. Day means a calendar day beginning at midnight and ending on the following midnight.
2. When counting the number of days for notices required by this SMP, the day a notice is mailed, posted, or published is not counted but the day of any hearing is counted. The day of the hearing shall be counted as an entire day, even though the hearing takes place before midnight and an entire twenty-four hour period has not passed.
3. When counting the number of days or years for other time limits established by this title, the day a decision is made is not counted in computing the time limit.

Lot Area and Setback Measurement

1. Public and privately owned rights of way and access or transportation easements shall not be considered as part of the lot or as being within the lot lines for the purposes of determining the lot size, lot area, or the area of the site.
2. Setbacks shall be measured at right angles from the appropriate lot line or the ordinary high water mark to the wall of the structure(s); provided that where a structure without a wall faces the appropriate lot line, the setback shall be measured to the post(s) or, if the building has no posts, a point that is 2 feet under the roof overhang measured from the drip line of the roof. Where a lot, as defined in this ordinance, consists of more than one lot of record or platted lot, the term "appropriate lot line" shall mean the lot lines

which form the boundaries of the entire contiguous ownership or as much of the ownership as is necessary to comply with the requirements of this ordinance. Nothing in this subsection shall be construed to allow the illegal division of land.

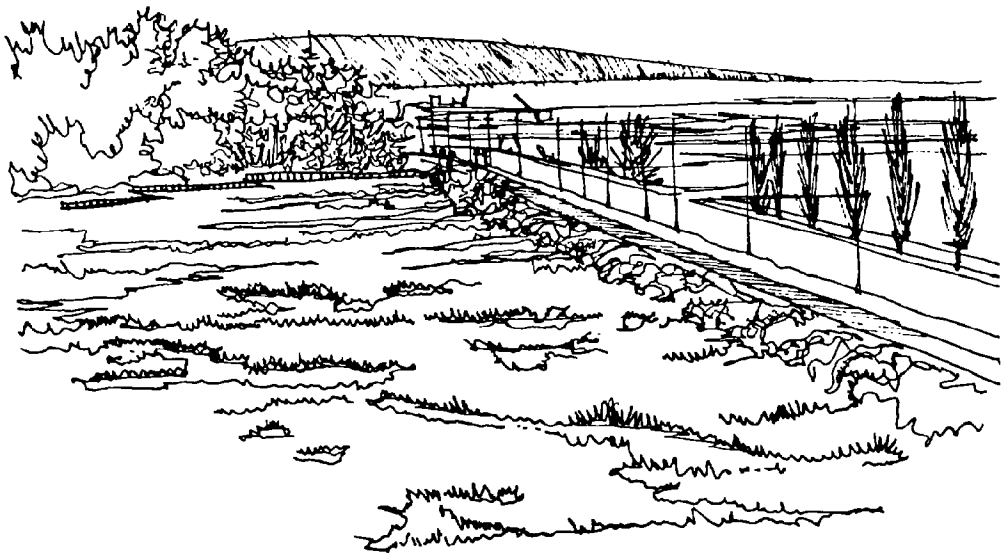
3. Structures, walls, decks, patios and sight obscuring fences shall not be included within the area of a setback for setbacks which are measured from the ordinary high water mark.

Transfer of An Approved Permit or Variance

An approved permit or variance may be transferred from the original applicant to any successors in interest to the applicant for the property for which the permit or variance was approved provided that all of the conditions and requirements of the approved permit or variance shall continue in effect as long as the use or activity is pursued or the structure exists unless the terms of the permit are modified in accordance with the applicable provisions of this shoreline master program.

Miscellaneous Provisions

1. Nothing in this SMP shall obviate any requirement to obtain any permit, certificate, license, or approval from any State agency or local government.
2. Specific provisions of this SMP shall not be construed or limited by the wording or phrasing of the section titles or headings under which they fall.



CHAPTER 10

Promoting Water-oriented Uses

Introduction

WAC 173-16-040-(4) states that: "Because shorelines suitable for urban uses are a limited resource, emphasis should be given to development within already developed areas and particularly to water-dependent industrial and commercial uses requiring frontage on navigable waters."

This can be accomplished most effectively by reserving portions of the shoreline for water-oriented uses through environment-specific use regulations. For example, a master program may dictate that only water-oriented commercial or industrial uses be permitted in certain sections of waterfront most suitable for these uses. Encouraging water-dependent, water-related and water-enjoyment uses in this manner requires that areas most suitable for specific water-oriented purposes be identified and a comprehensive strategy for regulating a range of uses be developed.

This chapter presents some tools and resources for preparing shoreline master programs that encourage diverse water-oriented development on shorelines. These tools include:

- Updated definitions of water-oriented uses
- Generalized physical requirements for water-oriented uses
- Guidelines for setting water-dependency requirements

Water-dependent, Water-related and Water-enjoyment Uses

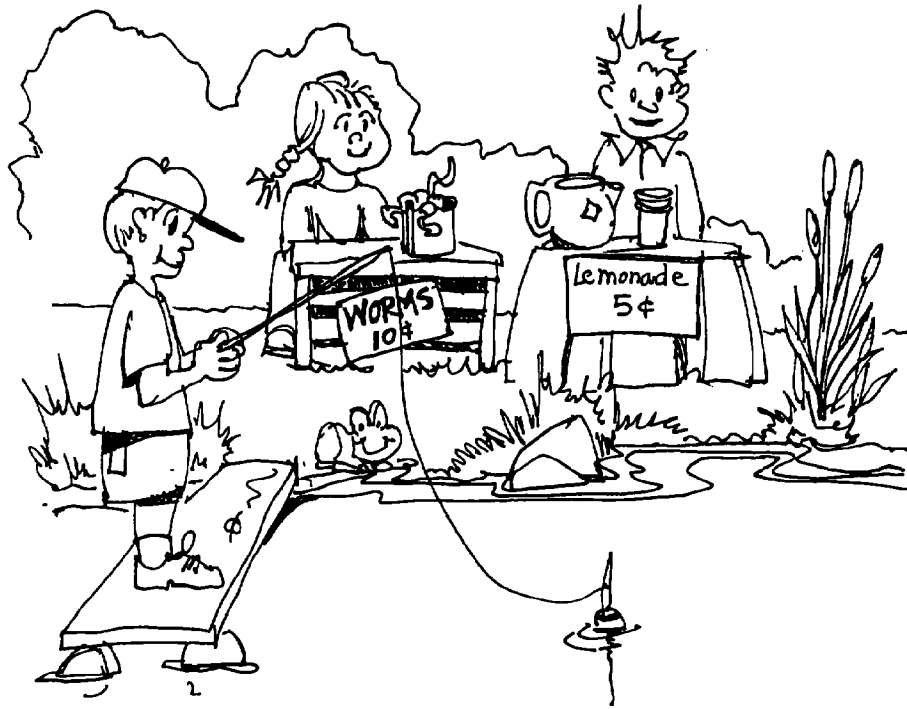
In order to give priority to those uses which rely upon a water location, all shoreline uses are classified into one of four categories; "water-dependent," "water-related," "water-enjoyment" (all "water-oriented" uses) and "non-water-oriented." Shoreline policy use and environment designation regulations can then be written relative to these categories. Clear, consistent definitions for these classifications are critical for shoreline management because many permitting decisions regarding allowable uses, shoreline modifications (e.g. landfill) and mixed-use projects depend upon whether or not a proposed use is water-dependent, water-related, etc.

A survey of local jurisdictions indicated that there is a wide diversity of opinion regarding which uses are water-dependent or water-related. Inconsistent and unclear interpretation of these terms results in difficulties in project review at the state and local level. There are several factors complicating attempts to clearly categorize uses as water-dependent, water-related or non-water-oriented and to develop policies related to the siting of these uses within the shoreline area.

- Some portions of an activity may depend upon the water while others do not (e.g. for cargo loading the crane area may be actually water-dependent but the storage area and the clerical offices may not be). Thus, there is a need to apply definitions to portions of uses.
- General land use classifications (e.g. warehousing, commercial offices, energy generation plants, etc.) are not useful in defining water-dependency because they are too broad. Water-dependent and non-water-oriented examples may be found within these traditional land use classifications.

- Different water-dependent uses require different locations relative to the shoreline. Some activities must be over water or in the water (e.g. aquaculture piers). Others must be adjacent to the shoreline (e.g. cargo loading terminal), still others must be proximate to the shoreline (e.g. cargo handling area).

The following definitions of these terms reflect current practice and Shorelines Hearings Board decisions.



Examples of water-dependent, water-related and water-enjoyment uses (left to right).

Water-dependent Use

Water-dependent use means a use or portion of a use which can not exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations.

Examples of water-dependent uses may include:

- Cargo terminal loading area
- Ferry and passenger terminals
- Barge loading
- Ship building, repair and servicing
- Dry docking of ships
- Aquaculture
- Float plane sheds
- Tugboat services
- Log booming
- Towboat operations
- Marinas
- Sewer outfalls
- Water intake structures

This interpretation best represents the intent of the SMA as well as decisions by the Shorelines Hearings Board and will be most useful in writing and administering master programs. It is also consistent with the definition of water-dependency adopted by the Washington Department of Natural Resources (RCW 79.90.465). Its specificity will be most useful in setting requirements that pertain to the protection of the shoreline by relating restrictions to shoreline construction and filling directly to strict water-dependency with clear exceptions within the master program.

It should be noted that the concept of water-dependency can apply to any category of use (e.g. commercial, industrial, recreational, etc.). For example, some commercial or recreational uses such as diving platforms can be water-dependent.

Water-dependency designations should only be given to those portions of an operation that are demonstrably dependent upon the water or the shoreline edge. For example, a pulp mill dock for loading logs or finished product transported by water is water-dependent, but the mill is not, nor is a related

storage area. The dry-dock of a ship-building yard is water-dependent but warehousing of ship parts is not. Thus, water-dependent uses are quite limited. These classifications should be considered water-dependent under usual conditions.

Water-related Use

The distinction between water-dependent and water-related uses is important because it recognizes a class of uses which does not intrinsically require a waterfront location but benefits economically from proximity to the shoreline or directly support water-dependent uses. Many uses such as warehousing, seafood processing and ship parts storage and assembly areas do not require direct shoreline access but obtain substantial benefit from proximity to the waterfront and enhance the viability of water-dependent uses.

Distinguishing between water-dependent and water-related uses enables master programs to give top priority to water-dependent activities and, at the same time, encourage water-related uses in a variety of ways. For example, a master program may permit water-dependent uses on over-water construction in a certain environment classification and allow water-related uses on upland sites. Also, the concept allows the more accurate classification of large developments such as pulp mills or fishing boat terminals where some of the components are water-dependent and other parts are water-related. The following definition includes two criteria for identifying water-related uses as well as the concept of economic benefit from a waterfront location as noted in the SHB decisions: *Yount and Department of Ecology and Attorney General v. Snohomish County and Hayes*, SHB No. 108; *Adams v. City of Seattle, Department of Ecology and Attorney General*, SHB No. 156.

Water-related use means a use or portion of a use which is not intrinsically dependent upon a waterfront location but whose economic viability is dependent upon a waterfront location because:

- 1. Of 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 commercial activities and the proximity of the use to its customers makes its services less expensive and/or more convenient. Examples include manufacturers of ship parts large enough that transportation becomes a significant factor in the product's cost, professional services primarily serving water-dependent activities, utility lines serving water-dependent activities and storage of water-transported goods.*

Uses which obtain an economic advantage from the shoreline due simply to its amenity factor (e.g. restaurants, hotels) should **not** be considered water-related (see water-enjoyment). Uses generally considered water-related include:

- Fabrication of ship parts and equipment providing that proximity of the activity to its customers on the waterfront can be demonstrated to be an advantage because of transportation costs or other functional factors.
- Warehousing of goods transported by water providing the economic distribution of those goods is dependent upon storage or handling at the point of unloading.
- Assembly of water transported parts providing that the economic advantage of assembling at point of entry can be demonstrated.
- Support services of fish hatcheries functionally proximate to the water element operation.
- Seafood processing plants if fish or products are brought to the site by water.
- Paper and wood products mills if materials or products are water transported.
- Oil refineries if petroleum materials or products are shipped by tanker.
- Salvage yards if materials are taken from water or if salvage includes ship or marine equipment.
- Energy generation plants if materials are transported by water or if large quantities of water are needed for cooling or generation.
- Construction materials plants (concrete, etc.) if materials or products are transported by water.
- Construction of modular buildings specifically intended to be transported by barge.
- Storage of logs transported by water.
- Utility lines serving waterfront uses.
- Intermodal transport when water transport is part of the service.

Sewage treatment plants and rail service yards in general are not considered water-related.

It is clear that many decisions regarding water-related status must be made on a case-by-case basis and that the bulk of commercial activities located along the waterfront may be water-related rather than water-dependent. Since the water-related classification is so broad and includes major industrial activities, prioritizing land for water-related activities becomes an important aspect of urban shoreline master program planning. The water-related classification will be useful for developing requirements aimed at furthering water-oriented commerce. However, the application of this classification will require careful review.

Water-enjoyment Use

RCW 90.58.020 addresses, and Chapter 173-16 WAC, Shoreline Management Act Guidelines for Development of Master Programs, section 060-4(a), specifies that "priority should be given to those commercial developments which are particularly dependent on their location and/or use of the shorelines of the state and other development that will provide an opportunity for substantial number of people to enjoy the shorelines of the state". The term "water-enjoyment" is used to signify those uses which provide an opportunity for substantial number of people to enjoy the shoreline. The following definition which sets criteria for evaluating whether or not a particular use applies is recommended.

Water-enjoyment use means a recreational use, or other use facilitating public access to the shoreline as the 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 the location, design and operation assures 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.

Primary water-enjoyment uses may include, but are not limited to parks, piers and other improvements facilitating public access to shorelines of the state; and general water-enjoyment uses may include but are not limited to restaurants, museums, aquariums, scientific/ecological reserves, resorts and mixed-use commercial; PROVIDED, that such uses conform to the above water-enjoyment specifications and the provisions of the master program.

Water-oriented Use

Water-oriented use is a term that includes any water-dependent, water-related or water-enjoyment use. In other words, a water-oriented use includes all of the above.

Non-water-oriented Use

Non-water-oriented uses describe all those uses which have little or no relationship to the shoreline and are not considered priority uses under the Shoreline Management Act. Any use which does not meet the definition of water-dependent, water-related or water-enjoyment is classified as non-water-oriented. Examples include professional offices, automotive sales or repair shops, mini-storage facilities, multi-family residential and condominium development, department stores and gas stations.

Adding public access features to a non-water-oriented use does not necessarily change the use to a water-oriented use. A non-water-oriented use, such as a retail shop, may be found acceptable for a shoreline location if it provides for substantial numbers of the public to enjoy the shoreline, but in these instances the project would have to provide a significant amount of public benefit -- a simple walkway allowing passage along the water may not be sufficient. Instead, substantial public facilities such as picnic tables, benches and the like will most likely be needed and considerably more shoreline space will have to be dedicated for public use. For a large development, a requirement that a public park be provided would not be an unreasonable requirement.

Figure 10-1 illustrates water-dependent (W-D), water-related (W-R), water-enjoyment (W-E) and non-water-oriented (N-W-O) uses.



Special Tip

The term "non-water-dependent" should not be used except in the rare circumstance where you wish to specify all but water-dependent shoreline uses.

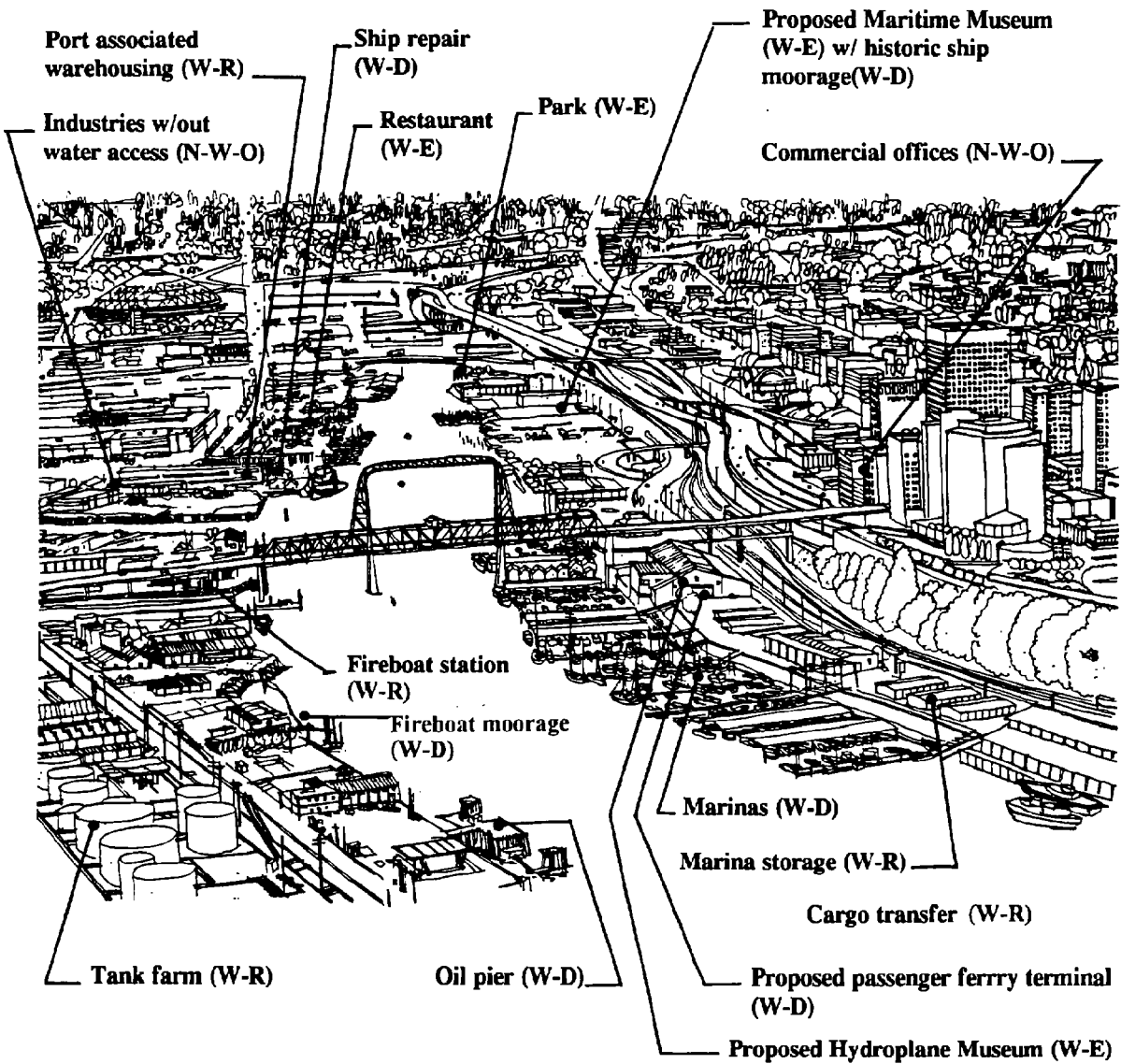


Figure 10-1. Examples of water-dependent (W-D), water-related (W-R), water-enjoyment (W-E) and non-water-oriented (N-W-O) uses.

Physical Requirements of Water-dependent Uses

The primary master program tool for giving priority to water-oriented uses is a set of master program policies and regulations that encourages water-oriented uses and restricts non-water-oriented uses. These provisions could be applied uniformly across the urban shoreline environment. However, it is advantageous to refine this approach by requiring water-dependent activities only in those areas most suited for them and to write use requirements that encourage specific use types such as cargo terminals, marinas, waterfront parks, etc., in specified districts that have compatible environmental conditions and support facilities. To accomplish this, a comprehensive shoreline program is necessary that identifies the most suitable areas for the different shoreline uses and recommends a set of regulatory measures (the shoreline master program being the most prominent) and civic actions to implement its objectives.

Chapter 3 of this *Handbook* presents a process for comprehensive waterfront planning that includes:

1. Inventorying shoreline characteristics that affect waterfront development.
2. Identifying the requirements for potential water-oriented uses.
3. Determining the suitability of specific shoreline areas for various shoreline uses.
4. Determining the development potentials of each shoreline area.
5. Formulating a waterfront development/management strategy on which master program provisions and capital improvement programs can be based.

In recent years, several cities including Bellingham, Aberdeen, Everett, Olympia, Oak Harbor, Tri-Cities, Seattle and others have undertaken comprehensive shoreline planning efforts. One resource that would have assisted these projects is a listing of the physical requirements for various water-dependent uses. With such a listing, the capability of various shorelines to accommodate specific uses could more easily be determined.

Figure 10-2 presents the physical requirements and environmental constraints for typical water-oriented uses. Two caveats should be noted. First, physical requirements can vary widely for certain uses. Obviously, there are several different types of shipbuilding, marine construction and aquaculture activities within these broader use categories. New technologies are changing the

requirements over time. Also, many of the uses such as marinas and parks could vary widely in size. The figures can only indicate typical sizes for existing facilities in Washington. Secondly, figure 10-2 is not specific enough for individual site planning, which requires analysis of the specific situation. It is intended for comprehensive and conceptual level planning only.

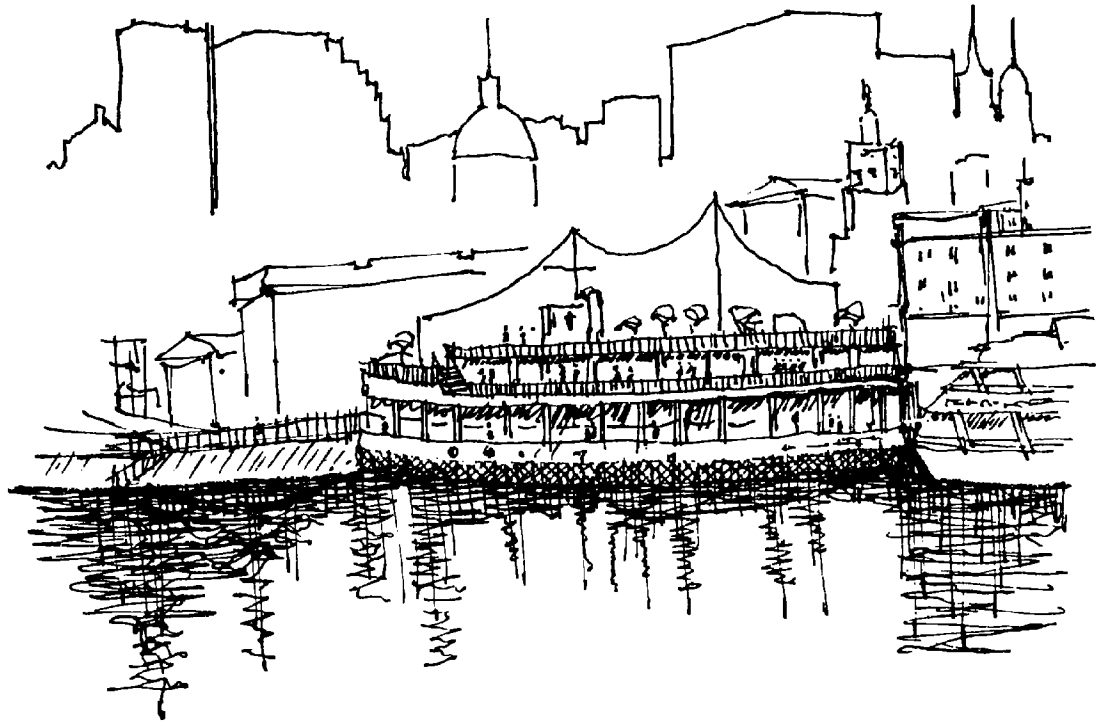


Figure 10-2. Generalized physical requirements for specific water-oriented uses (page 1 of 5).

	Cargo Terminal (Container)	Tug & Barge Terminal	Major Ship Building	Commercial Building & Repair	Boat Terminals (up to 100' Vessels)
Pier depth (in feet below M.L.L.W.)	50'	25'	50'	25'	20'-50'
Pier Length (feet)	800' +	400'	1200'	250'	100'
Minimum Land Area Required (acres)	25 acres/berth	1 acre	10 acres	2 acres	2 acres
Desirable Land Area (acres)	100 acres	Site-specific	20 acres	5 acres	10 acres
Submerged Land Area Required (acres)	5 acres	Varies	10 acres	1 acre	10 acres
Wave Protection (required/not required/ may be required)	Not required	Required	Desirable	Required	Required
Access Requirements (required/desirable/not req.)					
Highway	Desirable	Not required	Not required	Not required	Not required
Arterial Truck Route	Required	Desirable	Required	Desirable	Desirable
Arterial		Required	Required	Required	Required
Rail	Required	Not required	Required	Not required	Not required
Proximity to Airport		Not required	Desirable	Not required	Not required
Compatible with Residences	No	Possibly	No	No	Possibly
Compatible with Water- enjoyment/Recreation Activities	Possibly	Yes	No	No	Yes
Benefits from Proximity to Tourist/Commercial Activities	No	No	No	No	Possibly
Other Required Facilities or Conditions				Public utilities	Utilities
Parking Requirements (spaces/unit)	1/employee	1/employee + visitors	1/employee + visitors	1/employee + visitors	2/boat
Notes	Lights: Heavy impacts to residences				
	Noise: 24-hour operations				

Figure 10-2. Generalized physical requirements for specific water-oriented uses (page 2 of 5).

	Cruise Ship Terminal	Auto Ferry Terminal	Passenger Ferry Terminal Boating Services	Recreational Marina	Dry Land Boat Yard
Pier depth (in feet below M.L.L.W.)	35'	26'	26'	10'	15'
Pier Length (feet)	800'	NA	NA	20'-60'	40'
Minimum Land Area Required (acres)	3 acres	2 acres	1 acre	Varies	1 acre
Desirable Land Area (acres)	6 acres	5 acres	2 acres	2 times water area	Varies
Submerged Land Area Required (acres)	6 acres	2 acres	1 acre	Avg: 24 berth/acre	Yes
Wave Protection (required/not required/ may be required)	Not required	May be required	May be required	Required	Yes
Access Requirements (required/desirable/not req.)					
Highway	Required	Required	Desirable	Desirable	Desirable
Arterial Truck Route	Required	Required	Desirable	Desirable	Desirable
Arterial	Required	Required	Required	Desirable	Required
Rail	Not required	Required	Not required	Not required	Not required
Proximity to Airport	Required	Not required	Not required	Not required	Not required
Compatible with Residences	Possible	Yes	Yes	Yes	Possibly
Compatible with Water-enjoyment/Recreation Activities	Yes	Yes	Yes	Yes	Possibly
Benefits from Proximity to Tourist/Commercial Activities	Yes, required	Yes	Yes	Yes	Possibly
Other Required Facilities or Conditions	Hotel & visitors services	Transit bus service	Transit bus connections	Boating services desirable	Hoist or travel lift
Parking Requirements (spaces/unit)	Project-specific	200 + stalls + (Min.)	20 + stalls (Min.)	1 space/.5 berths to 1 space/1 berth	1 space/.5 berths to 1 space/1 berth
Notes	Links to other passenger access critical			Provide public utilities	
				Compatible with public access and parks	

Figure 10-2. Generalized physical requirements for specific water-oriented uses (page 3 of 5).

	Public Fishing Piers	Car-top boat Launch Sites	Water-oriented Parks
Pier depth (in feet below M.L.L.W.)	30'		
Pier Length (feet)	Varies/16' min.		
Minimum Land Area Required (acres)		10'-20' easement from ROW	
Desirable Land Area (acres)	Depends on access	Parking controls area	
Submerged Land Area Required (acres)	1 acre	10'-20' (W) easement	5 acres (min.)
Wave Protection (required/not required/ may be required)	Not required	May be required	Not required
Access Requirements (required/desirable/not req.)			
Highway	Not required	Not required	Not required
Arterial Truck Route	Not required	Not required	Not required
Arterial	Not required	Desirable	Desirable
Rail	Not required	Not required	Not required
Proximity to Airport	Not required	Not required	Not required
Compatible with Residences	Adequate parking & screening	Yes w/adequate parking	Yes, if beaches are posted and parking adequate
Compatible with Water-enjoyment/Recreation Activities	Yes, except nearby boating	Yes	Not w/fishing, boating
Benefits from Proximity to Tourist/Commercial Activities	Yes, e.g. parks assignments, ferries	No	No
Other Required Facilities or Conditions	Bait and tackle shop near by	Water access at all tides	Dive shop and changing room desirable
Parking Requirements (spaces/unit)	1/2 # of anglers	Depends on usage	Depends on usage
Notes	Benefits from varied water depth & substrate	No, or low bank shoreline desirable; avoid mud/silt subtidal	Access to water via hard beach, steps, ladders or ramps
	Artificial reefs for fish enhancement	Stepped bulkhead or narrow ramp desirable	Area needs to be secure from boat traffic

Figure 10-2. Generalized physical requirements for specific water-oriented uses (page 4 of 5).

	Large Fishing Boat Terminals (Factory Trailers)	Fish Processing	Log Terminal	Petroleum Terminal/Tank Farm	Marine Construction Yard
Pier depth (in feet below M.L.L.W.)	50'	35'	35-40'	40-80'	15'
Pier Length (feet)	300' +	500' x 75'	750'	400-600'	
Minimum Land Area Required (acres)	10 acres	4 acres	20 acres	20 acres	2 acres
Desirable Land Area (acres)	10 acres	6 acres	40-100 acres	40 acres	4-6 acres
Submerged Land Area Required (acres)	Access	Access	Access	Access	1-2 acres
Wave Protection (required/not required/may be required)	Possibly	Required	Possibly	Possibly	Yes
Access Requirements (required/desirable/not req.)					
Highway	Desirable	Desirable	Desirable	Possibly	Desirable
Arterial Truck Route	Required	Required	Required	Required	Required
Arterial					
Rail	Not required	Not required	Not required	Required	Desirable
Proximity to Airport		Desirable	Not required	Not required	Not required
Compatible with Residences	Possibly	No	No	No	No
Compatible with Water-enjoyment/Recreation Activities	Possibly	Possibly	No	No	Possibly
Benefits from Proximity to Tourist/Commercial Activities	No	Possibly	No	No	No
Other Required Facilities or Conditions			Spill containment		
Parking Requirements (spaces/unit)	1/outfitting employee	1/employee	NA		NA
Notes		Port of Seattle is considering as part of harborfront redevelopment	Log trucks impact road cond. on uplands	Block views. Tanks could be buried.	

Figure 10-2. Generalized physical requirements for specific water-oriented uses (page 5 of 5).

	Grain Terminal	Public Boat Launch	Aquaculture (Fish)	Aquaculture (Shellfish)
Pier depth (in feet below M.L.L.W.)	65' NA	8'/60' under pens	Minimum access	
Pier Length (feet)	800-1400	NA	20'-50'	Minimum access
Minimum Land Area Required (acres)	10 acres	Varies	1/2 acre	1/2 acre
Desirable Land Area (acres)	10+ acres	Varies	2 acres	2 acres
Submerged Land Area Required (acres)	5 acres	Minimal	5-30 acres	5-30 acres
Wave Protection (required/not required/may be required)	May be required	Required	Buoys	Not required
Access Requirements (required/desirable/not req.)				
Highway	Desirable	Desirable	Desirable	Desirable
Arterial Truck Route	Required	Desirable	Desirable	Desirable
Arterial		Required	Desirable	Desirable
Rail	Required	Not required	Not required	Not required
Proximity to Airport		Not required	Desirable	Desirable
Compatible with Residences	No	Possibly w/screening	Possibly	Yes
Compatible with Water-enjoyment/Recreation Activities	Yes	Yes	Possibly	Possibly
Benefits from Proximity to Tourist/Commercial Activities	No	Possibly	Retail	Retail
Other Required Facilities or Conditions		Low current on rivers		
Parking Requirements (spaces/unit)		1 car & trailer spaces per lane	1 stall/empl.	1 stall/empl.
Notes	Dust-generating	Great demand for these		
	Structure can block views	Generates peak traffic & parking demand		

General Guidelines for Setting Water-dependency Requirements on Urban Waterfronts

If a jurisdiction has an urbanized shoreline suitable for water-dependent uses, at least a portion of that shoreline should be reserved for water-dependent uses. The easiest way to accomplish this is to use sub-classifications of the urban environment designation. The following guidelines outline a general approach to setting water-dependency use regulations in urban environment designations.

- A. Top priority should be given to those areas with deep draft shipping capabilities that are suitable for industry and commerce. SMPs should limit uses to water-dependent uses, water-related uses supporting the water-dependent uses, or public access. This can be done by creating an "urban-maritime" environment with such requirements. Other uses can be permitted as auxiliary or conditional uses. If other uses are allowed, "primacy" can be given to water-dependent uses in case there are any questions of compatibility. This means that water-dependent uses such as a boat paint shop can be built even though they might impact adjacent non-water-dependent uses. Current water-dependent activity areas should be retained unless there is a compelling reason to do otherwise.
- B. Areas where large-scale industrial and commercial uses are not feasible but which are suitable for smaller-scale water-dependent activities (e.g. recreational boating, small-scale fishing and boat repair) should require that new shoreline development emphasize water-dependent uses by one of the methods below:
 1. Permitting water-dependent uses solely; or
 2. Requiring that a portion (percentage) of the development be water-dependent by encouraging mixed-use projects that combine water-dependent uses with public access and water-enjoyment or limited non-water-oriented uses; or
 3. Requiring that a designated portion or percentage of shoreline of the suitable area be reserved for water-dependent uses; or
 4. Conditioning non-water-dependent uses so they do not displace existing water-oriented uses and/or are located so that they do not preclude future water-dependent uses suitable for the site. For

example, the conditions might require that a resort complex be set back from the water a sufficient distance to allow future cruise ship, or passenger ferry moorage.



Special Tip

The differences in physical requirements between small craft/recreational boating facilities and large cargo/shipbuilding activities often form a natural separation between these two ranges of uses. The shallow water depth that prohibits larger vessels facilitates float and breakwater construction for marinas.

- C. There may be a third condition where the suitability for most water-dependent uses is limited because:
1. Little or no upland area exists nearby.
 2. Other uses such as the central business district (CBD) or residential neighborhood make large industry intrusive.
 3. Heavy wave action limits small boat use.
 4. Lack of access or traffic congestion prevent efficient activities.
 5. Proximity to the CBD with demand for pedestrian-oriented uses.
 6. Environmental conditions make dredging, filling or other shoreline modifications impractical.
 7. Opportunity for civic redevelopment using shoreline as a public amenity is a community goal.
- D. In these cases where suitability of water-dependent uses is limited, opportunities for water-dependent activities should be sought and incorporated into the development. A special environment designation can be developed with less stringent water-dependency requirements. Examples of SMP requirements include:
1. Requirement for providing moorage on all development directly on the shoreline.
 2. Incentives for mixed-use development incorporating substantial water-dependent uses.

3. Requiring public access for all projects in the environment. Access requirements should be specific in intent and include design specifications.
4. Restricting development to water-oriented use on the ground level and/or waterfront side of the development.

Chapter 12 discusses master program techniques local governments can use to encourage a broad spectrum of water-oriented activities on their waterfronts.

Another important way to encourage water-oriented uses on the waterfront is to classify existing non-water-oriented uses in areas suitable for water-dependent development as non-conforming uses. This means that the existing uses would be "grand fathered" (allowed to remain on the shoreline) but not be allowed to expand. By setting clear requirements that existing non-conforming uses not be allowed to expand in an environment designation where water-oriented uses are given priority, a master program can prevent the further encroachment of inappropriate activities into key maritime commercial/industrial sites.

CHAPTER 11

Master Program

Provisions for

Mixed-use Projects

Definition and Objectives

Mixed-use projects are developments that combine water-dependent uses with water-enjoyment uses and/or non-water-oriented uses. Mixed-use developments can be a tool for achieving increased water-dependent activities, civic revitalization and public access on the shoreline. To encourage mixed-use projects that achieve a public benefit, special provisions can be included in a master program that offer a potential developer incentives or more latitude than normal master program requirements. In return, the developer's proposal must include elements that further the objectives of the Shoreline Management Act and benefit the public. Implicit in the concept of mixed-use provisions is that additional development incentives must be justified by increased and long-term public benefit resulting from the project and that the public benefit must relate to the SMA objectives. Generally, in mixed-use projects the water-oriented uses and non-revenue recreation uses are "subsidized" by the economic advantages of the other uses in the sense that the water-oriented uses could not be economically developed without support from viable non-water-oriented uses.

Typical benefits and incentives that are balanced in mixed-use projects are described below.

Shoreline Management Objectives for Mixed-use Projects

- A. Giving priority to water-dependent uses by:
 - 1. Including significant water-dependent development as part of a mixed-use project; or
 - 2. Reserving a portion of the site for development of water-dependent development; or
 - 3. Providing facilities that support on-site or adjacent water-dependent activities (e.g. support services for fishing industry).

- B. Giving the public greater opportunities to enjoy the shoreline by:
 - 1. Including water-enjoyment uses as part of the project; and
 - 2. Integrating significant public access elements into the project; and
 - 3. Providing special design elements or features such as view corridors, natural shoreline landscaping, etc.

- C. Protecting a natural resource by:
 - 1. Including a protected habitat area as part of the project; or
 - 2. Enhancing the biological qualities of a degraded or polluted site.

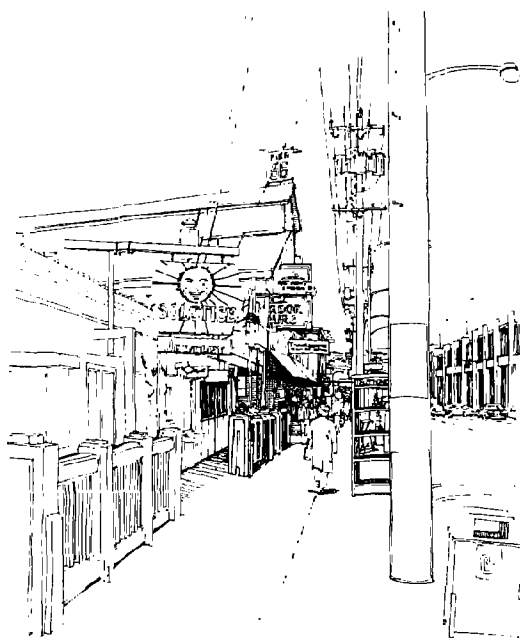
Development Incentives For Projects Which Serve SMP Objectives

- A. Greater height or development intensity than normally permitted under the SMP;
- B. Greater range of potential permitted uses;
- C. Greater potential for over-water construction as a conditional use; and
- D. Greater flexibility in site design standards.

Mixed-use Development Issues

The *Urban Waterfront Policy Analysis* produced by the Washington State Department of Ecology in 1986 addressed the following issues related to mixed-use projects:

1. Methods to weigh the project's public benefit against its potential impacts and how to incorporate public input into the decision process.
2. A process to "negotiate" design elements and use requirements. Typically, reviewers and development applicants need to be able to mutually resolve numerous planning and design issues such as amenities of use, public access design, urban design controls, integration with local surroundings, parking and circulation, etc.
3. Ensuring that the water-dependent use is not abandoned after the project is developed, leaving essentially a non-water-dependent project on the shoreline.
4. Evaluating whether or not the "subsidy" of water-dependent or recreational uses is legitimate and necessary.
5. Involving the Washington Department of Ecology and the Washington Department of Natural resources, (if DNR is involved as land owner) into the initial stages of the review process.
6. Ensuring that the project does not set an undesirable precedent that can be copied in other areas.



This chapter describes more specific master program techniques for mixed-use projects, focusing on problems and examples related to the above issues that have arisen during the past few years.

In addition, the SMA and WAC 173-16 objectives, along with Ecology permit review experiences in recent years, indicate policy guidelines that set certain limitations or constraints on SMP mixed-use provisions, which are discussed below.

Specifying Where Mixed-use Projects Are Permitted

The most effective way to reduce the chance of an inappropriate mixed-use proposal, or to avoid setting a dangerous precedent for proposals in incompatible locations is to state specifically where on the shoreline mixed-use projects are permitted. Unless there is an unusual situation, mixed-use projects should be restricted to urban environments, as they fit with the objective of "ensur[ing] optimum utilization of the shorelines within urbanized areas by providing for intensive public use and by managing development so that it enhances and maintains shorelines for a multiplicity of urban uses" (see WAC 173-16-040(4)(4)). Within the urban environment, mixed-use projects should be restricted to those areas where:

1. An intensive mix of uses would not conflict with established or potential water-dependent uses.
2. Development would not damage an important environmental resource.
3. Mixed-use development would not occupy a shoreline that is a unique resource for a major water-dependent activity (such as a large site with deep water and rail access that is suitable for a container cargo yard, log shipment facility, major boat building shop, etc.).
4. There is a nearby urban center, large population, unique activity or special amenity that would benefit from more intense shoreline development.
5. More intensive shoreline use fits with state and local public policies and planning objectives.

Restricting mixed-use projects to appropriate locations along the shoreline has the additional benefit in that the master program site design standards and permit conditions can be tailored to take maximum advantage of those shorelines.

Potential locations for mixed-use projects can be specified in SMPs in any one of the ways described below:

1. Define a special environment designation such as "urban mixed-use" where mixed-use projects are permitted and the special mixed-use provisions apply; or
2. Indicate the sections of the shoreline to which the mixed-use provisions apply. This method is useful when there are only a few specific properties or points along the shoreline that are suitable for mixed-use projects; or
3. List specific conditions that must exist at a site to be considered for a mixed-use project. Conditions might include a more specific statement of those geographical limitations described above. Because it is based on a performance standard, this technique is more subject to interpretation and therefore less preferred than the other two approaches above. It should only be used if the mixed-use provisions themselves are very specific and provide strong controls during the review process.



Special Tip:

Potential locations for mixed-use projects should be one of the items considered during the shoreline inventory and suitability analysis (see Chapter 3, SMP Amendment Process).

Specifying Requirements and Incentives for Mixed-use Projects

Master program provisions for mixed-use projects should list the general objectives and specific requirements that the project must meet in order to qualify as an acceptable mixed-use project. A key element in mixed-use projects is, of course, the water-dependent and water-enjoyment uses. It is clear that many decisions regarding water-related status must be made on a case-by-case basis and that the bulk of commercial activities located along the waterfront may be water-related rather than water-dependent or water-enjoyment uses. If mixed-use projects do not include either or both of these uses they are not truly mixed-use projects. Adding public access elements (such as a boardwalk) or environmental mitigation (such as wetland enhancement) to a proposal does not make it a mixed-use project.

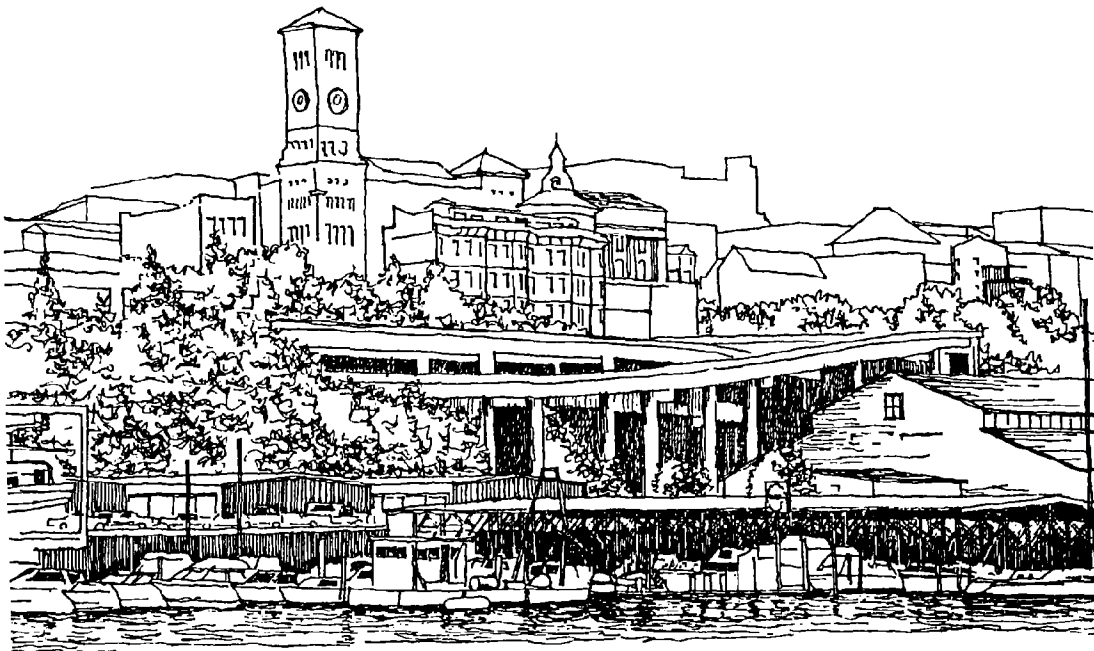


Special Tip:

If the local government's development objective for a specific section of shoreline is public access or environmental enhancement, then these elements should be conditions placed on any development permit. The master program may also provide incentives such as greater intensity or a wider range of uses with the increase of public access or environmental enhancement. Specific standards for meeting these conditions are often simpler than mixed-use provisions, which involve a wider range of options and variables.

Below are listed several examples of methods to specify the type and amount of water-dependent or water-enjoyment uses. (The term "water-oriented" is used to specify water-dependent, water-related, or water-enjoyment uses.) In essence, the provisions are formulas for setting the amounts and locations of non-water-oriented and water-oriented uses. Which type of formula is most appropriate depends upon local conditions.

Figure 11-1 illustrates Fisherman's Terminal in Seattle, a mixed-use project with water-dependent, water-related, water-enjoyment and non-water-oriented uses. The City of Seattle's SMP determined the location and quantity of non-water-oriented uses.



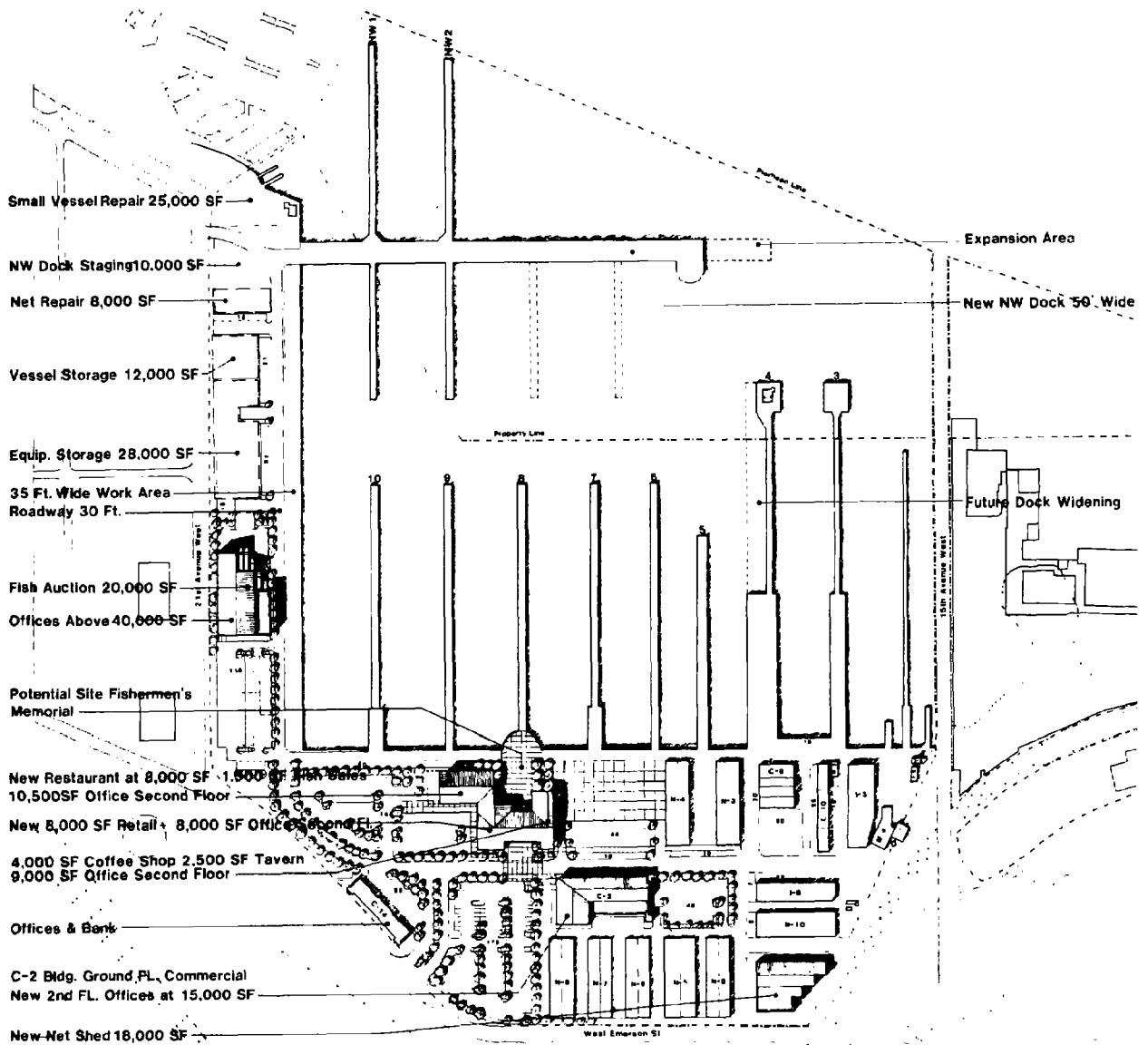


Figure 11-1. Fishermen's Terminal in Seattle. A mixed-use project with water-dependent, water-related, water-enjoyment and non-water-oriented uses. The location and quantities of non-water-oriented uses were set by Seattle's SMP.

Formulas for Setting Water-oriented Use Requirements

Five methods for reserving portions of new development for water-oriented uses are described below.

- A. Require that a certain percentage of a building's ground floor area be water-oriented. Example: "A minimum of 85 percent of the total ground floor building area of all structures shall be water-oriented uses" (see Figure 11-2).

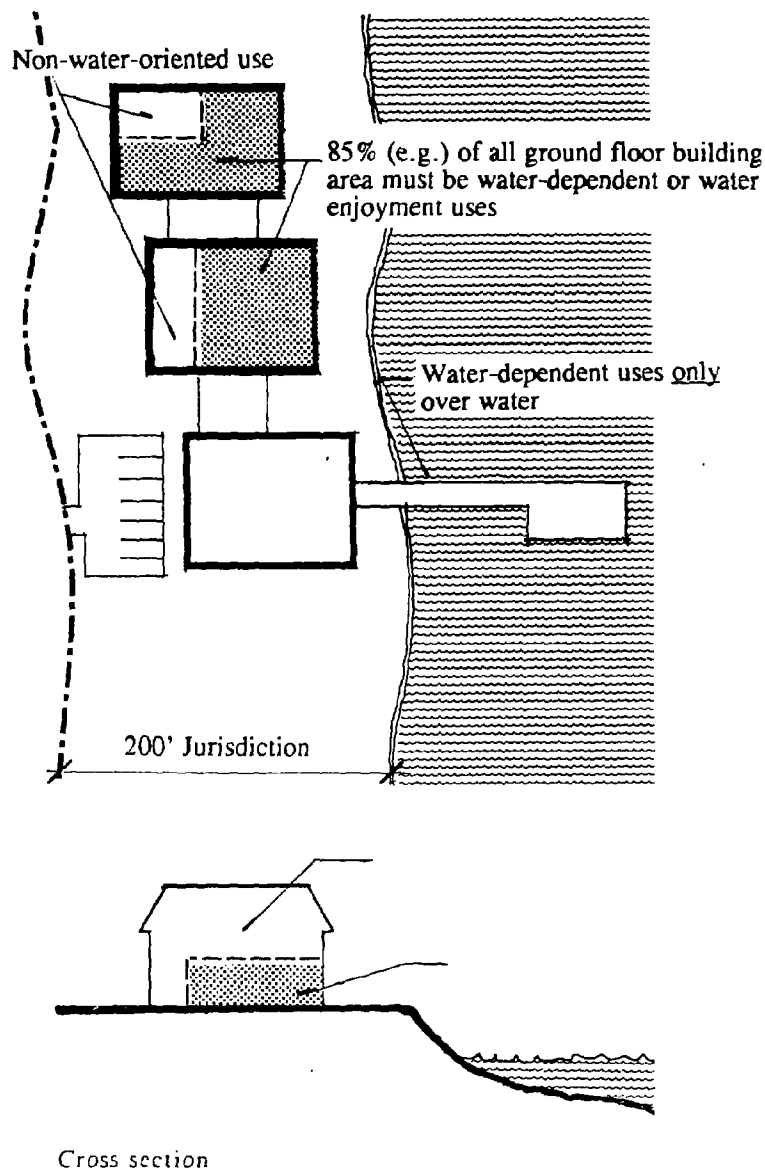


Figure 11-2. Mixed-use formula based on a maximum percentage of the building's ground floor area being non-water-oriented.

B. Base the required amount of water-oriented uses on a percentage of site area (see Figure 11-3). Example: Non-water-oriented uses are permitted when:

1. The non-water-oriented commercial uses occupy no more than 15 percent of the dry land area of the site.
2. The uses are located on site to accommodate water-dependent, water-related or water-enjoyment uses that are included as part of the development proposal or are existing on the site. Parking required for each use shall be incorporated as part of the land area for that use.

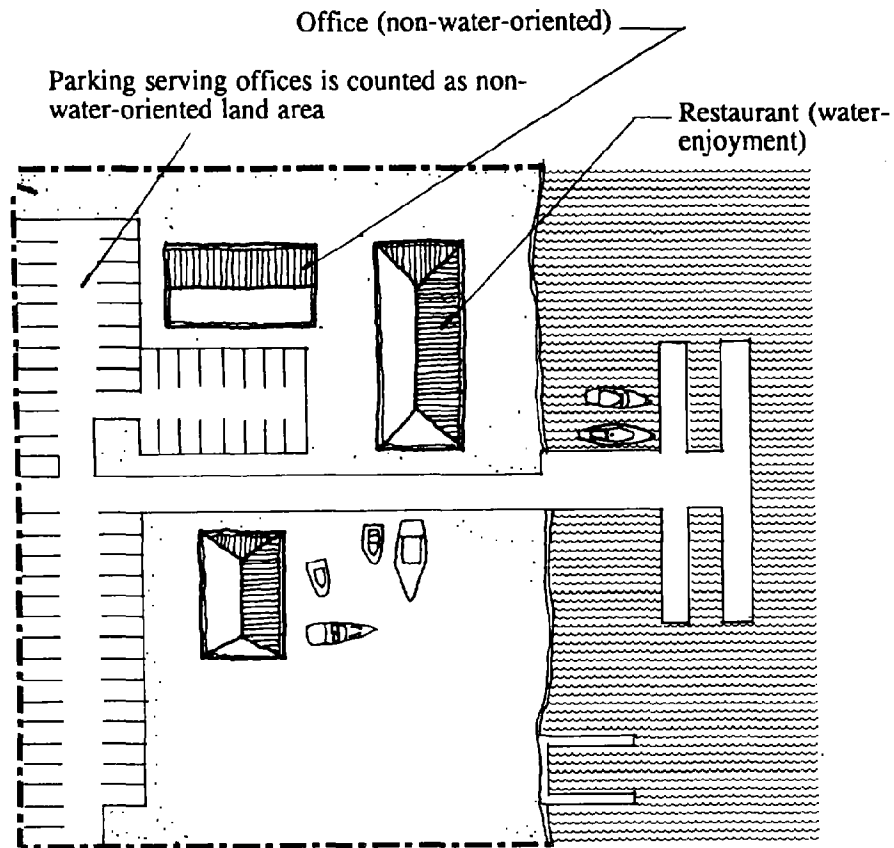
Note: Master programs should indicate how the amount of required parking is calculated on the site. These types of provisions are useful for large master-planned sites.

C. Designate a parallel environment that applies to all submerged land and, if desired by local government, all dry uplands within 100 feet of the shoreline (see Figure 11-4).

Note: With this formula, a property owner would be encouraged to develop a mixed-use project to get maximum use of his/her site.



*Non-water-oriented use may occupy up to 15% of lot



*85% of lot reserved for water oriented uses

Note that this provision would calculate the % of entire shoreline lot area, not just within the 200' of the shoreline. The regulations could also be written to apply just to the 200' jurisdiction.

Figure 11-3. Mixed-use formula based on a percentage of land area.

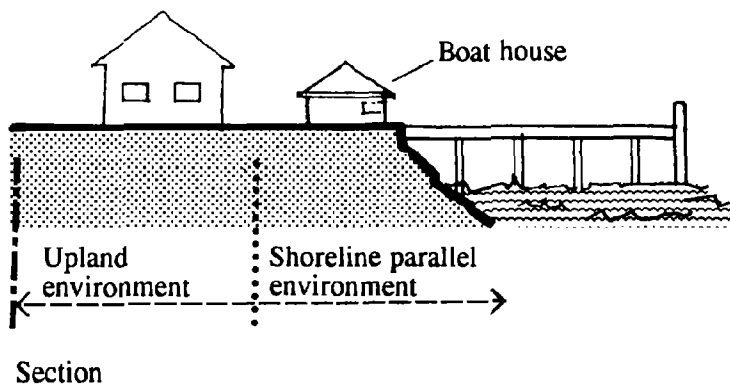
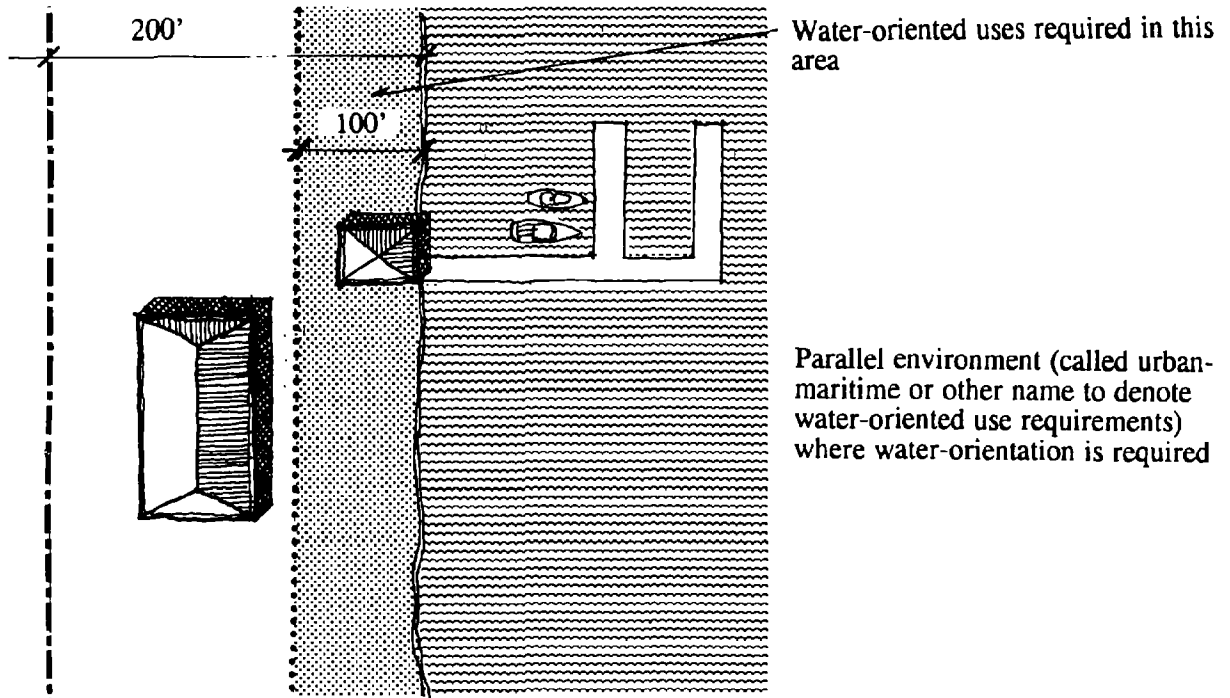


Figure 11-4. Mixed-use provisions using parallel environments that require water-oriented uses.

- D. Use the parallel environment technique in "C" above and allow the property owner the option of building 1 square foot of site area in the shoreline environment for every square foot of site area of water-oriented use in the upland environment. No non-water-oriented use should be permitted over water. In some cases they may be permitted as conditional uses. See discussion on conditional uses below. No parking or access roads serving the non-water-oriented uses should be allowed in the shoreline environment (see Figure 11-5).

Note: Since this type of mixed-use provision allows a great number of possible types of site design variables, it is recommended that option "D" be allowed only as a conditional use.

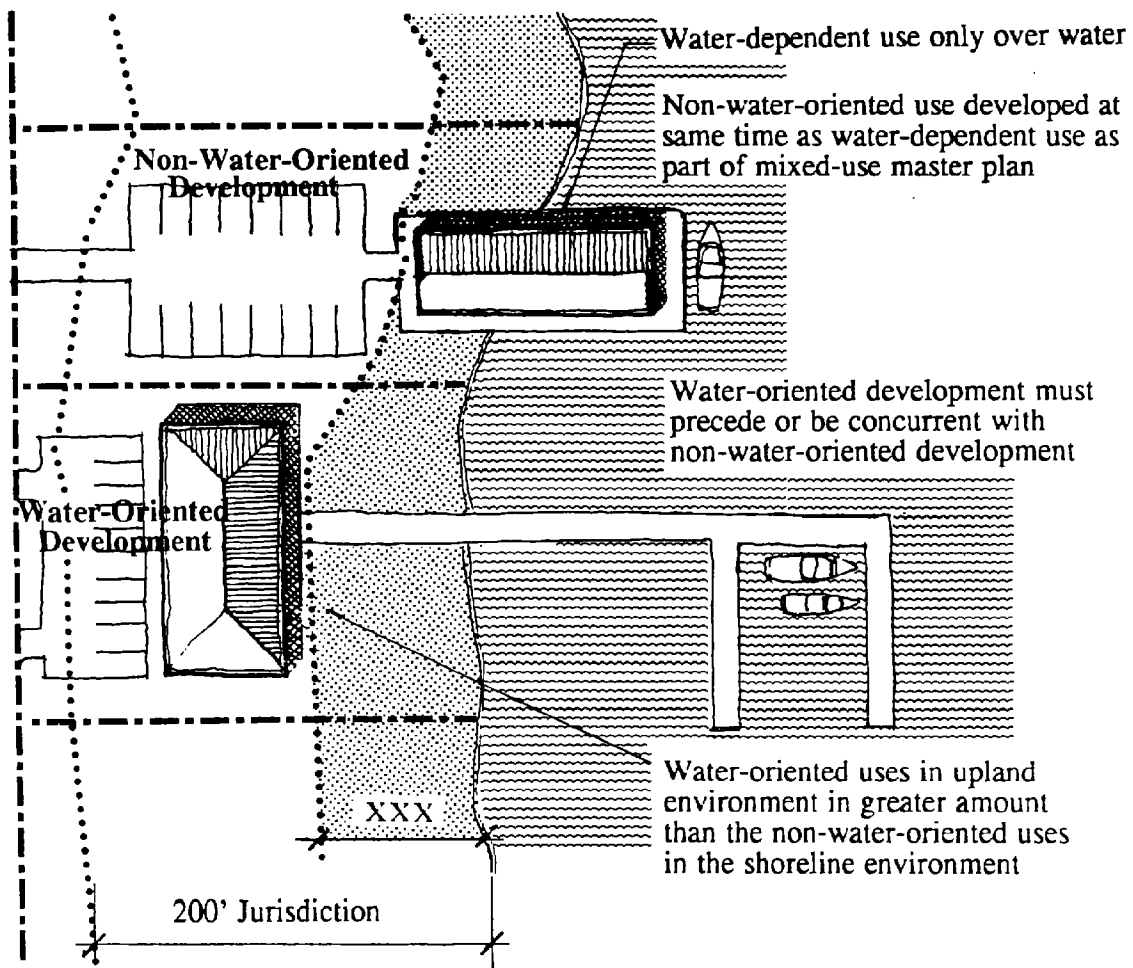


Figure 11-5. Mixed-use provisions allowing non-water-oriented uses if the uses are set back from the shoreline.

- E. Specify where non-water-oriented uses are allowed. Port Townsend has recently formulated a mixed-use development provision for allowing non-water-oriented uses on the interior of an over-water building if water-oriented uses occupy the remainder of the building envelope. A possible regulation might be worded: Non-water-oriented uses not exceeding 15 (e.g.) percent of total building area, are permitted over-water as conditional uses, provided that they are separated from the shoreline, dock or pier by a water-oriented use and a continuous public access pathway (see Figure 11-6).

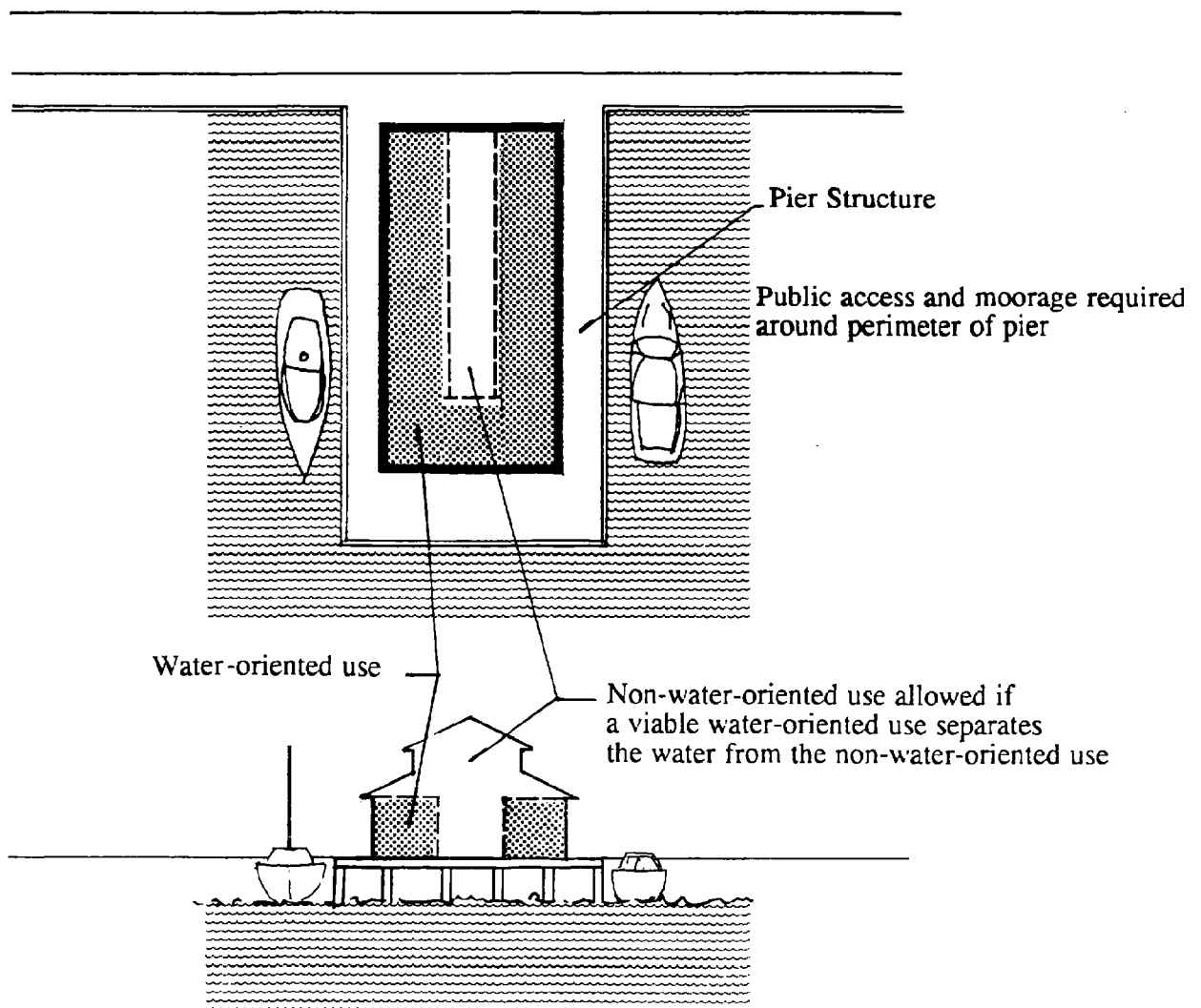


Figure 11-6. Illustration of mixed-use provisions requiring that non-water-oriented uses be separated from the shoreline by public access and a water-oriented use.

- F. **Moorage Requirements.** Reserve moorage space for vessels by specifying the amount and type of moorage facilities for over-water construction. The following moorage requirements are from the Seattle Shoreline Master Program Central Harborfront Environment.

EXAMPLE: CITY OF SEATTLE SHORELINE MASTER PROGRAM

23.60.700 Moorage Requirements

- A. Developments in the UH Environment shall provide moorage on a regular basis either through:
1. Using moorage as an integral part of their operation; or
 2. Leasing their moorage for use by commercial or recreational watercraft; or
 3. Actively advertising the availability of transient moorage.
- B. To facilitate moorage, developments shall provide either:
1. Cleats on the two sides of the pier sufficiently strong for the moorage of vessels 100 feet in length; or
 2. Floats, for moorage of smaller vessels, that are at least 1,800 square feet with a minimum width of 6 feet; or
 3. Alternative moorage facilities providing an equivalent amount of moorage, as determined by the Director.
- C. To facilitate access to moorage, developments shall provide:
1. A pier apron of a minimum width of 18 feet on each side and the seaward end of the pier or wharf; and
 2. Railings and/or ramps designed to permit access to the pier apron or roadway from moored ships and boats.
 3. Requiring a specific amount of moorage space per one 1 square foot of development. Example: At least 50 linear feet of mooring floats or berthing pier with at 20 feet of water depth below MLLW shall be provided per 1000 square feet of gross building floor area.

Site Development Standards for Mixed-use Projects

Since mixed-use projects encourage more intense development and a variety of activities, it is often useful to require special site design standards that further public objectives. Site design standards in the form of conditions on mixed-use projects can relate to public access, height and view blockage, landscaping and environmental protection. Below are listed typical site design standards that should be considered in preparing mixed-use development provisions.

Note: Such standards can be written for any type of development but since mixed-use is essentially a bonus for public benefit, the standards can be more extensive and specific. The requirements below are presented as examples. The numbers and dimensions may or may not apply.

A. Public Access

1. Requiring specific public access elements such as a public pathway 12 feet wide along the waterward perimeter of all over-water structures except where limited by a water-dependent use.
2. Requiring a public access path to the waterward side of all non-water-oriented uses and specifically stating that no non-water-oriented use shall limit the public's ability to access the shoreline.
3. Requiring special facilities for activities such as bicycles, children's play area, etc.
4. Requiring 10 linear feet of public seating per 100 linear feet of shoreline or square feet of required public open space.
5. Requiring 45 percent of the site be retained as public open space or that 25 percent of all over-water structures be public open space, and further requiring the public open space not be separated from the shoreline by buildings or parking.

B. Height, Bulk and View Blockage

1. Requiring that buildings over 35 feet above MHHW be set back 30 feet from the OHWM for every foot above 35 feet and requiring that the setback area be used for public open space.

2. Requiring that all developments with buildings over 35 feet high provide a view corridor from the nearest public street right-of-way (R-O-W) to the water of at least 20 percent of the width of that building as measured parallel to the public R-O-W.

C. Landscaping and Environmental Protection

1. Requiring that significant native (indigenous) vegetation be retained/restored.
2. Requiring that 30 percent of the lot be placed in landscaped open space.
3. Placing landscaping standards on parking lots. (For example: one tree and 150 square feet of landscaped berm with ground cover per every three parking stalls).
4. Screening of all parking lots from the shoreline.
5. Requiring environmental enhancement as an element of development (this should be specific to conditions where mixed-use projects are permitted).

Techniques for Reviewing Mixed-use Projects

Balancing the public benefits and developer advantages inherent in a mixed-use development is often difficult because of the number and complexity of the issues involved. Even specific use formulas for water-oriented uses and site development standards for mixed-use developments are subject to interpretation. Therefore, a special review process for local evaluation of mixed-use projects is recommended. Also, it should be made clear in the policy statements preceding the mixed-use regulations that mixed-use provisions are incentives granting a developer greater flexibility only if he or she meets local government's objectives for providing a public benefit as well as the letter of the requirements. As such, the option for a mixed-use project does not constitute a development "right". The onus is clearly on the developer to meet the requirements as interpreted by the local government during review.

There are three general models for a mixed-use review process described below. Opportunity for public involvement in the decision making should be provided in all of the processes.

Local Review Based on Site Development Proposals

The first model requires that the applicant provide the reviewing body with a preliminary site development plan illustrating how the mixed-use requirements are met. The submittal requirements and review process will vary from government to government depending upon the complexity of the mixed-use regulations. At a minimum, the required submittal package should include:

1. Calculations showing that the percentages or quantities of required uses are met.
2. Schematic plan of public access elements and areas proposed for dedication to public.
3. Parking, landscaping, open space areas in plan.
4. Required setbacks and/or view corridors.
5. Description of uses in enough detail to ascertain that they are water-dependent, water-related, water-enjoyment or non-water-oriented.
6. Other environmental documentation as required by state and local regulations.

The local government can determine the review process for mixed-use regulations under this model so long as the process meets the minimum WAC 173-14 permit processing requirements (see *Shoreline Administrator's Manual*). It may be that the preliminary site review follows a procedure similar to a local planned unit development or special design review district.

Conditional Use Permit

If the local government's mixed-use provisions are designed to allow maximum flexibility or to be adaptable to a wide variety of shoreline conditions, then the review process must give the local reviewing body and the Department of Ecology greater control in negotiating the specifics of the development proposal. This can be done using the conditional use process in WAC 173-14 and described in the *Shoreline Administrator's Manual*. The conditional use permit process requires Ecology review and approval before the permit is granted. Although the conditional use permit takes longer than the normal process, it allows local jurisdictions several advantages.

1. Mixed-use project provisions can be more flexible and allow a greater range of development options.

2. It provides local jurisdictions technical assistance and support from Ecology during review.
3. It enables local jurisdictions to consider mixed-use projects in a greater variety of settings and shoreline conditions.
4. Conditional uses require a public hearing.

Conditional Use Permit Required in Special Situations

Another option for designing a mixed-use permit process is to use the process described in the local review process above, except in specified conditions; for example, on shorelines of state-wide significance or for projects proposing water-enjoyment uses on over-water construction. It is recommended that mixed-use projects require a conditional use permit when:

1. Master program mixed-use regulations are not stated in a specific formula for evaluating quantities and types of uses.
2. Mixed-use projects are allowed in environmentally sensitive areas.
3. Mixed-use projects are allowed in a wide variety of shoreline conditions.
4. Mixed-use projects can allow over-water construction for other than a water-dependent use.
5. Mixed-use projects are allowed in an environment designation that is suitable for maritime industry (see Chapter 10, Promoting Water-oriented Uses.)

Insuring the Permanence of Water-oriented Uses

One of the most difficult problems inherent in a mixed-use project is insuring that the water-dependent, water-related or water-enjoyment use is not abandoned and the space converted to non-water-oriented uses. Although there are no easy ways to enforce the continuance of a water-oriented use that is not economically viable, there are some ways to inhibit the conversion of shoreline space to non-water-oriented uses.

The first method is to state in the master program that those areas reserved for water-oriented uses shall not be used for non-water-oriented use and that

occupancy permits shall not be granted for non-water-oriented uses in designated areas if the conditions of the shoreline permit are not met.

A second enforcement method that falls clearly within the shoreline substantial development permit process is to include a general regulation in the master program that requires all new non-water-oriented development be in conformance with past conditions placed on mixed-use projects on that site. This means that the amount of water-oriented uses required by previous permits must be at a given site if any further non-water-oriented development is to occur.

An important requirement to include with any set of mixed-use provisions is that the water-oriented portion of the project be operational prior to the granting of an occupancy permit for the non-water-oriented use. It is also useful to have any covenants required under the permit recorded as a deed restriction on the title report. This will ensure that the requirements will continue even if the property is sold.

Limitations on Mixed-use Projects

While mixed-use provisions can result in the relaxation of some shoreline master program regulations in order to encourage water-oriented development, there are some shoreline management practices that will not be approved at the state level unless there are extreme and unusual circumstances.

1. Non-water-oriented and water-enjoyment uses shall not be developed over water or in existing structures except as a conditional use subject to Ecology review. (See Chapter 12, Encouraging Waterfront Redevelopment in Special Situations).
2. The priorities of RCW 90.58.020 shall apply to mixed-use developments on shorelines of state-wide significance.

Checklist for Master Program Mixed-Use Provisions

The following outline summarizes the issues that should be addressed in mixed-use provisions and presents options for approaches to addressing them. It is also intended as a summary of this chapter's major points.

- A. Identify where mixed-use provisions apply.
 1. Only in specified locations; (or)

2. Only in specified environment designations; (or)
 3. Only where specified conditions occur; (or)
 4. Combination of the above.
- B. Define use requirements for the quantities and types of uses (water-oriented and non-water-oriented) and geographic and site conditions placed on each type of use.
1. Requirements for water-oriented uses based on:
 - a. Percentage or quantity of a **building's ground floor area** devoted to water-oriented uses; (or)
 - b. Percentage of **land area** devoted to water-oriented uses; (or)
 - c. Maximum percentage of **land area** allowed for non-water-oriented uses plus significant water-oriented development requirements.
- C. Develop moorage capability by:
1. Requiring moorage facilities on all over-water structures; (and/or)
 2. Developing moorage facilities based on a formula for development intensity; (or)
 3. Other.
- D. Set special design standards that increase public benefit from mixed-use projects (when permitted).
1. Additional legally dedicated and maintained public access or open space; (and/or)
 2. Bonuses for environmental enhancement; (and/or)
 3. View protection requirements; (and/or)
 4. Other.
- E. Define the review process which gives the local government control to weigh public benefits and development incentives by:
1. A local special review procedure similar to planned unit development or design review district permit process; (or)

2. A process that requires a formal conditional use permit with Ecology approval required; (or)
 3. A local special review process such as (a) above which requires a conditional use permit if the developer pursues specific options that are of state-wide importance (e.g. non-water-oriented development over water).
- F. Include provisions to inhibit conversion of water-oriented uses to non-water-oriented uses once the project is completed by:
1. Prohibiting occupancy of non-water-oriented uses in areas reserved for water-dependent uses; (or)
 2. Conditioning all future non-water-oriented development on the site contingent on adherence to the requirements of the previous mixed-use permit.
- G. Write policy statements to guide permit review including:
1. Statement that the mixed-use provisions are options for development bonuses based on public benefit and are subject to local government and state review and approval; (and)
 2. Clear, objective statements for mixed-use projects that emphasize uses that require a waterfront location and the significant opportunity for people to enjoy the shoreline; (and)
 3. Criteria for evaluating public benefit of a project based on the goal statements above to be used in evaluating mixed-use permit applications.

CHAPTER 12

Encouraging Waterfront Redevelopment in Special Situations

Introduction

By giving priority to those uses which are dependent upon a shoreline location, the SMA and its supporting WAC 173-16 guidelines discourage non-water-oriented development on the shoreline and mandate restricting over-water construction unless its primary purpose is for water-dependent or public uses. These general restrictions can conflict with local government's waterfront redevelopment efforts. For example, some cities may wish to permit a non-water-oriented hotel or office building on the shoreline to add activity to their central waterfront. In other cases, allowing water-enjoyment uses such as restaurants or resorts over the water would help entice more development into the downtown. This chapter presents some methods for taking advantage of special opportunities for shoreline redevelopment while remaining consistent with shoreline management objectives.

Mixed-use Projects

Mixed-use projects which combine water-oriented uses with non-water-oriented uses are a proven way of increasing shoreline development in urban areas. The concept for mixed-use provisions is that **in return for including water-oriented uses and public access features in the project, the developer is granted special bonuses that allow more intense development, a greater range of non-water-oriented uses or more extensive over-water construction.** In most cases, the non-water-oriented uses subsidize and support the water-oriented activities so that the shoreline management objectives are satisfied. Special SMP provisions encouraging mixed-use projects can be complex and are usually tied to specific sites or opportunities along an urban waterfront. Techniques for preparing SMP mixed-use project provisions are discussed in detail in Chapter 11 of this *Handbook*.

Historic Structures

Historic waterfront structures represent a limited but important group of cultural resources. Older buildings, bridges and industrial elements generally require ongoing maintenance and in many cases, have outlived their original purposes. Unless they can be adapted to new uses, many will likely fall into disrepair. Therefore, it may be appropriate to allow non-water-oriented uses in historic buildings on the shoreline and, in some cases, in historic wharf structures constructed over water.

As a general policy guideline, Ecology will give consideration to master program amendments which permit non-water-oriented use in historic structures provided that the following conditions are met.

- The structures are historic landmarks on the local, state or national registries.
- The non-water-oriented use does not displace an existing water-dependent use.
- The structure is brought up to the maintenance standards and historic restoration required by its registration.
- Adequate public access is established.

An important aspect of this guideline is that, since it applies to a finite number of existing structures with unique circumstances, the policy does not set a

precedent that can be repeated indiscriminately. Also, this policy is consistent with the Washington State Department of Natural Resources' WACs governing lease conditions.

Constrained or Unusual Shoreline Areas

In many cities, the shoreline is separated from the downtown by train tracks, steep cliffs or freeway viaducts, constraining the usefulness of the property. In these cases, development of the waterfront for water-oriented uses is severely limited by access and buildable area and yet the shoreline may represent an untapped resource near a large population of potential users. Where the creation of new land or over-water uses would result in greater public enjoyment of the shoreline through water-oriented uses and public access, Ecology may consider master program conditional use provisions that permit creating land or over-water construction for a variety of shoreline uses. The local governments wishing to redevelop such a shoreline should confer with Ecology Shorelands staff regarding the possibility of preparing more inclusive use provisions.

In order to be considered favorably by Ecology, provisions for over-water construction or landfill on urban shorelines for other than water-dependent uses must demonstrate that:

1. Urban shoreline use will be severely limited by physical conditions unless the provisions are enacted.
2. There will be no significant negative environmental impact or loss of resources resulting from proper enforcement of the provisions.
3. The provisions further the local government's urban redevelopment plans and are complemented by capital improvements such as roads and utilities to support the new development.
4. The development will not displace current water-dependent uses or preclude future water-dependent uses.
5. There will be a net public benefit from projects permitted by the proposed provisions.
6. The provisions are applicable only to a specific location or section of shoreline.

All uses proposed for over-water construction or on new fill, other than water-dependent uses, should be permitted only as conditional uses. Mixed-use provisions that require inclusion of water-oriented uses in a project may be a useful method to frame regulations that give developers and local governments more latitude in areas that are difficult to develop.

Central Waterfront Redevelopment Districts

The central waterfronts of many Washington communities represent excellent sites for civic revitalization efforts. Often, the maritime industrial uses have moved away from the central harborfront due to lack of space, changes in the industry or restricted access, leaving the urban shoreline underutilized. With the new emphasis on revitalizing downtowns through public improvements and high amenity multi-use development, central waterfronts in cities ranging in size and character from Seattle and Everett, to Aberdeen, Oak Harbor and the Tri-Cities are seen as key opportunities for recreational, commercial and civic development.

WAC-173-16-040 supports intense mixed-use shoreline redevelopment in urban environments so long as priority is given to water-oriented uses and public access. However, there are many instances where intensive urban redevelopment can conflict with shoreline management principles. Some examples are:

- Displacing water-dependent uses with non-water-oriented commercial development.
- Constructing extensive parking in the shoreline jurisdiction to serve commercial uses.
- Developing exclusive water-enjoyment uses or non-water-oriented uses over the water.
- Developing residential communities on the water that will ultimately conflict with nearby recreational or maritime industrial uses.
- Destruction of shorelines and shallow water habitat and vegetation.

If master program provisions are prepared specifically to resolve apparent conflicts between high intensity development and general shoreline management principles, then greater site planning flexibility can be achieved, potentially resulting in more attractive shoreline development that offers greater shoreline use and benefit to the public.

The recommended approach to promote greater flexibility in master program provisions for revitalizing central waterfronts is the designation of a special shoreline environment such as an "urban central harborfront" or "urban redevelopment" environment for the redevelopment area and to prepare regulations in that designation that deal specifically with the key issues listed above. The following sections discuss concepts for dealing with use, regulations and site development standards for an urban environment designation encouraging intense multi-use redevelopment.

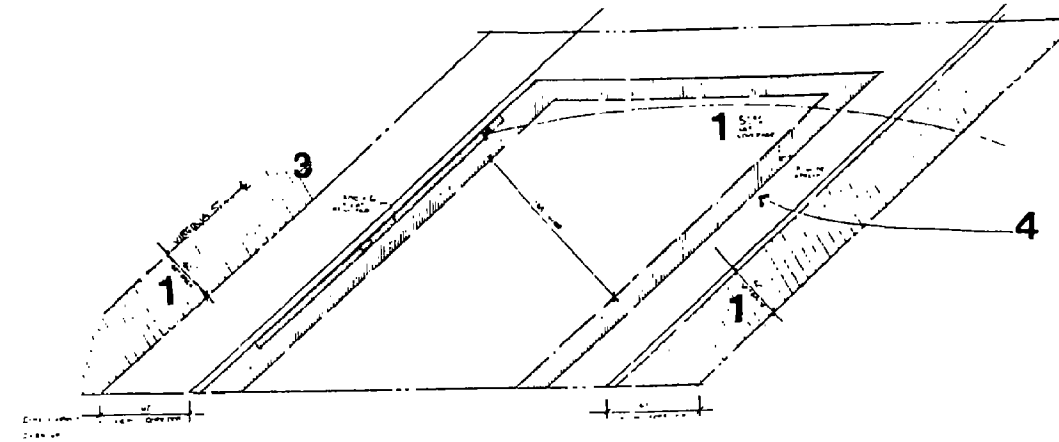
Water-dependent Use Regulations

Use regulations in an "urban redevelopment" environment must still address the WAC guideline giving priority to uses that require waterfront locations or that offer people the opportunity to enjoy the shoreline. This can be done in several ways.

1. By comprehensively planning the city's urban shoreline resources and designating specific areas for maritime industrial uses. Seattle has used this technique effectively by creating six separate urban environments with varying water-dependency provisions. On the central waterfront, where space and access constraints limit industrial activities, the SMP does not require water-dependent uses but does require moorage facilities on over-water construction (see Figure 12-1).

In order to relax requirements for water-oriented and water-enjoyment uses on the shoreline, the local government should be prepared to demonstrate that a shoreline suitability analysis and comprehensive planning effort has reserved suitable shoreline areas for maritime uses and/or the shorelines in urban redevelopment environments are not suitable for water-dependent industry (see *Handbook* Chapter 10, Promoting Water-oriented Uses).

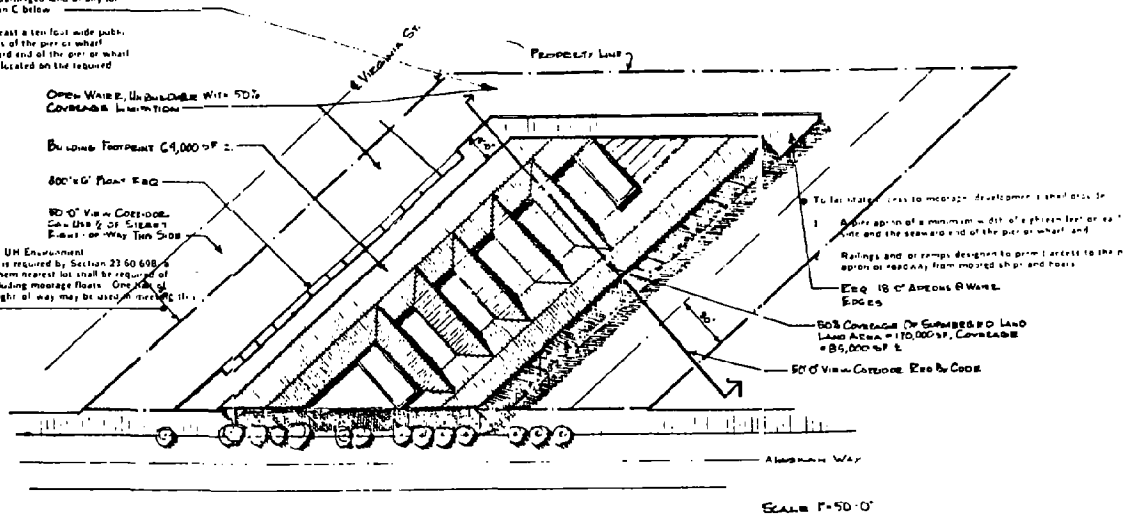
2. Through mixed-use project provisions, mixed-use projects that combine water-oriented shoreline uses with non-water-oriented uses can add interest and diversity to a waterfront. Chapter 11 discusses techniques for preparing mixed-use SMP requirements.
3. Permitting non-water-oriented uses in registered historic structures as discussed in the section above.
4. Focusing on water transportation. Passenger ferries, shuttle boats, tour services and float planes are becoming more attractive transportation options as Washington's ground transportation links become more clogged. Redevelopment districts in urban areas should accommodate this future need.
5. Providing transient moorage and/or public fishing piers.



Buildable Area One Parcel

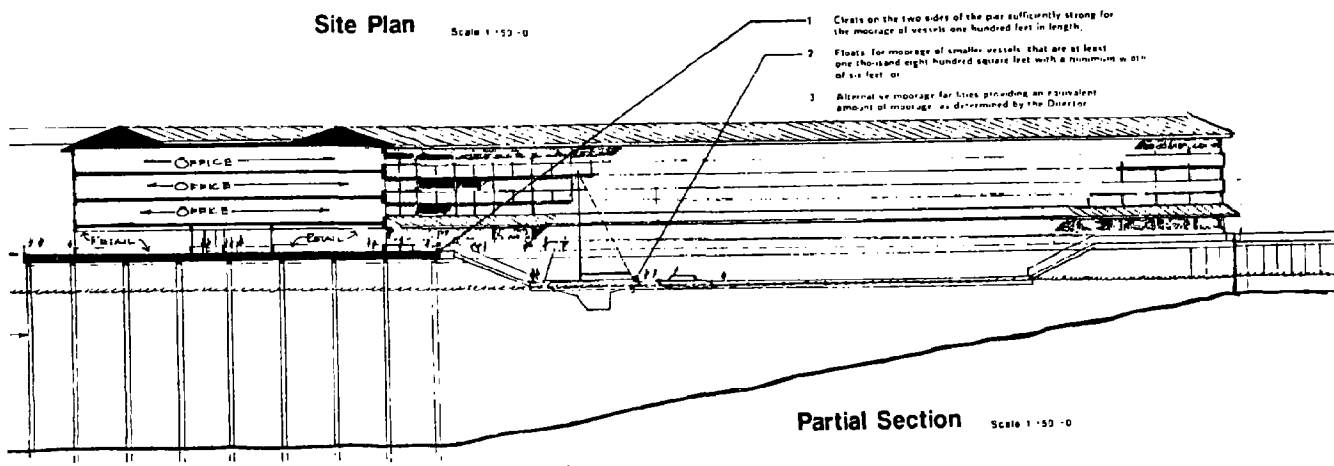
Scale 1" = 50'-0"

- 1 Structures, including floats and piers, shall not occupy more than fifty percent of the submerged land of any lot except as modified by Subsection C below.
- 2 Developments shall provide at least a ten-foot wide public access walkway along two edges of the pier or wharf including as one edge the seaward end of the pier or wharf. The required walkways may be located on the required eighteen-foot pier apron.



Site Plan

Scale 1" = 50'-0"



Partial Section

Scale 1" = 50'-0"

Figure 12-1. Seattle's Master Program allows over-water, non-water-oriented uses on the central waterfront as it has reserved other areas for water-dependent uses and required moorage and public access on all piers.

Parking

Extensive parking to serve public uses is often a necessary evil on shorelines, especially where easy public access from the city center is blocked by distance, steep grades or physical barriers. Parking requirements in redevelopment districts should be based on a careful study of real, not perceived, needs. Before extensive parking is developed, the following alternatives should be evaluated:

1. Transit service/shuttle bus;
2. Water transportation;
3. Improved pedestrian links to upland parking; and
4. Joint-use parking (e.g. parking for offices during the week, and a boat launch, marina or park during the weekend). In fact, joint-use parking opportunities can be a motivation for mixed-use development.

Parking in shoreline jurisdiction should be limited to accessory use parking for permitted uses only. Where possible parking should be built on the landward side of structures and well-screened.

Over-water Uses

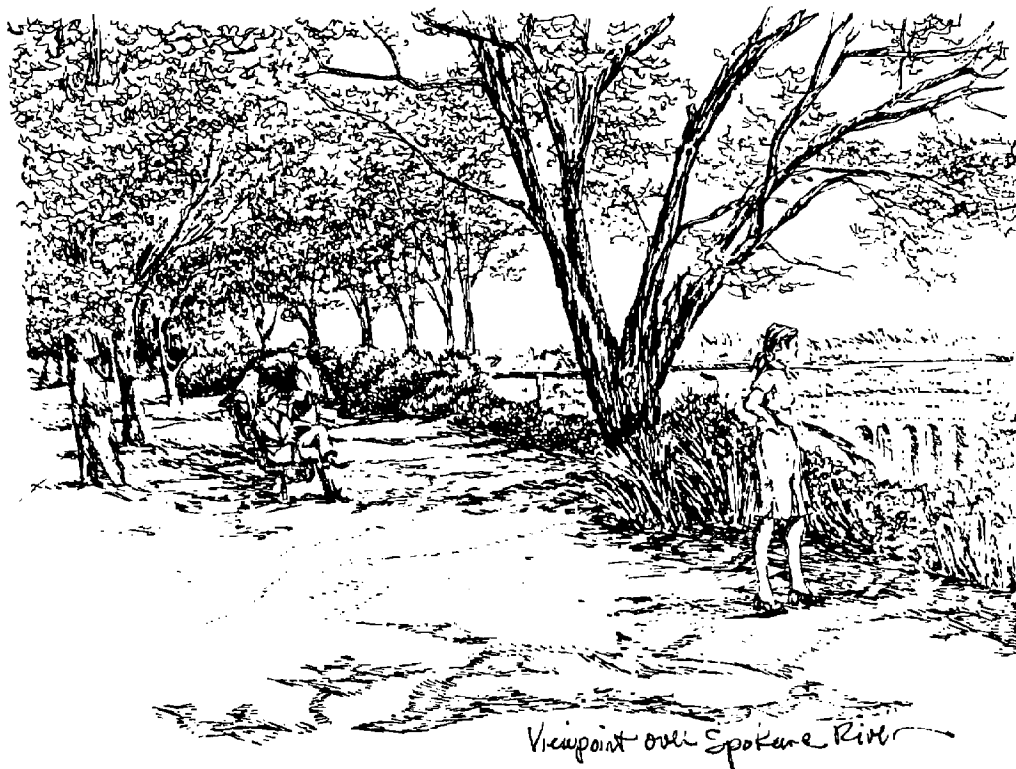
There may be limited sites on the central waterfront where permitting water-enjoyment uses over the water can realize significant public benefit, especially where these uses are tied to a comprehensive public access and/or water transportation system. Ecology may consider water-enjoyment uses over water as a conditional use if the location and conditions for approval are clearly stated. The public benefit of such a provision and the specific reasons for allowing over-water construction must be clearly identified. Impacts to shallow water habitat must also be considered. Special public access features or free transient moorage may be required as a condition in exchange for over-water construction.

Public Access

A public access system and a mix of recreational facilities are essential ingredients in any successful central waterfront revitalization. SMP provisions should include specific public access requirements for all development in redevelopment districts, especially water-enjoyment and non-water-oriented uses. Figure 12-2 illustrates an example of specific public access provisions with landscaping and pedestrian use standards. Another provision that should

be added is "Developments with non-water-oriented and water-enjoyment uses must not prevent public access to the water and must provide continuous public access between the use and the shoreline."

Creative public access provisions should be explored that require specific public access improvements for large-parcel development such as plazas, artwork, viewing areas, interpretive kiosks, etc. This is most effectively done when tied to a comprehensive public access plan (see Chapter 3, SMP Amendment Process and Chapter 17, Public Access). The use of off-site public access mitigation improvements or funds represents another opportunity for implementing waterfront redevelopment district public access improvements. Many communities require port districts to provide public access on new development projects. Sometimes the operations or location of large industrial facilities such as log storage yards or container terminals preclude useful public access. In this case, the public access requirement can be transferred to another site such as a waterfront park or central waterfront area. Port-funded view towers, esplanades, interpretive displays, decks or other amenities in a redevelopment district can be an effective way to accomplish public access objectives, especially when there is a conceptual link to port activities, such as a view of the working harborfront, interpretive display or other public information element. However, off-site access should be used only when on-site access is not an option (see Chapter 17, Public Access).



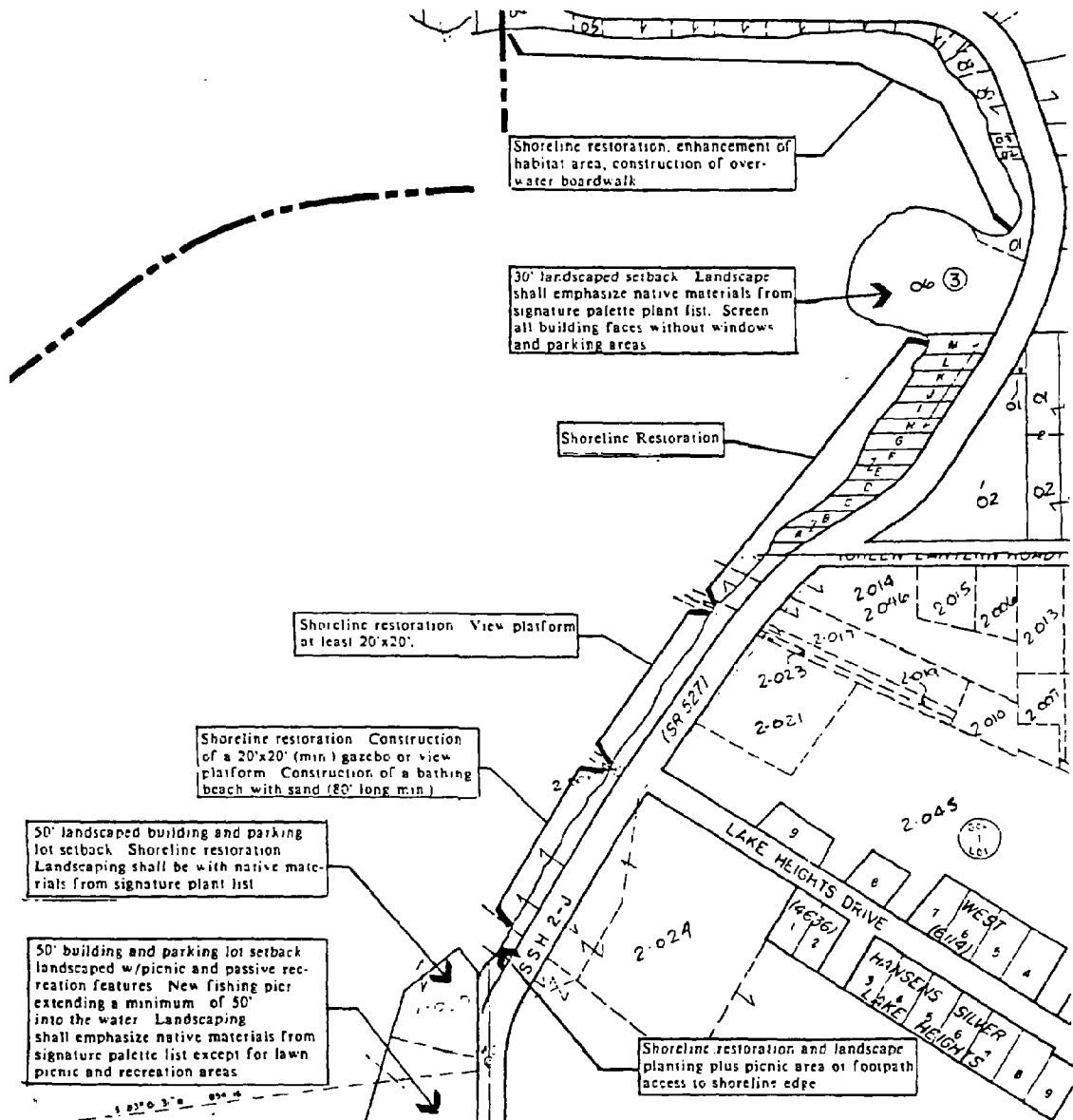


Figure 12-2. Example of site specific public access improvements as a condition of substantial development permits.

CHAPTER 13

Riparian Corridor Management

Introduction

Rivers and lakes differ from coastal shorelines in several respects that create special issues and call for unique shoreline management techniques. Because rivers form linear corridors, they are especially important ecological systems linking habitats as well as providing migrating routes for wildlife. Rivers often are the spine of larger ecosystems of associated wetlands, river valleys and estuaries. The same linear configuration which makes rivers so valuable also renders them especially delicate because the connecting habitat corridor can be broken at any point and pollution or environmental degradation anywhere along its course can have an effect throughout the system. Lakes are equally sensitive as links within a larger river system or as diverse ecosystems that provide a focus for surrounding areas.

Development pressure is increasing along many of the state's river corridors. Effective river-oriented shoreline management and environmental protection is especially critical in eastern Washington. Communities east of the Cascades are experiencing increased and rapidly changing development trends.

- Large scale recreational and resort development, particularly on the Columbia, Snake and Spokane rivers;
- Increased residential and retirement community development oriented to river shorelines;
- Growth of port district development; and
- Use of riverfronts as the focus of civic revitalization efforts in cities such as East Wenatchee, Clarkston, Tri-Cities and Spokane.

Coupled with this increased development pressure is the fact that the river courses in dryer climatic zones are especially critical wildlife habitat corridors. Hundreds of the state's vertebrate species are dependent upon the riparian environment for their food, weather protection and cover. Moreover, the river corridors support an integrated ecosystem of codependent plant and animal communities.

This chapter describes special considerations and techniques for preparing master program regulations for river corridors and includes "special tips" for this process and "recommendations" for key regulatory topics.

Determining Shoreline Jurisdiction

The Shoreline Management Act requires local governments to define shoreline jurisdiction along rivers in either of the two ways below.

1. The area 200 feet from OHWM or floodway whichever is greater plus all wetlands (marshes, bogs and swamps) in the 100-year floodplain (see Figure 13-1, Option 1);
2. All or any portion of the 100-year floodplain as long as it includes all of those areas falling within Option 1 above (see Figure 13-1, Options 2 and 3).

Figure 13-1 illustrates the floodway and the floodplain and these options. Option 1 represents the minimum amount of area that may be included within shoreline jurisdiction.

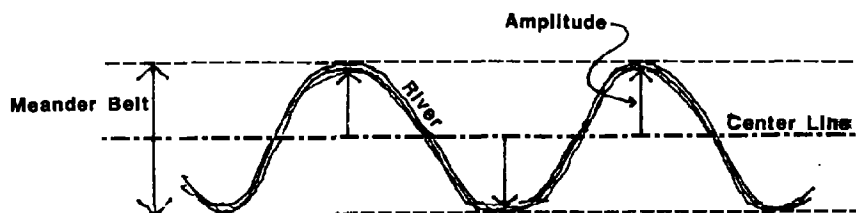


Special Tip

Including the entire 100-year floodplain in shoreline management jurisdiction has the following advantages:

- *Accommodates complete meandering river ecosystems so that changes in the river bed itself will not affect jurisdictional boundaries*
- *Automatically places shoreline management protection on the land areas surrounding wetlands in the floodplain. This allows greater control of the wetland edges, linkage to the water body or drainage system, water quality and quantity entering and exiting the wetlands.*
- *Does not immediately require as extensive inventory of wetlands because each substantial development in the floodplain must apply for a shoreline permit. At that time, a specific wetland analysis can be required.*
- *Allows more comprehensive shoreline management of the entire floodplain.*
- *Carries the legal and administrative status associated with a state regulation, including the attendant support with respect to the public trust doctrine, public access and funding sources.*

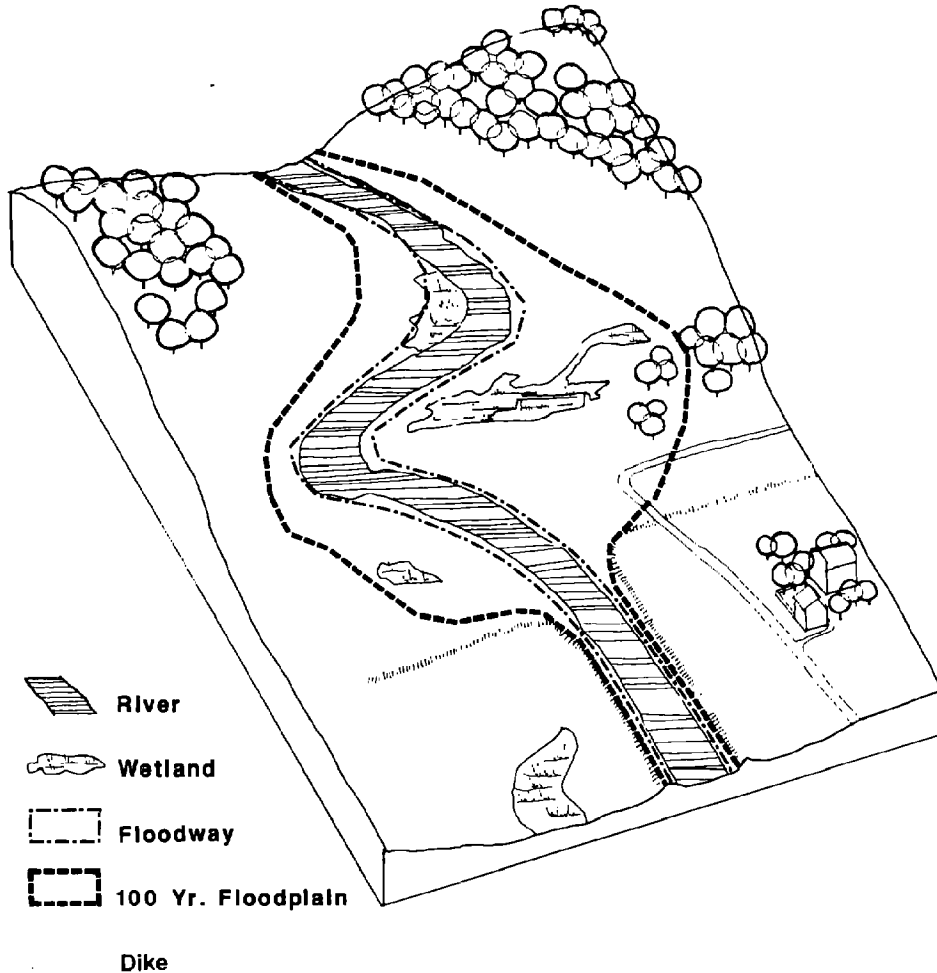
Limiting shoreline jurisdiction to the 200-foot floodway and all associated marshes, bogs and swamps, which will include wetlands in the 100-year floodplain, requires that wetlands in the floodplain be inventoried and recorded so that the shoreline jurisdiction be established and sensitive areas identified. Permit applications in the floodplain can then be evaluated quickly as to whether or not a wetland will be affected by the proposed development. The major advantage of this option is that proposed developments that do not include wetland areas and which are not within 200' of the floodway do not require a shoreline permit, although such projects may require flood permits and SEPA review.



River Meander Belt.

Figure 13-1. Options for determining shoreline jurisdiction on rivers (Page 1 of 4).

FLOODWAY & FLOODPLAIN BOUNDARIES

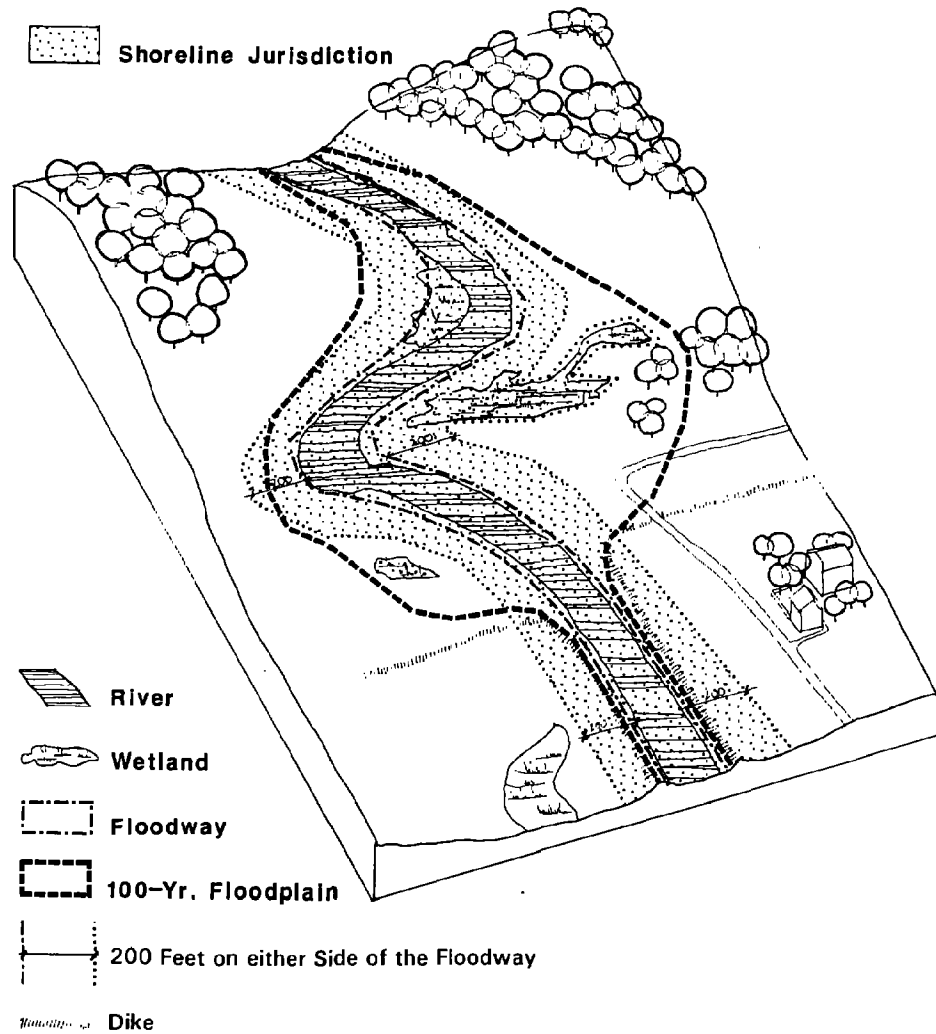


Floodplain is synonymous with 100-year floodplain and means that land area susceptible to being inundated by stream derived waters with a one percent chance of being equaled or exceeded in any given year. The limit of this area shall be based upon flood ordinance regulation maps or a reasonable method which meets the objectives of the SMA (WAC 173-22-030 (2)).

The floodway is those portions of the area of a river valley lying streamward from the outer limits of a watercourse upon which flood waters are carried during periods of flooding that occur with reasonable regularity, although not necessarily annually, said floodway being identified, under normal conditions, by changes in surface soil conditions or changes in types or quality of vegetative ground cover conditions. The floodway does not include 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. The limits of the floodway are based on flood regulation ordinance maps or by a reasonable method which meets the objectives of the SMA (WAC 173-22-030 (3)).

Figure 13-1. Options for determining shoreline jurisdiction on rivers (Page 2 of 4).

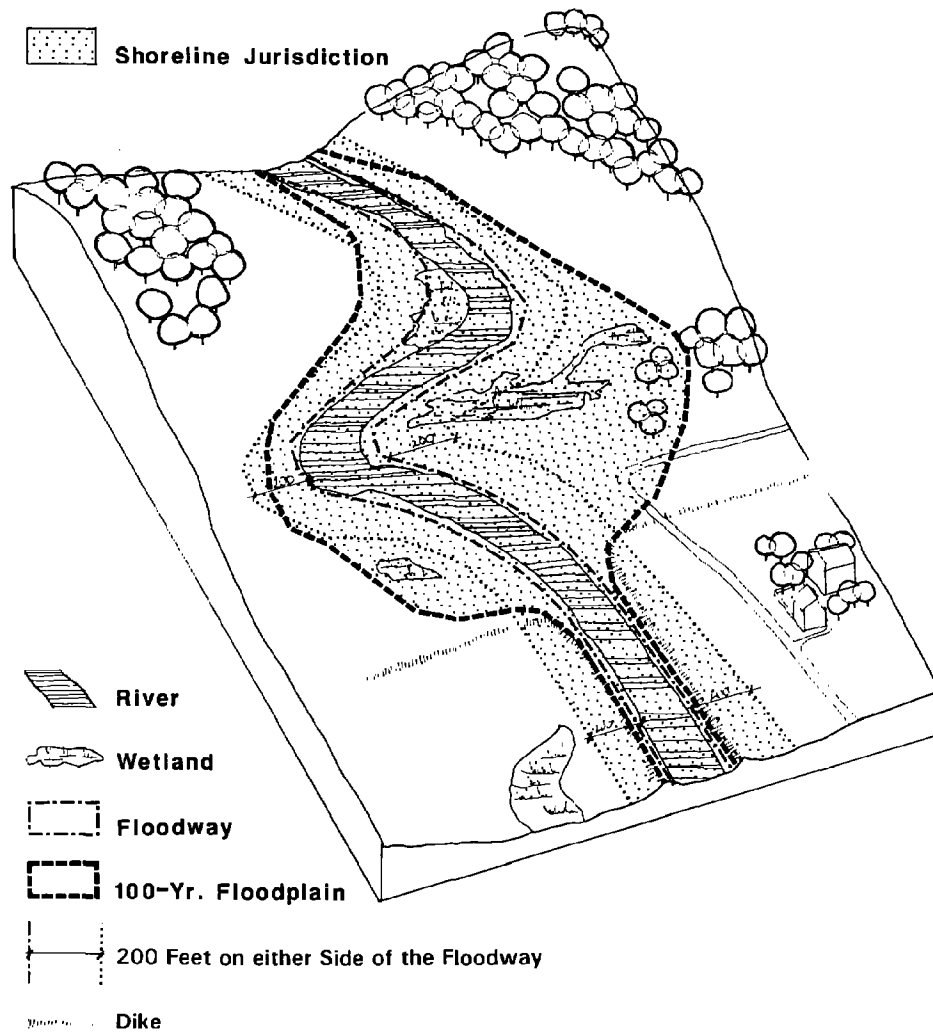
OPTION 1



Shoreline jurisdiction includes all lands within 200' of floodway or OHWM (whichever is greater), plus all marshes, bogs and swamps in the 100-year floodplain.

Figure 13-1. Options for determining shoreline jurisdiction on rivers (Page 3 of 4).

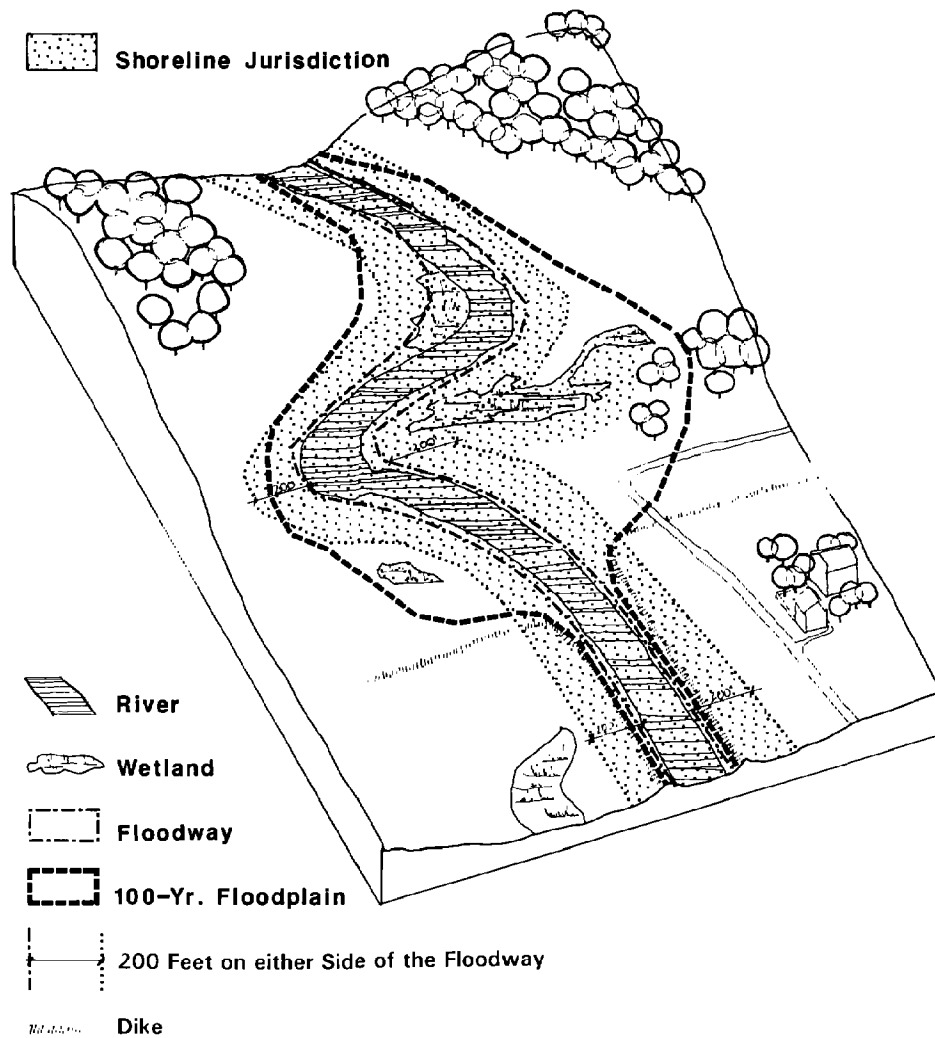
OPTION 2



Shoreline jurisdiction includes all lands within 200' of floodway or OHWM (whichever is greater), plus the entire 100-year floodplain.

Figure 13-1. Options for determining shoreline jurisdiction on rivers (Page 4 of 4).

OPTION 3



Shoreline jurisdiction includes all lands within 200' of floodway or OHWM (whichever is greater), all marshes, bogs and swamps in the 100-year floodplain, plus other portions of the 100-year floodplain as designated by the local government

From a holistic perspective, planning for the entire floodplain makes the most sense when natural systems such as wetlands and wildlife habitat areas are interconnected by drainage ways and ground water aquifers.

Since the SMA allows the inclusion of any or all of the 100-year floodplain within shoreline jurisdiction, in addition to the 200-foot strip plus all floodplain wetlands, there are other possible jurisdictional configurations that may be advantageous. For example, a local government may elect to include a buffer strip of specified width around all floodplain wetlands for greater protection. Another approach would be to include specified drainage systems that are critical for water quality or flood control. Finally, strips of land between wetland areas and the river corridor could be placed within shoreline jurisdiction to serve public access. See Figure 13-1 (option 3) on previous page.



Special Tip

Measuring Stream Flow: Urban development can increase runoff into streams, increasing their peak flow. In some cases, this can bring new streams within the 20 cfs flow criteria for inclusion within shoreline management jurisdiction. There may also be streams that have not had an accurate flow measurement. If there is a question whether or not a stream meets the 20 cfs flow requirement, the local administration should contact the Washington State Department of Ecology Shorelands Program to request a stream flow analysis, (the Department has contracted with the U.S. Geological Survey for a long-term study to reevaluate all 20 cfs points on watersheds throughout the state. This project should be completed in the mid 90s).

Physical Criteria for Boundary Determination: If there is a question of whether or not a lake or river shoreline is within shoreline management jurisdiction, the physical criteria for shoreline designation stated in WAC 173-18 and -20 prevail over other forms of boundary determination. This means that if a shoreline or wetland meets the criteria of these WAC chapters, then it is within SMA jurisdiction.

Finding the Ordinary High Water Mark: The "ordinary high water mark" (OHWM) is defined in RCW 90.58.030 as "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." Thus, the OHWM is determined by visual inspection of the river bank and can move as the river course changes over time (see Shoreline Administrator's Manual, Chapter 3, Determining SMA Jurisdiction Boundaries).

Floodways Referenced as Shoreline Boundaries: Sometimes a diked or mapped floodway is used as the boundary from which the 200-foot shoreline area is measured. In order to qualify as the edge of a floodplain and floodway, a dike must extend at least as high as the 100-year flood elevation plus 3 feet (FEMA requirement).



"Herb, you left your OHWM around the tub again!"

Coordination with Fisheries Regulations and Forest Management Practices

The Washington State Department of Fisheries and Wildlife should be contacted so that provisions for protecting or enhancing streambed and fisheries habitats can be consistent with its policies.

The Washington State Forest Practices Rules and Regulations (Chapter 222-30-020 WAC) calls for the establishment of a "Riparian Management Zone" (RMZ) defined as a specified area along Type I waters (by definition these are shorelines of the state) and other smaller water bodies. Forest practice regulations set out specific measures that are to be taken to protect water

quality and fish and wildlife habitat, including the retention of a specific quantity and type of trees. WAC-222-30-020 through -060 includes shoreline protection regulations. The guidelines for calculating the average width of an RMZ for Type I waters states that the RMZ must average a minimum of 50 feet in width from the shoreline.

Public Access and Recreational Development

As mentioned above, rivers are increasingly becoming the focus of recreational development. The Shoreline Management Act explicitly lists as priority uses public access and those activities that allow individuals to enjoy the shoreline. However, it places a higher priority on preservation of natural resources, particularly along shorelines of state-wide significance. In some areas, parks, shoreline trails and other features can be developed without impacting the natural shoreline environment. In other cases, trails and park amenities must be set back from the shoreline to protect sensitive habitats. The shoreline inventory should identify those sections of the shoreline where trails and other public access features can approach the water's edge without causing harm. Provisions should be included to close sensitive habitat areas during breeding or spawning periods, and for general revitalization, if necessary. The regulations for environment designations should set standards for public access along specific sections of the shoreline.

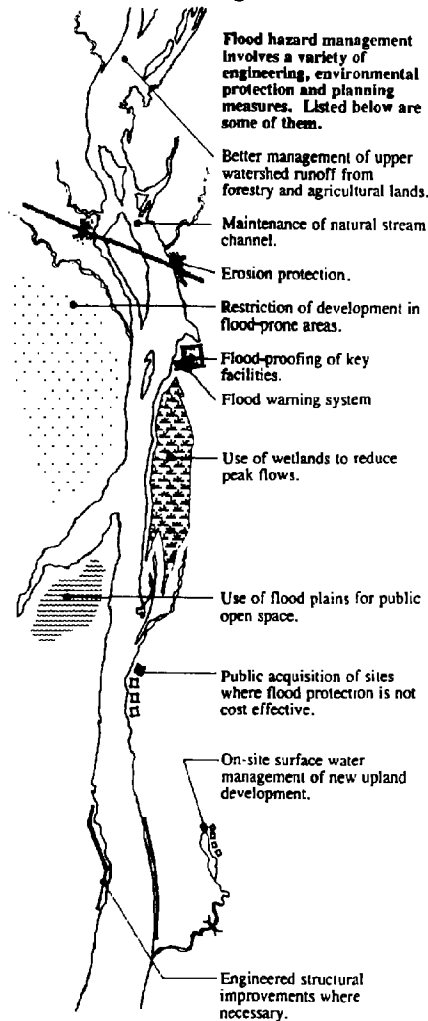
Floodplain Management

In recent years Washington's state and local governments have focused increased attention on floodplain management. Severe flooding and rapid development have made citizens and public officials more aware of the interrelated and difficult challenges as well as the critical importance of flood damage protection, stormwater management, resource protection and comprehensive planning. The focus must be on managing the hazards that are related to flooding since realistically it is impossible to strictly "control" floods. The State of Washington has enacted state statutes establishing programs to assist local governments in undertaking flood hazard management activities.

In 1991, the Department of Ecology published the handbook titled *Comprehensive Planning for Flood Hazard Management* which presents a framework for floodplain planning and numerous resource management and shoreline mitigation recommendations relevant to preparing SMPs for rivers. The handbook stresses an ecologically sound approach to flood hazard

management that emphasizes nonstructural methods including land use controls, flood-proofing and on-site stormwater management practices. *Comprehensive Planning for Flood Hazard Management* also discusses the planning techniques to satisfy Chapter 86-16 RCW (minimum requirements of the National Flood Insurance Program) and Chapter 86.26 RCW (Flood Control Assistance Account Program [FCAAP]). Procedures to combine FCAAP and CZM funds to better integrate flood hazard management and shoreline management are presented. Cities and counties preparing for SMP updates for rivers and floodplain shorelines are encouraged to contact the Department of Ecology Shorelands Program to obtain a copy of *Comprehensive Planning for Flood Hazard Management*.

Flood Hazard Management Activities



Comprehensive flood hazard management measures.

Chapter 86.16 RCW requires local governments to prepare floodplain regulations which meet the minimum requirements of the National Flood Insurance Program (NFIP) and Chapter 86.16 RCW. Local governments submit their floodplain regulations to the Washington State Department of Ecology for approval. Local requirements may meet or exceed the State's minimum floodplain regulations. Nearly all jurisdictions within floodplains have adopted the minimum floodplain regulations.

The Washington State Flood Control Assistance Account Program (established by Chapter 86.26 RCW) provides grants to local governments for comprehensive flood hazard management planning and maintenance projects. Completion of a state-approved Comprehensive Flood Control Management Plan (CFCMP [a.k.a. Comprehensive Floodplain Management Plan or Comprehensive Flood Hazard Management Plan]) as per Chapter 173-145 WAC is required to continue to be eligible for FCAAP funds for maintenance projects. The Plan's goal is to reduce the hazards of flooding. Plans typically include technical data on the watershed, location and identification of specific flood problem areas, description of flood damage history, description of potential flood damages, a thorough assessment of alternatives including an analysis of environmental impacts and an evaluation of solutions and prioritized recommendations (see Chapter 173-145 WAC for a complete description of required plan elements).

Comprehensive Flood Hazard Management Plan

Local governments will find information developed in the Comprehensive Flood Control Management Plan (referred to as "Plan" in this section) helpful in determining appropriate shoreline jurisdiction and shoreline designations. Plans (prepared pursuant to Chapters 86.16 and 86.26 RCW) may also serve as a basis for the updating or amendment of existing SMPs, particularly for rivers. A 1991 amendment to the SMA establishes a new element for master programs. Chapter 90.58.100 (h) RCW requires an element that gives consideration to the state-wide interest in preventing and minimizing flood damage. A Plan can express the symbiotic relationship between the FCAAP process and the local SMP. The comprehensive floodplain management plan process, with its emphasis on flood hazard reduction, can provide an important conceptual framework and technical base for developing local SMPs. Conversely, the local SMP is a strong regulatory tool in reducing flood hazards through managing uses within the floodplain. Furthermore, the state statutes encourage coordinated integration of and require consistency between floodplain management and shoreline management.

In the past, conflicts have arisen from floodplain management planning's emphasis on structural flood control measures (for example, dikes, levees and flood walls). These measures were often contrary to shoreline management's emphasis on resource management. The FCAAP program's shift in emphasis to a comprehensive balance between structural and nonstructural measures (flood-proofing, development restrictions in floodways, etc.) reduces the likelihood of this conflict continuing to occur.

Human use of rivers and floodplains encompasses a broad range of environmental, public and private objectives. Floodplain management seeks to incorporate the full range of comprehensive planning tools to achieve those objectives, including the following:

1. Shoreline master program regulations that restrict inappropriate development and encourage compatible land uses.
2. The acquisition of flood sensitive areas for compatible land use such as low impact recreational activities and wildlife habitat.
3. Land use zoning and site development standards that are responsive to flood protection issues such as the requirement for on-site detention/retention systems.
4. Forestry management and agricultural practices that reduce runoff and attenuate peak flows.
5. The use of existing dikes and levees for recreational trails and public access to water as part of park and recreation plans.
6. Designing transportation facilities to reduce their impact on the watershed.
7. Protection and creation of wetlands for stormwater storage and biofiltration as well as fish and wildlife habitats.
8. Stormwater management planning that requires individual or cooperative retention/detention systems.
9. Carefully designed structural flood control projects that reduce, as much as possible, negative impacts to adjacent shorelines and other public objectives.
10. Retrofitting/flood-proofing of existing structures.

Consequently, comprehensive floodplain management planning provides an excellent framework to systematically address those elements of other planning activities normally carried out by local governments.

Flood Hazard Management and Local SMPs

For the past 20 years, the SMA has proven to be an effective tool in protecting, utilizing and enhancing Washington State's shorelines. Coordination between a local SMP and its corresponding Comprehensive Flood Hazard Management Plan (CFHMP) is crucial and advantageous for several reasons:

- SMP provisions should regulate flood control projects to insure that they do not detract from SMA goals.
- An SMP can be a strong regulatory tool in controlling flood-exacerbating development in the floodplain.
- Flood hazard management is an important concern in writing SMP provisions, with shoreline use, resource protection and environmental quality important shoreline management goals to factor into a CFHMP.

Shoreline master planning mirrors comprehensive floodplain management planning in both process and concept. Both involve public participation, inventory of existing conditions, goal setting, exploration and analysis of alternatives, and both processes are comprehensive in nature.

Local governments may find it both efficient and cost effective to adopt a joint approach to shoreline and floodplain management planning. Coastal Zone Management (CZM) funds for preparing SMPs can be combined with FCAAP funds so that the work for both a CFCMP and an SMP update can be undertaken concurrently. This gives local jurisdictions a fiscal as well as a strategic reason to coordinate programs. Local agencies are encouraged to consult with Ecology staff on joint-funding opportunities.



Shoreline Master Program Issues

Comprehensive nonstructural flood hazard management techniques, including local flood hazard ordinances, acquisition of flood-prone properties, resource management regulations and environmental protection measures dovetail nicely with the requirements and intent of local SMPs.

Consequently, SMPs should include the following elements related to flood hazard management.

1. State where structural flood hazard management measures are allowed or prohibited; and, under some circumstances, set standards for specific locations (see *Handbook* Chapter 7, "Flood Hazard Management").
2. State standards for riparian vegetation management (see *Handbook* Chapter 5, "Clearing and Grading").
3. Restrict development in floodplains. There are several ways to address this issue. The most powerful is to set the master program use regulations in accordance with strong flood hazard control practices. The Growth Management Act mandates the protection of frequently flooded areas through development regulations, of which the SMP is one example (see ESHB 1025 Section 21).
4. Allow only flood-compatible uses in flood-prone areas.
5. Encourage a variety of stormwater management techniques and measures (on-site, subregional, regional) (see the Department of Ecology's *Stormwater Management Manual for the Puget Sound Basin*).
6. Clearly favor nonstructural methods such as land use controls, natural retention systems and upland on-site runoff control measures over diking, flood walls and other engineering solutions that destroy the natural hydrological and biological processes.
7. Set standards for flood control projects to minimize their impacts.
8. Call for the shoreline management objectives to be included in all flood control planning and stormwater management programs.
9. SMP administrative procedures should have clear, concise language addressing flood control projects or actions which require permits or are specifically exempted from the substantial development permit process (e.g. maintenance, repair and emergency work).



Special Tip

Flood control construction that enlarges a dike or other structure, substantially alters a stream course or removes significant vegetation goes beyond the definition of repair and maintenance and should be subject to the permit requirements of the shoreline master program.

Recommendations for Master Programming Riparian Systems

1. Master programs should clearly describe SMP jurisdictional boundaries. The local government should prepare a map delineating shoreline jurisdiction. If the shoreline jurisdiction is established at 200 feet from the OHWM (or floodway) plus all marshes, bogs and swamps in the floodplain, then all marshes, bogs and swamps in the floodplain should be identified and mapped.
2. Parallel environmental designations and strict setback requirements for development and altering vegetation should be used to protect significant habitat corridors. Parallel environment designations are preferred as a means of providing stronger, more continuous protection and should be used for sensitive riparian corridors, especially east of the Cascades and on shorelines of state-wide significance. However, precise clearing and grading regulations, and riparian vegetation management regulations should also be incorporated in the SMP to protect the riparian corridor.
3. Public access should be encouraged along riparian systems but not to the detriment of environmental quality. Public access and shoreline recreation plans should include environmental analysis to insure that damage to habitat areas does not occur.
4. Public access should be a condition of all large-scale development e.g. residential, commercial, recreational, resort and golf course projects.
5. Master programs for river shorelines should include provisions specifying that structural flood control measures are a conditional use based on need and the lack of alternative nonstructural flood control techniques. Channeling and flood walls should be permitted only where natural flood control measures and restrictions to development on the floodplain are not an option.

6. Use regulations should specify preservation and/or establishment of native vegetation for all erosion control and shoreline modifications, including revegetation and landscaping within a specified setback determined from environmental analysis. This can be most effectively done through parallel environment designations. The preservation and/or revegetation with native plant materials within the parallel designation should be a condition of all permits on shorelines of state-wide significance, and for most permits along the immediate shoreline state-wide. This approach reinforces both the high-priority preferred uses protecting the natural character, resources and ecology of shorelines and the restoration goals for degraded shorelines.
7. Riparian management zones and policies as well as fisheries and wildlife habitat protection measures should be identified during the process of updating master programs by coordinating with the applicable state and federal agencies.
8. All shorelines within national forests, and other federal and Native American lands should be assigned an environment designation so that if the property is sold to another entity or developed through private concession, the applicable environment designation and associated regulations will be in place.

CHAPTER 14

Parallel Environment Designations

Introduction

WAC 173-16-040 (4) calls for local jurisdictions to classify their shorelines into different "environment designations." Master program regulations for each designation can then account for different environmental conditions and use opportunities found in each designation. The most common practice has been to divide shorelines laterally into segments with differing characteristics as shown in Figure 14-1. While this segmented technique is useful for a variety of situations, it is sometimes advantageous to classify the shoreline jurisdiction into designations that run parallel to the shoreline or that reflect specific environmental conditions or physical features. These may include steep bluffs, dikes, roadways, rail lines and other well-defined features that exist in the shoreline environment.

Figure 14-1. Typical Environment Designations

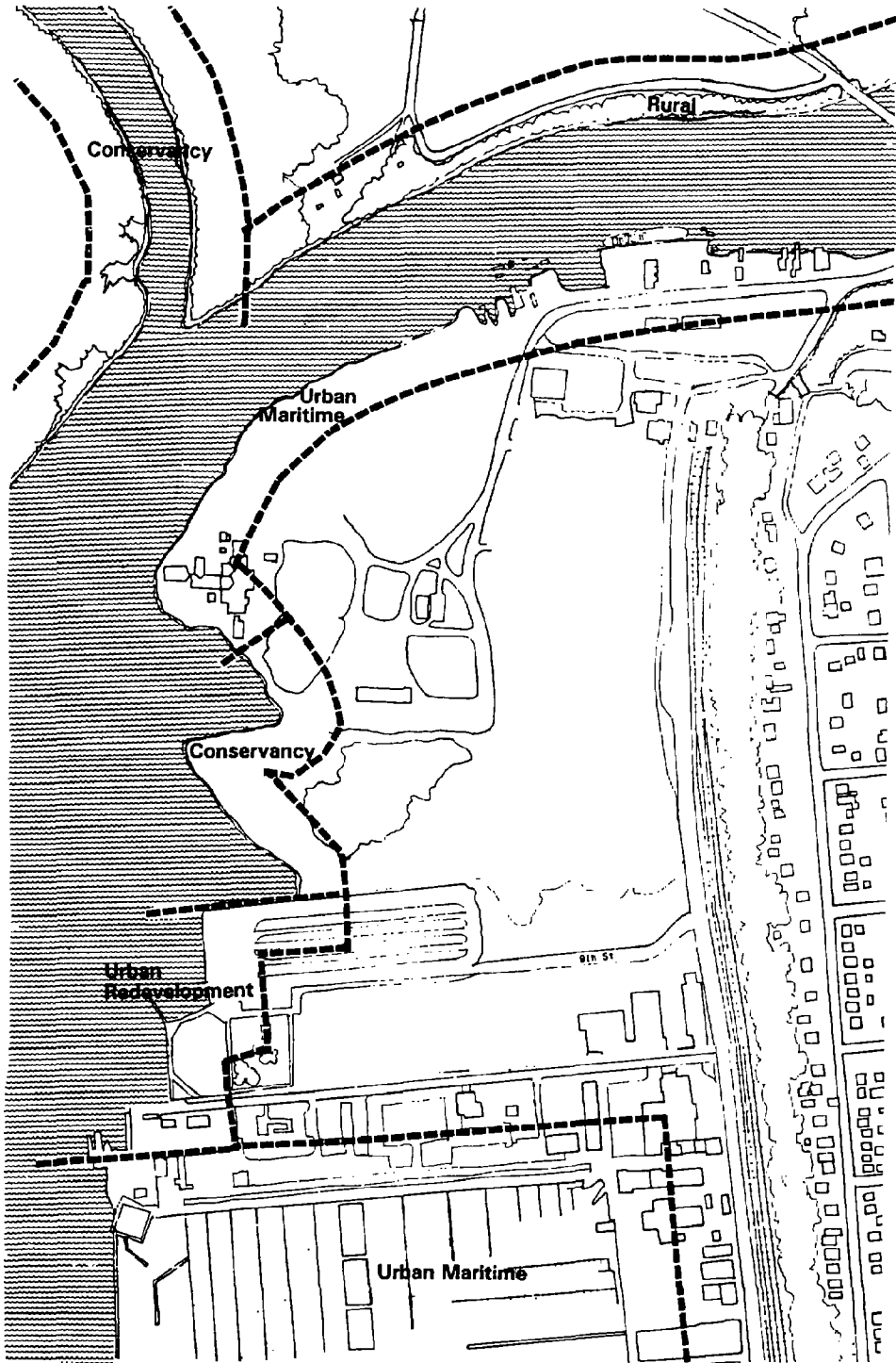


Figure 14-2 illustrates an example of the use of parallel environment designations. Parallel environment designations can accomplish a variety of objectives, including (the letters below correspond to examples shown in Figure 14-2):

- (a) Protecting sensitive shoreline areas; for example, a master program may designate a "riverine conservancy" environment extending 100 feet from the shoreline of the specified river to protect shoreline vegetation, critical wildlife habitats and shaded streambeds.
- (b) Differentiating shoreline use areas; for example, the area within 100 feet of the shoreline might be restricted to water-oriented uses while areas upland of this boundary carry no shoreline use preference requirement.
- (c) Preventing shoreline modification such as clearing, grading or filling, diking or vegetation cutting.
- (d) Setting buildings back from key shoreline areas.
- (e) Permitting more intensive development in upland areas along the landward side of a public road in shoreline jurisdiction.

Some of these objectives can be accomplished with shoreline setback regulations. However, parallel environment designations have several key advantages:

1. A parallel environment clearly establishes policies that support environmental protection regulations whereas an urban designation with setback requirements does not have that same internal consistency.
2. A parallel environment establishing a linear corridor emphasizes an integrated set of policies and regulations that work together to provide optimum resource protection.
3. Since setbacks are not always supported by the integrated policies and regulations, they are not as forceful or defensible regarding resource protection and are more subject to compromise due to variances and conditional use permits.
4. Environment boundaries can follow a natural or man-made physical feature such as the ridge of a side slope or edge of a roadway, dike or railway (easily located on the ground).
5. Parallel designation boundaries are more in harmony with the characteristics of the existing shoreline, producing linked and compatible shore vs. upland designations.

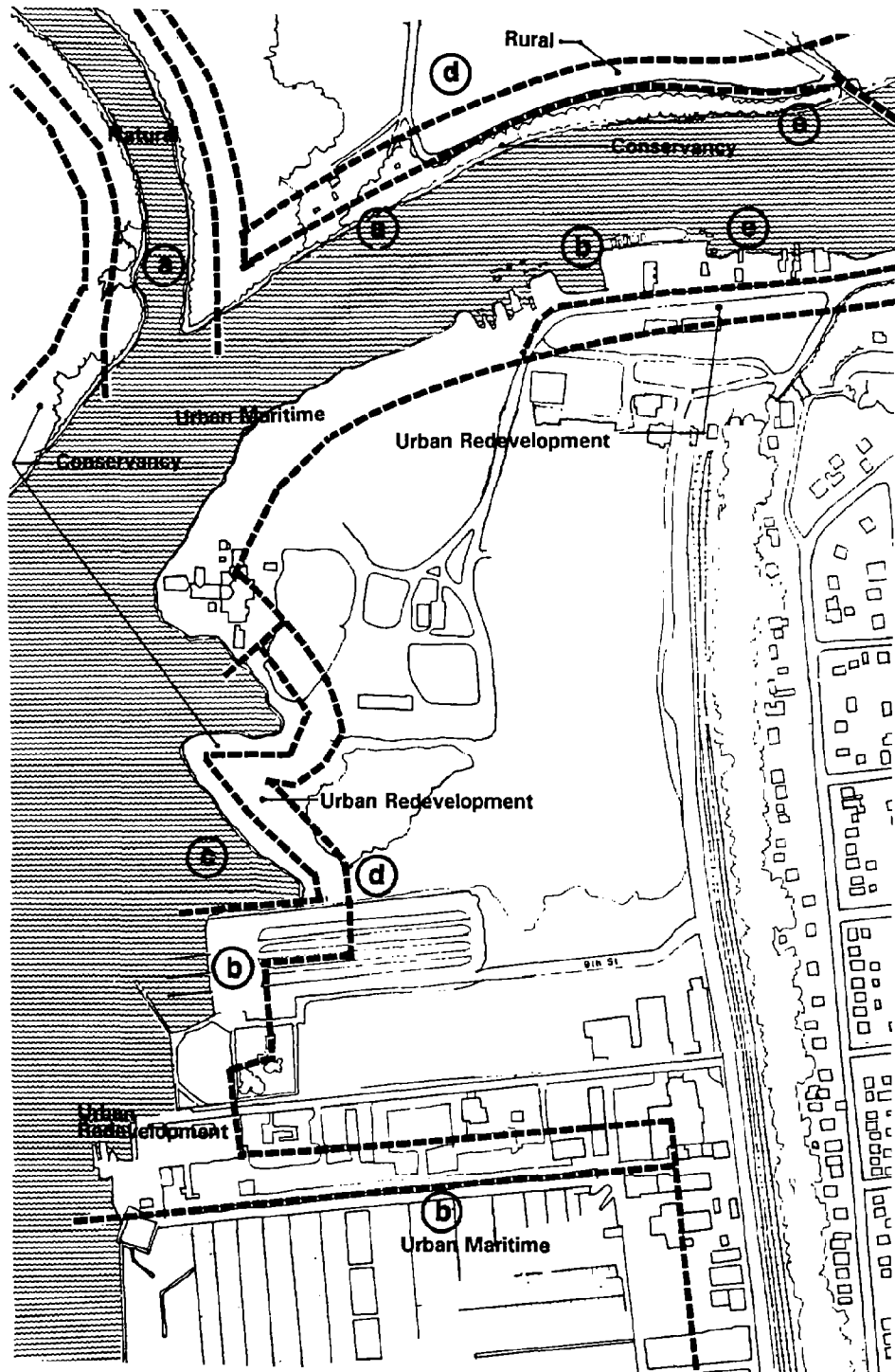


Figure 14-2. Use of parallel environments to achieve better resource protection and redevelopment potential.

Parallel environment designations can be useful in managing urban waterfronts as well as lake shorelines and riverine corridors. This chapter presents examples of the use of parallel environments in these situations.

Parallel Environments on Urban Shorelines

The technique of classifying urban shorelines in parallel has several applications in urban situations. Because environment boundaries can follow roadways, steep banks, property lines or other physical or geographic features that are not necessarily a set distance away from the shoreline, they provide a flexible way to distinguish between different conditions on upland areas. For example, development can be restricted through a conservancy environment on the waterward side of a roadway but allowed in the urban environment on the upland side (see Figure 14-3).

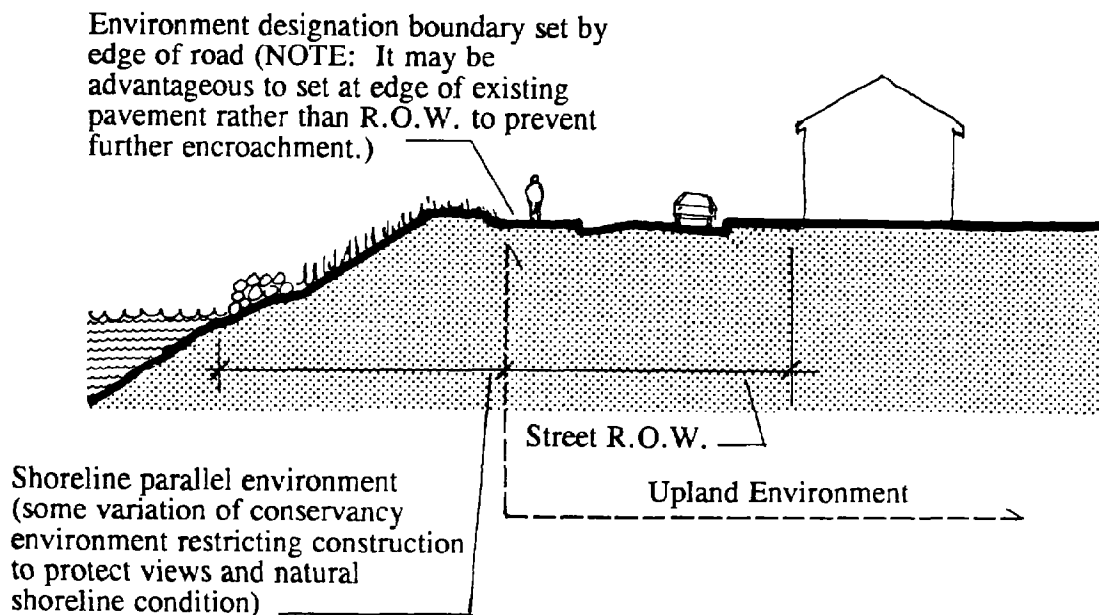


Figure 14-3. Parallel environment used to preserve open shoreline on waterward side of roadway.

Water dependency use requirements can also be fine-tuned using parallel environments. For example, use requirements for water-dependent or water-enjoyment uses within 100 feet of the shoreline can be tied to parallel designations. See Chapter 11, Master Program Provisions for Mixed-use Projects, for further discussion of this technique.

Height limits, view corridors and public access elements can also be made requirements of a parallel environment that runs along the shoreline. For example, an "urban view" environment that runs along the waterward side of a road could require view corridors and restrict building height (see Figure 14-4).

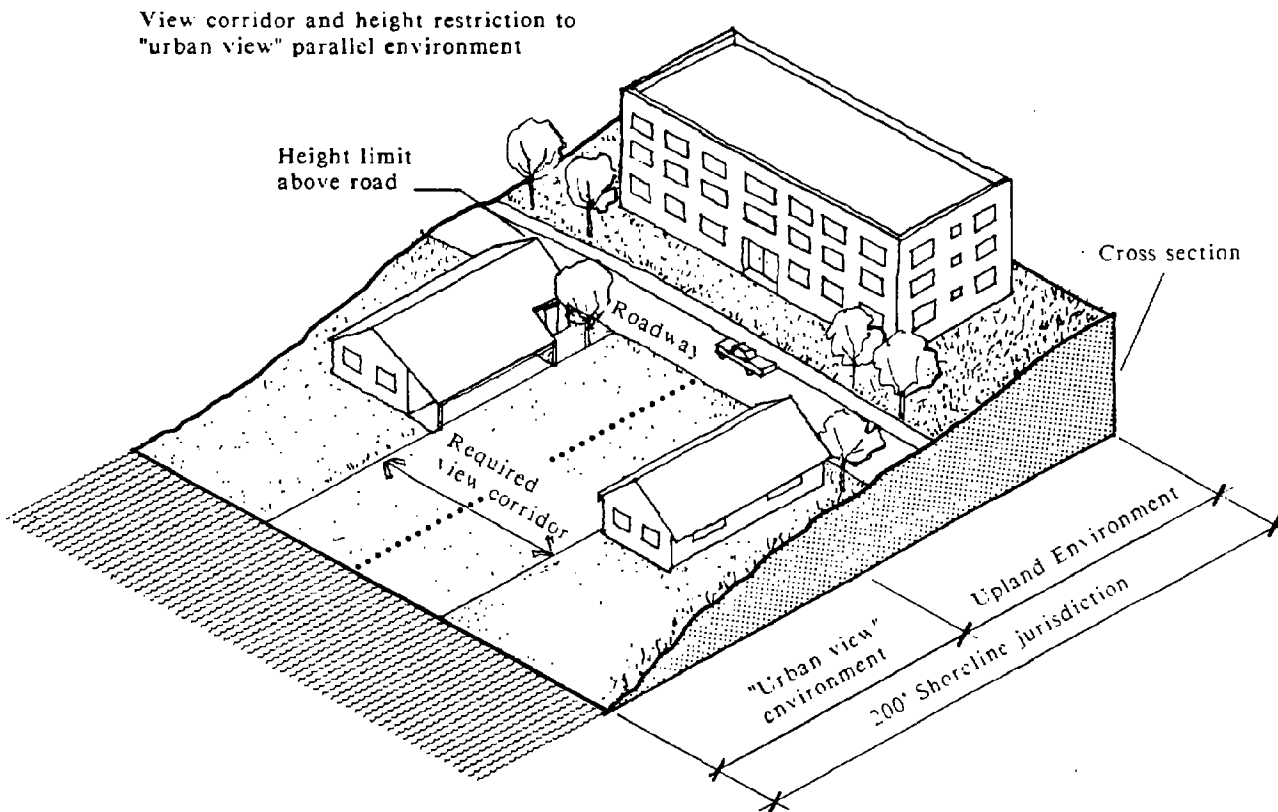


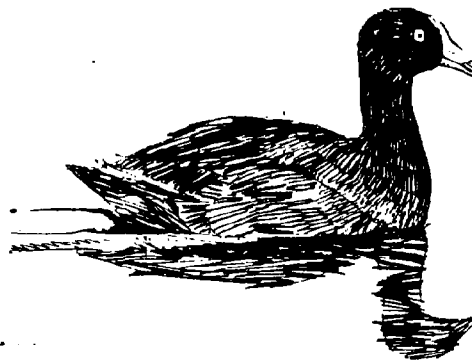
Figure 14-4. Example of a parallel corridor used to reduce view impacts.

Parallel Environments on Coastal and Lacustrine Shorelines

As noted earlier, parallel environment designations are an especially effective tool in natural resource management. Boundaries along lakes and coasts can be set by natural features such as steep slopes or by a specified setback dimension from the ordinary high water mark or bluff.

For example, the "Conservancy Steep Slope" environment illustrated in Figure 14-5 is tied to the slope of the land. Specialized parallel environments can be used to:

1. Prevent destructive clearing, grading and erosion near lakes and marine shorelines.
2. Establish a natural vegetation or visual buffer strip around the perimeter of a residential lake so that the natural visual qualities of the lake are not destroyed.
3. Strengthen protection of the shoreline's wildlife habitat characteristics, (e.g. roosting and nesting areas, watering spots, shallow water feeding areas) which are critical features of the water's edge.
4. Protect the perimeter areas around wetlands located within shoreline jurisdiction. This is especially true when a large portion of the 100-year floodplain is within shoreline jurisdiction.
5. Protect lakes and coastal shorelines from contaminated runoff (for example, culverted storm drainage outfalls can be prohibited within a parallel environment).



Cooper's Hawk

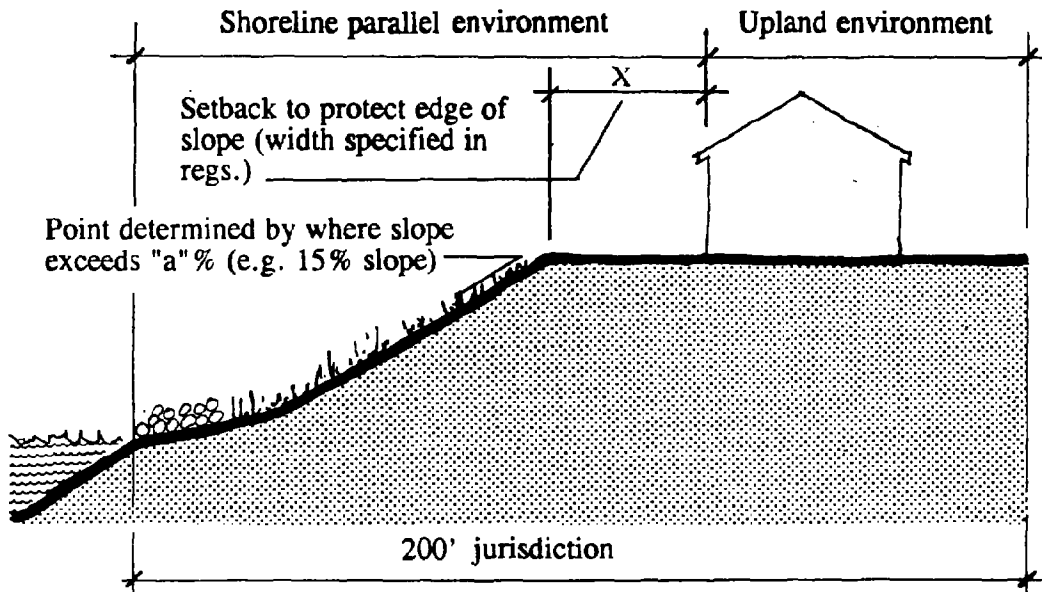


Figure 14-5. Cross section illustrating use of parallel environment to protect steep slopes.

Parallel Environments on Riparian Shorelines

Riparian corridors, areas of trees, shrubs, forbs and grasses found along shorelines, are critical habitats for the majority of vertebrate wildlife and many fish species on both sides of the Cascades. For riparian systems where continuity of the natural habitat is especially critical, there is often an advantage to designating the shoreline environments in parallel. This allows setting specific environmental protection requirements along the critical shoreline area throughout the length of the river corridor. This parallel environment can include all lands within a given distance from the OHWM, the edge of a designated floodway, from the top of a defined bank, or on the waterward side of a manmade feature such as a road, dike or railway.

Normally, a corridor designation should either be "natural" or "conservancy" or a similarly protective tailor-made alternative. A "natural" classification would be most appropriate if the riparian system warrants restoration or preservation in a condition free of human influence because it includes a unique resource or is intolerant of intensive human use. Natural is also the appropriate

environment designation along shorelines that have a pristine or near-pristine riparian native plant community in areas of otherwise rural or urban land use. Conservancy is best applied to maintain the existing character of a shoreline while allowing some specified uses. For example, a conservancy environment is appropriate where river corridors, public access and habitat management objectives can be balanced.

Several considerations should be addressed in establishing the width of the parallel environment. The environment should be wide enough to:

1. Provide shade where necessary to aquatic life.
2. Retain significant plant communities.
3. Prevent unnatural shoreline erosion.
4. Provide habitat and buffers for wildlife sufficient to retain existing species.
5. Prevent impacts to the shoreline environment from actions on adjacent land such as timber harvesting, clearing, grading or other forms of development.
6. Accommodate public access where compatible with the conservation goals.

The supporting regulations that apply to these parallel environments should be carefully tailored to protect the biological or physical qualities of the shoreline and uplands. Vegetation maintenance provisions are especially important in these situations. It is also useful to give the parallel designations a descriptive name such as "Conservancy-River Corridor" or "Natural-Hall's Creek Estuary" to indicate the purpose or geographical area that applies. A descriptive name also helps to prevent confusion with other environment descriptions. Figure 14-6 illustrates a river-conservancy corridor.

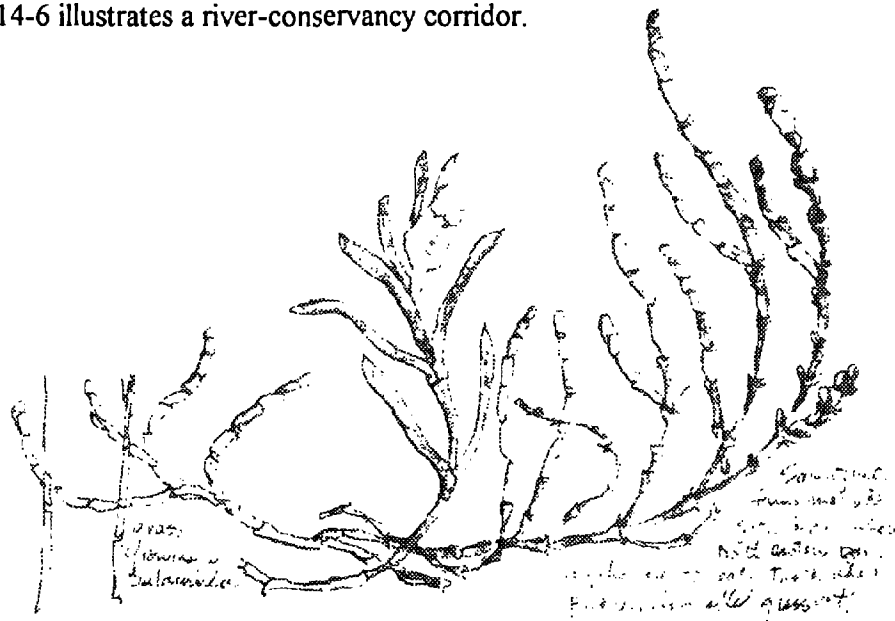
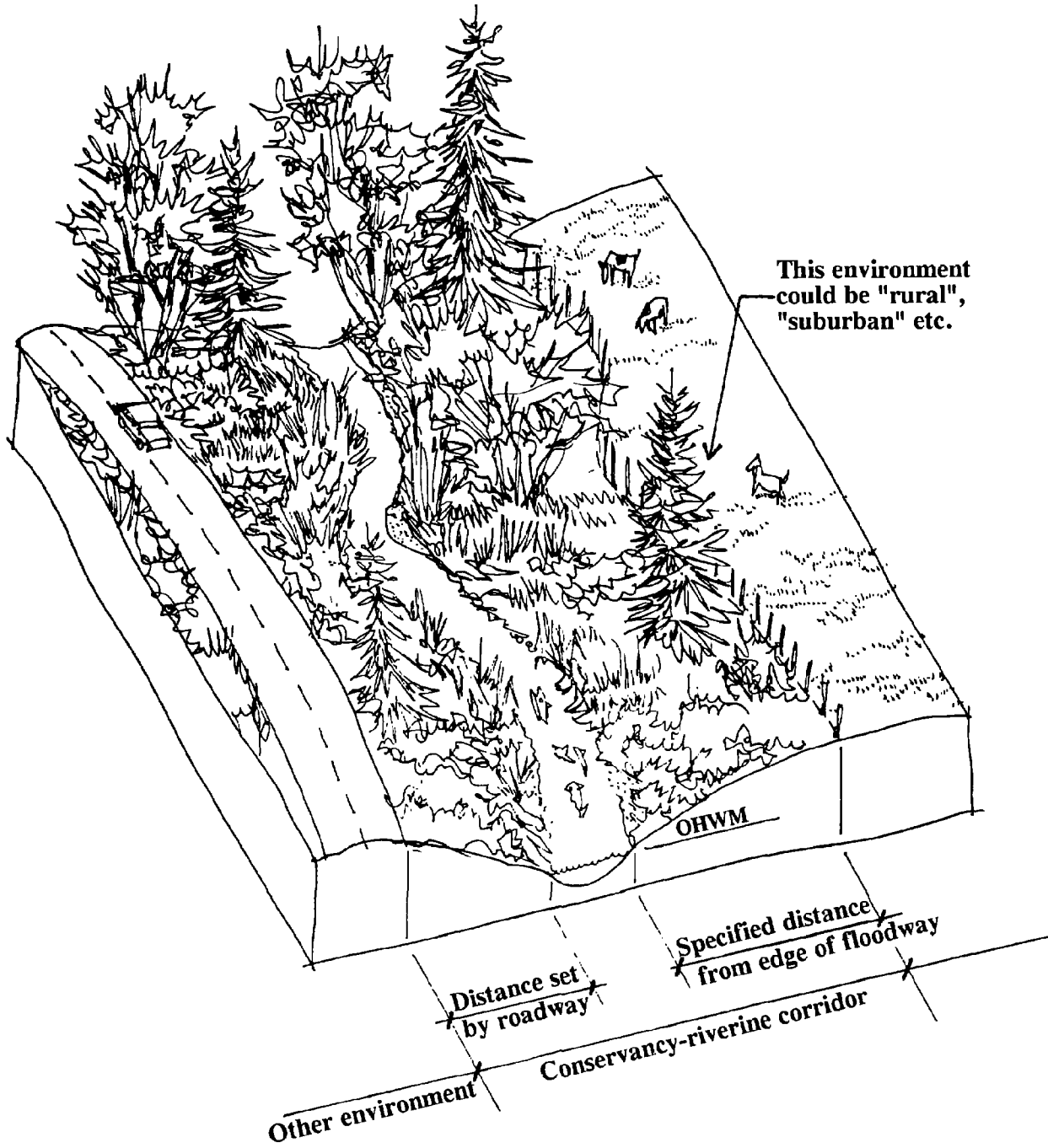


Figure 14-6. Parallel environment used to create riverine conservancy corridor.



CHAPTER 15

Shoreline

Modification Activities

Introduction

Shoreline modification activities are those actions that modify or change the physical configuration or qualities of the shoreline. Chapter 8 presents model language for shoreline modification activities such as breakwaters, jetties, beach enhancement, etc. Chapter 8 also describes the difference between a shoreline use and a modification activity and why such a distinction is important. Besides the organizational points expressed in Chapter 8, there are several factors to consider in regulating shoreline modification activities, which are briefly summarized below.

Shorelines are dynamic systems. Builders, home owners and even engineers and planners have learned through painful experience that shoreline environments are both fragile and dangerous. Because shoreline environments are a balance of large and changing forces, disruption to these balanced forces can have unforeseen and sometimes catastrophic consequences. Not only is the delicate interplay between geologic, hydrologic and biologic systems easily damaged, but also a shoreline modification at one point along a shoreline can have disastrous impacts to other areas far from the construction site. For example, an upstream river levee can exacerbate flooding in the downstream lowlands. Similarly, restricting the natural flow of sediment along a beach can

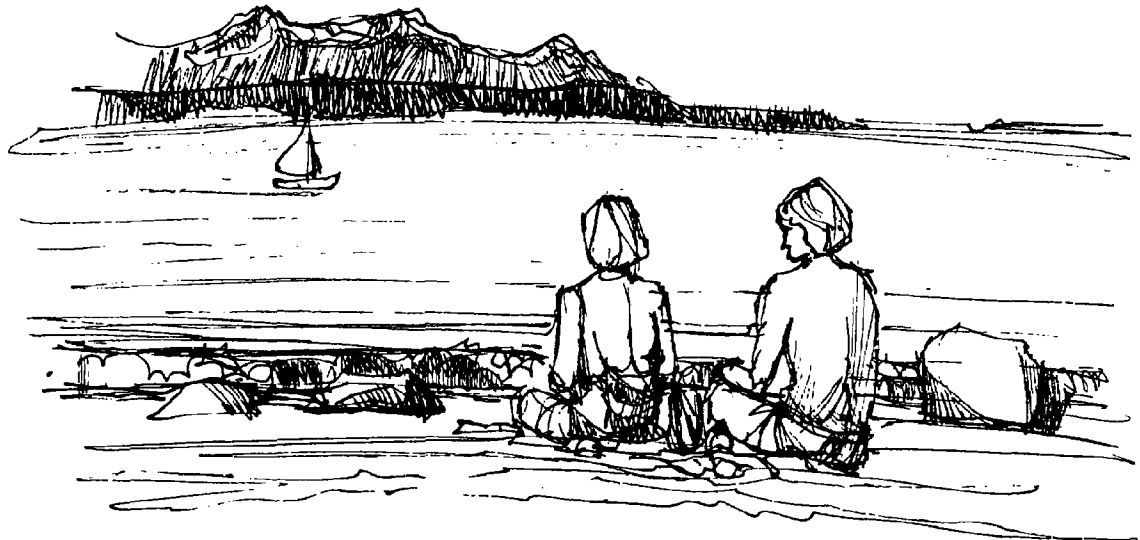
cause destructive erosion to another section of shoreline. Often, engineered structures such as bulkheads or concrete channels present a hard, non-resilient surface for the power of wave action to work against. Over time, hard structures can be weaker than less costly nonstructural solutions.

Realization of these facts has led to new directions in the management of shoreline modification activities. For planning purposes, "shoreline modification activities" is a broad term encompassing a wide range of actions that modify the physical configuration, processes or qualities of the shoreline area. Shoreline modification activities are usually undertaken in support of or in preparation for a shoreline "use" e.g. a bulkhead/landfill for a marina (see Chapter 8). Modification activities include beach enhancement, breakwaters, jetties, groins, rock weirs, dikes, levees, dredging, landfill, bulkheads, revetments (riprap, etc.) and other bank stabilization actions (bioengineering, etc.). Understanding the larger overall system in which each of these types of activities may have an effect or impact is paramount to managing the shoreline for long-term, sustained public benefit and environmental protection.



The Larger Picture and the Planning Process

One of the easiest pitfalls in reviewing specific shoreline modification projects is to overlook the larger shorescape issues in favor of focusing on the immediate problem at hand. How will the proposal fit into the ongoing interactive processes between landscape and water bodies that shape what we call the shoreline? A simple planning process should be undertaken for each modification action proposed in the dynamic shoreline corridor. First, an inventory of the specific natural system in which the proposal is located needs to be developed, and the dynamics with respect to the system determined. Second, the full range of alternatives for a proposal needs to be evaluated. Avoiding a future conflict by redesigning a subdivision, for instance, is much preferable to later mitigating the impacts of a series of poorly located homes. Relocation of poorly sited structures may also be an alternative which in the long-run is cheaper and less environmentally damaging. If structures or modifications are warranted, what is the range of alternatives and what are the direct impacts, and cumulative impacts? Third, if there are unavoidable impacts, can the impacts be mitigated, will the mitigation work, and can it be enforced?



*Golden Gardens
June 1, 74*

Identifying Natural Systems and Processes

Although marine shores, riverfront property and lakeside lots appear to be different situations, the same types of forces are at work in the dynamic shoreline area. Bank failure, sloughing, erosion, toe undercutting, flooding and wave damage occur with regularity wherever moving water and shoreline development coincide. It is imperative that we understand and inventory the natural system processes in each of these environments if we are to successfully plan for their long-term reasonable and appropriate use. It should also be emphasized that the impact, indeed cumulative impacts, are not just confined to disturbing the geohydraulic processes, but also seriously affect the biological health, water quality and aesthetics of the shoreline.

The inventory process may take several forms depending upon the level of information and the decisions which are pending. In the simplest form, a permit or exemption application may be submitted to a planning department initiating review of the site and surroundings. Given the short time frame in which a decision must be made, only the most immediately available information can be considered together with observations made in the field. Data on general trends and stability conditions can often be gleaned from comparison of old and more recent aerial photos, the Coastal Zone Atlas of Washington, Net Shore Drift Studies and related technical references listed in Chapter 19. Following the guidance and evaluation techniques described in several technical papers listed in Chapter 19, notably "Shoreline Bluff and Slope Stability: Management Options" Ecology Technical Paper, the planner inspecting a site in the field should be able to identify the type and magnitude of development situation relative to the natural system process in which it is located. Without the benefit of more detailed and precise data, a cautious approach in determining setbacks is warranted.

Given a longer time frame, the inventory process could take on a much more comprehensive and accurate format. For example, a marine erosion bluff and accretion beach system could be precisely mapped and studied to identify critical factors such as hydrology, soil composition, geologic strata, sediment transport quantities and rates, bluff erosion rates, etc. Based on an analysis of improved empirical data, best management practices and land use standards could be developed through a planning process with the community to protect the long-term integrity of the natural system while recognizing and allowing reasonable methods for individuals, preferably as a community, to protect their private property.

Such a system-based planning approach would provide policies and standards tailored to individual communities which are immediately affected by changes in the system. Community education about the interconnectedness of developmental events within a system might emphasize the point that the

creation of one person's bulkhead might mean the demise of a neighboring person's beach. In conjunction with the local jurisdiction, a management plan could be developed which includes technical data and recommendations, a community vision for the area and proposed shoreline policies and standards.

Playing with a Full Deck

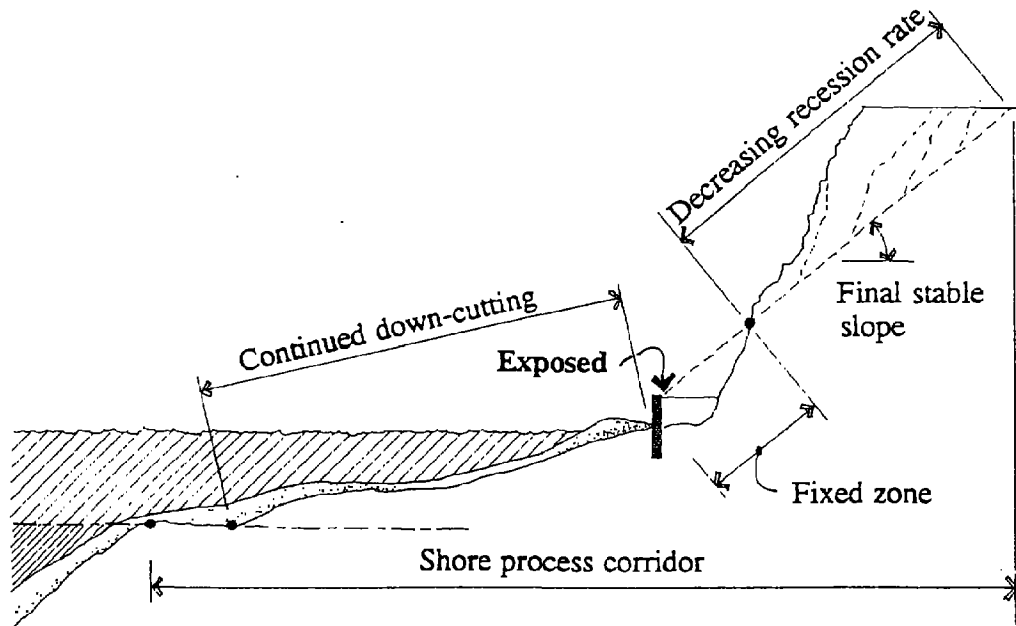
Rather than being put in a reactive role responding piecemeal to shoreline modification applications and actions within a particular river reach or marine/lake drift cell, a local government that is equipped with a special resource management plan (inventory, analysis, alternatives evaluation, recommendations) is in a position to work with the community to establish and implement a long-term management strategy. A complete range of alternatives should be evaluated and innovative approaches, options and combinations of techniques explored. These approaches include:

1. Prevention as a Priority
 - a. The first rule in mitigating for adverse impacts is to avoid the situation altogether if feasible. This is by far the most economical and environmentally-sound approach in the short- and long-term. Not locating in the floodway or on an eroding beach or steep bluff prevents creation of the problem in the first place, although it may be difficult to convince a developer or property owner. Relocating or changing land uses to more compatible types may also be an option. Having an inventory and a management plan for critical habitat and/or hazardous areas raises awareness and community support for protective measures and may make acceptance by individuals easier.
2. Emphasis on Nonstructural Solutions
 - a. Utilizing bioengineering techniques rather than hard structures at the shoreline and adjacent banks/bluffs.
 - b. Combining bioengineering techniques with scaled-down structural methods to mitigate impacts and provide some additional benefits.
3. Mitigating Structural Solutions
 - a. Allowing only necessary structures with demonstrated system-wide benefit and minimized impact.
 - b. Requiring mitigation and enhancement of habitat.
 - c. Requiring maximum setbacks for structural approaches (revetments, bulkheads, etc.).

- d. Employing setback dikes along rivers and streams to permit the natural meander process.

Recognition and Analysis of Cumulative Impacts

Whatever alternative or option is being considered, an evaluation of the impacts of the proposal as if other similar properties were developed within the particular natural system should be carried out. In addition, analyzing what the off-site impacts of a given proposal might be, such as transferring an erosion problem to a downstream neighbor, should provide an impetus for developing a system-wide management plan.



Long-term effects of bulkheading.

Shoreline Master Program Recommendations

In order to take advantage of many of these approaches effectively, master program guidance should be explicitly expressed in clear policies and regulations, preferable in an SMP chapter specifically addressing shoreline modification activities. There are several ways that these approaches can be written into a master program, including:

1. Establishing goals and policies that put all shoreline modification activities within a proper context in relation to natural system processes. The Conservation Element in Chapter 4, Goals, is a prime place to insert a goal for developing special resource area management plans which recognize and protect specific resource areas such as marine drift cells. Setting policies in the General Shoreline Modification Provisions (Chapter 8) which recognize the public benefits of maintaining natural processes such as littoral drift, river gravel transport, feeder bluff activity, etc. and that discourage unnecessary interference with such phenomena should also be accomplished.
2. Describing all shoreline modification activity regulations in a unified and consistent manner so that they are considered within a system context and relative to each other (see Chapter 8).
3. Setting general requirements for shoreline modifications that require that there be a demonstrated need for a shoreline modification and, if a need is demonstrated, that the least intrusive modification technique be used. Chapter 8 contains suggestions for provisions that apply to all shoreline modifications. They include the requirement that all shoreline modification activities shall support an allowed shoreline use, and emphasize the employment of nonstructural techniques.
4. Establishing specific standards for each type of activity e.g. beach enhancement, revetments, bulkheads, rock weirs, groins, dikes, etc. (see Chapter 8).
5. Clearly identifying permit and exemption parameters. Although all shoreline modification activities must comply with the SMP policies and standards, a few select activities are exempt from the substantial development permit requirement. Notably, a "normal protective bulkhead" constructed at the OHWM to protect an existing single-family residence from erosion. A variance or conditional use permit may still be required. This exemption is to be narrowly construed and shall not be allowed for undeveloped property, subdivisions, or multi-family structures. An SDP

exemption may also be granted for activities which qualify as "normal maintenance and repair" (WAC 173-14-040 (b)). Two related points which may assist in the management of shoreline modification activities are:

- a. Requiring that the project proponent apply for a written exemption. Many shoreline modification activities such as clearing and grading or bulkheading of single-family residential properties may not require a substantial development permit. However, these activities still fall within the purview of the Shoreline Management Act, and are regulated even though they do not require a substantial development permit. To help insure that environmentally destructive practices are minimized, many jurisdictions require that the project proponent apply for an exemption in writing. The application for an exemption includes much of the information required for a permit so that the project reviewer can evaluate whether or not the proposal will meet SMP requirements. Mitigation or project modification may be required to keep the activity within the parameters of the exemption. In this way, local governments can establish records, monitor and secure greater control and consistency over incremental activities that have great impact over time. (See sample exemption form in the *Shoreline Administrator's Manual*, Appendix 6).
- b. Requiring a conditional use for all residential bulkheads and related shoreline modification actions proposed within identified critical areas. Residential bulkheads, revetments, groins, etc. cause difficult and wide-ranging problems along many shorelines because of cumulative biological impacts and because they can ultimately result in the erosion of the shoreline and destruction of the development they were designed to protect. Also, they can prevent the normal migration of sediment and can impact beaches in other sections of the shoreline. They are particularly a problem in semi-rural and suburban shorelines where continuous bulkheads and similar armored treatments can extend for miles, altering the character and dynamic functions of a long stretch of the shoreline. A normal protective bulkhead for an existing single-family residence is generally exempt from the substantial development permit process but not from the variance or a conditional use permit process, if required by a local master program. Requiring a conditional use permit for residential bulkheads and other shoreline armoring can give local governments control over their location, design and installation and greater consideration of cumulative impacts. It also allows local jurisdictions to deny new bulkheads and revetments if they are not necessary and serve only to extend shoreline property waterward.

6. New techniques for shoreline enhancement and restoration. Environmental scientists, planners and engineers are constantly developing new approaches to treating shorelines that are more consistent with natural processes. Bremerton has recently developed an SMP section on beach enhancement that has proven effective, and the new King County flood hazard management plan includes several suggestions for bioengineering techniques. As experience with these methods grows, their acceptance as an alternative to expensive engineering structures will expand. Check with the Shorelands Program for information on new techniques. (See Chapter 19 for references and available materials).



Special Tip

Definition of Landfill. The Handbook defines landfill as the placement of soil, sand, rock, gravel, existing sediment or other material (excluding solid waste) to create new land, tideland or bottom land area along the shoreline below the OHWM, or on upland areas in order to raise the elevation. If this definition is used, it is important to clarify when in-water and upland landfill is allowed and to define the limits of backfill allowed relative to bulkhead projects, etc.

Definitions of Clearing and Grading. The difference between clearing and grading has caused some confusion. The following definitions can help clarify the issue.

Clearing means the destruction or removal of vegetative ground cover and/or trees including, but not limited to, root material removal and/or topsoil removal. This includes such activities as clear cutting or selective harvest of trees, pulling out of stumps, hauling off of shrubs, slash piles, etc.

Grading means the physical manipulation of the earth's surface and/or surface drainage pattern without significantly adding or removing material.

CHAPTER 16

Advance Compensation and Environmental Mitigation Planning

Introduction

This chapter provides a brief discussion of off-site mitigation and mitigation banking. Appendix B contains a more detailed discussion of both individual off-site mitigation and mitigation banking, including model master program language and examples.

Because mitigation banking is a relatively new shoreline management concept, the discussion of mitigation banking here and in Appendix B is intended as a resource rather than a set of Department of Ecology-sanctioned recommendations. Ecology's response to mitigation proposals continues to be on a case-by-case basis.

As development pressures increase on our state's shorelines, more and more projects will be proposed in areas with valuable natural resources. Consequently, the conflict between economic development and environmental protection will continue to grow. State and federal policy currently attempts to avoid this conflict by discouraging development in areas with valuable

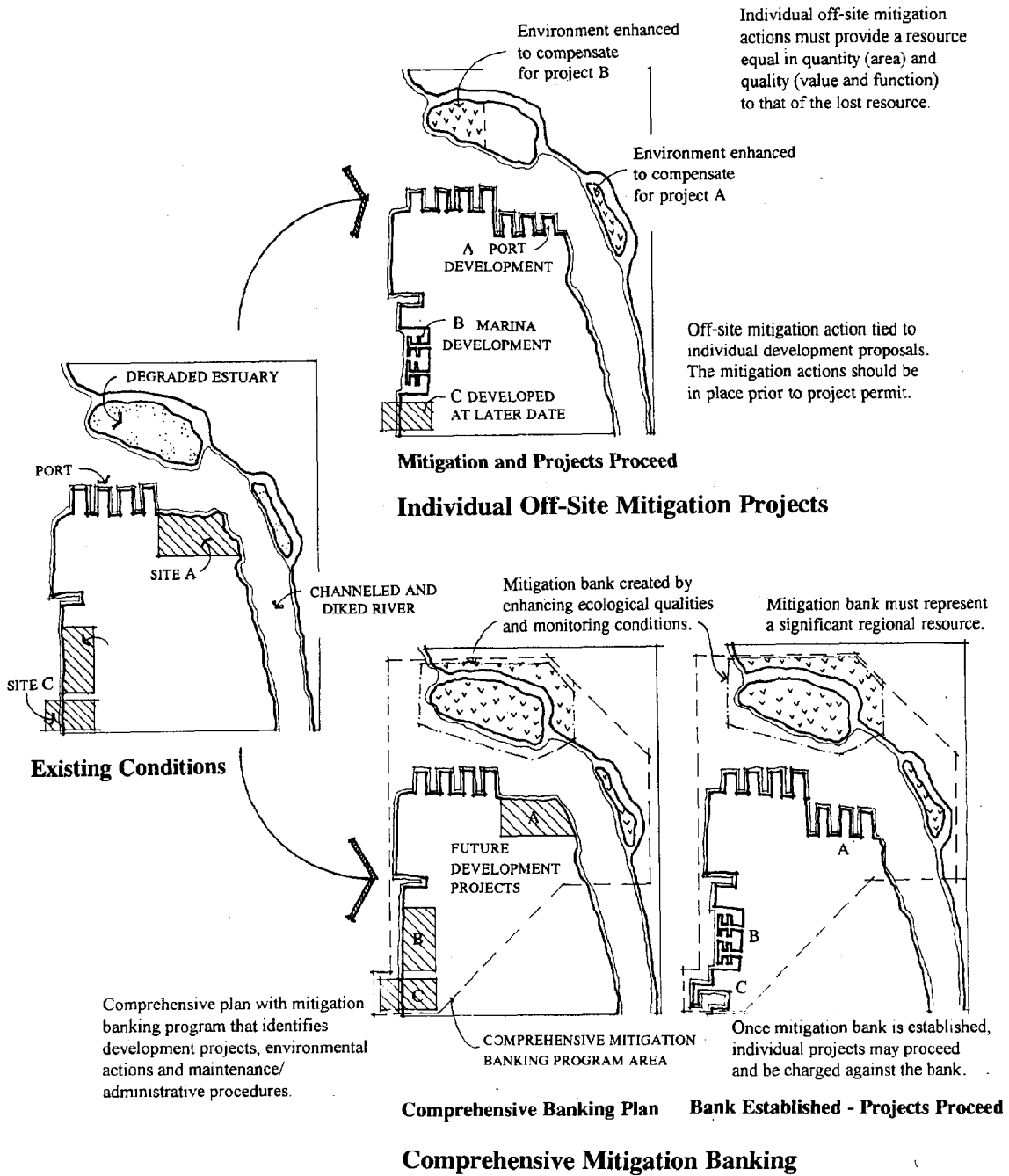
natural resources or requiring on-site mitigation for development impacts. However, there are situations where necessary and appropriate development cannot avoid impacts to natural resources. In these cases it may be desirable to mitigate the project's impacts by creating, restoring or enhancing shoreline resources off-site. This is often referred to as off-site compensation or off-site mitigation.

The two primary off-site mitigation strategies are individual, case-by-case projects and comprehensive mitigation banking (see Figure 16-1). Individual off-site mitigation projects involve replacing a resource with a similar and functionally equivalent resource at another site. Mitigation banking is the off-site creation, restoration, and/or enhancement of a natural resource to compensate for unavoidable adverse impacts associated with future development. Mitigation banks provide a relatively large mitigation site to collectively compensate in advance for many, usually unrelated, development projects. Each development project qualifying for the use of the bank contributes to bank creation and maintenance costs. Only after the bank is established (mitigation delivered) may development move forward.

Environmental mitigation banks represent the newest resource protection mechanism being considered by state and local governments today. This approach is in response to increasing evidence that case-by-case compensatory mitigation may not fully compensate for lost resource functions and values. However, both approaches have significant limitations. The science of "creating" complex environmental resource landscapes is in only the very early stages of development. It has been difficult to demonstrate that off-site mitigation actually creates a resource with the equivalent function and value of the lost resource. Nor has it been easy to insure that created resources are maintained over time. Studies also indicate limited compliance with individual off-site mitigation requirements.

At the same time, the effectiveness of mitigation banking has not been demonstrated conclusively. Because it is a new concept, and several years are required to create a mitigation bank, it is too early to assess existing programs, but so far mitigation banking programs have experienced many of the same technical difficulties as individual compensatory projects.

Figure 16-1. Approaches to Off-site Mitigation



Individual Off-site Mitigation

The State Environmental Policy Act Rules (WAC 197-11-768) defines mitigation as:

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 during the life of the action;
5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or
6. Monitoring the impact and taking appropriate corrective measures.

The order of mitigation actions listed, from most direct and complete to the least direct, implies an order of preference from 1 (high preference) to 6 (low preference). This means a selected mitigation action will be considered appropriate in satisfying SEPA requirements only if the mitigation actions of higher preference are not feasible or are ineffective.

The priority for environmental mitigation actions establishes state-wide shoreline management policy which encourages off-site environmental mitigation only if on-site mitigation measures are not feasible. However, situations may occur where on-site mitigation for unavoidable impacts is either not feasible or not desirable from a natural resources perspective.

In these cases, shoreline enhancement, restoration, or creation may more than offset a project's impact to produce a net environmental benefit. Also, enhancing, restoring or creating a high-quality shoreline resource off-site may be more desirable than mitigating for impacts to a low-quality shoreline resource on-site. Off-site mitigation actions might include:

- Breaching an estuarian dike to create a salt marsh;
- Cleaning up or capping contaminated sediments and restoring the shoreline to its natural condition;

- Restoring a beach to its natural conditions; or
- Reestablishing a dune system.

Typically, off-site mitigation is considered on a project by project basis. This approach has produced some successes but, in general, has several limitations.

Without clear rules or guidelines for off-site mitigation, it is difficult for project proponents and regulatory agencies to reach agreement. Agencies must determine whether they are setting a precedent that could result in abuse, and project proponents must know agency expectations and procedural requirements in order to develop a responsive proposal.

Natural resource enhancement, restoration and creation efforts have not always been successful. Since resource replacement is technically demanding and subject to a number of variables, the only way to ensure mitigation success is to establish and monitor the resource prior to permit issuance for the base project.

Individual off-site mitigation projects do not necessarily further a comprehensive "natural systems" approach to resource management. Establishing an isolated resource, even if technically successful, may not contribute to the shoreline system impacted by the project. Long-term, regional resource management concerns can only be addressed through comprehensive shoreline planning.

The shortcomings of off-site mitigation can be overcome to a certain extent by better defining the process, goals, policies and priorities which guide off-site mitigation projects. Policies and regulations outlining the procedures and criteria for considering off-site mitigation as a means to satisfy SEPA and other resource protection requirements may be included in the Environmental Impacts section of the SMP's General Policies and Regulations. The SMP policies and regulations should address each of the following points.

Adhere to the priorities set by SEPA for mitigation.

Off-site mitigation should be considered only after all reasonable measures to avoid, minimize, rectify, or reduce project impacts are considered and determined to be infeasible and only after on-site mitigation is determined to be infeasible.

Establish procedures for ensuring the long-term success of the resource.

Because shoreline enhancement, restoration and creation efforts are technically demanding, mitigation should be delivered and the success of the mitigation demonstrated prior to approval of the base project. Off-site mitigation success must be documented through an evaluation of physical and biological conditions prior to and after the completion of the mitigation action. The

resource must be legally and physically protected through covenants, conservation easements or other means to ensure the resource will be maintained in perpetuity.

Insure mitigation efforts are integral to reestablishing a connected shoreline system.

The quantity (area) and quality (functions and values) of the replacement resource should be greater than the quantity and quality of the lost resource. Mitigation efforts also should be integral to reestablishing a connected shoreline system.

There are two approaches to this requirement. The first approach establishes SMP criteria for determining when off-site mitigation is suitable. This gives project proponents the flexibility to propose a variety of off-site mitigation alternatives. However, it provides the applicant little direct guidance in mitigation site selection and proposal preparation. Nor does this parcel-by-parcel method necessarily ensure the mitigation will be part of a connected shoreline system.

Advance comprehensive mitigation planning is the second and preferred approach for determining the suitability of mitigation alternatives. The local jurisdiction adopts an area-wide (watershed, shoreline, etc.) plan that identifies suitable development and off-site mitigation receiving sites. A comprehensive shoreline enhancement plan is most effectively developed in the early stages of an SMP amendment process, when shoreline environment designations are being reviewed.

The SMP should outline, in general terms, procedures to resolve these issues during permit review. Off-site mitigation proposals necessarily will be carefully examined by the Department of Ecology and other resource agencies. Procedures should be included that assure early involvement of the resource agencies. Designation of off-site mitigation as a conditional use is appropriate because of the case-by-case considerations required for these projects and because it assures Ecology's involvement in the project.

Mitigation Banking

The Department of Ecology Shorelands Program has undertaken two studies regarding mitigation banking. The first study, Wetlands Mitigation Banking, looked at mitigation banking from a purely wetlands perspective. The 1991 report, titled *Wetland Mitigation Banking* (Castelle et al.), prepared as part of the first study, forms the basis of much of the information in Appendix B.

The second study, Shoreline Environmental Mitigation Banking, identified issues, opportunities and procedures for establishing and administering shoreline mitigation banks. The study attempted to depart from previous mitigation banking studies by addressing mitigation banking for all types of shoreline resources, not just wetlands, and building on past studies to examine "real world" obstacles to mitigation banking implementation. This study included the formation of a Task Force representing both public and private interests and a survey which was administered to over 500 organizations across the state in an attempt to gather information regarding mitigation banking. The results of the survey were not statistical but did indicate a high level of awareness of, and interest in, mitigation banking as a resource management tool. Respondents also expressed reservations regarding the concept, citing numerous technical, administrative and political obstacles. Despite the limited scope of the study, several findings and recommendations did emerge from the research and Task Force participation. These are summarized below.

There is a growing need for off-site compensatory mitigation banking.

The need for flexible, innovative environmental mitigation planning which successfully balances development needs and environmental values is growing. Planners throughout Washington are confronting off-site mitigation every day in cases where on-site mitigation for unavoidable development impacts may be infeasible or undesirable from a natural resources perspective.

New shoreline development associated with the ever-changing economy of water-dependent uses must be accommodated somewhere and such development will often incur unavoidable environmental impacts. Shoreline planning has tended to concentrate intensive shoreline development in urban centers where competition for shoreline resources and limited space for water-dependent uses leave little room for on-site mitigation. Furthermore, the Growth Management Act advocates concentrating new development in existing urban areas, placing even greater pressure on our urban shorelines.

It has been difficult to demonstrate that created resources are equivalent in function and value to lost resources. Lacking a comprehensive environmental enhancement plan, individual off-site and on-site mitigation projects result in scattered, low-quality natural resources that are not representative of what was

historically a larger resource system. Nor has it been easy to insure that individually created resources are maintained over time. Studies indicate limited compliance with individual off-site mitigation requirements and in some cases, the mitigation is never delivered. In Washington State, it is estimated that only about 10 percent of wetland losses permitted under the Section 404 permit process are actually mitigated (Rylko and Storm 1991). Furthermore, a study of 40 mitigation projects conducted in south Florida indicated that only 10 percent of the forty mitigation projects were successful (Erwin 1991).

Approximately one-third of governments and organizations responding to a 1993 Department of Ecology survey regarding off-site mitigation indicated that they had been involved in off-site mitigation projects. Forty-one of sixty-nine respondents indicated that their organization had considered mitigation banking as a resource management tool and fifty-one out of sixty-nine respondents indicated that mitigation banking was potentially useful.



Mitigation Banking is one approach to protecting, enhancing, restoring, and/or creating shoreline systems.

Mitigation Banking is being pursued as a viable resource management tool throughout the nation and within Washington State.

The US. Army Corps of Engineers' Institute for Water Resources is reviewing wetlands mitigation banking to determine the potential of this concept for achieving national wetlands goals, to determine its applicability to Corps of Engineers' programs and projects and to formulate and design a demonstration program for potential authorization and implementation by the Corps. The study has completed an initial inventory of wetland mitigation banks and has just initiated detailed case history documentation for twenty-five banks. Currently, there are at least one hundred banks in an active or planning status, with a potential for several additional banks to become operational each month (Brumbaugh and Reppert 1992). An Interim Report on the first phase of this study is scheduled for completion in the Fall of 1993.

In Washington State, several banking studies and activities are occurring, including:

- Washington Sea Grant has funded a University of Washington proposal to research mitigation banking entitled *Strategies for Aquatic Environments* by Hershman, Schauman and Witherspoon.
- Washington State Department of Transportation (DOT) is pursuing a banking program to mitigate ongoing construction projects. DOT is working now with resource agencies and other participants in drafting a memorandum of agreement that will form the basis of an implementation program.
- The firm of Biringer and Ebert is developing a private bank site (the Biringer Berry Farm) in the City of Everett.
- The City of Renton is creating a wetland bank to compensate for future development at various sites.
- The *Mill Creek Special Area Management Plan* (SAMP) is a comprehensive, interjurisdictional resource management plan based on the concept of mitigation banking. The plan involves King County, the City of Auburn and the City of Kent. The Plan is being prepared currently and is modeled after the *West Eugene Wetlands Plan* (City of Eugene 1992).

Mitigation banking offers resource management opportunities.

Ecology acknowledges that mitigation banking, in concept, addresses many of the pitfalls associated with individual off-site mitigation projects. However, as a new, and relatively unproven concept it should be pursued **cautiously and**

only with the intent of improving the current situation. Following are some of the potential benefits of mitigation banking.

1. Demonstration of mitigation success prior to project impacts.
2. Opportunity to design restoration and creation projects as pilot projects.
3. Potential for the creation of sustainable systems which are more resilient to change rather than continued resource fragmentation. Opportunity to locate banking sites where there is greater likelihood of project success, both in near-term and in long-term perspective.
4. Opportunity to develop the techniques necessary to repair or replace natural resources lost from accidents (e.g. oil spills) or natural catastrophes. Also to improve ability to undertake voluntary efforts to create and restore natural systems.
5. Ability to reduce mitigation ratios (down to 1:1) commensurate with reduction in environmental risks and lag time in establishing functioning systems.
6. Fewer costly delays involved in development review and approval of individual site-by-site mitigation plans.
7. Opportunity to address resource protection from a much more comprehensive "systems" perspective (regional, watershed, etc.). Ideally, a banking program should be based on a comprehensive environmental enhancement plan.
8. Opportunity for collective interjurisdictional actions.
9. Economy of Scale Advantages: A large, regionally based bank may be potentially easier to manage than many small sites. A larger site also may be more stable and have greater resource value and diversity.

Despite opportunities, mitigation banking must first address inherent problems.

The following issues must be resolved before a mitigation bank can be established.

1. Long-term protection and maintenance of the resource.
2. Insuring that the resulting bank resource is better than the resource lost in terms of area, function and value.

3. Establishing realistic criteria for the bank's use, including a system of "credits" tied to environmental values and a process to determine what projects qualify for bank use.
4. Insuring that the public's interests are protected through an open public decision-making process.
5. Coordinating other applicable regulatory and resource agencies in the process.

There are certain situations which may be particularly suited for mitigation banking.

It is important to note that there is no model for mitigation banking. Banks may be appropriate in a variety of situations. The following conditions may indicate suitability for mitigation banking.

1. Intense competition for shoreline and/or other land resources.
2. Large-scale restoration projects are planned or are currently ongoing. For example, the cleanup of Commencement Bay in Tacoma, Washington.
3. A significant proportion of a jurisdiction's land base is constrained by environmental conditions. For example, the West Eugene [Oregon] Wetlands Plan was developed because Eugene's primary industrial development area was severely restricted by the presence of wetlands.
4. Regional resource planning efforts, for example watershed planning, are planned or are currently ongoing.

Comprehensive *regional* environmental enhancement planning provides the best approach to mitigation banking.

Mitigation banking will have the greatest chance of success if implemented on a regional basis.

In general terms, a comprehensive environmental enhancement plan (CEEP) identifies a strategy for protecting, enhancing, restoring and/or creating a region's natural resources based on community input and scientific study. Local governments and potential bank operators are strongly encouraged to base mitigation banking programs on a CEEP for several reasons.

1. A CEEP provides the opportunity to identify the extent of resources that might be lost under current development projections.

2. A CEEP establishes resource protection priorities based on a comprehensive natural resource inventory and assessment. By approaching a region's resources as a whole or as "system", the plan can identify which resources should be protected, enhanced, restored and/or created. This approach ties resources together into a connected system and fills the gaps within the region's spectrum of resource types.
3. The CEEP process provides opportunities for ongoing land planning.
4. The CEEP process can be designed to include broad participation by property owners, the development community, environmental groups, state and federal agency representatives, tribes and other interested citizens.
5. Broad public participation allows community values to be incorporated into resource protection goals.
6. Scientific criteria can be established for determining when off-site mitigation is appropriate and when "in-kind" mitigation is appropriate. For example, if a CEEP identifies salt water wetlands as a very high value resource, then the enhancement of a degraded salt water wetland may, under certain conditions, be justified as mitigation for impacts to non-associated, isolated wetlands.
7. A comprehensive resource inventory allows the determination of relative resource values. This is necessary for establishing the currency proscribed in the mitigation bank's memorandum of agreement (MOA) and insuring that bank transactions result in a net environmental benefit in terms of resource quantity (area) and quality (value and function).
8. CEEPs can meet a range of community objectives. For example, a comprehensive wetlands protection plan can protect rare plants, provide open space along a region's major streams, provide for water quality improvements, reduce the risk of flooding, meet state and federal wetland protection requirements and provide for economic development.
9. A regional approach provides economy of scale advantages: one large bank site may be easier to manage over time than many small sites.
10. Provides opportunities for multi-use (or multi-objective) of the bank which can increase funding opportunities.
11. Priorities for shorelines of state-wide significance emphasize a regional approach.

If mitigation banking is to be a useful shoreline management tool in Washington State, a number of obstacles must be overcome.

First, existing environmental protection regulations and permit review procedures discourage comprehensive mitigation banking. Because it carries opportunities for abuse and because it departs from the straightforward, "hold the line" resource protection stance, agencies are slow to consider the concept.

Moreover, banking requires coordination of all applicable resource agencies and local governments each with their own interests and jurisdictions. All must be satisfied before a program can proceed. Since mitigation banking requires breaking new ground, in effect experimenting, a mitigation banking program must navigate through the same regulatory web designed to protect natural systems. Because mitigation banking is complicated, that web of regulations and procedures is especially complex.

Second, better scientific information is needed. The concept of mitigation banking has been applied almost exclusively to wetlands. Shorelines are complex natural systems. Research is needed to improve our knowledge of environmental enhancement and restoration. There is a critical need for a body of experience to guide future banking efforts.

Third, funding is a serious problem. Mitigation banking requires considerable expenditure well in advance of development projects, and the success of the program is never certain, it seems unlikely that private interests will be able to provide the resources and accept the risks a banking program will entail. In effect, compensatory banking is a long-term, relatively high-risk investment. Large state or federal agencies (e.g. WSDOT, the EPA), major ports, non-profit organizations (land trusts) or a unique private situation may be the most likely funding sources.

Fourth, the concept must be discussed within the larger public forum. Ultimately, mitigation banks will affect the distribution of resources and must be predicated on public acceptance and approval. Since public participation will be an important part of mitigation bank development, interested citizens should have a voice in framing the policies supporting those efforts.

Fifth, education is essential. It must be clear that mitigation banking is not a shortcut or panacea. However, resource managers must acknowledge the risks of the current system (that it has achieved limited success) and take a "leap of faith" regarding new mitigation alternatives.

The Washington State Department of Ecology is in a position to provide the leadership needed to pursue mitigation banking in Washington State.

Leadership is needed to coordinate regulatory procedures, foster scientific research, pursue funding and provide guidance regarding administrative and management practices.

Ecology cannot take an operational position on mitigation banking that will influence department decisions because, as currently conceived, the concept is still in its experimental stages and it carries the potential for abuse and is locally unproven. However, Ecology does embrace, in principle, the concept and will take an active role in exploring its potential through controlled experimentation and interagency efforts in hopes that an understanding can be reached consistent with SMA goals and other resource management efforts.

Before advocating mitigation banking as a viable resource management tool, the department must insure that banking programs are not merely used as a way to circumvent current regulations and that they are worth the major investments they require.

Despite these limitations, the concept of mitigation banking is worth pursuing because of its potential to solve key resource management/development conflicts and provide a comprehensive resource planning approach.

Any mitigation banking position taken by the Department of Ecology would be based on a resource management perspective and the following assumptions.

1. A higher level of natural resource protection is the fundamental reason for pursuing mitigation banking. The primary impetus is **NOT** development expediency.
2. Resource enhancement, restoration or creation must take place prior to development.
3. The mitigation bank must respond to a comprehensive environmental enhancement plan.
4. Compensatory mitigation policies do not supplant SEPA mitigation guidelines and priorities.
5. The mitigation bank effort must involve citizens, local government and resource agencies.

CHAPTER 17

Public Access

Introduction

The Washington Administrative Code chapter providing guidelines for master program development, WAC 173-16-040 (4) (iv), states that:

"In the master program, priority is also to be given to planning for public visual and physical access to water in the urban environment. Identifying needs and planning for the acquisition of urban land for permanent public access to the water in the urban environment should be accomplished in the master program. To enhance waterfront and ensure maximum public use, industrial and commercial facilities should be designed to permit pedestrian waterfront activities. Where practicable, various access points ought to be linked to non-motorized transportation routes, such as bicycle and hiking paths."

The provision of public access along shorelines has resulted in several master program issues:

- How can public access be most effectively planned to optimize public benefit?
- When can public access be a substitute for water-dependent or water-related uses?

- When should public access be required?
- What implementation techniques are useful in achieving public access objectives?

Chapter 17 addresses these questions. Additionally, the Department of Ecology publication, *An Evaluation of Public Access to Washington's Shorelines Since the Enactment of the Shoreline Management Act of 1971*, by James Scott, is a valuable reference and includes master programming and policy recommendations. Suggestions for design and construction details can be found in the *Shoreline Public Access Handbook*, Ecology publication #90-06.

Public access provisions can present complex legal issues in certain circumstances. Local governments should periodically review their public access provisions to ensure they comply with current legal standards. While Ecology has information on suggested public access provisions, responsibility for legal review rests with the local government and their legal counsel.

Comprehensive Access Plan

Public access improvements are most effective when they are coordinated to provide a spectrum of recreation and educational experiences and linked to each other and to other focal points in the community. Therefore, public access improvements and master program requirements should be strategically integrated through a public access plan. Such a plan not only organizes the public planning and capital improvement efforts, it also provides a rationale for private development access requirements. Requiring development to provide shoreline access has a stronger legal basis if these policies are tied to a comprehensive strategy to enhance the public's use of the shoreline because a stronger connection can be drawn between an individual requirement and impacts which must be mitigated. For example, a comprehensive waterfront access plan can identify where access will be most useful, demonstrate how private efforts can tie into public projects, specify how various private developments can be linked together, and/or be used as a basis to decide which areas require specific standards. While examples in this chapter highlight urban shores, similar application can be made to rural areas.

Access plans have been useful in revitalizing urban waterfronts, garnering public support and furthering urban design goals because they are visual in presentation and positive in direction rather than solely regulatory. They also compliment the regulatory aspects of master programs and can provide a basis for master program standards.

A successful public access plan should ideally contain the following elements and should incorporate public improvements (such as trails and parks), regulatory requirements and design standards for private developments:

- Pedestrian connections
- Relation of pathways to land uses and development patterns
- Districts of differing access requirements (e.g. districts where shoreline access is required, where it can be a substitute for water-dependent uses, where it is not necessary, etc., type of access required)
- Identification of special opportunities, including view access
- Relation to recreational facilities, parks, etc.
- Design and signage standards
- Public/private implementation strategy
- Safety criteria
- Automobile parking
- Connections to bicycle trails
- Standards for private development (e.g. setback, landscaping, etc.)
- Standards for providing privacy for adjacent residents

An access plan can either be a part of the shoreline master program or a separate document referred to in the master program. A separate document has the advantage of being more easily modified and utilizing an appropriate format. It is sufficient in Department of Ecology permit review for local administrators to document whether or not the proposed project meets the adopted access plan and to refer to the plan's provisions. If a separate access plan document is used, however, the master program should contain minimum access design standards and indicate where access is required. Some jurisdictions have included abbreviated portions of the public access plan as an appendix to the master program. The plan should include both a map and language which establishes the criteria and standards. It could be developed in phases, with a conceptual plan and general goals coming first, supplemented by more detail as time is available.

Several towns and cities have developed access plans for a portion or all of their urban waterfronts; these include Seattle, Everett, Oak Harbor, Port Townsend, Port Angeles, Bremerton, Kirkland, Tacoma and Olympia. Several cities have also initiated successful public access and recreation projects resulting from or in addition to such planning efforts. Examples include Percival Landing in Olympia, Elliott Bay Park and Waterfront Park in Seattle, the Port Angeles Civic Pier, Ruston Way in Tacoma, Riverfront Park in Spokane and Columbia Park in Kennewick and Richland. These and other projects have generally been key factors in stimulating desirable development along urban shorelines and have played important roles in revitalizing their locales.

Public Access as a Requirement for Non-water-oriented Uses

Public access should not be a substitute for water-oriented use requirements. The access plans should indicate specifically where public access is used as a provision for permitting non-water-oriented uses and this provision should also be reflected in the master program use requirements. Public access should be a component of all "water-enjoyment" uses. The master program should set definite standards for the design of the access which should cover:

1. Connection to public ROW;
2. Hours and restrictions to access;
3. Legal mechanism for insuring that access will be established permanently (easement, etc.) and maintained;
4. Signage;
5. Connection to pedestrian or bike trail;
6. Requirements for site enhancements such as seating, landscaping, viewing platforms, opportunity to reach the water's edge, lighting, interpretive displays, etc.

Public Access on Industrial Sites

The public's fascination with the waterfront has always been quite strong. Industrial waterfronts, especially those with a variety of human activities and historical or cultural associations, are valued as an important public amenity as well as a critical economic resource.

Industrial activities and recreational visitors, however, fall into apparent conflict for several reasons. Many ports and maritime industries fear that public access improvements such as pathways, piers, viewpoints, boat moorage or parks will interfere with work activities, compromise security or threaten individual safety. Often, industrial activities produce noise, glare, fumes, or other conditions that make them incompatible with waterfront attractions such as parks, restaurants and retail shops. Also, public access improvements in the past have tended to "clean up" or "beautify" the waterfront to the detriment of the messy but lively work-a-day character that provided the waterfront's original attraction.

These apparent conflicts are the basis of the most challenging issues in the planning and design of public access elements and mixed-use projects on industrial waterfronts, and pose the following design questions:

- How can public access be added to industrial sites without interfering with work or compromising security?
- What are some ways visitors' safety can be assured in active industrial areas?
- How can the working waterfront's visual character be maintained while providing attractive amenities for visitors?

Several projects from across the state have incorporated the following solutions:

Observation Points

View towers, periscopes and elevated platforms are useful in providing views of industrial activities and have proven successful in areas such as Percival Landing in Olympia and Pier 48 viewpoint in Seattle. Interpretive displays explaining what is seen is also an attractive feature. Such viewpoints are considered viable alternatives to trails or paths into dangerous industrial sites.

In her research on public access in industrial areas, Susan Ernst-Corser found that such observation points were used more heavily when they were close to other public attractions or were located on pedestrian/bicycle trails.

Design of Improvements

Promoting public access on industrial sites can be a particularly difficult challenge, but the effort can be successful if attention is paid to site design. The Port of Seattle's Fishermen's Terminal complex is a good example, since it

includes both a wide range of industrial activities and serves as a popular visitor's destination. Aspects of the design which make it successful include:

1. Separating visitor circulation and parking from industrial traffic;
2. Concentrating visitor attractions in one part of the site;
3. Providing a strong attraction that focuses visitors attention (at Fishermen's Terminal, the restaurants and central plaza served this purpose);
4. Reinforcing safety signage with design cues such as paving, lighting and site amenities to indicate where visitors are welcome;
5. Restricting bicycle traffic to indicated areas and providing safe lanes where they are allowed; and
6. Designing architectural and site elements to reinforce the activity's utilitarian character. For example, at Fishermen's Terminal, the building was designed with metal siding and simple forms in response to the architecture of the warehouses and net sheds.

The terminal was successful in meeting both its industrial and public access goals. The greatly expanded fishing fleet facilities have functioned exceptionally well and the terminal has become an active visitors destination, attracting between 95 and 125 people per hour on summer weekends.

The project illustrates that industrial waterfronts can be the setting for exciting recreational opportunities and important civic attractions. It substantiates the premise that combining recreational and commercial uses along a harbor can, if properly planned, enhance economic viability of all uses and maximize the use of shoreline resources. Visitor safety, impacts on industrial work and compatibility of shoreline uses are concerns that must be addressed, but which can often be solved.

Fishermen's Terminal also illustrates several elements in the design process that are key to successfully integrating public access with industrial activities. They are:

1. Working directly with the industrial businesses to lower apprehensions regarding increased public access and seeking solutions that benefit both visitors and workers.
2. Considering public access and use compatibility issues throughout the program, master planning and design process. Continuity within the design team through these work phases is recommended.

3. Careful site planning to separate incompatible uses and provide adequate circulation. Separate vehicle access and parking for visitors reduces impact to work activities.
4. Including elements in the project that benefit workers and industrial activities as well as the visiting public. Better circulation and parking, convenient commercial services, improved lighting and new site amenities can upgrade conditions for the existing industrial uses.
5. Using signing and visual cues to orient and direct visitors. Non-verbal design elements such as pavement markings, lighting and site furniture can help to control visitor circulation.
6. Respecting the work-a-day qualities of the industrial setting. Not only does a low-key design approach help preserve the working waterfront's authentic character, it also indicates that visitors should respect the workers' needs and reiterates that the site is a working area first, and secondly a public attraction.

Incorporating Public Access Into Environmental Mitigation

Many industrial developments require that environmental impacts be mitigated by on-site environmental improvements such as the creation or enhancement of wetlands, beaches, lagoons, dune environments or other biological resources. In some cases, public access improvements such as nature trails, canoe launches, observation decks or fishing piers can be incorporated into the environmental enhancement measures. The combination of environmental and public access mitigation can, if done well, save money and utilize shorelines more efficiently. The Southwest Harbor Development being proposed by the Port of Seattle points out some of the opportunities and challenges of such an approach.

The Southwest Harbor project is driven by the need for expanded terminal space which may require filling along the shoreline. If this occurs, significant environmental enhancement will be required in the form of low-angle beach creation, environmental clean up and biofiltration of runoff. One scheme to accomplish all of these requirements is to create an "atoll" breakwater with a pathway that protects the sensitive shallow beach intertidal zone. The path will also prove a destination attraction with a unique view of the city, the river and the surrounding habitat. Drainage systems can be developed to treat runoff as well as provide upland habitat that is separated but visible from the walkway. At the same time, the interconnectedness of development, toxic sediment clean up measures, public access features and habitat mitigation actions means that all of the engineering and regulatory problems for each of the elements must be

solved together. This greatly complicates the work process but offers much greater rewards if the project is successful.

Off-site Public Access

As a matter of policy, on-site public access mitigation is preferred over off-site public access improvements because unless carefully planned, off-site mitigation does not truly compensate for the loss of the public's right to access the shoreline. However, there are cases where on-site public access cannot be accommodated for safety, security, compatibility, or site planning reasons. The general requirements for public access (see Chapter 5) acknowledge these conditions and allow off-site public access when they are not possible on-site. Note that these exceptions to on-site public access requirements generally apply to water-dependent industries only.

For two reasons, a public access plan that indicates key public access locations, pedestrian/bike routes and special features is necessary to insure successful off-site access. First, it considers the broad spectrum of shoreline access resources so that the relative importance of each site can be evaluated. Second, it identifies potential public access features which may be developed as off-site compensation. The Port of Seattle's Duwamish Waterway Public Access Plan offers a good example of a plan that coordinated proposed Port development with a comprehensive series of projects to improve access throughout the waterway. Public access improvements were timed to development actions in a agreement that allows the Port to proceed with orderly development on the river harbor.

Public Access in Environmentally Sensitive Areas

There may be situations where providing public access conflicts with environmental protection of wetlands and critical wildlife habitats. In such cases, protection of the resource generally has priority. Damage to critical areas is sometimes cited as a reason for not providing public access. However, often times the two objectives can be accomplished through careful design.

Wetland protection usually requires that a buffer be maintained around the designated area. Public access can sometimes be accommodated; in other cases, it can threaten a buffer. Boardwalks, platforms, vegetation screening and setbacks can all be utilized to mitigate the impacts of public access on a sensitive area. The model language in Chapter 5 makes allowances for not requiring public access where environmental harm will occur. However, the regulation also requires that all reasonable alternatives to mitigate that impact

be explored, so that an apparent conflict between public access and environmental protection should not be taken as a necessarily irreconcilable conflict.

Public Access Design Standards

Thus far, the discussion in Chapter 17 has dealt with physical access but the SMA addresses visual access as well. Design standards to preserve views, provide sunlight and air, control height and building density, regulate signage and enhance urban design character are used by various jurisdictions. The complexity and format for these differ greatly.

The most specific directions in the Shoreline Management Act and supporting WACs regarding design standards deal with view blockage. This concern for view protection translates into the need for master programs to regulate height and side yard (or view corridor) requirements. In addition, front yards (facing the street) and rear yards (facing the water) are often specified in order to prevent a visual narrowing of the street corridor and to provide a setback from the water. Besides maintaining views of the water, height and bulk (bulk meaning the size of building as determined by side yard setbacks) are useful in regulating the scale of shoreline developments and in preventing undesirable shade and shadow patterns.

It is important to note that the WAC directions pertain primarily to view blockage or degradation and not to design, style or purpose. Master program standards for signs, other than signs for public access elements, need not be concerned with issues such as color, materials or graphic designs. These types of controls, if desired, should be included in the City or County's signage, zoning or design review ordinance. Likewise, design standards for building materials and architectural design elements standards should not be included in master programs except as they relate to public access improvements.

Location and size of parking lots are important considerations relating to both use requirements and design standards. Screening and landscaping of parking may be included in SMP provisions. Also, design standards for public access points and view corridors should be included where applicable.

Providing Flexibility and Specificity in Design Standards

Design standards must be specific enough to facilitate project review with predictable results. At the same time, design standard flexibility is desirable to take into account unique site conditions or to allow deviations or variables that

would result in development more favorable to the public. Several methods to deal with these two objectives have been developed and are described below.

Refining design standards according to parallel subareas.

Just as parallel subareas (e.g. aquatic, shoreline and upland lots) can be used to refine use requirements, they can also be helpful in formulating more effective design standards. For example, in a given zone, the height limits might be 15 feet for aquatic areas, 35 feet for shoreline lots and 55 feet for upland lots. This type of refinement could be very useful in preventing view obstruction and maintaining smaller-scale development at the shoreline.

Refining design standards by setting a hierarchy of requirements from general standards to use-specific or area-specific standards.

The Seattle Master Program sets both general development standards that are applicable throughout all shorelines and standards that vary from subenvironment to subenvironment. Signage standards are covered under general development standards while height and bulk standards are set for each individual subenvironment (e.g. urban maritime, urban commercial, etc.). Some master programs assign height and bulk to individual shoreline areas. The proposed Seattle Shoreline Master Program further divides the Urban Harborfront Environment Subclassification into subareas with height limits specified for each area. Finally, greater heights are allowed in specified areas if water-dependent uses are developed according to the water-dependency provision. Thus, additional height is used as an incentive with water-dependency but only according to very specific conditions.

Allowing exceptions to design standards if they meet specified performance criteria.

The Tacoma Shoreline Master Program incorporates a technique for allowing exceptions to design criteria. For example, a rear setback can be reduced from the requirement stated in the code if approved by the Hearing Examiner and the City Council. To be approved, it must be shown that, a) one of several benefits will accrue by granting the exception or that the required setback is unnecessary by site condition; and b) that the redirection of a setback will not result in any of the negative impacts described in this section. Finally, the Hearing Examiner and the City Council may place conditions on the substantial development permit to ensure compliance with the master program objectives.

In summary, local SMPs should include design standards for height, side yard setbacks (view corridors), front yard setbacks and rear yard setbacks (shoreline setbacks). They should also include signage standards that address view degradation or blockage. Standards for size and location of parking lots

should also be set either as use requirements or design standards. Cities and counties should consider a variety of options in developing provisions for flexibility and specificity in design standards.

Writing Specific Public Access Provisions

The model language for general public access provisions presented in Chapter 5 is a good starting point for a city or county SMP. However, provisions can be added to provide greater specificity in terms of required public access improvements for different shoreline segments, additional design standards for public access areas including view corridors and open space. Below are presented some examples of SMP provisions that provide direction to property owners and permit reviewers. These are not intended as model language but as examples of local implementation. Dimensions, features and other provisions will vary from one situation to the next.

Standards for a Continuous Public Esplanade

The following excerpt from the City of Tacoma's Foss Waterway Public Access Plan is an SMP recommendation for a continuous esplanade.

EXAMPLE: CITY OF TACOMA FOSS WATERWAY PUBLIC ACCESS PLAN

A condition of all shoreline permits in the S-8 district shall be the construction of the following public access improvements:

A continuous, unobstructed, publicly accessible esplanade or boardwalk fronting directly on the shoreline edge. The esplanade or boardwalk will be a minimum of 15 feet wide with a 20-foot average width. Site amenities such as benches, lights and landscaping will be included as a part of the esplanade or boardwalk construction. NOTE: The esplanade section in the Wheeler-Osgood Waterway may be a minimum of 8 feet wide, but it must be set within a required 25-foot wide (minimum) vegetation maintenance zone. Native vegetation, (ground cover, shrubs and/or trees) shall be established and maintained within this area.

Public Access Trail Standards Adjacent to Environmentally Sensitive Areas

The following graphic from Everett's SMP illustrates an example of trail development in sensitive areas.

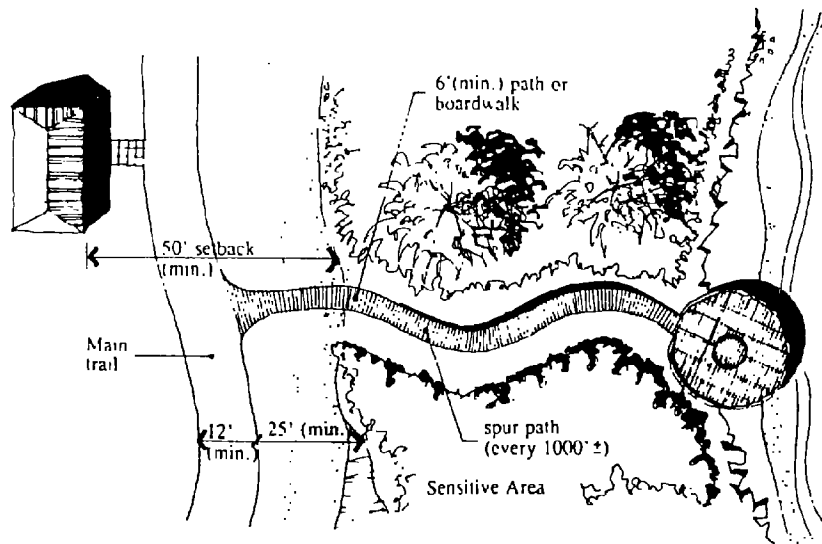
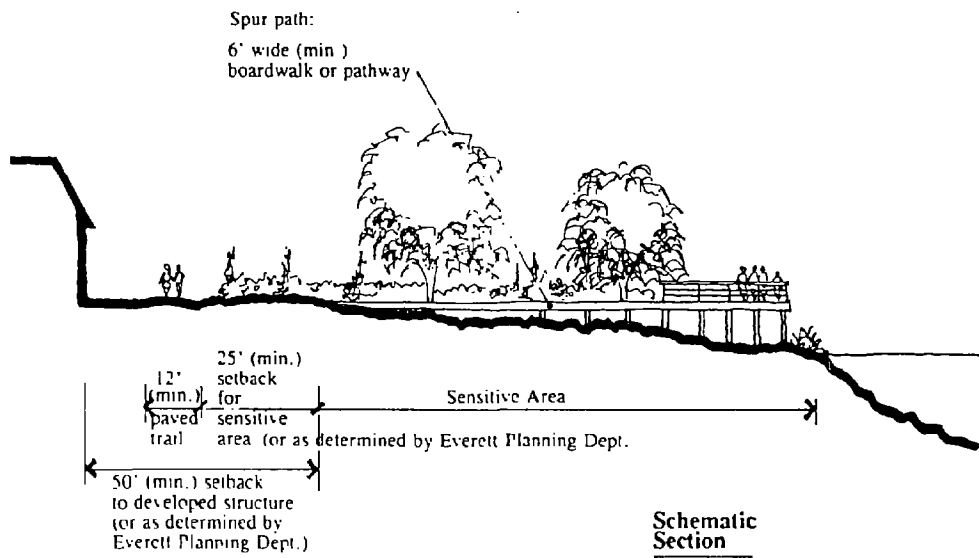


Figure 17-1. Example of trail development in sensitive areas.

Reference to Public Access Plan Standards

The following example illustrates how public access plans may be referenced in an SMP. Note that a minimum standard is stated explicitly.

CITY OF EVERETT SHORELINE MASTER PROGRAM

Requirements for Development on Port Gardner Harborfront

All developments on the Port Gardner Harborfront south and west of the Alverson Street Bridge shall adhere to the standards and intent of the "Everett Harborfront Public Access Plan". At a minimum, all on-site public access improvements shall include a dedicated paved walkway at least 15 feet wide or as indicated in the Harborfront Public Access Plan and include the on-site improvements shown in the plan. The railing, pavements, landscaping and other site improvements shall meet or exceed the standards in plan as determined by the Everett Planning Department. The public access improvements shall be connected to other sections of the Plan's public access route.

Provision For Off-site Public Access Improvements

The City of Everett's SMP allows compensatory off-site public access improvements so long as they conform to the adopted access plan. Note that such a provision is effective only when it is found in a comprehensive public access plan.

CITY OF EVERETT SHORELINE MASTER PROGRAM

Off-Site Public Access Requirements

If the City of Everett determines that on-site development is not feasible because of conditions stated under Regulation 1-a through 1-e, (1a-e is the same as the model language regulation in Chapter 5), then the City may permit the applicant to substantially contribute to a significant off-site public access-recreation feature included in the Everett Harborfront Public Access Plan. Significant public access/recreation features in the Plan include Harborfront View Park, Boat Launch Park, Forest Park (shoreline area), Jetty Island, BN Station Viewpoint and the proposed 13th Street Public Access site. The City of Everett shall determine the amount and terms of the public access contribution.

View Corridor, Pedestrian Circulation and Open Space Requirements

The City of Tacoma's proposed access standards for the Thea Foss Waterway include provisions for view corridors, pedestrian levels from the street to the shoreline, parking dedicated to public access and open space for large parcels.

CITY OF TACOMA FOSS WATERWAY PUBLIC ACCESS PLAN

View Corridor Requirements

1. A side yard/view corridor of 30 percent of the width of the site is required under existing regulations. In addition to this existing regulation, at least 50 percent of this side yard/view corridor shall be dedicated to hardscape, low-growing vegetation, open space, or site amenities other than parking.
2. A pedestrian circulation link from street right-of-way to the public esplanade or boardwalk, parking lot and building entrance shall be provided for each development and be a minimum of 15 feet wide. It is desired that required pedestrian circulation link be adjacent to the site's off-street parking and/or view corridor.
3. One parking space for the first 20 parking spaces and one for each 50 thereafter shall be set aside and appropriately marked for public access only.
4. Developments on sites over one acre in land area or with over 500 linear foot frontage shall include additional public open spaces or plazas equal to at least 5 percent of total property area. Such public spaces shall include landscaping and site amenities such as benches and lighting.
5. A public access easement for the above requirements shall be provided to the City. Public access easements and permit conditions shall be recorded on the deed of title and/or on the face of the plat or shore plat as a condition running in perpetuity with the land. A prohibition against "hostile" signs and locking gates shall be part of the access easement.

Parking Lot Screening

The following example of screening deals with several of the parking lot design issues near public access sites. However, parking lots can provide expanded views over the cars to the shore. In such cases, screening should be kept low and trees placed to minimize view blockage.

EXAMPLE: CITY OF TACOMA FOSS WATERWAY PUBLIC ACCESS PLAN

Parking Lot Screening Requirements

1. Parking shall be screened from the street and esplanade by a three-foot-high landscaped screen or a three-foot-high brick or solid fence, allowing for proper sight distance at accesses. Such landscaping shall provide 50 percent screening at time of planting, and should achieve 100 percent screening within three years after planting. At minimum, ground cover shall be used in conjunction with a wall or fence.
2. Landscaping equal to 15 percent of the paved vehicular area shall be installed.
3. One medium-growing tree, 30 to 50 feet at maturity, shall be required for every 1,500 square feet of paved vehicular area.
4. Parking lot planted beds shall be a minimum of 8 feet wide. Perimeter planting beds adjacent to parking spaces shall be a minimum of 6 feet wide.
5. Parking lot lighting shall not exceed 20 feet in height.
6. Parking lots shall contain pedestrian connections to the public esplanade or boardwalk, building entrances, public circulation link. Pedestrian connections shall either be a raised sidewalk, or minimally, composed of a different material from the parking lot. Pedestrian connections must be at least 5 feet wide, excluding vehicular overhang.
7. Wherever walkways abut driving surfaces, a change of grade shall be used to create a visual separation between the walkway and the driving surface. At minimum, different paving materials shall be used.
8. Parking shall be located on the streetside of any building within 200 feet of the shoreline, or on a separate lot. Outside the shoreline district, if parking is limited by the project site and cannot be contained on the streetside of the building, a minimum landscaped buffer of 20 feet adjacent to the esplanade shall be provided and maintained. Such buffer area shall contain landscaping including medium-growing trees and site amenities. Such buffer area shall also provide for direct pedestrian access from the parking area to the public esplanade or boardwalk.
9. Angled street parking, where it conflicts with public transportation needs, shall be prohibited within the shoreline district.
10. There shall be no parking requirement for the Foss Waterway S-8/10 Shoreline District, and no parking spaces other than currently required by Chapter 13.06 of the Land Use Regulatory Code may be installed. Exceptions for unusually special cases may be granted by the Land Use Administrator.

Reference to Design Standards

Design standards may be referred to in a public access plan as in the following example.

EXAMPLE:

All required public access improvements shall be constructed and landscaped according to the standards stated in the City's adopted Shoreline Public Access Plan and shall be approved by the City.

The City of Everett's SMP requires a site development plan showing landscaping and site design be submitted during permit review.

Local governments may include requirements as in the following example.

EXAMPLE: SHORELINE ACCESS EASEMENTS

All shoreline access easement areas shall be landscaped in accordance with the site development plan submitted by the applicant and approved by the City.

All accessway pavements shall be asphalt, concrete or unit paving suitable for foot and bicycle traffic. Boardwalks for foot traffic only are preferred for spur paths through environmentally sensitive areas. Property owners and developers are encouraged to integrate accessway paving and design elements into their site improvements.

CHAPTER 18

Aquatic Habitats

Introduction

Many valuable aquatic habitats are located within shoreline jurisdiction. This chapter briefly describes some of the important habitats and an approach local governments can consider in protecting those habitats. This chapter also includes model comprehensive plan policies that could be used in conjunction with the suggested shoreline master program policies and guidelines in this *Handbook*. Most of the terms used in this chapter are defined in the glossary of this *Handbook*.

Recommended critical salt water habitat and salmon and steelhead policies and regulations can be found in Chapter 5, Shoreline Use Policies and Regulations.

As used in this chapter, critical salt water habitats are kelp beds (members of the brown algal family Laminariales including Alaria marginata, Alaria nana, Alaria tenuifolia, Egregia menziesii, Eisenia arborea, Pterygophora californica, Agarum cribosum, Agarum fimbriatum, Costaria costata, Cymathere triplicata, Hedophyllum sessile, Laminaria spp., Pleurophycus gardneri, Dictyoneuropsis reticulata, Dictyoneurum californicum, Lessioniopsis littoralis, Macrocystis integrifolia, Nereocystis luetkeana, and Postelsia palmaeformis), eelgrass beds (Zostera spp.), surf smelt (Hypomesus pretiosus) spawning beds, Pacific herring (Clupea harengus pallasii) spawning beds, Pacific sand lance (Ammodytes hexapterus) spawning beds, rock sole (Lepidopsetta bilineata) spawning beds, rockfish (Sebastes spp.) settlement and nursery areas, lingcod

(Ophiodon elongatus) settlement and nursery areas, and the beds of the following shellfish: the Pacific oyster (Crassostrea gigas), the Olympia oyster (Ostrea lurida), the razor clam (Silqua patula), the native little clam (Protothaca staminea), the Manila clam (Venerupis japonica), the butter clam (Saxidomus giganteus), the Geoduck (Panope generosa), the horse clam (Schizothaerus nuttalli and Schizothaerus capax), the cockle (Clinocardium nuttalli), the macoma (Macoma spp.), and the eastern soft shell clam (Mya arenaria).

Salmon and steelhead habitats include 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 salt water bodies used as migration corridors; and salt water bodies used for rearing, feeding and refuge from predators and currents.

Kelp Beds, Eelgrass Beds, Herring Spawning Areas, Smelt Spawning Areas and other Critical Salt Water Habitats

The Growth Management Act, in Sections 36.70A.060 and 36.70A.170 RCW, requires local governments to designate and protect critical areas. This requirement applies both to local governments planning under the Growth Management Act and all other local governments. The Minimum Guidelines to Classify Agriculture, Forest, Mineral Lands, and Critical Areas (WAC 365.190.080(5)(a)(4)) designate kelp beds, eelgrass beds, herring spawning areas and smelt spawning areas as critical areas. The minimum guidelines also designate commercial and recreational shellfish areas as critical areas. So local governments should consider identifying and protecting these areas.

The Department of Fisheries has identified the four critical areas listed above and the habitats of several other salt water fish as saltwater habitats of special concern. These additional habitats include Pacific sand lance spawning beds, rock sole spawning beds, rockfish settlement and nursery areas and lingcod settlement and nursery areas. Juvenile salmonid habitats are also identified by the Department of Fisheries as saltwater habitats of special concern. Because of the overlap between the critical areas species and the other saltwater habitats of special concern, this chapter addresses all of the species.

All of these areas are important salt water habitats that support valuable species. Kelp and eelgrass beds provide habitat for plants, fish, shellfish, sea birds and sea mammals. Herring spawn in and on kelp beds, eelgrass beds and other types of marine vegetation. Herring and surf smelt support a limited commercial fishery and are an important food fish for salmon, marine fish, sea birds and marine mammals. Surf smelt are also the basis for a recreational fishery. The Pacific sand lance is eaten by many fish species which are the basis for commercial and recreational fisheries, such as lingcod. Lingcod, rock sole and rockfish support commercial and recreational fisheries. Shellfish also support commercial and recreational fisheries.

These important and sensitive habitats are threatened by a variety of activities. Bulkheading can cover spawning beaches. Bulkheads can also lead to the erosion of spawning beaches. Bulkheads can reduce the erosion of material from feeder bluffs which builds up beaches. Currents and tides remove material from beaches. Unless this material is replaced, the beach may erode and the types of material on the beach may change. These changes may make a beach unsuited to spawning. Bulkheads also intensify wave action on the beach, leading to changes in beach material and erosion. Landfills can cover spawning beaches, algae and marine vegetation. Dredging can remove algae and marine vegetation and deepen the bottom to depths below which they can grow. In-water structures can shade algae and marine vegetation, killing them. Silt from dredging construction runoff, logging runoff and road building can hinder the growth of algae and marine plants or kill them by reducing the sunlight available to them. Silt and other fine materials can smother kelp and eelgrass beds. Nutrient enrichment can increase free-floating algae, reducing sunlight available to eelgrass and other marine plants. The introduction of non-native species, such as *Spartina*, can also displace valuable marine plants. Stormwater runoff, improperly functioning on-site sewage systems and point source discharges can pollute shellfish beds, rendering the shellfish unsafe for human consumption. Sources of pollution, even if located far upstream, can adversely affect shellfish beds.

It is important to note that most salt water areas have significant habitat value. For example, mud flats are important sources of food for aquatic life. Salt water ecosystems are not well understood. As research progresses, more critical habitats may be discovered. Those salt water habitats which are not classified as critical are also important and should be managed to ensure their continued productivity.

Salmon and Steelhead Habitats

Salmon and steelhead are two of the enduring symbols of the Northwest. Salmon and steelhead are also important economic and recreational resources.

During their life cycle, salmon and steelhead use many of the state's shorelines. Salmon and steelhead spawn in gravel-bottomed streams and rivers. In the late summer or fall, the female salmon digs a redd in which she deposits her eggs. Steelhead spawn in the winter and spring, also depositing the eggs in a redd. The male salmon and steelhead fertilize the eggs as they are deposited. The female salmon and steelhead cover the eggs with gravel.

If the eggs are to survive, the redd cannot be covered with silt, disturbed, or dewatered. While salmon and steelhead evolved to tolerate some natural stream instability, human activities exceed these limits. Development, road building and cultivation can increase siltation. Increased silt in rivers and streams can cover redds, reducing the flow of oxygenated water to the eggs, suffocating them. Human activities can also increase runoff peaks by constructing impervious surfaces, channelizing streams, armoring river and streambanks and removing forest cover. Increased runoff peaks can wash out redds or result in higher water levels. This causes fish to spawn on higher portions of the streambed which then dry out when the storm subsides.

The eggs hatch and the young salmon and steelhead emerge from the gravel in the winter and spring. Depending on the species, the young spend varying amounts of time in the stream. The salmon and steelhead depend on the stream for food and protection. Streamside vegetation provides cover from predators and insects which the fish eat. Water temperatures are also important to the survival of salmon and steelhead. Streamside vegetation, especially trees, moderate water temperatures. Removal of streamside vegetation can reduce salmon and steelhead survival. Some species also depend on side channels, wetlands and ponds connected to rivers and streams. These species seek refuge in these areas during high-water events.

The salmon and steelhead then migrate down the streams and rivers. During their journey, they need pools in which to hide and rest.

When the young salmon and steelhead reach salt water, they must adjust to changes in salinity. They must also continue to feed. Salmon and steelhead use shallow salt water areas as migration corridors, rearing areas and feeding areas.

Shallow areas have an important role in both saltwater and freshwater. Shallows protect juvenile salmon and steelhead from predators. Shallows are also productive areas for marine plants and algae. These shallow water habitats can be lost through bulkheading and landfilling. Bulkheading also contributes to the loss of shallow water habitat through erosion. Waves and currents move material from beaches and shallows into deep water. By reducing the erosion of shorelines which feed beaches and shallows, bulkheads contribute changes in the beach material and the erosion of beaches and shallows. Bulkheads can also lead to beach erosion by intensifying wave action on beaches in front of the bulkhead.

The salmon and steelhead migrate out to sea and live in the open ocean for two to five years. They then complete the cycle by returning to spawn in the rivers and streams in which they were hatched.

Because of the wide range of habitats used by salmon and steelhead, comprehensive policies are necessary to ensure their continued viability. Chapter 5 contains policies and regulations local governments should consider including in their shoreline master programs to protect salmon and steelhead. The shoreline master program is the appropriate mechanism to protect these species because it protects aquatic areas and their immediate uplands.

Recommended Approach

Because critical salt water habitats are located within salt water areas, the local government's most appropriate regulatory mechanism is the shoreline master program. The local comprehensive plan could include a policy which references the local shoreline master program. The substantive policies and regulations would then be included in the master program. The local government should also adopt the master program policies and regulations by reference in the critical areas regulations. Alternatively, these recommended policies and regulations could also be included in comprehensive plans and critical areas ordinances. For salmon, steelhead and shellfish, a basin wide approach will be needed to protect the water quality on which the shellfish rely. This will require the use of other land use controls in addition to the shoreline master program.

Local governments may only have some of the critical salt water habitats and salmon and steelhead habitats recommended for protection. So local governments should edit the definitions and suggested policies and regulations to exclude those protected resources not found within their jurisdiction.

The Department of Fisheries has concluded that methods do not currently exist to successfully develop in-kind replacement mitigation for surf spawning areas and marine vegetation. This means that developments which modify or destroy these habitats permanently decrease the supply of certain fish. These fish species are important to other marine fish and wildlife, commercial fishers and recreational fishers. Consequently, these recommendations focus on directing development away from these areas.

Local governments should consider a two-part approach to identifying critical salt water habitats. First, the local governments should obtain the best available inventory information and map it. Second, where developments would impact marine waters which may support critical salt water habitats and the project has the potential to impact resources, the proponent should conduct a reconnaissance study to determine if any critical salt water habitats are present.

By mapping this information, the local government gives applicants notice that the resource may be present at a specific site. This reduces applicant costs and allows applicants to identify development constraints early in the development process. This makes it more likely that negative impacts can be avoided.

Comprehensive data identifying critical salt water habitats and salmon and steelhead habitats are not available for most jurisdictions. This means that even if the available data do not show that a critical habitat is present, the habitat may be present if the site is biologically suitable. Where a use or activity is proposed which may negatively impact critical habitat, the proponent should contact resource agencies to see if additional data are available. The Department of Fisheries Habitat Management Division is preparing a database identifying the location of various salt water habitats. The Department of Natural Resources is also developing an geographic information system (GIS) containing data on salt water habitats. Some projects will require a Hydraulics Project Approval (HPA) from the Department of Fisheries Habitat Management Division. A consultation can sometimes take place as part of the HPA application process. Information on the location of salmon and steelhead habitats may be available from affected Indian tribes as well.

If the proposal has a significant potential to adversely affect critical salt water habitats or salmon and steelhead habitats, the local government should require the applicant to conduct a reconnaissance study to determine whether the habitat is actually present. The study should be designed in consultation with the local government, affected state and federal resource agencies and affected Indian tribes. Recommended shoreline master program Policy #4 (page H-483) should describe the typical location of critical saltwater habitats.

Some seagrasses are annuals and die back in the winter. So reconnaissance studies should take place during the growing season (June through September). In addition, the distribution of eelgrass may change within a given area. Eelgrass may grow in an area, die back, and then regrow. The absence of eelgrass at any one time cannot be taken as determinative that a critical salt water habitat does not occur in that area.

Mapping the resources requires a substantial up-front investment by the local governments. If the local government does not have the resources to map critical salt water habitats, it can still use the second and third steps to protect the habitats.

A similar approach is recommended for salmon and steelhead habitats. First, the local governments should obtain the best available inventory information and map it. Second, where developments could impact salmon and steelhead habitats, the project proponent should contact resource agency staff to determine if more recent information is available.

The habitat maps may be included in the shoreline master program, a critical areas map series, or comprehensive plan documents. If the areas are not mapped as part of the shoreline master program, the location of the maps should be indicated in the master program. Some local governments may wish to map these areas generally in the comprehensive plan or critical areas map series and more specifically in the shoreline master program. The habitats can be mapped on paper maps, mylars, overlays or computerized GIS systems. The maps should be reproducible.

After mapping or otherwise identifying critical salt water and salmon/steelhead habitats, local governments should review the nearby upland shoreline designations to ensure they are compatible with the in-water resources. As noted in the introduction, upland uses can significantly affect salt water and salmon/steelhead habitats and salmon and steelhead habitats. Upland shoreline designations and master program provisions which are consistent with protecting these resources are important. In addition, local governments can help manage cumulative impacts on salt water and salmon/steelhead habitats by evaluating the uses and activities allowed in shoreline areas which may affect critical salt water habitats. Local governments can then take steps to avoid the potential negative impacts.

Recommended Comprehensive Plan Policies

1. Critical saltwater habitats provide critical rearing and nursery areas for valuable recreational and commercial species. They also provide habitat for many marine plants, fish and animals. These habitats should be protected because of their importance to the marine ecosystem and our economic well-being.
2. Salmon and steelhead habitats support valuable recreational and commercial fisheries. These habitats should be protected because of their importance to the aquatic ecosystem and our economic well-being.
3. Critical saltwater habitats and salmon and steelhead habitats are managed as provided for in the shoreline master program.
4. Critical saltwater habitats and salmon and steelhead habitats are mapped in _____ (Omit this policy if the local government decides not to map the habitat types.)

Additional Information

Alice Lee or Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P. O. Box 47690, Olympia, Washington 98504-7690. Alice Lee's telephone number is (206) 407-6524, SCAN 407-6524. Peter Skowlund's telephone number is (206) 407-6522, SCAN 407-6522.

Department of Community Development, *Planning Data Source Book for Resource Lands and Critical Areas*, pages 141-50 (1991). State of Washington Department of Community Development, Growth Management Division, Ninth & Columbia Building, P. O. Box 48300, Olympia, Washington 98504-8300. Telephone (206) 753-4317. Telephone (206) 753-4317.

Washington State Department of Fisheries, Habitat Management Division, P.O. Box 3155, Olympia, Washington 98504-3155. Telephone (206) 902-2534, SCAN 902-2534. Note: These numbers may change when the Departments of Fisheries and Wildlife merge, effective July 1994.

Washington State Department of Wildlife, Habitat Division, 600 Capital Way North, Olympia, Washington 98501-1091. Telephone (206) 753-3318, SCAN 234-3318.

Tom Mumford, Department of Natural Resources, Division of Aquatic Lands, P. O. Box 47027-7024, Olympia, Washington 98504. Telephone (206) 902-1079.

Puget Sound Water Quality Authority, *Puget Sound Environmental Atlas*, (1987 and 1992). Available from most Puget Sound Area libraries and county and regional planning departments.

Washington Coastal (Floating) Kelp Resources: Port Townsend to Destruction Island is available from Therese Swanson, Shorelands and Coastal Zone Management Program, Department of Ecology, P. O. Box 47690, Olympia, Washington 98504-7690. Telephone number (206) 407-6789, SCAN 407-6789.

Washington State Department of Health, Environmental Health Programs, Office of Shellfish Programs, P. O. Box 47824, Olympia, Washington 98504-7824. Telephone (206) 753-5992. For information on the location of commercial shellfish beds.

Shellfish Protection Team, Planning Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P. O. Box 47690, Olympia, Washington 98504-7690. Telephone number for Jay Shepard is (206) 407-7283, SCAN 407-7283. Technical assistance on shellfish protection.

CHAPTER 19

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Chapter 3: SMP Amendment Process

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Chapter 5: General Policies and Regulations

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(Aimed at local government officials, this paper contains sections on "Slope Failure: Its Nature and Causes" and "Management Options" which discusses the use of clearing and grading codes and bluff setbacks as means of minimizing erosion.)

Environmental Impacts

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(Includes methods of analysis for air, noise, energy, water quality, vegetation and wildlife impacts.)

Environmentally Sensitive Areas

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(Copy at Washington State Library.)

2. Canter, Larry and Loren Hill. 1979. *Handbook of Variables for Environmental Impact Assessment*. Ann Arbor Science.

(A comprehensive listing of variables pertaining to environmental review in water resources planning.)

3. Conservation Foundation. 1980. *Coastal Environmental Management: Guidelines for Conservation of Resources and Protection Against Storm Hazards*. Washington, D.C.: U.S. Government Printing Office.

4. Washington State Department of Wildlife. 1987. *The path between habitat and development - a pamphlet on fish, wildlife and environmental laws*.

(Descriptions of different types of habitat, summary of state and federal laws which protect habitat, description of different types of projects and what the permits, conditions are.)

5. Washington State Departments of Wildlife and Fisheries. *So you want to work in the water*. SHL. Pamphlet.

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6. Washington State Department of Ecology. 1985. *Forest Riparian Habitat Study Phase I Report*. Ecology Publication #85-3. HQL.

7. Washington State Department of Ecology. July 1985. *Shoreline Bluff and Slope Stability: Technical Management Options*. By Douglas Canning. Shorelands Technical Assistance Paper #2. SHL.
8. Washington State Department of Ecology. December, 1981. *Streambed Assessments, Habitat Evaluations, Beneficial Use and Recommendation Towards Enhancement of Stream Ecosystems Within the City of Kent*. By Bruce M. Bortz with Kent Planning Department.

(Identifies sensitive areas, gives methodology for assessment procedure.)
9. Phipps, James B., et. al. 1978. *Pacific Ocean beach erosion and accretion report*. Aberdeen, WA.: Grays Harbor College. (HQL)

(Discusses erosion control, accretion.)
10. Washington State Department of Ecology, Shorelands and Coastal Zone Management Program. 1989. *Proposed Shoreline Master Program Wetland Provisions*. (SHL).
11. Puget Sound Water Quality Authority. June, 1986. *Issue Paper: Habitat and Wetlands Protection*. (SHL)
12. Washington State Department of Ecology, Shorelands and Coastal Zone Management Program. July, 1985. *Shoreline Bluff and Slope Stability: Technical Management Options*. By Douglas Canning. Shorelands Technical Assistance Paper #2.

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15. U.S. National Oceanic and Atmospheric Administration, Office of Coastal Zone Management. November, 1976. *Natural Hazard Management in Coastal Areas*. By Gilbert E. White et. al. Boulder, Colorado.

(Describes application of the Coastal Zone Management Act to natural hazards to minimize losses in the coastal zone. Hazards discussed, delineated and analyzed in light of public policy include hurricane, flood, coastal erosion, landslide, earthquake, tsunami, volcano, avalanche and land subsidence. Problems are discussed by states also. Problems and recommendations are presented.)

16. U.S. Army Corps of Engineers. May, 1988. *Wetlands Development and Restoration*. Huntsville Division Control No. 276.

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(Provides a basic understanding of recreation supply and demand, impacts and management considerations. Recommendations are made for integrating a recreation element into a long-term coastal zone management program. The report describes a user-resource recreation planning

approach as well as some basic recreation planning assumptions and available management tools. Also discussed are: (1) coordination with other governmental agencies having recreation responsibilities; (2) public access; (3) the role of the recreation sector; and (4) classification of coastal recreation activities, a bibliography and selected recreation contacts.

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7. Washington State Department of Ecology, Shorelands and Coastal Zone Management Program. February, 1990. *Shoreline Public Access Handbook*. Ecology Publication #90-6. (SHL)
8. Washington State Department of Ecology. September 20, 1990. *Case Studies of Conditional Public Access in Puget Sound*. Ecology Publication #91-4.

Signage

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5. Gray, Donald H. and Andrew T. Leiser. 1982. *Biotechnical Slope Protection and Erosion Control*. Van Nostrand Reinhold Company.

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6. Kent Planning Department. 1981. *Streambed assessments, habitat evaluations, beneficial uses and recommendations towards enhancement of stream ecosystems within the City of Kent*. By B.M. Bortz. Kent, WA. (WQL)
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3. Washington State Department of Ecology. *Design Criteria for gravity oil/water separators*. Ecology Publication #82-1.
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2. Northwest Power Planning Council, *Columbia River Basin Fish and Wildlife Program* Adopted November 15, 1982.

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3. Oak Ridge National Laboratory. 1980. *Analysis of Environmental Issues Related to Small Hydroelectric Development*.

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Mining

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Recreational

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(Provides a basic understanding for recreation supply and demand, impacts and management considerations. Recommendations are made for integrating a recreation element into a long-term coastal zone management program. The report describes a user-resource recreation planning approach as well as some basic recreation planning assumptions and available management tools. Also discussed are: (1) coordination with other governmental agencies having recreation responsibilities; (2) public access; (3) the role for the private sector; and (4) classification of coastal recreation activities, a bibliography and selected recreation contacts.

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8. Washington State Department of Ecology. *Water Quality Guide: Recommended Pollution Control Practices for Homeowners and Small Farm Operations*. By Joy P. Michaud. Ecology Publication #87-30.
9. Clark County Conservation District. 1981. *Erosion and runoff control guide for construction in Clark County*. Vancouver, WA.(WQL)
10. Federal Emergency Management Administration. January, 1981. *Design and Construction Manual for Residential Buildings in High Hazard Areas*.

11. King County Department of Public Works. 1986. *Surface water design manual*. King County, Seattle, WA.

(For engineers and developers - discusses policy, performance criteria and standards for development controls. Water quality and erosion control standards and operation and maintenance requirements for surface water projects.)

12. Maryland Coastal Zone Program. 1979. *Environmental and Economic Effects of Residential Development on Mayor Peninsula, Anne Arundle County, Maryland*. By Mitre Corporation.

(Provides a checklist of environmental impacts associated with residential development and recommends mitigation measures. Designed to serve as a guidebook for local governments.)

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Guidance to Lake communities about measures to protect.

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(Guide for DOT engineering personnel provides policies and methods to predict and reduce water quality degrading from highways.)

Utilities Primary

See Instream Structures

Chapter 8: Shoreline Modification Activity Policies and Regulations

Shoreline Modification

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4. U.S. Army Corps of Engineers. 1981. *Low-Cost Shore Protection: A Guide for Engineers and Contractors*.

(One of a series of three handbooks published by the Corps which discusses in detail the successes and failures of various shoreline stabilization methods. see also, "*Low Cost Shore Protection: A Guide for Local Governments*" and "*Low Coast Shore Protection: A Property Owner's Guide*") (SHL)

5. U.S. Environmental Protection Agency. July, 1989. *Miller Bay: A Case for Cumulative Impact Assessment* By Lytitia Paramenter.

(This paper evaluates the effects of in-water structures, including piers and bulkheads, in Miller Bay in Kitsap County.)

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(Covers some structure and nonstructural methods of reducing erosion. Sections on "Erosion Control Techniques," pp. 8-12 and "Erosion Abatement Advice," pp. 36-47. See (SHL))

7. Wisconsin Coastal Management Program. January, 1981. *Regulations to Reduce Coastal Erosion Losses*. By D.A. Yanggen.

(Report discusses the role that local zoning and subdivision regulations can play in reducing losses as a result of erosion along Wisconsin's Great Lakes coast.)

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(This paper provides technical guidance to local government officials and helps them to understand the processes of shore erosion, some shore protection alternatives, the design considerations for structural shore protection, and the environmental impacts of improper shore protection.)

9. Washington State Department of Ecology. 1989. Shoreline Modifications. In *Shoreline Public Access Handbook*. Section XIII., pp. 87-90.
10. *Shoreline Structures Design and Construction Standards Compendium*. City of Seattle, Department of Community Development, Environmental Management Div. June 1977 (SHL)
11. Washington Sea Grant Program. 1983. *The Coast of Puget Sound: Its Processes and Development*. By John Downing. University of Washington.

(This book contains section on "Controlling Coastal erosion")

Beach Enhancement

1. *Marine shore resource analysis - shoreline dynamics (beach enhancement program)*. Seattle, WA. Publisher Wolf Bauer. 1978. (HQL)

(Beaches, shoreline protection, marine environment.)

Breakwaters, Jetties and Groins

1. U.S. Army Corps of Engineers. May, 1975. *Guidelines for the Environmental Impact Assessment for Small Structures and Related Activities in Coastal Bodies of Water*. By Mitre Corporation. McLean, Virginia.

(Presents information to assist in the identification and analysis of impacts related to permit applications for riprap, bulkheads, groins, mooring piles, dolphins and ramps, dredging, outfalls, submerged lines and pipes and aerial crossings. For each of the above headings there is a detailed definition, description of main uses, analysis of construction methods and case study describing typical impacts. Tables and information permit analysis of impact magnitudes based on the size of the project. A detailed description of environmental factors precedes the impact assessment segments. Several useful appendices on erosion, runoff, water and air quality and navigation are included.)

2. U.S. Fish and Wildlife Service Office of Biological Services. *Biological Impacts of Minor Shoreline*.
3. *Structures on the Coast Environment: State of the Art Review*. Volumes 1 and 2. March, 1980.

(Volume 1 is a summary of literature on breakwaters, jetties, groins, bulkheads, revetments, ramps, piers and pilings, buoys, harbors for small craft, bridges and causeways. Volume 2 is the bibliography.)

Bulkheads

1. Washington Department of Fisheries. Adopted February 5, 1971. *Criteria Governing the Design of Bulkheads, Land Fills and Marinas in Puget Sound, Hood Canal and Strait of Juan de Fuca for Protection of Fish and Shellfish Resources*. Guidelines.
2. North Carolina Sea Grant College Program. 1981. *A Homeowner's Guide to Estuarine Bulkheads*. UNC-SA-81-11.
3. U.S. Army Corps of Engineers. 1982. *Low Cost Shore Protection (3 volumes): (1) A Property Owner's Guide; (2) A Guide for Local Government Officials; and (3) A Guide for Engineers and Contractors*.

See also references listed under Breakwaters, Jetties and Groins and Shoreline Stabilization and Flood Protection.

Levies and Dikes

1. State of California, The Resource Agency, The Reclamation Board. February, 1988. *Interim Guide for Vegetation on Flood Control Levees Under Reclamation Board Authority.*

(These guidelines provide standards for inspecting and managing levee, levee toe and berm vegetation. See Marcia Geidel, Washington State Department of Ecology, for copy.)

Dredging and Dredge Spoil Disposal

1. *Draft Environmental Impact Statement - Unconfined Open-Water Disposal for Dredged Material, Phase II.* North and South Puget Sound. March, 1989. (SHL)

(This DEIS evaluates alternatives considered in identifying preferred sites for disposal of dredged material in north and south Puget Sound, including Olympia, Port Townsend, Port Angeles, Anacortes, Bellingham. Five multi-user disposal sites are identified for use based on site selection process considering alternative sites.)

2. *Confined Disposal of Contaminated Sediments - Documentation of Standards Development.* Final Report. November, 1989. Sediments Unit.
3. *Puget Sound Dredged Disposal Analysis (PSDDA) Reports. 1986-1988.*

A collection of reports and technical studies (sediment contamination issues) which comprise the combined federal and state planning effort to manage the disposal of dredged material in the Puget Sound. Available from the U.S. Army Corps. of Engineers, Seattle District Office, Attn: PSDDA Study Director, or at Washington State Department of Ecology Headquarters.

4. Washington State Department of Ecology. August, 1982. *Guidelines for Issuing Water Quality Certifications for Dredging and Discharge of Dredged Material.* Ecology Publication #82-13.
5. Washington State Department of Ecology. September, 1989. *Management Plan Report: Unconfined Open-Water Disposal of Dredged Material Phase II (North and South Puget Sound)* EPA Region 10.
6. Williamson, K.J., et al. March, 1977. *Dredging in Estuaries: A Guide for Review of Environmental Impact Statements.* Oregon State University.

7. U.S. Army Corps of Engineers. December, 1978. *Dredge Material Research Program, "Guidelines for Dredged Material Disposal Area Reuse Management."*
8. U.S. Fish and Wildlife Service, Office of Biological Services. September, 1980. *Impacts of Navigational Dredging on Fish and Wildlife: A Literature Review,*

Revetments

1. Washington State Department of Ecology. June, 1985. *Shoreline Erosion Protection: On Shore Structural Methods.* By Douglas Canning. Shorelands Technical Assistance Paper #1. Seattle Metro, Construction and Water Quality 1977.

(Revetments, Bulkheads, Design and Planning considerations.) (Design and construction considerations of both massive rigid revetments) and alternative erosion control devices (Jetted willow poles, jacks, revegetation, etc.)

Appendixes



*Shorelands & Coastal Zone
Management Program*

93-104C

Appendix A

Integrating Growth Management with Shorelines Management: Local Options

Introduction

Washington State has a strong tradition of local-state partnerships in land use and environmental planning. The Shoreline Management Act, celebrating its twentieth birthday in 1991, is a cooperative local-state program. The Growth Management Act is also a cooperative local-state program.

The Department of Ecology Shorelands and Coastal Zone Management Program prepared this technical assistance report to answer questions from local government planners on shorelines management and growth management. The paper has three additional goals. First, to help local governments planning under the Growth Management Act (RCW 36.70A) by identifying issues they may wish to consider, sources for additional information, and funding sources that might be used to help implement the Growth Management Act. Second, to improve administration of the Growth Management Act and the Shoreline Management Act by improving consistency between comprehensive plans and shoreline master programs. And third, to reduce potential conflicts between comprehensive plans, development regulations, and shoreline master programs.

The Department of Ecology prepared this issue paper under its authority to develop guidelines for the management of shorelines and adjacent lands under the Shoreline Management Act. This paper is provided only for technical assistance purposes.

This technical assistance paper focuses on shoreline master programs and comprehensive planning. The Shorelands and Coastal Zone Management Program of the Washington Department of Ecology produces the *Shoreline Management Guidebook* which describes how to prepare and administer shoreline master programs. This technical assistance paper was coordinated with the Washington State Department of Community Development. The paper is intended as a companion to the technical assistance papers prepared by the Washington State Department of Community Development.

The following section summarizes current information available on the relationship between comprehensive plans and shoreline master programs. The third section describes shoreline policies and issues local governments should consider when developing their comprehensive plans and methods local governments can use to incorporate these issues into their comprehensive planning process. The fourth section describes ways of avoiding conflicts between comprehensive plans and shoreline master programs. The fourth section also describes methods local governments can use to integrate comprehensive plans and shoreline master programs. The fifth section briefly describes Department of Ecology grant programs which can fund certain types of planning activities.

For additional copies of this technical assistance paper please contact Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690. Telephone (206) 438-7430, SCAN 585-7430.

The author would like to extend his thanks to the Department of Ecology staff, especially Thomas Mark, the project manager, and Peter Skowlund. The author would also like to thank the local government planning staff, state agency staff, and others who reviewed drafts of this paper and offered suggestions. The author also thanks the Thurston Regional Planning Commission and the Municipal Research and Services Center for the use of their libraries. As always, the responsibility for any mistakes is the author's.

Relationship Between the Comprehensive Plan and the Shoreline Master Program

A local government comprehensive plan contains a community's vision of its future. This vision should be based on a realistic analysis of problems, potentials, and opportunities. Local governments need to include a state perspective in this analysis. This state perspective is reflected in the Growth Management Act's comprehensive planning goals found in RCW 36.70A.020. For local governments with shoreline areas within their jurisdiction, the community vision should also include the policies of the Shoreline Management Act.

The community's vision in the comprehensive plan should be reflected in functional plans, special area plans, and implementing regulations. This includes shoreline master programs. The Department of Ecology encourages local governments to amend their shoreline master programs so they are consistent with their comprehensive plans. Of course, the amendments cannot be approved unless they comply with the Shoreline Management Act, guidelines, and regulations.

Summary of the Shoreline Management Act and the Growth Management Act

This section first discusses the Shoreline Management Act, then the Growth Management Act, and finally the relationship between shoreline master programs and comprehensive plans. Figure 1 illustrates the relationships between the Shoreline Management Act and shoreline master programs. The figure shows the relationship between the Growth Management Act and comprehensive plans and development regulations. Figure 1 also shows the relationships between comprehensive plans developed under the Growth Management Act, RCW 36.70A, and shoreline master programs. The following subsections discuss the relationships shown in Figure 1.

Shoreline Management Act

The people of the state of Washington adopted the Shoreline Management Act to provide for a cooperative local government-state government program to manage shoreline areas. The Shoreline Management Act encourages the appropriate development of shorelines and the protection of shoreline resources. The Shoreline Management Act is based on the

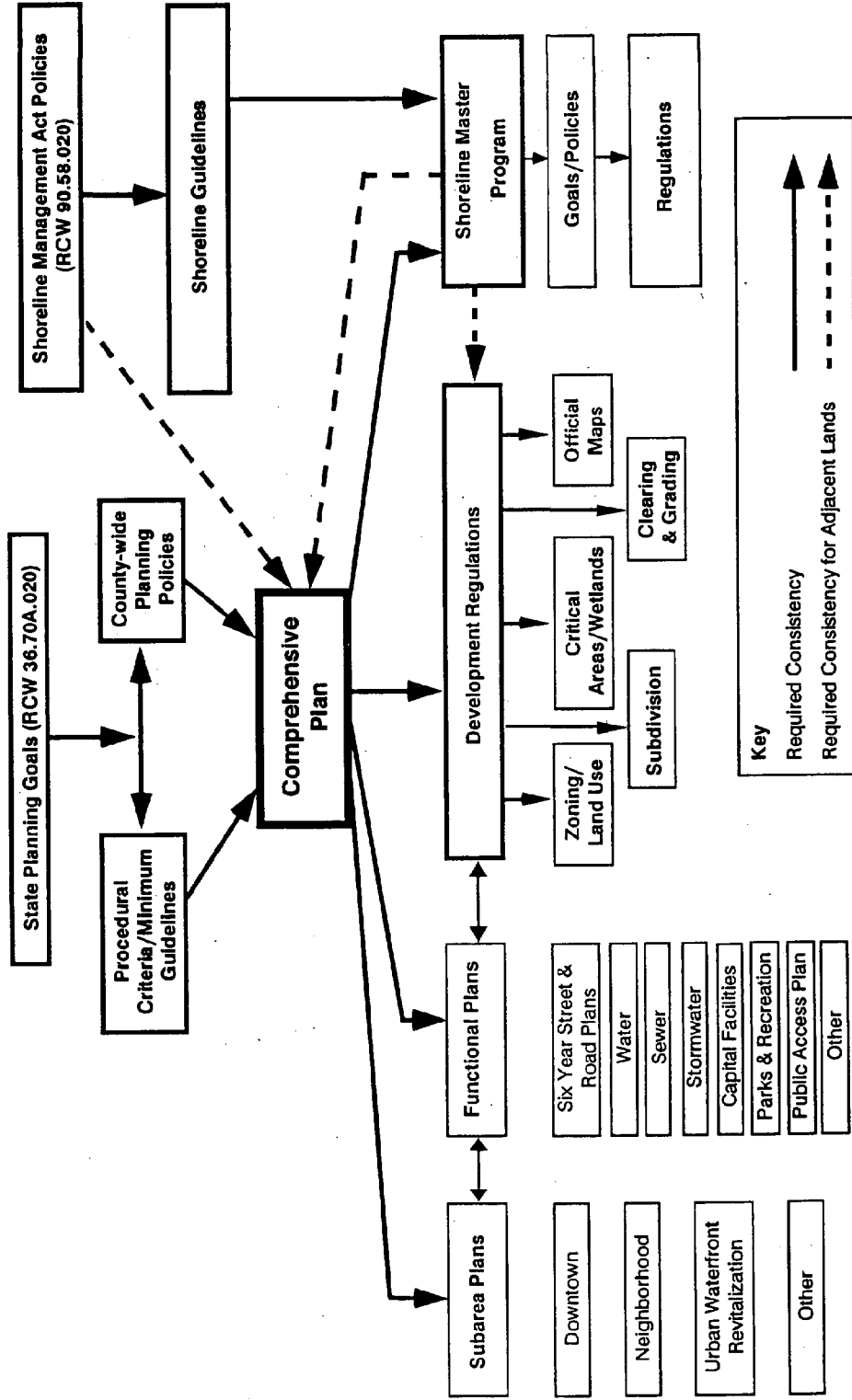
State of Washington's police power under the state constitution and the state's duty to manage the shorelines and tidelands for the benefit of the public consistent with the public trust doctrine.

The Shoreline Management Act is needed to carry out the state's public trust responsibilities. The Shoreline Management Act also recognizes the joint local-state interest in shorelines. This joint interest results because the environmental, economic, and recreational resources of shorelines extend beyond local government boundaries. State involvement in shorelines management helps insure shoreline policies are coordinated where local governments manage parts of the same waterbody. The state provides technical assistance to local governments preparing and implementing shoreline policies. The state also helps local governments consider state-wide interests when managing resources which affect the entire state. Because of these joint interests, the Shoreline Management Act in RCW 90.58.020 establishes a state policy for the management of shorelines.

Under the cooperative program established by the Shoreline Management Act, local governments have primary responsibility for administering the Act. Local governments inventory shoreline areas and resources. Local governments prepare Shoreline Master Programs in compliance with the Act and implementing regulations adopted by the Department of Ecology. Local governments decide applications for shorelines development projects. Local governments have independent and joint enforcement responsibility with the Department of Ecology.

The Department of Ecology reviews local shoreline master programs and shoreline master program amendments. The Department of Ecology approves those programs and amendments which follow the policy of the Shoreline Management Act and the guidelines. The Department of Ecology reviews all permits approved by local governments. The Department of Ecology must approve shoreline conditional use permits and shoreline variances before they are valid.

Figure 1
 Relationship between Comprehensive Plans and Regulations
 under the
 Growth Management Act and the Shoreline Management Act



State agencies must comply with the Shoreline Management Act and adopted shoreline master programs. State agencies must get shoreline permits for development activities under the jurisdiction of the Shoreline Management Act.

The Shoreline Management Act and the Growth Management Act are complimentary. The Shoreline Management Act focuses on shoreline resources of regional and state importance, and, therefore, includes significant state oversight. The Growth Management Act focuses on community-wide land use planning. Shorelines may be affected by development outside of shoreline jurisdiction and development near or within waterbodies too small to be under the jurisdiction of the Shoreline Management Act. Local government planning under the Growth Management Act can help lessen these impacts.

Growth Management Act

The Legislature passed the Growth Management Act to help local governments to better manage growth. In RCW 36.70A.020, the Legislature adopted thirteen state land use goals to guide the preparation of local comprehensive plans.

The Growth Management Act, RCW 36.70A, requires all local governments to identify natural resources lands and critical areas. Natural resource lands include agricultural lands suitable for the long term production of agricultural products, forest lands suitable for the long term production of forest products, and lands suitable for the long term production of minerals, including sand and gravel. Critical areas include wetlands, critical aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas. All local governments must protect critical areas. Local government not required and not choosing to plan under RCW 36.70A must make their development regulations consistent with their comprehensive plans by July 1, 1992.

The Growth Management Act requires that counties with populations which exceed 50,000 people and where the population increased by more than ten percent in the previous ten years prepare and adopt comprehensive plans and development regulations. Counties which experienced population increases of more than twenty percent in the previous ten years must also prepare and adopt comprehensive plans and development regulations. Those counties which meet the 20 percent growth criteria can decide not to plan under the Growth Management Act. Any other county can choose to plan under RCW 36.70A. Cities in all three types of counties must also adopt comprehensive plans and development regulations. The local governments must adopt comprehensive plans by July 1, 1993 and development regulations which are consistent with comprehensive plans by July 1, 1994.

The comprehensive plans must be consistent with county-wide planning policies adopted by the county in cooperation with the cities. The comprehensive plans are to include land use, housing, capital facilities, utilities, rural, and transportation elements. County comprehensive plans must designate urban growth areas. The urban growth areas include cities and unincorporated areas which are or will be developed at urban densities. These areas are to be large enough to accommodate the county's projected twenty year urban population.

After preparing comprehensive plans, local governments update their existing development regulations, such as zoning ordinances, or prepare new development regulations to implement their comprehensive plans. Local government development regulations must be consistent with the comprehensive plan.

The Department of Community Development adopts procedural guidelines to guide the development of comprehensive plans. The Department of Community Development also provides grants and technical assistance to local governments. The Department of Community Development is authorized to resolve disputes between cities and counties over urban growth boundaries.

Local governments proposing to adopt comprehensive plans, development regulations, or amendments to plans or development regulations under RCW 36.70A must notify the Department of Community Development of their intent to adopt at least sixty days before final adoption. State agencies may provide comments to the local governments during the public review process before adoption.

State agencies must follow adopted county-wide planning policies and comply with local comprehensive plans and development regulations adopted under RCW 36.70A. State agencies must obtain local permits.

Once adopted by local governments, comprehensive plans are presumed valid. Local government comprehensive plans and implementing regulations may be appealed to one of three regional Growth Planning Hearings Boards. If a Growth Planning Hearings Board finds a comprehensive plan is not in compliance with the Growth Management Act, it is remanded back to the local government.

Relationships between Shoreline Master Programs and Comprehensive Plans

The Department of Ecology recognizes that the new comprehensive plans developed by local governments under the Growth Management Act may improve upon shoreline policy decisions in existing shoreline master programs. This is most likely to be the case for those jurisdictions which have not recently updated their shoreline master programs.

The Department of Ecology encourages local governments to make their shoreline master programs consistent with their new comprehensive plans where the plans adequately incorporate shorelines policies and concerns. Like all master program amendments, these amendments must comply with the Shoreline Management Act, related regulations (WACs), and be approved by the Department of Ecology. Coastal Zone Management grants may be available to assist eligible local governments in updating their shoreline master programs. These grants are described on page 47 of this paper.

Shoreline master programs are adopted and enforced both by local governments and the Washington State Department of Ecology. When adopted by the Department of Ecology, master programs become state regulations. This joint local and state adoption and enforcement means shoreline master programs are not local government development regulations as defined by the Growth Management Act. Therefore, the Growth Management Act's requirement that local government development regulations comply

with comprehensive plans does not apply to shoreline master programs. In addition, local governments are not required to adopt new shoreline master programs by July 1, 1994.

Section 4 of the 1991 amendments to the Growth Management Act requires state agencies to comply with local comprehensive plans and development regulations prepared under RCW 36.70A. Section 4, however, does not amend the Shoreline Management Act. Nor does the general provision of Section 4 override the Department of Ecology's specific authority to review and approve or disapprove shoreline master program amendments based on the Shoreline Management Act and the regulations implementing the Act. Therefore, the Department of Ecology must consider local government comprehensive plans when reviewing shoreline master programs and shoreline master program amendments. Where a proposed shoreline master program or amendment conflicts with the Shoreline Management Act, the guidelines or the regulations, the Department of Ecology retains the authority to amend or deny the proposed shoreline master program or amendment.

The Shoreline Management Act and local government shoreline master programs are generally minimums that local governments can exceed with other ordinances. The Shoreline Management Act, in RCW 90.58.340, requires that local governments and state agencies review their plans, regulations, and ordinances which apply to areas adjacent to shorelines jurisdiction and modify these plans, regulations, and ordinances so they "achieve a consistent use policy" with the Act and the shoreline master programs. This means that local government comprehensive plans and development regulations for adjacent lands must be consistent with the Shoreline Management Act and local government shoreline master programs. Figure 1 shows these requirements with double lines. To help in complying with the adjacent lands requirements, local governments should incorporate Shoreline Management Act policies into the comprehensive planning process. Local governments should also review existing shoreline master program policy decisions when developing their comprehensive plans.

Why Local Governments Should Incorporate Shoreline Concerns into Their Comprehensive Planning Process

Shorelines play a key role in many communities. Shorelines are valuable economic, social, and ecological resources for local communities. Ports are major employers in many communities in both eastern and western Washington. Water-enjoyment uses, such as restaurants and hotels, are also significant employers in many communities. Waterfront parks on the ocean, sounds, rivers, and lakes are important social and recreational areas. Salt water bodies, freshwater bodies, riparian areas, and adjacent uplands are important natural resource areas and habitats.

For these reasons, local governments often consider shoreline areas and resources in their comprehensive planning process. The Department of Ecology hopes this paper will provide information to aid their efforts and reduce the time and cost of preparing comprehensive plans.

A second reason to incorporate shorelines considerations into the comprehensive planning process is that local governments will want to amend their shoreline master programs to reflect their new comprehensive plans and development regulations. By incorporating shorelines concerns into the comprehensive planning process, these amendments to shoreline master programs will be consistent with the Shoreline Management Act. The Department of Ecology will agree to amendments to shoreline master programs to reflect comprehensive plans which adequately address shoreline issues. The state will follow these amendments in making shoreline decisions.

Incorporating shoreline policies and policy decisions into comprehensive plans and then updating shoreline master programs based on the comprehensive plan will result in consistent plans and regulations. Consistent plans and development regulations will make local government administration of plans and development regulations easier, more economical, and help insure that developments achieve local goals. This is so because the documents will not conflict and will work well together.

Consistent comprehensive plans, development regulations, and shoreline master programs will improve predictability for property owners. This will help local communities encourage the type of development they want and help reduce the costs of getting development approvals.

Incorporating shorelines concerns into local comprehensive plans will result in better comprehensive plans. The shorelines factors will help make the planning process comprehensive and ensure a broad range of issues are considered.

The Department of Ecology can provide technical assistance. This technical assistance includes the *Shoreline Management Guidebook*. The *Shoreline Management Guidebook* is available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, State of Washington Department of Ecology, P. O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430. The Department of Ecology also holds periodic shorelines management conferences. The Department of Ecology will hold mini-workshops on shoreline management for local governments on request. Department of Ecology staff will also answer questions on shorelines management issues over the phone or by letter. For any of these services call or write the above address.

The Department of Ecology can provide financial assistance for amendments to shoreline master programs. Please see the description of financial assistance programs in Section V beginning on page 47.

Amending shoreline master programs can also help insulate local governments against takings claims. Because shoreline master programs are reviewed and approved by the state, local governments may have less liability for takings claims where the decision is based on shoreline master program policies and regulations.

In addition, because the Shoreline Management Act helps implement the public trust doctrine, courts may be more likely to take the doctrine into account when determining if land use restrictions result in a taking. However, the public trust doctrine can be asserted anytime a local government regulation protects a public trust resource. The public trust

doctrine provides that when the state conveys tidelands or shorelines owned by the state at the time of statehood to public or private owners, a legal servitude applies to those lands unless the state explicitly extinguishes the servitude. The servitude limits the private use of lands under navigable waters conveyed by the state to uses compatible with public trust rights such as navigation and fishing. Local governments and the state may authorize uses which would affect the servitude through the Shoreline Management Act under certain circumstances.

In *Orion Corp. v. Washington*, 109 Wash. 2d 621, 747 P.2d 1062 (1987), the Washington State Supreme Court found that to determine whether a local shoreline master program had resulted in a taking, the uses prohibited by the master program had to be uses permitted under the public trust doctrine for a taking to have occurred. If the prohibited uses were incompatible with the public trust doctrine, then the local and state governments had not taken private property rights. This is so because the state conveyed the property to the owner with public trust doctrine limitations.

Shoreline Policies and Issues to Address in Comprehensive Plans

The first part of this section describes methods local governments have used to incorporate shoreline policies and issues into local comprehensive planning processes. The second section describes the shorelines policies and issues local government should consider during the comprehensive planning process.

How to Incorporate Shoreline Policies and Concerns into Comprehensive Planning under the Growth Management Act

Local governments often include shorelines policies and issues in their comprehensive planning processes. When and to what extent shorelines policies and issues are incorporated depends on the jurisdiction, the extent of shorelines resources in the jurisdiction, and the type of plan being developed. The key to cost-effectively incorporating shorelines issues is to include them as an integral part of the planning process, rather than adding them on at the end.

Figure 2 illustrates one approach to the comprehensive planning process. This approach begins with data gathering and analysis. The local government then works with the community to identify its preferred future. The local government next works with the community to prepare goals, alternatives, and policies. After the comprehensive plan is adopted by the local government, implementing regulations are prepared. Communities using a similar process would include Shoreline Management Act policies and the policy decisions in the existing shoreline master program in the inventory and analysis step. When comparing alternatives, they would include shoreline policies as some of the

comparison criteria. After preparing and adopting development regulations, the local government would update its existing shoreline master program to reflect the new comprehensive plan and development regulations.

The specific ways local governments include shoreline policies and considerations into their comprehensive planning processes are not important. What is important is that the local government consider them. Local governments have used the following methods to consider shoreline issues and concerns.

Include shorelines areas and resources in inventories. The Growth Management Act requires local governments to inventory natural resource lands, such as land suitable for long term agriculture and forestry, and critical areas such as wetlands, aquifer recharge areas, and fish and wildlife habitats. Many of these areas are in shoreline areas and local governments will inventory them as a matter of course. Local governments should also consider inventorying other shoreline information such as shoreline master program environment designations and water-dependent and water-related uses.

Address shorelines issues and policies in an analysis of trends and issues. Local governments often analyze and forecast community trends when preparing a comprehensive plan. This analysis can help local governments spot problems and opportunities. For example, changes from industrial to commercial uses in shoreline areas may indicate opportunities for shorelines redevelopment and increased public waterfront access. If the area is a deep water shoreline, this trend may also indicate the need to reserve some suitable shorelines as a working waterfront. Local governments generally include the analysis in issue papers or comprehensive plan chapters distributed to citizen advisory committees and planning commissions.

Include shorelines factors in land capability or suitability analysis. Local governments often base comprehensive plan land use designations in part on the physical suitability of land for development. Local governments often consider factors such as soil suitability, water and sewer capacities, street and road capacities, the presence of wetlands, and existing uses. Shoreline factors local governments should consider include shoreline master program environments, flood plains, access to deep water shipping channels, fish and wildlife habitats, and riparian vegetation. Local governments often map these factors on map overlays or use computerized geographic information systems (GIS) to display and analyze these factors.

Shorelines Subcommittees. In certain communities shorelines issues can be time consuming but important parts of the comprehensive planning process. Some communities have established subcommittees of interested persons to consider alternatives and resolve the issues. While subcommittees may require a significant staff commitment, they can be useful.

Consult with the Department of Ecology on draft comprehensive plans and draft implementing regulations. The Growth Management Act requires local governments to notify the Department of Community Development sixty days before final adoption of comprehensive plans and implementing regulations. This is a good opportunity to ask the Department of Ecology to review plans and development regulations. This peer review can help a local government address potential problems before adoption. Department of

Ecology review will make it easier for local governments to amend their shoreline master programs to make them consistent with newly adopted comprehensive plans. This is so because the Department will have had an opportunity to identify and resolve any problems during the comprehensive planning process. The Department of Ecology encourages consultation as early in the process as is convenient for local governments.

The Growth Management Act authorizes state agencies to review and comment on draft local government comprehensive plans during the public comment period. The Department of Ecology will review and comment on draft comprehensive plans. The Department of Ecology will also review and comment on draft environmental impact statements prepared for draft comprehensive plans.

Shoreline Policies and Issues to Incorporate into Comprehensive Planning under the Growth Management Act

Use Policies and Issues

Reserve appropriate shoreline areas for water-dependent, water-related, and water-enjoyment uses.

Summary. Shoreline areas are among Washington state's most attractive development sites. The growth pressure facing Washington has been especially strong in shoreline areas. This competition for shoreline sites means that local governments should reserve areas for uses that require or benefit substantially from waterfront locations.

The Shoreline Management Act policies designate uses to which local governments are to give priority when allocating uses in shoreline areas. The policies in RCW 90.58.020 provide that in the limited situations when local governments authorize shoreline alterations, the following uses shall have priority: single family residences, ports, shoreline recreational uses (including parks, marinas, piers, and other public access improvements), industrial and commercial uses which require a shoreline location or use shoreline resources, and other developments which will provide an opportunity for substantial numbers of people to enjoy the shorelines of the state.

Not all shorelines are suitable for these priority uses. When allocating uses in the comprehensive plan and development regulations, local governments should consider the policies of the Shoreline Management Act, the suitability of the shorelines for specific uses, and community goals.

For Additional Information. The Shoreline Management Act, including the policies in Section 90.58.020, the *Shoreline Management Guidebook, 1990*, and the Urban Waterfront Policy Analysis Addenda to the *Shoreline Management Guidebook, 1990* (see Addendum 2) are available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P. O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Provide for the continued operation and appropriate expansion of existing ports and provide for land uses on adjacent lands which facilitate the operation and expansion of existing ports.

Summary. Ports are one of the priority uses established by the Shoreline Management Act. In Washington state, ports are typically located on Puget Sound, the Strait of Juan de Fuca, Grays Harbor, Willapa Bay, and the Columbia River. Efficient ports are essential to the continued growth and development of the Washington state economy. However, the development of new ports has major environmental impacts. New ports are also very costly and may not be competitive with ports outside the state. Providing for the efficient operation of existing ports and the expansion of existing ports when needed to meet increased demand will have significant economic and environmental benefits.

Local government comprehensive plans can provide for ports in four ways. First, existing ports in appropriate locations should be designated for continued use as ports and industrial areas and developed for water-dependent and water-related uses. Second, areas within and adjacent to appropriately sited ports should be designated to meet the projected future expansion needs of the port where consistent with the natural resources of the area. Third, the land use designations for lands adjacent to existing appropriately sited ports should be compatible with the noise, glare, dust, and other impacts generated by port activities. Fourth, local government comprehensive plans should protect and enhance rail corridors and truck traffic links to ports so ports remain efficient.

For Additional Information. The *Shoreline Management Guidebook, 1990*, the *Urban Waterfront Policy Analysis Addenda to the Shoreline Management Guidebook, 1990* (see Addendum 2), and the *Urban Waterfront Policy Analysis*, publication number 87-12, are available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P. O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Protect rural, conservancy, and natural shoreline areas.

Summary. Local government shoreline master programs typically designate shorelines areas as one of four or five main shoreline environments. These environments are similar to broad zoning districts in that they contain purpose statements, allowed uses and activities, and development standards.

The urban environment is the most intense. It allows the most extensive modification to the shoreline and water. Most ports are within urban or maritime (a type of urban) environments. The suburban environment generally provides for intense shoreline modification, with less in-water types of development. Suburban designations are often oriented towards residential, park, and water-enjoyment uses. Rural environments generally provide for natural resource based uses such as agriculture and forestry and moderate to large lot residential uses. Rural environments generally provide significant protection for aquatic areas and riparian vegetation. Conservancy environments protect shoreline areas and may allow for aquaculture, low intensity agriculture, and similar natural resource uses on a sustained yield basis. Natural shorelines provide the highest level of resource protection. Only very limited uses, such as passive recreation and

wildlife preserves, are allowed in most natural environments. Some local governments have aquatic environments for large open water areas such as Puget Sound, bays, and large lakes when aesthetics, navigation, and fisheries considerations predominate.

Rural, conservancy, and natural shoreline environments are intended to protect important in-water and shoreline habitats. Local governments should periodically review their shoreline master programs to ensure important natural resources are identified and protected.

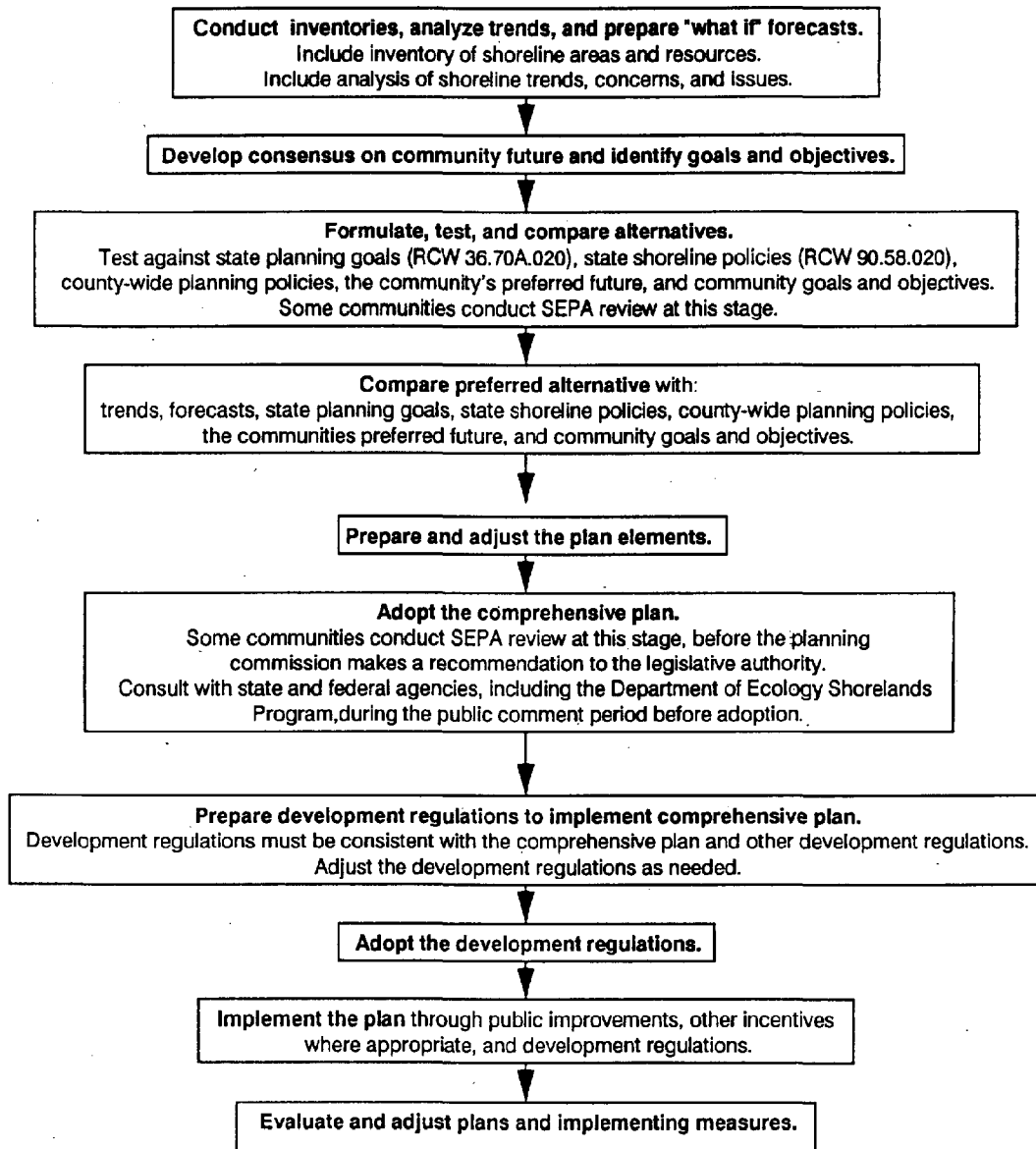
Uses and activities outside of shorelines jurisdiction can have significant negative impacts on shoreline resources. Local government comprehensive plans and development regulations can lessen impacts on shorelines by minimizing erosion from land clearing, reducing storm water runoff, and designating adjacent lands for compatible uses.

For Additional Information. The *Shoreline Management Guidebook, 1990, Shoreline Master Program Handbook* (see Chapter 6) and WAC 173-16 (see WAC 173-16-040(4) for a description of the four major shoreline environments) are available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Protect the productive capacity and resource values of urban and suburban shorelines.

Summary. While urban and suburban shoreline environments experience the most intense development, they can also have valuable natural resources. Urban and suburban shorelines are also important as fish and wildlife migration routes. Salmon and steelhead must swim through many urban and suburban shoreline areas on their way from spawning beds to the sea and back again. Riparian vegetation and wetlands in urban and suburban areas are valuable and should be protected. This is especially true in shorelines of state-wide significance where protection of natural resources is Shoreline Management Act priority. Uses and activities within and outside of shoreline jurisdiction can have significant negative impacts on these valuable natural resources.

Figure 2
Generalized Comprehensive Planning Process
With Opportunities to incorporate Shoreline Management Act Policies



Source: modified from F. So & J. Getzels, THE PRACTICE OF LOCAL GOVERNMENT PLANNING, 12-13 (1988).

Local government shoreline master programs can identify and protect the water and shoreline features necessary to protect these resources. Local government comprehensive plans and development regulations can lessen the impacts on shorelines by minimizing erosion from land clearing, reducing storm water runoff, and designating adjacent lands for compatible uses.

For Additional Information. The *Shoreline Management Guidebook, 1990, Shoreline Master Program Handbook* (see Chapter 6) and WAC 173-16 (see WAC 173-16-040(4) for a description of the four shoreline environments) are available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Protect sanctuaries and similar areas.

Summary. Local, state, and federal agencies have designated land and water areas as wildlife sanctuaries, wildlife habitat areas, and natural heritage areas. Some rivers are state or federal wild and scenic rivers. Private organizations, such as the Nature Conservancy and community land trusts, acquire and manage land and water areas for similar purposes. Local governments should consider these areas when determining the land uses and intensities the comprehensive plans and development regulations will allow on nearby lands.

Protect shoreline visual assets and visual access to the shoreline.

Summary. Shoreline views are one of the elements that make Washington state a desirable place to live. The Shoreline Management Act provides for the protection of shoreline views and aesthetics. Local governments may include a design element in their comprehensive plans or prepare a separate design plan for the community or part of the community. When preparing a design element or design plan, local governments should consider protecting shoreline visual assets and providing visual access to the shoreline. Typically the policies of a design element or design plan relating to shoreline visual assets and visual access can be implemented through specific policies and regulations in the community shoreline master program.

For Additional Information. General information related to shoreline master programs and visual assets and visual access may be found in the *Shoreline Management Guidebook, 1990, Shoreline Master Program Handbook* (see Chapter 5) and the *Urban Waterfront Policy Analysis*, June 1986, publication number 87-12, (see Chapter 5) both available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Encourage uses and densities on adjacent lands that reinforce the policies of the Shoreline Management Act and shoreline master programs.

Summary. Development outside of shoreline jurisdiction can affect shoreline resources. Section 90.58.340 of the Shoreline Management Act requires that local government land use policies for lands adjacent to shoreline areas be consistent with the Shoreline Management Act and local government shoreline master programs. The Department of

Ecology has defined the term adjacent lands to include "those lands immediately adjacent to and abutting lands under permit jurisdiction extending landward to the extent necessary to control direct and significant impacts to the shorelines and to implement the management policy articulated in the Shoreline Management Act, the guidelines, and the master program. The inland extent will necessarily vary with the particular management objectives for the shoreline setting." Examples of adjacent lands include lands abutting the shoreline jurisdiction area and non-shoreline streams tributary to shoreline waterbodies which affect shoreline water quality.

As the definition of adjacent lands indicates, the key criterion for determining if land use policies reinforce the shoreline provisions is whether significant negative impacts are avoided. In making this determination, local governments should consider whether adjacent uses are compatible with shoreline uses and whether development standards are adequate to reduce impacts on shoreline resources.

Compatibility includes two elements. First, will uses on adjacent land uses negatively impact shoreline uses or the shoreline environment. These impacts may include noise, glare, traffic, siltation, storm water runoff, or discharges from upland septic systems into water bodies. The second element is whether upland uses will interfere with shoreline uses. For example, residential uses next to a port may prevent the efficient operation of port facilities.

Development standards can increase compatibility by reducing impacts on shoreline uses and protecting shoreline environments. Providing a sewer system and a storm water collection and treatment system to upland residential areas can make residential areas compatible with shoreline environments sensitive to water pollution. Similarly, industrial performance standards may make certain industrial uses compatible with some conservancy shoreline areas.

For Additional Information. General information related to adjacent lands may be found in the *Shoreline Management Guidebook, 1990, Shoreline Administrator's Manual* (see Chapter 2) available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Plan public utilities and transportation facilities so they reinforce the overall land use pattern and the shoreline environment designations.

Summary. An effective land use strategy includes both regulations and incentives. The regulations include zoning, or similar land use controls, sensitive area regulations, subdivision regulations, and shoreline master programs. Incentives include public facilities, such as water, sewer, storm water, and transportation systems. Providing urban public facilities in areas designated for development and not providing urban public facilities in areas designated for resource use or protection reinforces local government development regulations.

The Growth Management Act requires that comprehensive plans direct both development regulations and public facilities. In designating the levels and types of public facilities for various areas, local governments should consider the Shoreline Management Act policies and the policy decisions made in local government shoreline master programs.

For Additional Information. The Shoreline Management Act (including the policies in Section 90.58.020) and the *Shoreline Management Guidebook, 1990, Shoreline Master Program Handbook* (see the environment purpose and indent statements and management policies in Chapter 6) are available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Maintain and restore riparian vegetation in shoreline areas and on tributary streams and waterways which affect shoreline resources.

Summary. The Growth Management Act, in RCW 36.70A.170 and RCW 36.70A.160, requires local governments to designate critical areas, including wetlands, fish and wildlife habitat conservation areas, and open space corridors useful for recreation, wildlife habitats, and connecting critical areas. RCW 36.70A.060(2) requires local governments to protect critical areas.

The riparian vegetation along rivers and streams is often a critical area. Riparian vegetation provides bird and wildlife habitat. Riparian vegetation provides food materials which fall into rivers and streams providing food for aquatic organisms. Riparian vegetation shades rivers and streams, lowering their temperature. This shade is important to fish survival. Riparian vegetation and the streams and rivers often provide corridors for fish and wildlife to move between various areas with the seasons and during their life cycles. Riparian vegetation is important in both eastern and western Washington. For these reasons, local governments should protect riparian vegetation not only on shoreline rivers and streams, but also on water bodies which are tributary to shoreline rivers and streams.

The Yakima Greenway Plan protects riparian vegetation, fish and wildlife habitat, connects habitat areas, and provides for public access and recreational use of the river. The plan is an example of planning for regional shoreline resources. The greenway covers Yakima County and several cities.

For Additional Information. The *Shoreline Management Guidebook, 1990, Urban Waterfront Policy Analysis Addenda* (see Addendum Number 1) is available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Use parallel environments and other appropriate methods along waterways to protect habitat and recreation areas.

Summary. One technique to protect riparian vegetation and other types of linear habitats is the parallel zone or parallel shoreline environment. A parallel shoreline environment designates the river or stream and the adjacent riparian vegetation as conservancy or natural. This environment would contain development standards designed to protect

aquatic resources and riparian vegetation. The balance of the shoreline jurisdiction area would be in a shoreline environment which allows more intense development. Zoning can accomplish the same ends by using a riparian protection zone or by designating rivers, streams, and riparian vegetation as an environmentally sensitive area. Local government comprehensive plans should include policies to guide the use of parallel shoreline environments or similar zoning techniques.

For Additional Information. The *Shoreline Management Guidebook, 1990, Urban Waterfront Policy Analysis Addenda* (see Addendum Number 1) is available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Wetlands Policies

Consider state and federal wetland protection policies in shoreline areas, adjacent lands, and wetlands and water courses tributary to shoreline areas which affect shoreline resources.

Summary. Protecting wetlands prevents damage to both the human and the natural environment. Wetlands reduce flood damages by storing flood waters and reducing flood peaks. Wetlands prevent erosion by slowing water velocities and buffering uplands from storm waves. Wetlands help maintain water quality by filtering out sediments, nutrients, and other pollutants. Wetlands can serve as aquifer recharge areas, maintaining the quantity of groundwater available for residences, industry, and agriculture. Wetlands pond surface water and then discharge it over a longer period of time, making more surface water available for in-stream uses and out of stream uses such as agriculture. Wetlands provide important fish and wildlife habitat. Wetlands provide communities with open space. Wetlands provide people with recreational opportunities. Filling, draining, or other alterations of wetlands can result in the loss of these functions.

Because of the important functions of wetlands, the Growth Management Act requires all local governments to identify and protect wetlands. The Department of Community Development's Minimum Guidelines (WAC 365-190-080(1)) encourage local governments to follow Washington State Executive Orders 89-10 and 90-04. The Minimum Guidelines also recommend local governments consider the Department of Ecology's Model Wetlands Protection Ordinance when developing their regulations.

The Executive Orders direct state agencies to use their existing authorities to manage and protect wetlands. Executive Order 89-10 adopted a state agency goal of no net loss of wetland acreage and functions. This means that state agencies are to prevent the loss of wetlands where possible within their existing authorities. If wetland losses are unavoidable, replacement wetlands are to be provided. The order also directs state agencies to use their existing authorities to encourage a long term gain in wetland resources.

The Executive Orders directed the Department of Ecology to prepare a Model Wetlands Protection Ordinance. The key elements of the Model Wetlands Protection Ordinance include wetland protection goals, the Washington State four tiered wetland rating system,

a mitigation policy with specific replacement mitigation ratios, buffer standards, and density transfer provisions allowing wetland owners to increase the density allowed on their upland areas. The Department of Ecology also recommends that wetland programs include public education, incentives (such as open space taxation) to encourage private wetland retention, restoration of wetlands, and public acquisition of key wetlands for open space and other uses.

The Puget Sound Water Quality Authority, in Element W-4.1 of the *1991 Puget Sound Water Quality Management Plan*, recommends that local governments in the Puget Sound Basin adopt comprehensive wetland protection programs. These programs include designating wetlands for protection in land use plans; encouraging wetlands preservation through public acquisition, land trusts, and encouraging private owners to maintain wetlands; restoring degraded wetlands; education; and wetlands regulations which include a goal of no net loss, a wetlands rating system, mitigation requirements, and wetland buffer zones.

The local government comprehensive planning under the Growth Management Act is an opportunity to establish consistent wetland protection provisions for the community. Local governments determine their wetland policies in the comprehensive plan. Their development regulations will then implement these policies. Local governments may choose to include wetland protection provisions in a zoning ordinance, a sensitive areas ordinance, a separate wetland protection ordinance, or some other document. The department encourages local governments to make the wetland protection regulations in their shoreline master programs consistent with their other wetland protection provisions where these provisions comply with the minimums required under the Shoreline Management Act. Integrating sensitive areas ordinances and shoreline master programs is described on pages 44 and 45 of this paper.

For Additional Information. The Model Wetlands Protection Ordinance can be obtained free from Peggy Clifford, Wetlands Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 459-6916, SCAN 585-6916.

The following publications are available from the Publications Office, Department of Ecology, P. O. Box 47600, Olympia, Washington, 98504-7600, telephone (206) 438-7474. *Washington's Wetlands*, publication number 88-24, free; *Wetlands Regulations Guidebook*, publication number 88-25, free; *Wetlands Preservation: An Information and Action Guide*, publication number 90-5, free; *Washington Hydric Soils Guidebook*, publication number 90-20, free; *At Home with Wetlands: A Landowners Guide*, publication number 90-31, free; *A Guide to Conducting Wetlands Inventories*, publication number 89-60, \$16.00.

The Wetlands Section loans wetland education video tapes and traveling displays on wetlands to local governments. Call (206) 438-7538 or (206) 459-6674 for information.

The Wetlands Section provides technical assistance to local governments. The Wetlands Section can perform wetland site evaluations, provide expert testimony at local hearings and in legal proceedings, help develop wetland protection policies and ordinances, and

provide training for wetland identification and boundary delineation. Contact Bill Leonard, Wetlands Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7161, SCAN 585-7161.

As part of this year's triennial review of the Washington State's surface water quality standards, the Department of Ecology proposed adopting water quality criteria specifically designed to protect wetlands. These proposals include adding wetlands to the definition of the surface waters of the state, including a definition of wetlands, identifying characteristic uses of wetlands, and adopting narrative and numeric water quality criteria to protect these uses. A wetlands mitigation section is also included in the proposed standards. The proposed standards will apply to Clean Water Act _ 401 certifications, National Pollution Discharge Elimination System (NPDES) permits, water quality standard modification permits, and all other current applications of surface water quality standards. For more information contact Perry Lund, Wetlands Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 493-9405, SCAN 585-9405.

The *Shoreline Management Guidebook, 1990, Shoreline Master Program Handbook* includes model wetland policies in Chapter 5. The *Shoreline Management Guidebook* is available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Element W-4.1 of the *1991 Puget Sound Water Quality Management Plan* is available from Steve Tilley, Puget Sound Water Quality Authority, P. O. Box 40900, Olympia, WA 98504-0900, telephone (206) 439-9300, 1-800-54-SOUND, or SCAN 585-9300.

Consider the impacts of vertical land movement and sea level rise on coastal and Puget Sound wetlands including the need to provide migration buffers for these wetlands.

Summary. Vertical land movement is the change in the elevation of the land surface due to geological change. In Washington State, the north and south coast areas are rising and the central coast areas are stable or subsiding slightly. In the Puget Sound region, the Bellingham and San Juan Island areas are stable. The rest of Puget Sound is subsiding with the rate increasing from the northwest to the southeast. The greatest local rate of subsidence is at Tacoma. The land along the north side of the lower Columbia is rising. In areas where subsidence is occurring, the relative sea level is rising.

Global warming is likely to accelerate sea level rise in the 21st Century. The combination of vertical land movement and accelerated sea level rise will have substantial effects on coastal and Puget Sound wetlands. As the sea level rises, wetlands in estuaries and river deltas become flooded. Some wetlands will become open water areas. Others will change in type from less salty to more salty wetlands. Increased erosion from higher tides will reduce wetlands. If buffers are provided adjacent to wetlands, wetlands will migrate up slope. This will allow wetlands to continue their shore protection and fish and wildlife habitat functions. If migration buffers are not provided, wetland losses will accelerate.

Local governments should consider providing wetland migration buffers in their land use plans, development regulations, and shoreline master programs.

For Additional Information. *Sea Level Rise in Washington State:*

State-of-the-Knowledge, Impacts, and Potential Policy Issues is available from Douglas J. Canning, Planning Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 459-6785, SCAN 585-6785.

Protect kelp and eelgrass beds.

Summary. Kelp and eelgrass beds are important habitats and food sources for aquatic organisms. These beds are found in intertidal and submerged areas of Puget Sound, the Pacific Ocean, Grays Harbor, Willapa Bay, and the Columbia River estuary. The Growth Management Act requires that kelp and eelgrass beds be included in inventories of critical areas. The local government shoreline master program is the most appropriate mechanism to protect and manage kelp and eelgrass beds.

For Additional Information. Department of Community Development, *Planning Data Sourcebook for Resource Lands and Critical Areas*, 1990, Section on Kelp and Eelgrass, pages 141-46.

Shoreline Public Access

Provide public access to the shorelines.

Summary. Well designed public shoreline access can have significant public and private benefits. Public shoreline access can help meet local recreational needs. Public shoreline access can help increase public support for water quality improvements by showing local residents the benefits of improved water quality. Public shoreline access can help reduce congestion and excessive use pressure on beaches and waterways by allowing the use of additional areas. Public shoreline access can encourage the revitalization of blighted waterfront areas. Public shoreline access can attract customers to private businesses, such as restaurants and hotels.

Many local governments have included policies encouraging or requiring public shoreline access in their comprehensive plan, a shoreline access plan, or a public trails plan. Local governments also include policies describing the public shoreline access areas they will purchase in these plans. Often these public access policies provide that sites should be connected to walking and biking trails. Local governments should consider public waterfront access when preparing their comprehensive plans.

For Additional Information. The *Shoreline Public Access Handbook*, February 1990, publication number 90-6, is available from James Scott, Planning Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 459-6781, SCAN 585-6781. The *Shoreline Management Guidebook, 1990, Shoreline Master Program Handbook* (see Chapter 5) and the *Urban Waterfront Policy Analysis*, June 1986, publication number 87-12, (See Chapter 4) are available from Peter Skowlund, Management Section, Shorelands and

Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Flood Plain Policies

Consider state and federal flood plain policies in shoreline areas, adjacent lands, and water courses tributary to shoreline areas which affect shoreline resources.

Summary. The Growth Management Act requires that local governments identify and protect frequently flooded areas. The Department of Community Development's Minimum Guidelines (WAC 365-190-080(3)) require local governments to identify, at a minimum, the Federal Emergency Management Agency designated 100-year flood plain.

RCW 86.16 requires local governments to prepare flood plain regulations which meet the minimum requirements of the Federal Flood Insurance Program and RCW 86.16.041. The local government then provides a copy of the regulations to the Flood Plain Management Section of the Washington State Department of Ecology for approval. The Flood Plain Management Section must also review amendments to these regulations. Nearly all jurisdictions with flood plain areas have adopted the minimum required regulations. The state requirements are minimums and local government flood plain regulations may exceed these requirements.

For Additional Information. Chapter 86.16 RCW, Chapter 173-158 WAC, the Model Flood Plain Management Ordinance, and the Federal Flood Insurance Program regulations are available from the Flood Plain Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 459-6796, SCAN 585-6796.

Consider Comprehensive Flood Control Management Plans prepared under the Flood Control Assistance Account Program (FCAAP).

Summary. The Growth Management Act, in RCW 36.70A.070(1), requires that local governments review drainage, flooding, and storm water runoff issues in their comprehensive plan land use elements. The Growth Management Act, in RCW 36.70A.070(3), also requires local governments to inventory existing capital facilities and forecast future capital facilities needs.

The Washington State Flood Control Assistance Account provides grants to local governments to repair and improve public flood control facilities. Local governments must be preparing or must have completed a Comprehensive Flood Control Management Plan to be eligible for Flood Control Assistance Account grants. Flood Control Assistance Account grants can also fund the preparation of Comprehensive Flood Control Management Plans.

The goal of Comprehensive Flood Control Management Plans is to reduce flood damages. Comprehensive Flood Control Management Plans typically include technical data on flood frequencies and damages, areas subject to flood hazards, the meander belts of rivers, non-structural alternatives, and other technical data. Local governments may find this data useful in designating critical areas, identifying areas suitable for development in comprehensive plans, and preparing land use elements under the Growth Management

Act. Comprehensive Flood Control Management Plans may also include local government policy decisions on areas that should be developed, the intensity of development, and improvements required to protect flood prone areas from flood damages. Local governments should integrate these policy decisions into the land use and capital facilities elements of their comprehensive plans. The most effective strategy is to discourage development in flood prone areas. In addition, Comprehensive Flood Control Management Plans should be consistent with adopted comprehensive plans.

The Shoreline Management Act encourages local governments to include optional flood damage reduction elements in their shoreline master programs. If local governments have adopted flood damage reduction elements, they should consider the policy decisions in the element when preparing comprehensive plans under the Growth Management Act.

For Additional Information. The Flood Plain Management Section maintains a list of jurisdictions which have prepared Comprehensive Flood Control Management Plans. Contact: Flood Plain Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 459-6792, SCAN 585-6792; (206) 459-6796, SCAN 585-6796; and (206) 438-7569, SCAN 585-7569. *Comprehensive Planning for Flood Hazards Management*, Publication Number 91-44, is available from Marcia Geidel, Flood Plain Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 459-6792, SCAN 585-6792.

Water Quality Policies

Consider river basin plans as they apply to shoreline areas, adjacent lands, and water courses tributary to shoreline areas which affect shoreline resources.

Summary. The Growth Management Act, in RCW 36.70A.070(1), requires that local governments include water quality protection measures, including measures to protect and improve Puget Sound water quality, in their comprehensive plan land use elements. Local governments and state agencies may have prepared basin and other water quality plans describing water quality problems in your jurisdiction and recommending actions. Considering these plans can help reduce the cost and complexity of comprehensive planning under the Growth Management Act.

Puget Sound local governments have prepared *Early Action Watershed Non-point Source Control Action Plans*. Puget Sound local governments are also preparing *Watershed Action Plans* on an ongoing basis. The Hood Canal Coordinating Council, which includes the local governments with jurisdiction over Hood Canal, prepared the *Hood Canal Management Plan*. The Nisqually River Task Force prepared the *Nisqually River Management Plan*. Other local governments have prepared basin and sub-basin plans funded with EPA/Department of Ecology Section 205(j) grants and Department of Ecology Centennial Clean Water Fund grants.

Pacific County shows how water quality plans can help in preparing comprehensive plans under the Growth Management Act. Pacific County prepared the *Willapa Bay Water Resource Management Plan* in cooperation with those who use the bay and lands within

the basin. The county is incorporating applicable policies from the plan into its comprehensive planning under the Growth Management Act.

For Additional Information. For information on jurisdictions which have prepared basin plans contact Dayl Ann Stratton, Water Quality Management Section, Water Quality Program, Department of Ecology, P. O. Box 47600, Olympia, WA 98504-7600, telephone (206) 438-7065, SCAN 585-7065.

The Puget Sound Water Quality Authority maintains a list of jurisdictions which have prepared *Early Action Watershed Non-point Source Control Action Plans* and *Watershed Action Plans*. Contact Kathy Minsch, Puget Sound Water Quality Authority, P. O. Box 40900, Olympia, WA 98504-0900, telephone (206) 493-9300, 1-800-54-SOUND, or SCAN 585-9300.

Consider land clearing and soil disturbance controls and non-point runoff control measures for shoreline areas, adjacent lands, and streams and waterways which affect shoreline resources.

Summary. Many of the river basin plans recommend that local governments adopt land clearing, erosion control, and other non-point pollution controls to protect surface and ground water quality. Adoption of these measures in land use elements and development regulations can help local governments comply with the Growth Management Act. RCW 36.70A.070(1) of the Growth Management Act requires that local comprehensive plan land use elements review storm water run-off and provide for water quality protection measures, including measures to protect and improve Puget Sound water quality.

For Additional Information. Information on Best Management Practices (BMPs) for erosion control is available from Helen Pressley, telephone (206) 438-7089, SCAN 585-7089, or Pat Hartingan, telephone (206) 493-9454, SCAN 585-9454. Address: Stormwater Unit, Water Quality Program, Department of Ecology, P. O. Box 47600, Olympia, WA 98504-7600.

The Puget Sound Water Quality Authority's *Managing Non-Point Pollution: An Management Action Plan for Puget Sound Watersheds*, can be obtained from Kathy Minsch, Puget Sound Water Quality Authority, P. O. Box 40900, Olympia, WA 98504-0900, telephone (206) 493-9300, 1-800-54-SOUND, or SCAN 585-9300. This handbook contains information on the sources of non-point water pollution and strategies local governments can use to prevent non-point pollution.

If additional water quality planning is needed, the Centennial Clean Water Act grant program and the EPA/Department of Ecology 205(j) Water Quality Planning Grant program may be able to provide funds. The programs are described in Section V beginning on page 47.

Consider the Department of Ecology/Puget Sound Water Quality Authority storm water regulations for Puget Sound.

Summary. In addition to complying with the Growth Management Act's water quality provisions, Puget Sound local governments will soon have to comply with the Department of Ecology's and Puget Sound Water Quality Authority's Puget Sound Storm Water

Program. The Federal Water Pollution Control Act requires states to regulate storm water discharges from large communities. The Department of Ecology and the Puget Sound Water Quality Authority are preparing regulations to implement this federal requirement and the Puget Sound Water Quality Management Plan. The proposed regulations require Puget Sound local governments to adopt requirements to control storm water runoff from new development and redevelopment. Local governments should consider incorporating these provisions into comprehensive plans, development regulations, and shoreline master programs.

For Additional Information. Information on the Puget Sound Stormwater Program is available from Peter Birch, telephone (206) 438-7076, SCAN 438-7076. A model ordinance for complying with the Puget Sound Stormwater Program requirements will be available in early 1992 from Ann Wessel, telephone (206) 438-7077, SCAN 585-7077, or Melanie Vorass, telephone (206) 438-7058, SCAN 585-7058. The address for all of the above is: Storm water Unit, Water Quality Program, Department of Ecology, P. O. Box 47600, Olympia, WA 98504-7600.

Information on the Puget Sound Stormwater Program is also available from Kevin Anderson, Puget Sound Water Quality Authority, P. O. Box 40900, Olympia, WA 98504-0900, telephone (206) 493-9300, 1-800-54-SOUND, or SCAN 585-9300.

Consider the cumulative impacts of discharges to surface and ground water in comprehensive plans.

Summary. During the comprehensive planning process, local governments should consider the cumulative effects of discharges to surface and ground water bodies from development. This analysis can be done when preparing plans, comparing comprehensive plan alternatives, or during State Environmental Policy Act (SEPA) review of a comprehensive plan. While many individual surface water discharges require state National Pollution Discharge Elimination System (NPDES) permits, the permits are issued on a case-by-case basis. In addition, regulated discharges combine with unregulated discharges. The comprehensive planning process provides the opportunity to consider the cumulative effects of development on surface and ground water. Surface water discharges include storm water runoff, sewage treatment plants discharges, and industrial and commercial point discharges. Ground water discharges include storm water runoff and on-site septic systems.

After considering the cumulative effects of surface and ground water discharges, local governments may decide to provide additional public facilities to sensitive sites or to reduce the land area allocated to uses which produce high levels of surface or ground water discharges. For example, local governments may decide to extend sewer and storm water collection and treatment systems to serve areas with a high potential for adverse impacts on ground water. Based on preliminary analysis, local governments may also identify a need for additional water pollution control planning.

For Additional Information. If additional water quality planning is necessary for a jurisdiction, funding may be obtained from the Centennial Clean Water Act grant program and the EPA/Department of Ecology 205(j) Water Quality Planning Grant program. The programs are described in Section V beginning on page 47.

Consider Ground Water Management Area Plans as they apply to shoreline areas, adjacent lands, and water courses tributary to shoreline areas which affect shoreline resources.

Summary. The Growth Management Act, in RCW 36.70A.170 and RCW 36.70A.060, requires local governments to identify and protect aquifer recharge areas. The Growth Management Act, in RCW 36.70A.070, also requires local governments to protect ground water quality and quantity in the land use elements of local comprehensive plans.

The Department of Ecology, in cooperation with local governments, is preparing 15 Ground Water Management Area Plans in the Puget Sound basin, Blaine in Whatcom County, Clark County, the Methow Valley, and Deer Park in Spokane County. Ground Water Management Area Plans identify the extent of the aquifer, the aquifer recharge area, threats to the aquifer, and measures to protect the aquifer. These plans can help local governments meet their Growth Management Act responsibilities. For example, Island County is using a recently completed Ground Water Management Area Plan to identify and protect aquifer recharge areas. Local governments should consult any plan prepared or in process for their jurisdiction.

For Additional Information. Information on Ground Water Management Area Plans can be obtained from Doug Ruston, Water Resources Program, Department of Ecology, P. O. Box 47600, Olympia, WA 98504-7600, telephone (206) 459-6120, SCAN 585-6120.

Public Trust Doctrine

Consider incorporating public trust doctrine concepts and public trust uses as appropriate.

Summary. The public trust doctrine applies to tidelands and other navigable waters granted to the state by the federal government at statehood. The public trust doctrine limits the use of these tidelands and shorelines to uses compatible with public trust uses. Public trust uses include navigation, fishing, boating, swimming, water skiing, and other related recreational uses. Local governments and the state may authorize uses which would affect the public trust uses through the Shoreline Management Act under certain circumstances. It is also possible that state courts will extend the reach of the public trust doctrine to other areas, as have courts in other states.

Local governments should consider incorporating public trust doctrine concepts into their comprehensive plans, development regulations, and shoreline master programs to reduce the chances that regulating the areas to which the public trust doctrine applies may be found to be takings and to promote public trust uses. The term "taking" refers to a court's finding that a land use regulation violates the state or federal constitution. In *Orion Corp. v. Washington*, 109 Wash. 2d 621, 747 P.2d 1062 (1987), the Washington State Supreme Court held that to determine whether a local shoreline master program had resulted in a taking, the uses prohibited by the master program had to be uses allowable under the public trust doctrine. If the prohibited uses were incompatible with the public trust doctrine, then the local and state governments had not taken private property rights.

Local governments can include the public trust doctrine in two ways. First, local governments can include regulations to provide for and protect public trust uses in shoreline master programs and local development regulations. Second, local governments can including policy statements in their comprehensive plan and shoreline master program policies providing that the development regulations which advance public trust doctrine interests are intended to implement the doctrine.

For Additional Information. The *Shoreline Management Guidebook, 1990, Shoreline Administrator's Manual*, (See Chapter 1) is available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Shoreline Redevelopment and Restoration

Encourage the revitalization of blighted urban waterfronts.

Summary. Industrial land requirements have undergone substantial change in the past decades. Changes in nearby land uses have affected certain sites suitability for industrial uses. These and other changes in land use patterns have resulted in blighted urban waterfronts. Increased demands for public access to the water and water-enjoyment uses have resulted in uses that can help revitalize certain blighted areas. In preparing comprehensive plans, local governments should consider the revitalization potential of blighted urban waterfronts.

Revitalizing blighted urban waterfronts may require analysis and policy guidance on coordinated public and private investments beyond the scope of the comprehensive plan. Many local governments, including Bremerton, Bellingham, Clarkston, Hoquiam, Pasco, Port Orchard, Raymond, Richland, Tacoma, and Vancouver have prepared urban waterfront revitalization plans. These plans focus on revitalizing and increasing public access to urban waterfronts.

For Additional Information. The *Shoreline Management Guidebook, 1990, Shoreline Master Program Handbook, Urban Waterfront Policy Analysis Addenda*, Addendum Number 4 and the *Urban Waterfront Policy Analysis*, June 1986, publication number 87-12, (See Chapter 5) are available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Encourage the restoration of damaged shoreline areas.

Summary. Some shoreline areas have been degraded by past activities. Examples include former industrial waterfronts, silt damaged streams, and eutrophic lakes.

Local government comprehensive plans can promote voluntary restoration efforts such as the Adopt-A-Stream and Adopt-A-Beach programs. These programs encourage individuals and groups to restore streams and beaches by removing trash and reconstructing damaged habitat. Some local governments have staff working with volunteers on these programs. Local government comprehensive plans can identify certain public beaches, streams, and waterways for publicly funded restoration. Local government comprehensive plans or shoreline master programs can include policies

encouraging or requiring private restoration of shorelines when certain types of shoreline development occur.

For example, Thurston County is using U.S. Fish and Wildlife Service Conservation Ecosystem Program grant funds to help private landowners restore streams in south Thurston County. The City of Tacoma acquired land for parks and walkways and restored the shoreline as part of the Ruston Way redevelopment plan.

For Additional Information. Information on the Adopt-A-Stream and Adopt-A-Beach programs is available from the Adopt-A-Stream Foundation, Post Office Box 5558, Everett, Washington, 98206, telephone (206) 338-3487.

The Flood Control Assistance Account Grant program can fund restoration projects which are part of projects to restore stream flood carrying capacity or to maintain other types of public flood control works. See Section V on page 47 below.

The Centennial Clean Water Act grant program can fund projects with a primary focus on water quality improvement which have restoration components. See Section V on page 47.

The U.S. Fish and Wildlife Service Conservation Ecosystem Program provides funds to create wetland and riparian habitats on private land. The program can fund up to 30 percent of the project cost. Some of the match can be in-kind services and donations. The property on which the habitat is created must be covered by a ten year conservation easement. For more information contact the Conservation Ecosystem Program, U.S. Fish and Wildlife Service, 3704 Griffin Lane South East, Suite 102, Olympia, Washington 98501-2192, telephone (206) 753-9440.

Master Planned Resorts

Designate master planned resorts in locations consistent with the shoreline master program, the maintenance and enhancement of shoreline resources, and the revitalization of blighted shorelines.

Summary. The 1991 amendments to the Growth Management Act allow counties planning under the Growth Management Act (RCW 36.70A) to allow new master planned resorts outside of urban growth areas. Because of the amenities of shoreline areas, some of these resorts are likely to be sited within shoreline jurisdiction. Master planned resorts also have the potential to help restore blighted shoreline areas. When developing comprehensive plan policies, designating potential sites, and siting these resorts, local governments should consider shoreline master programs and the maintenance and enhancement of shoreline resources.

For Additional Information. The *Shoreline Management Guidebook, 1990, Shoreline Master Program Handbook*, (see Chapter 7) and the *Shoreline Management Guidebook, 1990, Urban Waterfront Policy Analysis Addenda* (see Addendum Numbers 1, 3, and 4) available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Urban Growth Areas

Local governments should include appropriate urban and suburban shoreline environments within urban growth areas. Local governments should exclude extensive areas of conservancy and natural shorelines from urban growth areas. Local governments should redesignate appropriate shorelines as rural, conservancy, and natural shorelines.

Summary. The Growth Management Act, in RCW 36.70A.110, requires counties planning under RCW 36.70A to designate urban growth areas. Local governments should include appropriately designated urban and suburban shorelines needed to meet the demands for urban land within urban growth areas. Local governments should generally exclude extensive areas of conservancy and natural shorelines from urban growth areas.

After setting urban growth areas, local governments should consider redesignating urban and suburban shoreline environments outside urban growth areas to a more appropriate environment, such as rural or conservancy. For salt water counties, Coastal Zone Management Act grants can help fund this effort. The Coastal Zone Management Act grant program is described in Section V on page 48.

Where shorelines have important recreational, habitat, wildlife corridor, or other natural resource values, local governments should designate the waterbody, wetlands, and the riparian vegetation strip conservancy or natural, even if it is within an urban growth area. Local governments should consider designating these areas as natural resource and recreation areas under Section 36.70A.160 of the Growth Management Act. Local governments should use parallel environments where appropriate to protect important shoreline resources.

For Additional Information. The *Shoreline Management Guidebook, 1990, Shoreline Master Program Handbook* (See Chapter 6) and the *Shoreline Management Guidebook, 1990, Urban Waterfront Policy Analysis Addenda* (see Addendum Number 1) are available from Peter Skowlund, Management Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 438-7430, SCAN 585-7430.

Coastal Hazards

Summary. The Growth Management Act, in RCW 36.70A.170 and 36.70A.060, requires all local governments to identify geologically hazardous areas and adopt development regulations to minimize the affect of geologically hazardous areas on development. The Department of Community Development Minimum Guidelines, WAC 365-190-080(4), define geologically hazardous areas to include areas subject to erosion, landslide hazards, and damage from earthquake caused slope failures.

When identifying geologically hazardous areas, local governments should consider shoreline erosion, slope stability, and seismic risk. Depending on the degree of risk, local governments should preclude development, require special engineering solutions, or designate areas for lower development densities.

Local governments should provide for setbacks for clearing and grading and construction from the top of unstable slopes based on the degree of instability plus a margin of error. For eroding shorelines, local governments should provide for setbacks from eroding shorelines based on a formula of fifty times the annual average erosion rate plus a margin of safety, and discourage shoreline hardening such as the construction of bulkheads or the placement of riprap.

Local governments should also consider the existing rate of vertical land movement in the requirements for the engineering and construction of coastal facilities and land uses. They should also consider accelerated sea level rise in conceptual planning for coastal facilities and land uses. The terms vertical land movement and accelerated sea level rise are defined in Appendix I. Current trends in vertical land movement and accelerated sea level rise are described on page 22 of this paper.

For Additional Information. *Marine Shoreline Erosion: Structural Property Protection Methods*, 1991; *Shoreline Bluff and Slope Stability: Management Options*, 1991; *Coastal Accretion and Erosion in Southwest Washington State: 1977-1987*, 1990, Ecology Report Number 90-21; *The Effect of Seawalls and Other Hard Erosion Protection Structures upon Beaches* (an annotated bibliography and summary), 1990; *Sea Level Rise in Washington State: State-of-the-Knowledge, Impacts, and Potential Policy Issues* (which provides technical information on sea level rise), 1990; *Sea Level Rise Policy Alternatives Study: Volume 1, Alternative Policy Responses for Accelerated Sea Level Rise and Their Impacts* and *Volume 2, An Analytical Review of State and Federal Coastal Management Systems and Policy Responses to Sea Level Rise*, 1990, Ecology Report Number 90-40 (which provides policy alternatives); and *Sea Level Rise Planning, Engineering, and Construction Policies for Shorelands-Funded Projects*, 1990; are available from Douglas J. Canning, Planning Section, Shorelands and Coastal Zone Management Program, Department of Ecology, P.O. Box 47690, Olympia, WA 98504-7690, telephone (206) 459-6785, SCAN 585-6785. Mr. Canning also has a list of additional Department of Ecology reports on coastal erosion and sea level rise.

Copies of the *Washington Coastal Zone Atlas* may be reviewed in most Puget Sound county Planning Department or Public Works Department offices and larger Puget Sound public libraries.

The Puget Sound Water Quality Authority prepared the *Puget Sound Atlas* in 1987. The *Puget Sound Atlas* is available in most county Planning Departments or Public Works Departments and larger Puget Sound public libraries. The Puget Sound Water Quality Authority is currently updating the *Puget Sound Atlas*. The atlas was completed in June 1992 and update copies sent to all current holders of the atlas. For an updated copy of the *Puget Sound Atlas* please contact the Puget Sound Water Quality Authority, P. O. Box 40900, Olympia, WA 98504-0900, telephone (206) 493-9300, 1-800-54-SOUND, or SCAN 585-9300.

Methods of Integrating Comprehensive Plans, Shoreline Master Programs, and Development Regulations

Avoiding Conflicts Between Plans, Development Regulations, and Shoreline Master Programs

Consistent comprehensive plans, development regulations, functional plans, and shoreline master programs will result in more consistency and predictability for property owners, ensure that community goals are achieved, and encourage coordination between local government agencies and local and state governments. The Department of Ecology encourages local governments to make their shoreline master programs consistent with adopted comprehensive plans which adequately address shoreline policies and issues.

Conflicts between comprehensive plans, shoreline master programs, and development regulations can be reduced by consciously assigning responsibility between the land use documents. The community decides the function of each of the documents in the community's land use guidance system. This allocation will vary from community to community. A good allocation meets the community's needs, eliminates needless duplication between documents, and results in consistent policies and regulations. Comprehensive plans often describe the relationship between the community's various land use documents and their functions.

Preparation of the Comprehensive Plan

Under the Growth Management Act, the local government comprehensive plan is the key to a consistent and predictable land use guidance system. Local and state government decisions on regulations and incentives are based on the comprehensive plan.

In preparing the comprehensive plan, local governments should consider incorporating the policies of the Shoreline Management Act and the policy decisions made in their current shoreline master program in their comprehensive planning processes. Section III of this paper beginning on page 10 describes ways local governments can include shoreline issues and policy decisions into the comprehensive planning process.

Evaluate Interim Development Regulations for Consistency and Update or Prepare New Development Regulations

After preparing the comprehensive plan, RCW 36.70A.060 of the Growth Management Act requires local governments to review natural resource lands and critical areas designations and interim development regulations for consistency with the comprehensive plans. The Growth Management Act, in RCW 36.70A.120, also requires local governments to prepare development regulations to implement the adopted comprehensive

plans. The development regulations must be consistent with the comprehensive plan. In some cases this will involve updating existing development regulations. In other cases, new development regulations may be required.

Local governments may regulate developments through various provisions including shoreline master programs, zoning ordinances, subdivision regulations, Washington State Environmental Policy Act (SEPA) regulations, sensitive area ordinances (SAOs), wetland protection ordinances, flood hazard regulations, and building codes. Local governments should evaluate these regulations to ensure they are consistent with the comprehensive plan and accomplish the functions the comprehensive plan specifies for each document. Local governments should also compare these regulations to ensure they are consistent with each other. Unnecessary duplication may be eliminated by combining regulations and deleting duplicative requirements from some documents and then cross referencing provisions in another document.

For example, some local governments include their wetland protection regulations in their sensitive area ordinances. The sensitive area ordinance can be included in the general provisions of their zoning ordinances. The shoreline master program then includes wetland protection policies and regulations specific to the areas within shoreline jurisdiction. These may include provisions to protect kelp and eelgrass beds, salt water marshes, and other specific resources under shoreline jurisdiction. The local governments then coordinate the shoreline master program wetland requirements with the wetland regulations in the zoning ordinance.

Other regulations can then cross reference these provisions. To illustrate, the local government subdivision ordinance references the wetland requirements in the zoning ordinance and shoreline master program. The subdivision ordinance then requires that all lots include a building site outside of any wetland areas, as defined in the zoning ordinance and shoreline master program, and that the general extent of the wetland areas be shown on the final plat.

These techniques, if appropriate to the community, can reduce duplication, increase consistency, and make the regulations easier to use. The techniques local government choose to use will vary depending on their situation.

Evaluate Functional and Subarea Plans for Consistency

RCW 36.70A.120 also requires local government activities and capital budget decisions to conform to the comprehensive plan. This requires local governments to review their functional plans to insure they are consistent with the comprehensive plan. Functional plans include water and sewer plans, Six Year Street and Road Plans, capital improvement and capital facilities plans, surface water plans, drainage plans, flood control management plans, park and recreation plans, public access plans, public trail plans, bike plans, and waterfront redevelopment plans.

Subarea plans must also be consistent with adopted local comprehensive plans. Subarea plans include downtown redevelopment plans, community and neighborhood plans, waterfront revitalization plans, and river basin plans.

Evaluate Shoreline Master Program Policies and Regulations for Consistency

Local governments should review their shoreline master programs for consistency with their adopted comprehensive plans and development regulations. The Growth Management Act does not contain a specific definition of the term consistency. Consistency will likely be defined through procedural criteria implementing the Growth Management Act, local government policy and practice, and the decisions of the Growth Planning Hearings Boards. The following recommendations for evaluating consistency are provided for areas within shoreline jurisdiction and then for lands adjacent to shoreline jurisdiction.

Consistency for Areas within Shoreline Jurisdiction.

Local governments should consider the following factors when reviewing consistency between comprehensive plans, development regulations, and shoreline master programs for the area within the jurisdiction of the Shoreline Management Act.

Consistency between Plan Designations and Shoreline Environments.

Shoreline master program environments should be consistent with comprehensive plan designations and development regulations, especially zoning districts. Shoreline master programs are typically broad. Most local governments have two to eight shoreline environments. Shoreline environments also typically have broad categories of permitted and conditional uses. The preferred practice is to classify commercial and industrial uses by terms such as water-dependent, water-related, water-enjoyment and non-water-oriented commercial and industrial uses. Local government zoning more finely regulates the uses allowed on a specific site to prevent use conflicts. When determining consistency between plan designations, zones, and shoreline environments, local governments should focus on the purpose and intensity of the plan designation, the zoning district, and the shoreline environment rather than comparing lists of permitted and conditional uses.

Urban shoreline master program environments are generally most appropriate for uplands without significant development constraints within urban growth areas. Suburban shoreline master program environments may be appropriate within urban growth areas where the densities are consistent with the comprehensive plan densities for the urban growth area. For areas within urban growth areas which have significant natural resource values, recreation values or development limitations, a conservancy or even natural shoreline environment is appropriate. These areas are good candidates for parallel shoreline environments.

Areas outside urban growth areas should generally be designated rural, conservancy, or natural. Aquatic environments are appropriate for large water bodies both within and outside urban growth areas. New master planned resorts within shoreline jurisdiction should generally either be within an urban shoreline environment or a conditional use within rural or conservancy shoreline environments.

Density and Development Intensity. The density and intensity of development allowed by shoreline master programs should be consistent with the density and intensity of development allowed by comprehensive plans and implementing regulations for the areas within shoreline jurisdiction. Densities, lot coverages, impervious surface ratios, or floor area ratios (FARs) allowed by shoreline master programs and local government development regulations should fall within the ranges allowed by the comprehensive plans.

Development Standards. Development regulations and shoreline master programs should protect shoreline areas from direct and significant impacts. These impacts may include non-point pollution, noise, glare, and land use incompatibilities. In addition, Shoreline master program policies and regulations typically include shoreline specific development standards which are not included in other development regulations. These may include setbacks from the ordinary high water mark, in-water disposal regulations, and standards for fills.

Policy Implementation. The text of the shoreline master program combined with the other development regulations which apply to the area within shoreline jurisdiction should be sufficient to implement the comprehensive plan policies.

Planned Public Facilities. The public facilities planned for areas within Shoreline Management Act jurisdiction should be consistent with the comprehensive plans and shoreline master programs.

Shoreline Master Program Environments Should be Consistent with Natural Resource Lands, Critical Area Designations, and Open Space Corridors. Shoreline master program environments should be consistent with the local government's natural resource land and critical areas designations. Local circumstances vary, but local governments should consider the following recommendations.

Wetlands, critical aquifer recharge areas, and fish and wildlife habitat areas are generally consistent with natural and conservancy shoreline master program environments. Frequently flooded areas and geologically hazardous areas are generally consistent with natural, conservancy, and rural shoreline master program environments. Where frequently flooded areas are included within an urban growth area, the portion outside a floodway may be consistent with the urban shoreline environment.

Agricultural lands of long term commercial significance and forest lands of long term commercial significance are generally consistent with conservancy and rural shoreline environments. Mineral resource lands of long term commercial significance may be consistent with rural or urban shoreline environments depending on the intensity of use and the types of accessory uses allowed. Where comprehensive plans or development regulations only provide for mineral resource removal as an accessory to agriculture, forestry, or aquaculture uses, mineral resource lands may also be consistent with the conservancy shoreline environment.

Open Space Corridors identified under RCW 36.70A.160 are generally consistent with natural, conservancy, and rural shoreline master program environments. When local governments designate open space corridors within urban growth areas, they may wish to use parallel environments designating the waterway, wetlands, and riparian areas

conservancy and the balance of the uplands within shoreline jurisdiction urban or suburban.

Coordinate with Adjacent Local Governments. Local governments should consult with nearby local governments which have responsibility for managing shoreline waterbodies which cross jurisdictional boundaries. Local governments should make their comprehensive plan designations, development regulations, and shoreline environments and regulations consistent for shoreline waterbodies across jurisdictional boundaries where the resources and other circumstances are similar. The county-wide planning policies adopted under the Growth Management Act may include provisions to help coordinate plans across jurisdictional boundaries.

Procedures. Shoreline master program and development regulation processes should be designed to allow optional consolidated hearings where feasible. The processes should also be designed to allow concurrent processing of permits.

Consistency for Adjacent Lands.

Local governments should consider the following factors when reviewing consistency between shoreline master programs and the comprehensive plans and development regulations for adjacent lands. The term adjacent lands is defined in Appendix I. The Department of Ecology's *Adjacent Lands Guidance* report recommended that adjacent lands include lands adjacent to shoreline jurisdiction the development of which may affect shoreline areas and rivers and streams not covered by the Shoreline Management Act but tributary to shoreline streams, lakes, and salt water areas.

Plan and Development Regulation Designations for Adjacent Lands. Comprehensive plan designations and development regulations should protect shorelines from land use incompatibilities. Comprehensive plans and development regulations should provide a transition from sensitive shoreline areas to intense upland uses. For example, a light industrial zone may be compatible with a sensitive river shoreline where the uses allowed near the shoreline do not generate noise, cause glare, and have no risk of toxic spills. More intense industrial uses can then be allowed landward of these low impact uses.

In some cases preferred shoreline uses may be incompatible with less intense uses on adjacent lands. Comprehensive plans and development regulations should provide for adjoining uses which are compatible with these uses or for a transition from these intense uses to less intense upland uses.

Development Standards. Comprehensive plans and development regulations should protect shoreline areas from direct and significant impacts. These impacts may include non-point pollution, and, for sensitive shoreline areas noise and glare. Local governments should consider buffers, limits on outdoor lighting, non-point pollution controls (including construction erosion controls), and other development standards to protect sensitive shoreline areas.

Planned Public Facilities. The public facilities planned for adjacent lands should be consistent with the comprehensive plan and shoreline master programs. In some cases these may require the extension of public facilities. An example is an area where urban or suburban densities are planned for uplands adjacent to commercial shellfish beds. This

would require the extension of sewers and the construction of a storm water collection system and storm water treatment measures to protect water quality. In other cases, such as designated forest land adjacent to a conservancy shoreline, the planned public facilities should be consistent with these low intensity uses.

Integrating Comprehensive Plans, Development Regulations, and Shoreline Master Programs

Local governments in Washington state have twenty years of experience integrating comprehensive plans and shoreline master programs. This section describes some of the techniques used by local governments and their advantages and disadvantages.

Perhaps the key to successfully integrating shoreline master programs, comprehensive plans, and development regulations is to consciously assign responsibility between the land use documents. The community decides the function of each of the documents in the community's land use guidance system. This allocation will vary from community to community. A good allocation meets the community's needs, eliminates needless duplication between documents, and results in consistent policies and regulations. Comprehensive plans often describe the relationship between the community's various land use documents and their functions.

Shoreline Master Programs as Special Area Plans

Many local governments treat shoreline master programs as special area plans and special area regulations. The comprehensive plan identifies the future development of the shorelines in general terms.

The community then prepares a shoreline management strategy, either as part of the comprehensive plan's conservation element, part of the shoreline master program, or as a separate plan. A shoreline management strategy is an integrated program to develop and protect shoreline areas. The strategy builds on the shoreline future identified in the comprehensive plan. The shoreline management strategy coordinates shoreline and community-wide regulations, government and private redevelopment activities, and public service, transportation, and public facility improvements.

Water, sewer, transportation, and public access plans identify community-wide public improvements. These plans also tie together public improvements proposed in plans developed for specific areas, such as the shoreline management strategy.

Shoreline master programs contain specific goals and policies for the shoreline. The master programs also focus on shoreline resources and opportunities. For example, shoreline master programs should identify specific salmon passage needs to allow salmon to swim from the ocean to the spawning grounds, standards to protect riparian habitats, the allocation of land for water-dependent and related-uses, and waterfront public access. Shoreline master programs should include shoreline specific regulations such as setbacks from the ordinary high water mark. Shoreline master programs should include general

policies and regulations coordinating the master program with community-wide regulations, such as sensitive areas regulations.

Shoreline master program environments regulate uses by general use categories such as water-dependent, water-related, water-enjoyment, and non-water-oriented commercial and industrial uses. The shoreline master program should also specifically regulate shoreline activities, such as dredging and fills. Zoning should address compatibility between specific types of uses. Development regulations, including zoning, subdivision, and sensitive areas regulations, should address community-wide resources and issues.

Advantages. The requirements for shoreline areas are clear. Duplication between documents is reduced. Property owners only need to refer to the documents covering their project.

Disadvantages. Community staff and property owners proposing complex shoreline projects must refer to three documents. As plans, development regulations, and shoreline master programs are amended over time, they may become inconsistent if not reviewed regularly and amended when necessary to maintain consistency with the other land use documents.

Including a Shorelines Sub-Element in the Conservation Element of the Comprehensive Plan

Shoreline goals and policies can be included in the conservation element of the comprehensive plan. This can vary from including a few policies to set the direction for future shoreline development to including all of the shoreline master plan goals and policies in the comprehensive plan.

Everett adopted its shoreline master program goals and policies as the shoreline element of the comprehensive plan. King County, which adopted the shoreline goals and policies as an element of the county comprehensive plan, publishes the policies as a separate shoreline master program. This makes it clear what policies are shoreline policies and allows them to be included with the regulations to explain the regulation's intent.

Advantages. Shoreline policies and the other community policies can be closely coordinated and are more likely to remain consistent with the comprehensive plan policies.

Disadvantages. The Shoreline Management Act provides that shoreline master program policies are regulatory. Putting them with general plan policies may confuse staff and property owners into thinking they are not regulatory. Separating policies from regulations may result in less use of policies. Separating policies from regulations may make regulations more difficult to implement because the policies which underlie them are not nearby. Shoreline policies must be clearly identified. Otherwise local governments may amend them without having the Department of Ecology adopt them. Unless adopted by the Department of Ecology, policies and regulations are not part of the shoreline master program and, although adopted by local governments, are not legally recognized.

A Development Ordinance with Chapters which contain the Shoreline Master Program

Development ordinances or land use codes put all of a community's land use regulations in one document. Development guides put all of a community's land use goals, policies, and regulations in same document. The intent is the same in both cases, to make all land use requirements easily accessible. In addition, development guides try to reinforce the tie between policies and regulations by putting the policies and regulations into the same document. Redmond has a development guide which includes shoreline goals and policies. Bellevue has a development code which includes shoreline regulations.

Advantages. All regulations are in the same place. For development guides, the policies may get more attention because they are included with the regulations in development guides. Shoreline policies and the other community policies can be closely coordinated and are more likely to remain consistent with the comprehensive plan policies.

Disadvantages. The Shoreline Management Act provides that shoreline master program policies are regulatory. Putting them with general plan policies may confuse staff and property owners into thinking they are not regulatory. Shoreline policies and regulations must be clearly identified. Otherwise local governments may amend them without having the Department of Ecology review and adopt them. Unless adopted by the Department of Ecology, policies and regulations are not part of the shoreline master program. Development ordinances and development guides are large documents and can be confusing to the public. Developers and property owners have more experience using separate comprehensive plans, development regulations, and shoreline master programs. Having them all together may confuse developers and property owners who have not worked with combined documents before.

Include Shoreline Master Program Provisions, Applicable Comprehensive Plan Provisions, and Development Regulations in a Single Document for a Limited Geographic Area

A local government could prepare a development guide for a limited part of the community. This document could include shoreline master program provisions, applicable comprehensive plan provisions, and development regulations.

This technique is most appropriate in certain situations. These include communities with limited shoreline areas. Communities with one or two shoreline areas which face substantial development pressure. Communities trying to encourage development or redevelopment in certain geographical areas. And communities which apply special development regulations to certain areas. Unless all community regulations are included in the document, the advantages of an integrated document may be lost.

Advantages. The advantages of a development guide for a limited area can be achieved with a smaller document. All regulations are in the same place. The policies may get more attention because they are included with the regulations. Shoreline policies and the other community policies can be closely coordinated and are more likely to remain

consistent with the comprehensive plan policies. Property owners with projects outside the areas where the integrated document applies would not need to use the document.

Disadvantages. The number of planning documents is increased rather than decreased. The Shoreline Management Act provides that shoreline master program policies are regulatory. Putting them with general plan policies may confuse staff and property owners into thinking they are not regulatory. Shoreline policies and regulations must be clearly indicated. Otherwise local governments may amend them without having the Department of Ecology review and adopt the policies and regulations. Unless adopted by the Department of Ecology, policies and regulations are not part of the shoreline master program. Development ordinances and development guides are large documents and can be confusing to the public. Developers and property owners are used to separate comprehensive plans, development regulations, and shoreline master programs. Having them all together may confuse developers and property owners who have not worked with them before.

Including a Non-regulatory Overlay in the Comprehensive Plan or Development Regulations

Local governments can include a non-regulatory shorelines overlay in the comprehensive plan or development regulations. The overlay is a plan designation or overlay zone which is shown on the comprehensive plan or zoning map. The overlay does not contain any regulations. The plan designation or overlay zone alerts staff and property owners that the shoreline master program also applies to the property. The shoreline master program would be a separate document.

Westport includes a non-regulatory shorelines designation on its comprehensive plan map. King County is considering using a "-P" suffix designation for certain properties within the jurisdiction of the Shoreline Management Act. As used in King County, a -P suffix is a notation added to the zoning map. A -P suffix lets property owners know a special requirement, in this case the shoreline master program, applies to the property. A subscript on the -P suffix identifies the type of limitation.

Advantage. This alerts staff and property owners that the shoreline master program also applies to the property.

Disadvantage. Adding a designation to a complex plan map or zoning map may make the maps harder to work with.

Integrating Sensitive Areas Regulations with Shoreline Master Programs

Sensitive area regulations are one technique local governments use to comply with the Growth Management Act requirement to protect critical areas from inappropriate development. Sensitive area regulations typically regulate development in wetlands, flood plains, geologically hazardous areas, and aquifer recharge areas community-wide. Some of these areas fall within the jurisdiction of the Shoreline Management Act and others do not.

The extent to which local governments incorporate these requirements into shoreline master programs varies. King County has incorporated large parts of its sensitive area regulations into its shoreline master program. Kirkland included very general sensitive area regulations in its shoreline master program with detailed sensitive area regulations in its zoning code.

Where local governments have adequate sensitive area regulations which apply community-wide, they may incorporate general sensitive area policies and regulations in their shoreline master programs. These policies and regulations must be sufficient for the state to carry out its responsibilities to protect sensitive areas under the Shoreline Management Act and other existing authorities. Allowing local governments to include general sensitive area policies in their shoreline master programs is intended to encourage local governments to adopt sensitive area regulations.

Advantages. Duplication between shoreline master programs and other regulations is reduced. Local governments can adjust sensitive area regulations without the approval of the Department of Ecology. The Department of Ecology, through the general sensitive area policies and regulations, can condition or deny shoreline conditional use permits and shoreline variances as needed.

Disadvantages. If local governments adopt general regulations in their shoreline master programs, local governments could amend the more detailed sensitive area regulations, resulting in less protection for environmentally sensitive areas both within and outside shoreline jurisdiction. The general sensitive area requirements may confuse property owners because the general regulations give less guidance. The general regulations are more difficult to administer because they give staff less guidance. If a property owner claims the application of the detailed sensitive area regulations resulted in a taking, the local government may not be able to use the shoreline master program to limit their liability even though a shoreline permit was required. This is so because the master program only contains general sensitive area regulations and the court may conclude the restrictions did not result from the shoreline master program policies or regulations. Carefully drafted shoreline policies and regulations may lessen the potential for this result.

Centralized Permit Services

A common way local governments have integrated development regulations and shoreline master programs is through centralized permit services. This is sometimes called one-stop permitting. Centralized permit services range from a central location where a staff person directs permit applicants to the correct department to single counter where all permit applications are accepted. For more information see *Streamlining Land Use Regulation: A Guide Book for Local Governments*, American Planning Association, 1980.

Advantage. Centralized permit services can reduce confusion and aid property owners and developers in obtaining permits.

Disadvantages. If a single department reviews permits for all departments, implementation of development requirements may suffer. Some jurisdictions have one permit counter with cross trained employees who answer questions and accept applications. They then have individual departments review the permit applications.

Integrated Permitting

Integrated permitting means using existing permits to trigger other reviews as a substitute for requiring multiple permits. For example subdivision, shorelines, and building permits could trigger review under a wetlands protection ordinance rather than requiring a separate wetlands permit.

Advantage. The number of permit applications and permits required for a particular project is reduced.

Disadvantages. Unless the system is carefully designed, some reviews may be overlooked. Certain permits and approvals are required by state law and cannot be integrated with other permits or approvals.

Simultaneous Review of Multiple Permits

Simultaneous permit review means reviewing multiple permits at the same time. Because the preparation of some permits is costly, simultaneous review should be optional in case applicants decide to apply for permits one at a time to reduce risk.

Advantage. Simultaneously reviewing multiple permits reduces total permit processing time.

Disadvantages. Simultaneous review may increase financial risk for property owners. Simultaneous review may be difficult for small staffs because they lack the staff to review the permits simultaneously.

Combined Public Hearings

Where a common decision maker decides a permit, such as a hearing examiner, some local governments combine the public hearings required for the same project. Again, because the preparation of some permits is costly, combined public hearings should be optional in case applicants decide to apply for permits one at a time to reduce risk.

Advantage. Combined public hearings for the same project reduces total permit processing time and permitting costs.

Disadvantages. Combined public hearings may increase financial risk for property owners. Combined public hearings may be difficult for small staffs to manage.

Diversifying Funding Sources

Comprehensive planning can be costly. Local governments are experiencing significant competition for budget funds. The following Washington Department of Ecology grant sources may be able to fund certain planning projects. For additional information on these funding sources call or write the contact.

Grant and loan programs are constantly changing. For information on all state grants and loans consult the current edition of *State Agency Assistance for Local Governments* available from Paula Fairchild, Association of Washington Cities, 1076 South Franklin, Olympia, Washington, 98501, telephone (206) 753-4137, SCAN 234-4137. The report is \$30.00 for non-members and free to cities and towns.

For current information on Washington State Department of Ecology grants and loans consult the current issue of *Sources*. *Sources* is published quarterly. To get on the *Sources* mailing list send a note with your name, agency, and mailing address to Annie Phillips, Washington State Department of Ecology, P. O. 47600, Olympia, WA, 98504-7600.

The Intergovernmental Public Facilities Finance Committee (IPFFC) holds an annual two-day conference each fall to publicize state and federal grant programs. For more information on the conference see the July 1991 issue of *Sources* or call Mary Crandall, Washington State University, 7612 Pioneer Way, Puyallup, Washington 98371-4998, telephone (206) 840-4575.

Growth Management Funding

Local governments planning under the Growth Management Act currently receive funds from the Washington State Department of Community Development. All acknowledge that these funds are not sufficient to fully fund the necessary work. One way to deal with this problem is to leverage Growth Management Act grant funds with other funds. The Washington State Department of Ecology has several grant programs which can fund certain types of planning activities undertaken to comply with the Growth Management Act. Local governments may be able to use Growth Management funds to match Department of Ecology grant programs under certain circumstances.

Coastal Zone Management Act (CZMA) Section 306 Grants

Eligible Jurisdictions: Cities, counties, and regional planning agencies in the 15 counties which front on salt water. These counties are Clallam, Grays Harbor, Island, Jefferson, King, Kitsap, Mason, Pacific, Pierce, San Juan, Skagit, Snohomish, Thurston, Wahkiakam, and Whatcom.

Type of Funding: Grants.

Local Match: Fifty percent.

Eligible Activities: Shoreline master program revisions, shoreline planning, and special studies oriented to shoreline areas and resources.

Application Period: January 10 to Feb 20, 1993.

Amount of Funds Available: Approximately \$400,000.

Written Information Available: 306A Grant Guidelines.

Contact: Steve Craig, Washington State Department of Ecology, P. O. Box 47690, Olympia, Washington, 98504-7690, telephone: (206) 459-6780, SCAN 585-6780.

Flood Control Assistance Account Program (FCAAP) Grants

Eligible jurisdictions: Cities, counties, and other government agencies responsible for flood management.

Type of Funding: Grants.

Local Match: Seventy-Five percent for comprehensive flood plain management plans.

Eligible Activities: Comprehensive flood plain planning activities. The maintenance of flood protection works is eligible for funding. Projects to maintain and repair flood protection works which also include habitat restoration and enhancement is eligible for funding.

Application Period: Before the beginning of each biennium.

Amount of Funds Available: Up to \$4 million each biennium.

Written Information Available: Application packets and program regulations.

Contact: Chuck Gale, telephone: (206) 439-7569, SCAN 585-7569. Marcia Geidel, telephone: (206) 459-7592, SCAN 585-7592. Tim D'Acci, telephone: (206) 459-6796, SCAN 585-6796. The address for the contacts is: Washington State Department of Ecology, P. O. 47690, Olympia, WA, 98504-7690.

Centennial Clean Water Fund (CCWF) Grants and Loans

Eligible Jurisdictions: Cities, counties, regional planning agencies, Indian tribes, and other public bodies.

Type of Funding: Grants and loans.

Local Match: Seventy-five percent for activities.

Eligible Activities: Planning for water pollution control, including non-point pollution control, ground water protection, lake protection planning, and watershed planning. Growth Management Act planning activities which have a surface or ground water quality focus may be eligible for funding under this program.

Application Period: January to February 1993.

Amount of Funds Available: Approximately \$45 million.

Written Information Available: Brochure and grant application packets.

Contact: Helen Bresler, Washington State Department of Ecology, P. O. Box 47600, Olympia, Washington, 98504-7600, telephone: (206) 459-6096, SCAN 585-6096.

Federal 205(j) Grants

Eligible Jurisdictions: Cities, counties, regional planning agencies, Indian tribes, and other public bodies.

Type of Funding: Grants.

Local Match: Seventy-five percent.

Eligible Activities: Planning for water quality protection. Growth Management Act planning which has a water quality focus may be eligible for funding under this program.

Application Period: January to February 1993.

Amount of Funds Available: Approximately \$334,000.

Written Information Available: Grant application packets.

Contact: Helen Bresler, Washington State Department of Ecology, P. O. Box 47600, Olympia, WA, 98504-700, telephone: (206) 459-6096, SCAN 585-6096.

Definitions

Adjacent Lands: Those lands immediately adjacent to and abutting lands under Shoreline Management Act permit jurisdiction extending landward to the extent necessary to control direct and significant impacts to the shorelines and to implement the management policy articulated in the Shoreline Management Act, the guidelines, and the master program. The inland extent will necessarily vary with the particular management objectives for the shoreline setting. Source: Department of Ecology, *Adjacent Lands Guidance* report, 1981.

Comprehensive Land Use Plan: A generalized coordinated land use policy statement of the governing body of a county or city that is adopted under RCW Chapter 36.70A. Source: RCW 36.70A.030(4). Note: Certain local governments in Washington state can adopt comprehensive plans under other planning enabling acts.

Conservancy Shoreline Master Program Environment: A geographical area designated in a shoreline master program and needed to meet the present or future recreational needs of the community or characterized by severe biophysical limitations including areas of steep slopes presenting erosion or slide hazards, areas prone to flooding, and areas which cannot provide adequate water supplies or sewage disposal capacity to support rural intensities of development.

Critical areas: Critical areas include the following areas and ecosystems: (a) Wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas. Source: RCW 36.70A.030(5).

Development Guide: An official local government land use document which includes many or all of a community's land use goals, policies, and regulations in the same document.

Development Regulations: Any controls placed on development or land use activities by a county or city, including, but not limited to, zoning ordinances, official controls, planned unit development ordinances, subdivision ordinances, and binding site plan ordinances. Source: RCW 36.70A.030(7).

Development Ordinance: An official local government land use document which includes all of a community's land use regulations in one document.

Functional Plan: A plan for a public facility or public system which identifies current facilities, future needs, and ways of meeting those needs. Functional plans include water and sewer plans, Six Year Street and Road Plans, capital improvement and capital facilities plans, surface water plans, parks and recreation plans, public access plans, trail plans, bike plans, and waterfront redevelopment plans.

Natural Shoreline Master Program Environment: A geographical area designated in a shoreline master program and characterized by unique natural or cultural features considered valuable in their natural or original condition and relatively intolerant of intensive human use.

Parallel Shoreline Master Program Environment: Two or more shoreline master program environments which are designated parallel to the shoreline. Typically, a resource protection environment is applied to the area immediately adjacent to the shoreline. An environment which allows a greater level of development is applied to the area between the other environment and the Shoreline Management Act jurisdictional boundary.

Riparian Vegetation: The plants and plant communities which grow on the banks of rivers, lakes, and salt water bodies. Riparian vegetation generally requires the water body for survival and is a transition from upland areas to wetlands and waterbodies.

Rural Shoreline Master Program Environment: A geographical area designated in a shoreline master program and characterized by intense agricultural and recreational uses and those areas with a high capability to support active agricultural practices and intense recreational development.

Shoreline Environment or Shoreline Master Program Environment: A geographical area designated in a shoreline master program which typically includes a purpose statement, allowed uses and activities, and development standards. The shoreline environment for a given area is based on the biophysical capabilities and limitations of the shoreline area and the goals of the community. Shoreline environments include natural, conservancy, rural, urban, aquatic, and maritime environments. Not all shoreline master programs include all of these environments.

Subarea Plan: A plan to guide the development of a part of a local government's jurisdiction. Sometimes called a community plan.

Shoreline Master Program: The comprehensive land use plan for the area under the jurisdiction of the Shoreline Management Act, 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. Source: RCW 90.58.030(3)(c).

Urban Growth Area: A geographical area consisting of cities and unincorporated areas characterized by or planned for urban development densities and intended to accommodate the projected urban population growth for the next twenty years. Urban growth areas are cooperatively identified by cities and counties and designated in a county comprehensive plan prepared under the Growth Management Act (RCW 36.70A).

Urban Shoreline Master Program Environment: A geographical area designated in a shoreline master program and characterized by high-intensity land uses including residential, commercial, and industrial expansion, or planned to accommodate urban expansion.

Vertical Land Movement: The change in the elevation of the land surface due to geological change. Vertical land movement is sometimes referred to as **the existing rate of sea level rise** where the land surface is subsiding. **Accelerated sea level rise** is the increase in sea level resulting from global warming.

Water-Dependant Use: A use or portion of a use which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations. Examples of some water-dependent uses include: marine cargo docks and loading areas, ferry terminals, boat ramps, swimming areas in lakes and rivers, aquaculture, marinas, water intakes, and outfalls. Source: *Shoreline Management Guidebook, Urban Waterfront Policy Analysis Addenda*, Addendum Number 2, 1990.

Water-Related Use: A use or portion of a use which is not intrinsically dependent upon a waterfront location but whose economic viability is dependent upon a waterfront location because:

- a. Of 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
- b. The use provides a necessary service supportive of the water-dependent commercial activities and the proximity of the use to its customers makes its services less expensive or more convenient.

Examples include manufacturing ship parts large enough so that transportation becomes a significant factor in the product cost, utility lines serving water-dependent activities, the storage or warehousing of water transported goods, seafood processing plants, manufacturing or processing facilities which receive or ship goods by water transportation, and intermodal transport when water transport is part of the service. Source: *Shoreline Management Guidebook, Urban Waterfront Policy Analysis Addenda*, Addendum Number 2, 1990.

Water-Enjoyment Use: a recreational or similar use facilitating public access to the shoreline as a primary character 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 character of the use and which through location, design, and operation assures 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 public and the shoreline-oriented space within the project must be devoted to the specific aspects of the use that foster shoreline enjoyment.

Examples include: public waterfront parks, public use beaches, aquariums available to the public, retail businesses housed in structures designed to take advantage of a waterfront location through views of the water, displays oriented to pedestrian traffic which is connected to shoreline access improvements, enhancement of pedestrian amenities, or other similar design features. Source: *Shoreline Management Guidebook, Urban Waterfront Policy Analysis Addenda*, Addendum Number 2, 1990.

Water-Oriented Use: Any water-dependent, water-related, or water-enjoyment use. Source: *Shoreline Management Guidebook, Urban Waterfront Policy Analysis Addenda*, Addendum Number 2, 1990.

Non-Water-Oriented Use: A use which is not water-dependent, water-related, or a water-enjoyment use.

Appendix B

**Suggested Techniques for
Compensatory Mitigation Planning**

Introduction

Appendix B supplements Chapter 16, Advance Compensation and Environmental Mitigation Planning, by presenting a discussion of the issues surrounding mitigation planning and suggesting processes for implementing a compensatory mitigation program. Two approaches to off-site mitigation are described: individual projects and mitigation banking. Historically, individual off-site mitigation projects have encountered a number of problems. Too often off-site mitigation is delivered after development has incurred on-site impacts and the off-site mitigation does not produce the hoped for results. For this reason, mitigation banking, in which the mitigation is based on a regional resource management plan and is delivered prior to development, is the preferred approach. However, mitigation banking is in itself a new and largely unproven concept in Washington State and requires large, long term investment therefore both approaches are presented.

Because environmental mitigation banking is a relatively new shoreline management concept, Appendix B is intended as a resource rather than a set of Department of Ecology-sanctioned recommendations. Ecology's response to mitigation proposals continues to be on a case-by-case basis.

Individual Off-Site Mitigation Projects

The State Environmental Policy Act Rules (WAC 197-11-768) defines mitigation as:

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 during the life of the action;
5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or
6. Monitoring the impact and taking appropriate corrective measures.

The order of mitigation actions listed, from most direct and complete to the least direct, implies an order of preference from 1 (high preference) to 6 (low preference). This means a selected mitigation action will be considered appropriate in satisfying SEPA requirements only if the mitigation actions of higher preference are not feasible or are ineffective. The Governor's Wetlands Executive Order 90-04, section 12, further clarifies this point by listing

the same 6-point SEPA definition for mitigation and stating that state agencies shall consider the 6 actions in order of preference from 1 (high) to 6 (low).

The priority for environmental mitigation actions establishes state-wide shoreline management policy which encourages off-site environmental mitigation only if on-site mitigation measures are not feasible. However, situations may occur where on-site mitigation for unavoidable impacts is either not feasible or not desirable from a natural resources perspective. New shoreline development associated with the ever changing economy of water-dependent uses must be accommodated somewhere and such development will often incur unavoidable environmental impacts. Shoreline planning has tended to concentrate intensive shoreline development in urban centers where development pressure and limited shoreline area leave little room for on-site mitigation.

At the same time, shifts in maritime economies have left vacant previously industrial shorelines. In these cases, shoreline enhancement, restoration, or creation may more than offset a project's impact to produce a net environmental benefit. Also, enhancing, restoring or creating a high-quality shoreline resource off-site may be more desirable than mitigating for impacts to a low-quality shoreline resource on-site. Off-site mitigation actions might include:

- Breaching an estuarian dike to create a salt marsh;
- Cleaning up or capping contaminated sediments and restoring the shoreline to its natural condition;
- Restoring a beach to its natural conditions; or
- Reestablishing a dune system.

To clarify compensatory mitigation measures, the following definitions are recommended:

"Enhancing" or "enhancement": Improving existing shoreline conditions in terms of ecological functions.

"Restoring" or "restoration": Returning a degraded or former shoreline to a more natural condition.

"Creating" or "creation": The construction of a new shoreline environment where none previously existed historically.

Typically, off-site mitigation is considered on a project by project basis. This approach has produced some successes but, in general, has several limitations.

Without clear rules or guidelines for off-site mitigation, it is difficult for project proponents and regulatory agencies to reach agreement. Agencies must determine whether they are setting a precedent that could result in abuse, and project proponents must know agency expectations and procedural requirements in order to develop a responsive proposal.

Natural resource enhancement, restoration and creation efforts have not always been successful. Since resource replacement is technically demanding and subject to a number of variables, the only way to ensure mitigation success is to establish and monitor the resource prior to permit issuance for the base project.

Individual off-site mitigation projects do not necessarily further a comprehensive "natural systems" approach to resource management. Establishing an isolated resource, even if technically successful, may not contribute to the shoreline system impacted by the project. Long-term, regional resource management concerns can only be addressed through comprehensive shoreline planning.

The shortcomings of off-site mitigation can be overcome to a certain extent by better defining the process, goals, policies and priorities which guide off-site mitigation projects. Policies and regulations outlining the procedures and criteria for considering off-site mitigation as a means to satisfy SEPA and other resource protection requirements may be included in the Environmental Impacts section of the SMP's General Policies and Regulations. The SMP policies and regulations should address each of the following points:

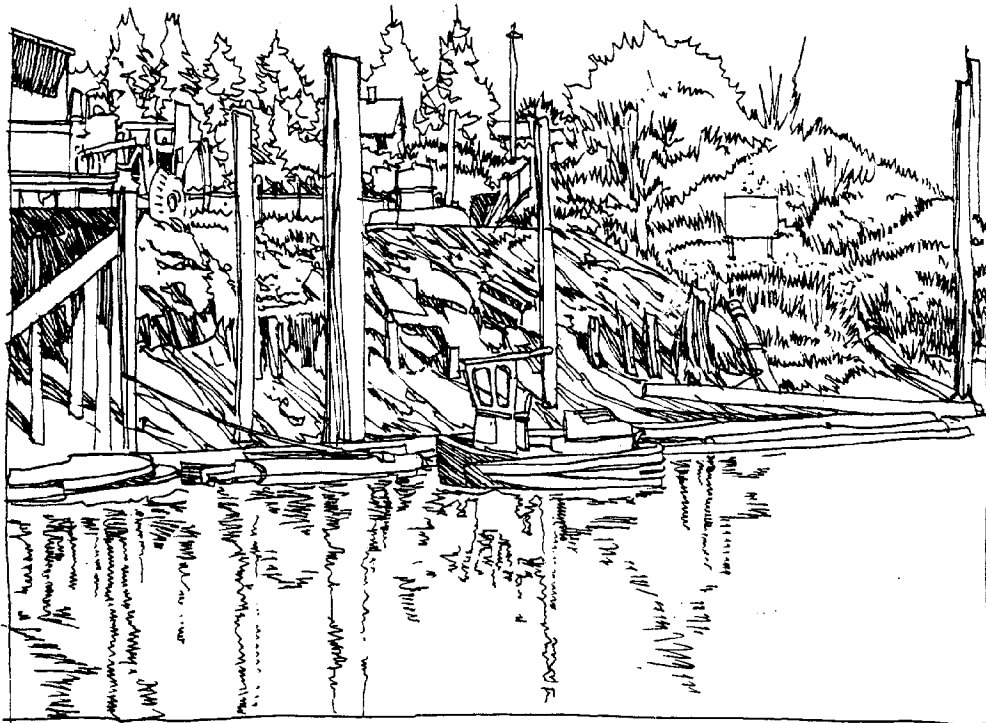
1. **Adhere to the priorities set by SEPA for mitigation.** Off-site mitigation should be considered only after all reasonable measures to avoid, minimize, rectify, or reduce project impacts are considered and determined to be unfeasible and only after on-site mitigation is determined to be infeasible.
2. **Establish procedures for ensuring the long-term success of the resource.** Because shoreline enhancement, restoration and creation efforts are technically demanding, mitigation should be delivered and the success of the mitigation demonstrated prior to approval of the base project. Off-site mitigation success must be documented through an evaluation of physical and biological conditions prior to and after the completion of the mitigation action. The resource must be legally and physically protected through covenants, conservation easements or other means to ensure the resource will be maintained in perpetuity.

The SMP should outline, in general terms, procedures to resolve these issues during permit review. Off-site mitigation proposals will be carefully examined by the Department of Ecology and therefore should require a conditional use permit. This will enable Ecology to be involved during project formulation and will help avoid costly permit appeals.

3. **Insure mitigation efforts are integral to reestablishing a connected shoreline system.** The quantity (area) and quality (functions and values) of the replacement resource should be greater than the quantity and quality of the lost resource. Mitigation efforts also should be integral to reestablishing a connected shoreline system.

There are two approaches to this requirement. The first approach establishes SMP criteria for determining when off-site mitigation is suitable. This gives project proponents the flexibility to propose a variety of off-site mitigation alternatives. However, it provides the applicant little direct guidance in mitigation site selection and proposal preparation. Nor does this parcel-by-parcel method necessarily ensure the mitigation will be part of a connected shoreline system.

Advance comprehensive mitigation planning is the second and preferred approach for determining the suitability of mitigation alternatives. The local jurisdiction adopts an area-wide (watershed, shoreline, etc.) plan that identifies suitable development and off-site mitigation receiving sites. A comprehensive shoreline enhancement plan is most effectively developed in the early stages of an SMP amendment process, when shoreline environment designations are being reviewed (See *Handbook* Chapter 2, Shoreline Master Program Organization).



Individual off-site mitigation and mitigation banking provide opportunities to restore degraded shorelines.

Summary

The SMP can be a useful tool in outlining procedures for evaluating off-site mitigation proposals. Off-site mitigation policies and regulations may be included in a subsection of the General Policies and Regulations dealing with environmental impacts (see *Handbook* Chapter 5, General Shoreline Policies and Regulations). The policies and regulations should address or include the following:

1. A statement that the SEPA priorities for mitigation shall still apply.
2. A statement that within shorelines jurisdiction, off-site mitigation shall be approved for water-oriented projects only.
3. A method to insure that off-site mitigation shall be integral to a connected shoreline system by:
 - a. Establishing criteria to make this determination; or
 - b. Referencing a comprehensive environmental enhancement plan (or component of a comprehensive plan) that identifies (i) development sites which may utilize off-site mitigation and (ii) off-site mitigation receiving sites; or
 - c. Identifying shorelines or shoreline environment designations where (i) off-site mitigation shall be permitted (ii) and where off-site mitigation receiving sites shall be permitted.

(Note: options b or c are preferred)

4. A statement that off-site mitigation shall be approved as a "conditional use" only.

Following are model policies and regulations for off-site mitigation.

Model Language for Individual Off-site Mitigation

Policies

1. Off-site mitigation should be considered only for water-oriented uses proposed on Urban shorelines and only if the following conditions are met: *Note: this is an example of restricting off-site mitigation to a single shoreline environment designation. It may be appropriate to restrict off-site mitigation to a geographic region such as a watershed or particular shoreline area.*
 - a. Off-site mitigation results in a more valuable resource in terms of quantity (area) and quality (functions and values) than on-site mitigation by:
 - i. Enhancing, restoring, or creating, a shoreline resource of greater value (in terms of quantity and quality); or

- ii. Creating a unique shoreline resource; or
 - iii. Reestablishing an integral element of the City/County's connected shoreline system.
 - b. Off-site mitigation is part of a comprehensive environmental enhancement plan to protect, enhance, restore or create the City/County's shoreline system.
 - c. The following alternative mitigation measures are not feasible or are less desirable from a natural resources perspective.
 - i. Avoiding the impact altogether by not taking a certain action or parts of an action;
 - ii. 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;
 - iii. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 - iv. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- 2. Off-site environmental mitigation should conform to the following criteria.
 - a. Off-site mitigation should be permitted only for water-oriented uses proposed on shorelines designated Urban Maritime or Urban Multi-use (or state shoreline locations where projects may use off-site mitigation). Off-site mitigation receiving sites should be designated Urban Estuarine (or state shoreline locations where off-site mitigation may be permitted).
 - b. Off-site mitigation should be permitted only as a conditional use subject to Ecology approval.
 - c. Off-site mitigation should be delivered and the success of the mitigation demonstrated prior to the approval of the base project.
 - d. The off-site mitigation site should be legally and physically protected through covenants, conservation easements or other means to ensure the resource will be maintained in perpetuity.
- 3. Off-site mitigation policy is intended to recognize and protect the economic significance of water-oriented uses on the City/County's industrial waterfront while protecting and enhancing valuable shoreline resources (state area). (Include brief statement of the general environment management intent.)

Regulations

1. Off-site environmental mitigation shall be permitted only as a conditional use.
2. Off-site mitigation shall be permitted only for water-oriented uses proposed on shorelines designated _____ (state shoreline environment designation or shoreline locations). Off-site mitigation receiving sites shall be permitted only on shorelines designated _____ (state shoreline environment designation or shoreline locations).
3. All shoreline development proposals utilizing off-site mitigation shall be subject to the following requirements.
 - a. Off-site mitigation shall be delivered and the success of the mitigation demonstrated prior to approval of the base project.
 - b. Off-site mitigation success must be documented through an evaluation of physical and biological conditions prior to and after the completion of the mitigation action. Documentation procedures shall be as by agreement with the City/County and Ecology.
 - c. Prior resource enhancement, restoration or creation shall not necessarily satisfy mitigation requirements unless specifically stated by agreement with the City/County and Ecology.
 - d. The off-site mitigation site shall be protected legally and physically through covenants, conservation easements or other means as by agreement with the City/County and Ecology to ensure the resource is maintained in perpetuity.
4. Off-site mitigation proposals shall meet the following criteria.
 - a. Priorities for shorelines of state-wide significance as stated in RCW 90.58.020.
 - b. The off-site mitigation shall result in a more valuable resource in terms of quantity (area) and quality (functions and values) than on-site mitigation alternatives.
 - c. The off-site mitigation shall be an element of a comprehensive environmental enhancement plan approved by the City/County and Ecology and/or create a unique shoreline resource (this provision is applicable when a comprehensive compensatory mitigation plan for the jurisdiction has been prepared).
 - d. Off-site mitigation shall be permitted only if the following alternative mitigation measures are not feasible or are less desirable from a natural resources perspective.
 - i. Avoiding the impact altogether by not taking a certain action or parts of an action;

- ii. 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;
 - iii. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment; and
 - iv. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- 5. Off-site environmental mitigation shall be permitted only after City/County and Ecology approval of a project-specific mitigation plan including at a minimum, the following:
 - a. A written assessment and accompanying maps of the impacted shoreline and proposed mitigation site. The assessment shall include wetland delineation, existing wetland acreage, vegetative, faunal and hydrologic conditions, relationship to other water bodies, soil and substrate conditions, topographic elevations, existing and proposed adjacent conditions, wetland buffers and shoreline setbacks and ownership.
 - b. A written report identifying the goals and objectives of the mitigation project, and indicating the likelihood of success based on available literature and/or experience to date.
 - c. Performance standards in the form of specific criteria for evaluating whether or not the goals and objectives of the mitigation project have been met, and for determining when any contingency plan should be undertaken.
 - d. Detailed construction plans and written specifications including the proposed construction schedule;
 - e. A monitoring program for tracking construction and evaluating the completed mitigation project, including sampling and measurement techniques, a protocol for evaluating the monitoring data, and requirements for reporting.
 - f. A contingency plan identifying potential courses of action, and any corrective measures to be taken when monitoring indicates that the project performance standards are not being met.
 - g. Comments on the overall adequacy of the mitigation project by any federal, state, regional or local agency including tribes, having any special expertise or interest with respect to any environmental impacts of the project.

Mitigation Banking

Introduction

Environmental mitigation banks involve the off-site protection, enhancement, restoration, and/or creation of natural resources to compensate for unavoidable adverse impacts associated with future development activities. The concept of mitigation banking was developed in the early 1980s as a mechanism to compensate for unavoidable habitat losses primarily associated with the federal Section 10 (Rivers and Harbors Act) and Section 404 (Clean Water Act) permit programs for wetland development projects.

In 1991, the Washington State Department of Ecology undertook a wetland mitigation banking study. The report, entitled *Wetland Mitigation Banking*, prepared by Andrew J. Castelle and others, was intended to provide the basis for future feasibility discussions on wetlands mitigation banking in Washington. This report surveys existing programs, describes the elements in a mitigation bank, and makes specific recommendations for assessing wetland mitigation banking options in Washington. Although focused specifically on wetlands, many of the reports conclusions are relevant to other shoreline environments and the study itself forms the basis for this section of Appendix B.

Mitigation banking differs from most compensatory mitigation projects in that mitigation banking is a program created by resource agencies, port districts, large development entities or conservation organizations to provide a relatively large compensatory mitigation site to be used to collectively compensate for many, usually unrelated, development projects. More traditional compensatory mitigation measures typically involve individual projects, and are implemented by developers.

An important feature of mitigation banking is that all compensation is constructed "up front," that is, before impacts to existing wetlands or shoreline resources occur. The majority of individual compensation projects are constructed either concurrently with or following development activities, resulting in functional losses over time until the compensation site reaches maturity. The intent of mitigation banking is to eliminate the uncertainty of success and time lag between resource loss and full compensation for those losses. Like individual off-site mitigation projects, mitigation banking may be implemented only if higher priority mitigation measures (e.g. avoidance, minimization, rectifying, etc.) are not feasible. Mitigation banking is intended also to improve mitigation planning and implementation by increasing public agency involvement.

Another important feature of the mitigation banking concept is that mitigation efforts are planned as a whole, where the most suitable sites are identified, acquired and restored in advance of impact. Because the bank is planned and developed as a whole, the details of mitigation can be incorporated into the existing environment, resulting in a more logical and natural system. The banking program also must account for long-term maintenance of the resource as well as respond to future development pressure, emerging shoreline use patterns and the broader issues of the public trust doctrine.

Mitigation banking should not be confused with "fee-in-lieu" programs in which developers are assessed an impact fee, that agencies use to create compensation projects. Fee-in-lieu programs typically do not compensate for environmental impacts up front.

Advantages and Disadvantages of Mitigation Banking

Proponents have suggested that mitigation banks provide several advantages over the traditional project-specific approach. For example, mitigation banks can expedite the regulatory process, reduce the costs of mitigation and permit large, otherwise cost-prohibitive projects to be completed. Some authors report that large environmental restoration projects that can be accomplished through mitigation banks are more effective than several small compensatory projects in various locations. Arguably, larger projects provide more habitat, are easier to create, and prevent some of the cumulative impacts (for example habitat fragmentation) associated with many small, scattered mitigation projects.

Although there may be advantages to mitigation banking, there are also many potential disadvantages. Opponents of mitigation banking argue that involved agencies invest a great deal of time and money in developing the bank, and that the costs may never be recovered. Because the banking site is developed (and therefore paid for) prior to permitting any of the projects which will be credited towards the bank, and because there is no guarantee that a sufficient number of developers will apply for mitigation credits with the bank, it is possible that the bank operator will never recover the initial investment nor the continuing maintenance and monitoring costs.

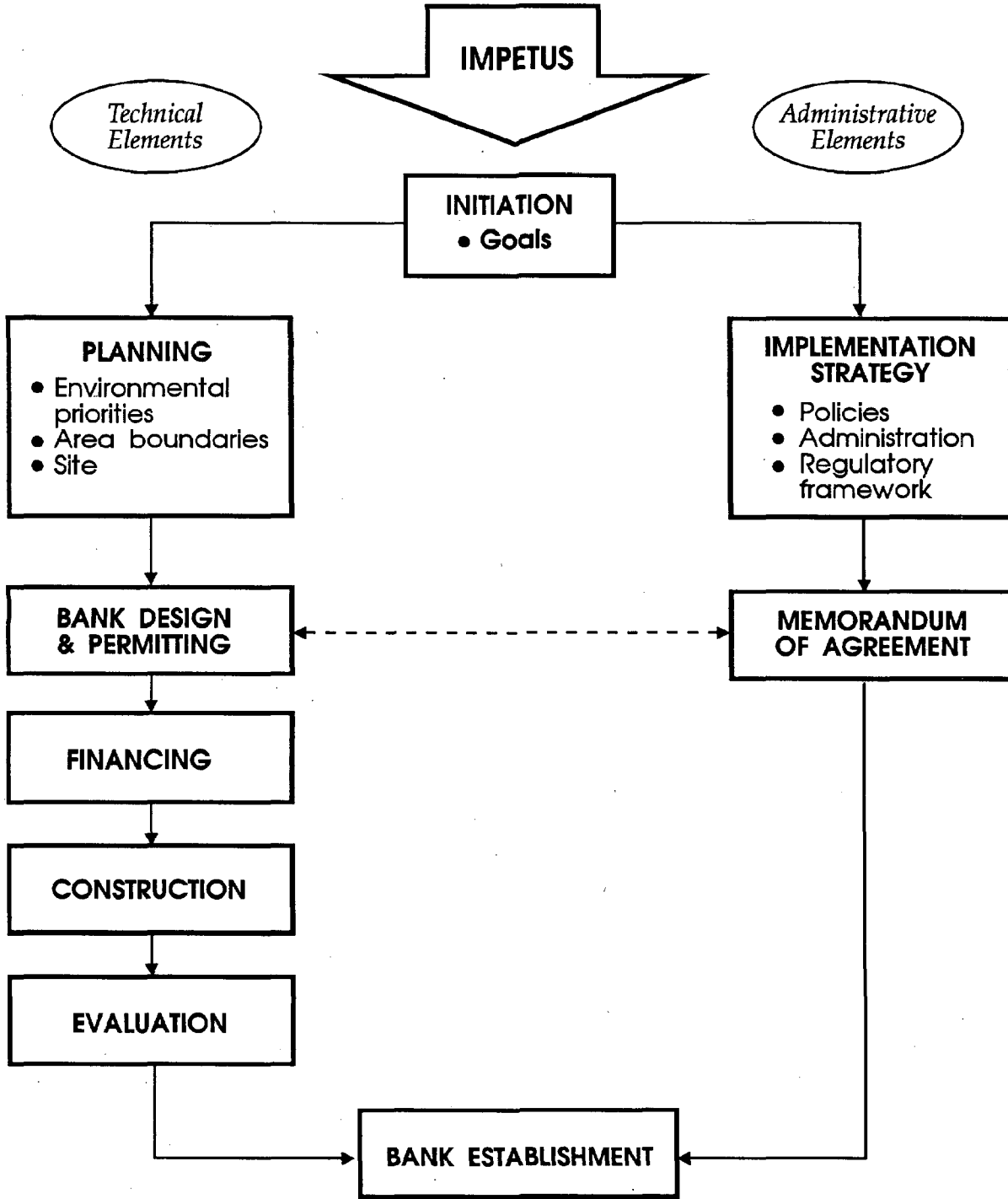
There are also several ecologically-based arguments against mitigation banking. For example, the same problems which have contributed to low success rates for individual compensation projects will also exist for mitigation banking programs. In addition, the spatial redistribution of resource types in the landscape and the potential for habitat trade-offs (for example, creating emergent habitat as compensation for forested wetland losses) may result in a reduction of native plant and animal species diversity.

Elements of a Mitigation Banking Program

Early mitigation banking studies focused primarily on wetlands, however, mitigation banking may be useful for other shoreline resources such as beaches, intertidal habitat, or riparian corridors, etc. Moreover, the current emphasis on wetlands is relevant to shoreline applications because many applicable shoreline areas such as estuaries and riparian corridors include "associated" wetlands.

Summarized below are the elements integral to a successful mitigation banking program as described in the 1991 Washington State Department of Ecology report on Wetland Mitigation Banking (cited here as the Mitigation Banking Study) and the 1992 ACOE "Partnerships in Restoration Workshop" (Mitigation Banking Session). As diagrammed in Figure B-1 the tasks to create and maintain a mitigation bank can be divided into "technical" and

Figure B-1. Elements of a Mitigation Bank



"administrative" elements. The technical elements include the scientific, developmental, financial or physical issues associated with bank establishment. The administrative elements involve establishing the bank's regulatory and managerial framework. As the diagram illustrates, the tasks follow two interdependent tracks. Ideally, the tasks roughly follow in sequence, starting with goals and objectives and proceeding to long term management activities. However, recent experience has indicated that the initiation of a bank project may begin at other points in the process. For example, the Washington State Department of Transportation (WSDOT) banking program began by developing an implementation strategy and a memorandum of agreement. The Biringer Berry Farm proposal began by exploring the technical and regulatory issues of a specific site.

Because mitigation banks require resource value determinations and public expenditure, public participation will be an important component of bank establishment. Public participation is most effective early in the project, notably in setting goals and objectives, developing a comprehensive resource plan and implementation strategy, and reviewing the memorandum of agreement. At a minimum, representatives from public groups should play an active role in these steps and should be involved in overseeing the long term maintenance of the resource.

Each bank element is described below in greater detail. Example projects are provided to illustrate basic concepts. For additional information regarding the examples consult the bibliography at the end of the Appendix.

Program Goals

Establishing goals is the first task in developing a mitigation banking program. Goals are broad statements of philosophy which establish program direction and are the basis for the program's specific policies and recommended actions. Perhaps the most common goal of mitigation banking programs is to achieve no net loss of resource quantity (area) or quality (values and functions). Another goal may be to increase greater regional acceptance of mitigation banking as a resource management tool by facilitating increased interagency involvement.

A mitigation bank's goals might include:

1. To restore and enhance existing habitat types to prevent a net loss of functional and habitat values.
2. To preserve and/or create particular habitat types for specific desirable, threatened, or endangered species.
3. To consolidate many small, otherwise unmitigated shoreline or wetland development projects into one compensation site.
4. To balance shoreline or wetland preservation and development interests, and to expedite the permit review process.

5. To preserve bank resources in perpetuity through long-term monitoring and management.
6. To promote cooperation and administration among the various regulatory authorities.
7. To protect and enhance water quality.
8. To achieve national and local requirement of "no net loss" of environmental resources in both quantity (area) and quality (value and function)
9. To create an interconnected system of environmental resources within a stable, ecologically sound system with a high likelihood for long term survival.
10. To promote the multiple use of protected resources for activities such as recreation and education while ensuring that the functions and values are maintained or enhanced.

Mitigation banks are not intended to allow developers to avoid stringent alternatives analysis; this may be the biggest fear of regulatory agencies who are concerned that without such analyses, otherwise avoidable impacts will occur.

Planning

Comprehensive Environmental Enhancement Planning

In general terms, a comprehensive environmental enhancement plan (CEEP) identifies a strategy for protecting, enhancing, restoring and/or creating a region's natural resources based on community input and scientific study. Local governments and potential bank operators are strongly encouraged to base mitigation banking programs on a CEEP for several reasons.

- A CEEP provides the opportunity to identify the extent of resources that might be lost under current development projections.
- A CEEP establishes resource protection priorities based on a comprehensive natural resource inventory and assessment. By approaching a region's resources as a whole or as "system", the plan can identify which resources should be protected, enhanced, restored and/or created. This approach ties resources together into a connected system and fills the gaps within the region's spectrum of resource types.
- The CEEP process can be designed to include broad participation by property owners, the development community, environmental groups, state and federal agency representatives, tribes and other interested citizens.
- Broad public participation allows community values to be incorporated into resource protection goals.
- Scientific criteria can be established for determining when off-site mitigation is appropriate and when "in-kind" mitigation is appropriate. For example, if a CEEP identifies salt water

wetlands as a very high value resource, then the enhancement of a degraded salt water wetland may, under certain conditions, be justified as mitigation for impacts to non-associated, isolated wetlands.

- A comprehensive resource inventory allows the determination of relative resource values. This is necessary for establishing the currency proscribed in the mitigation bank's memorandum of agreement (MOA) and insuring that bank transactions result in a net environmental benefit in terms of resource quantity (area) and quality (value and function).
- CEEPs can meet a range of community objectives. For example a comprehensive wetlands protection plan can protect rare plants, provide open space along a region's major streams, provide for water quality improvements, reduce the risk of flooding, meet state and federal wetland protection requirements and provide for economic development.
- Provides opportunities for multiple uses of the bank which can increase funding opportunities.
- Priorities for Shorelines of State-wide Significance emphasizes a regional approach.

EXAMPLE: WEST EUGENE WETLANDS PLAN

The *West Eugene Wetlands Plan (1992)*, prepared by the City of Eugene, Oregon is one example of the CEEP process. Eugene, Oregon is located in Lane County at the southerly end of the Willamette Valley. Eugene is the second largest city in Oregon with a population of 200,000 people. The West Eugene Wetlands Study and resultant Wetlands Plan (Plan) were undertaken when significant wetlands were discovered in Eugene's primary industrial development area. An extensive community participation process allowed the community to be involved during the scientific study and formulation of the Plan.

Inventories of habitat value, wetland boundaries and wetlands functions and values were conducted. It was determined that there were wetlands of greater and lesser value. The Plan recommended development of the lower value wetlands but because the loss of these lower value wetlands must be mitigated, the Plan proposed the creation of a system of restored and enhanced wetlands ("mitigation bank") to compensate for the loss of the lower value wetlands. The Plan approaches mitigation in a comprehensive manner where resulting efforts satisfy federal and state wetland law and achieve other community needs and objectives such as providing additional flood control storage, water quality enhancement features, improved wildlife habitat and educational and recreational needs. Figure B-2 illustrates a comprehensive approach to resource management where wetlands within a drainage basin are identified for protection, development, or enhancement prior to development impacts.

The Plan utilizes the wetland mitigation bank concept as the primary means for implementing the mitigation program. With this approach, mitigation efforts are planned as a whole where

the most suitable sites are identified, acquired and restored in advance of wetland impact. This concept benefits the natural resource system by comprehensively planning restoration efforts while also benefiting the development community by providing greater certainty in the development process. The bank system performs the mitigation requirements for individual users where the details of compensation are preplanned, constructed and maintained by a public or private nonprofit agency.

To satisfy individual impact requirements, users purchase mitigation credits from the bank, thus eliminating uncertainty and saving valuable time and resources.

Because the bank is planned and developed as a whole, the details of mitigation can be incorporated into the existing environment, resulting in a more logical and natural system. The bank is proposed to have sufficient capacity to serve the mitigation needs of the West Eugene Wetland Study Area and the community as a whole.

EXAMPLE: CITY OF RENTON MITIGATION BANK

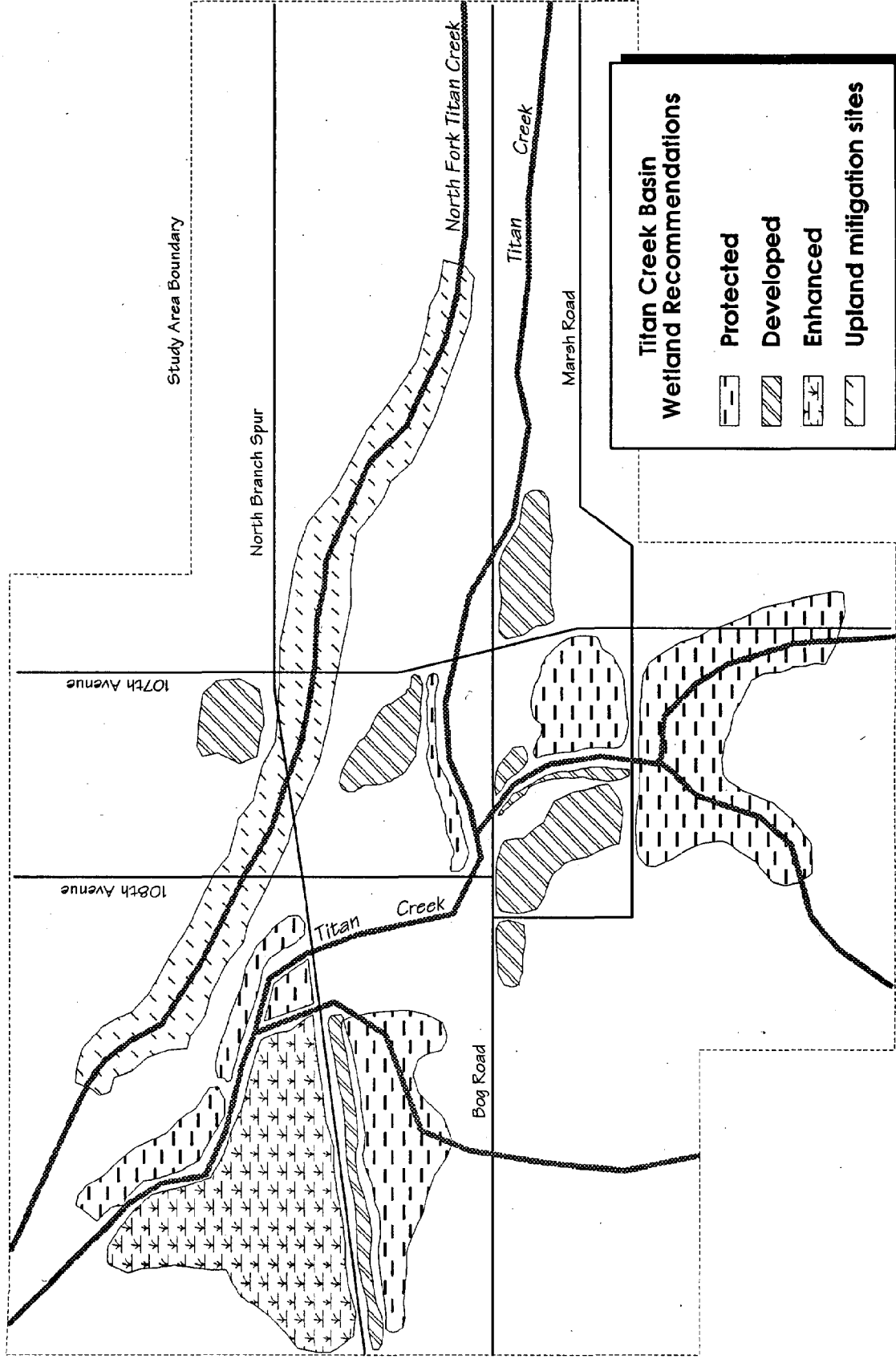
The City of Renton is currently undertaking a mitigation banking program that, although much less comprehensive than the West Eugene example is based on a resource planning approach.

As part of requirements under the GMA, the City of Renton prepared a critical areas inventory. The results of the wetland portion of the inventory concluded that the City had basically three types of wetlands: (1) very high quality wetlands and (2) medium high quality wetlands and (3) very low quality wetlands. This three category system is different from the usual four categories identified by many jurisdictions. The largest percent of wetlands were very low quality wetlands, with the second most frequent wetland occurrence that of high quality wetlands. In addition, the very low quality and the very high quality wetlands were both generally located in the Green River Valley.

The Valley had been historically a rich farming plain with existing wetlands. However, in 1979, before the value of wetlands was recognized, The City had allowed some 800 acres of land to be filled. The fill was imported, impermeable glacial till. If the filled parcels remained vacant, rainwater collected producing perched wetlands, the lower quality wetlands. These wetlands, scattered across the filled areas, fit the COE definition of wetlands. In addition in the same area, some large historic wetlands remain, having not been filled. These are high quality wetlands with great habitat values, important flood storage value to the City and aquifer recharge importance, as well as other wetland functions. Scientific evidence indicates that if the glacial till were removed in the Valley area, that historical wetlands could reestablish themselves in these excavated areas. The historical seedbed is still present, the original hydrology is present and hydric soils are still there.

In development terms, the presence of the perched wetlands on the filled parcels substantially reduces the development potential of the parcels, even though full infrastructure is available to service these parcels.

Figure B-2 Conceptual Comprehensive Wetlands Management Plan.



The city held focus group meetings with property owners, wetland regulators, environmental groups and citizens. A strong consensus emerged from the property owners to fill the smaller wetlands up to the then COE regulation of one acre per site. Regulators, environmental groups and citizens believed that re-establishment of historical wetlands could work, however, they wanted full protection through successful completion, i.e. smaller wetlands could be filled if the assurance of success would be present for the re-establishment of historic wetlands.

The City then wrote its wetlands ordinance setting up the frame work for the bank. The SEPA mitigation priority sequencing was written into the ordinance, i.e. avoidance, minimization, etc. had to be considered first before a banking situation could be tried. Ratio replacement, monitoring and re-establishment plans were required in the ordinance for any banking situation. All properties had to be within the same drainage basin.

Crucial to the development of the bank was finding a suitable piece of property to use as the bank site. Enter Glacier Park Company, mandated by its parent company to liquidate its land holdings in the Valley. Two of their properties had existing high quality wetlands adjacent to generous areas of fill which could be removed to reestablish new wetlands. Other parcels were restricted by low quality wetlands leaving little industrially developable land. Glacier Park donated the two large parcels to the City. In exchange, the City agreed to issue Glacier Park permits to fill up to one acre of low quality wetlands on each of their six remaining parcels. The City also assumed the obligation of mitigating the impacts to the six acres of wetlands likely to be filled after these properties sold.

Basically, the City came to the following agreement with GPC:

1. GPC would donate to the City parcels with partially filled and not filled wetlands in exchange for the right to fill five acres of wetlands on six other properties.
2. A total of 56 acres was donated, encompassing 26-30 wetlands. The donated land is essentially the Mitigation Bank's first "deposit". The City will allow other property owners within a specified area to use the Mitigation Bank to offset the fill of wetlands.
3. The City may require other property owners which use the Mitigation Bank to pay the City a specified amount of money. The City will own and operate the bank. The mitigation banking plan is currently in draft form. An engineering/planting plan for re-establishment of the wetlands is also being developed.

The City Council approved the acquisition of the site and the mitigation bank concept, and executed a wetlands mitigation banking agreement with Glacier Park on May 18, 1992. The City Council's decision to acquire the site was the most critical step in the implementation of this progressive approach to wetland mitigation.

Funding for the mitigation plan was another crucial ingredient in establishing a successful wetlands mitigation bank program. The City's Storm Water Utility allocated funds to finance a wetland restoration plan for the site, based on estimated savings from beneficial flood storage functions performed by potential future wetlands. Since the inception of the mitigation banking concept in April 1991, the City has acquired property for the bank, assembled an interdepartmental team to manage the creation of a mitigation plan, and will hire a consultant to draft the wetland restoration plan and banking system, (debits, credits and management of accounts.) The estimated date of completion for the wetland restoration plan, which includes a site analysis, conceptual master plan, and monitoring and maintenance plan, is August 1, 1993 with start up of the mitigation program to follow. The City intends to operate, maintain and monitor the mitigation site in perpetuity. The mitigation banking plan is currently in draft form.

A brief discussion of some key areas in the mitigation bank planning process follow.

Establishing the Planning Area

Ideally, the planning area should be based on natural systems considerations rather than jurisdictional boundaries. Setting study area boundaries to watershed boundaries, for example, may make the most sense. A regional CEEP also might provide an excellent opportunity for inter jurisdictional cooperation. It is important to note that the implementation of off-site mitigation is not a foregone conclusion. Indeed, the plan may conclude that mitigation banking is appropriate in very limited portions of the study area, only or not at all.

Site Identification/Selection

Site identification and selection begin with establishment of selection criteria. Because banking programs often seek to balance economic growth with natural resource protection, selection criteria are best determined by a cooperative review team comprised of agencies, developers, conservation groups, property owners and others. Examples of selection criteria include: (1) regional environmental resource loss trends; (2) predicted rates of loss; (3) regional goals for restoration or preservation of various environment types; and (4) habitat diversity and creation or enhancement of habitat for desirable species. However, perhaps the most important factors influencing site identification and selection are the program goals and objectives. For example, if a goal is to establish more estuarine habitat, then the site selection process will be directed by that intent.

Selecting mitigation bank sites requires an analysis of the types, distribution and values of shoreline resources within the region considering bank program implementation. This analysis is conducted in stages. First, a thorough resource inventory must be performed so that all

resources are identified. In some cases this will have been accomplished as part of Washington State Growth Management Act compliance. This is important not only to locate candidate banking sites, but also to evaluate the number, type and total area of shoreline resources existing in the study area to which alterations may be permitted in the future. Without this information, the necessary size of the banking site cannot be established.

Inventory data are used to determine the types of resources which may be created at a mitigation bank site. This information accomplishes two purposes by identifying environments to which alterations may be allowed in the future, and by identifying potential banking sites. Highly rated environments are not candidates for alteration, and therefore are not incorporated into mitigation banks. This is because the risk of degradation to highly rated environments or shorelines from bank construction and other disturbances is too great. Low value shoreline resources, however, are the most likely environments to which alterations may be permitted. Because the risk to low rated shorelines from construction is proportionally low, these areas may also be good candidates for banking sites. In any event, the "credit" given to the compensatory effort must be a function of the bank's environmental qualities after enhancement minus the site's environmental qualities prior to enhancement.

After the resource inventory is completed and resource ratings for shoreline projects are assigned, potential banking sites are identified. Site identification is constrained by availability of areas possessing the required characteristics that will support the desired environment. Shoreline resources, including wetlands, occur in specific geographic positions on the landscape such as river deltas, bay shorelines, lake shores and coastal areas and are part of a continuum of ecosystems which are in dynamic equilibrium. Shorelines are important transitional zones between aquatic and upland habitat types. As such, they cannot be created everywhere; their existence depends on a multitude of specific land form, hydrologic and ecological processes. Hence sites are limited to areas that possess specific physical, chemical and biological characteristics.

Specific site identification and selection recommendations are as follows:

1. Environmental resource inventories, including field verification and assigning ratings to all shoreline resources, should be performed.
2. Low-value resource areas should be identified.
3. High quality shoreline resources should neither be used for banking sites nor for development sites.
4. The ideal banking site would restore a shoreline resource to historic natural conditions.
5. Preference should be placed on selecting sites that will support an environment which is functionally equivalent to the environment likely to be impacted by development.
6. Regional differences within Washington State should be recognized. At a minimum, the state could be divided into eastern and western Washington. Differences should also be recognized between marine, river and lake shorelines.

Implementation Strategy

The proposed bank's administrative framework is best conceived in parallel with the physical planning work, since the scientific regulatory and procedural issues are so intertwined. The conceptual implementation strategy developed at this point should identify:

1. The participants and their role in the banking process;
2. Under what conditions the bank may be used;
3. The regulatory procedures required by the resource agencies;
4. The system of currency for bank operation;
5. Method of financing construction and evaluation; and
6. Provisions for long-term maintenance.

These issues are best addressed through a committee which includes members of the interested public, resource agencies, local governments, affected Native American Tribes and project proponent. Dedicated technical staff will most likely be needed to organize the committee and provide information and support.

An example of such a process is provided by the Washington State Department of Transportation (WSDOT) proposal for a mitigation program.

WSDOT is currently pursuing a program in which compensatory mitigation banks can be established prior to wetland impacts associated with road improvements. Because WSDOT's project programming is so far in the future, there is time to establish a bank prior to applying for the necessary permits. The process that WSDOT has begun emphasizes coordination between regulatory agencies and setting up the administrative process and regulatory procedures for establishing the banks. Rob Tiedeman was the consultant assisting the department. Several two day retreats were held to set up a framework agreement between all participants, including the State Departments of Ecology, Wildlife and Fisheries, EPA, and other federal agencies. An Oversight Committee (Committee) consisting of key agency representatives was established that will govern the bank operations. A draft Memorandum of agreement has been prepared and is currently in review. Key elements of the draft MOA include:

1. The SEPA mitigation priority sequencing is still in place. That is (1) Avoidance, (2) Minimization, etc.
2. Relationship of Authorities to the agreement. Regulatory agencies retain autonomy for their review process.
3. Responsibilities of the Oversight Committee. The Committee will govern the bank.
4. Criteria for bank site selection.

5. System of currency, credits and debits. The value of the resource is a function of area using the Ecology wetland rating system.
6. Monitoring protocol.
7. Resource maintenance.

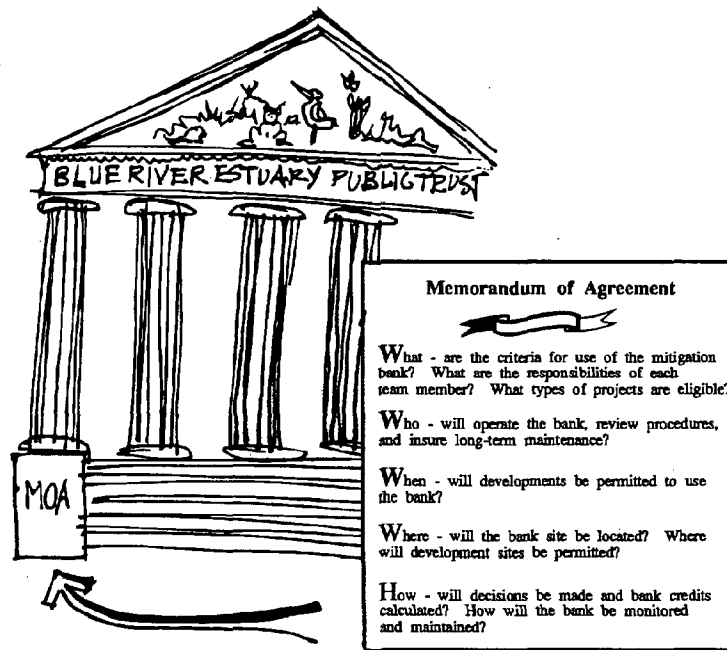
Public participation will be done on a case by case basis with the local communities.

Memorandum of Agreement

The purpose of the implementation strategy is a Memorandum of Agreement (MOA). Below are outlined some of the key elements in an MOA.

MOAs are legally binding agreements, usually between agencies with regulatory and/or vested interests (for example, the Washington Departments of Ecology, Wildlife, and Fisheries). These documents specify the roles, duties and responsibilities of each of the parties and often include:

1. Specific criteria for use, such as determination that the projects re design, on-site mitigation and other off-site mitigation alternatives are inappropriate or unfeasible;
2. Inclusion of, or reference to, comprehensive regional plans and/or other planning documents with similar and related goal objectives;



The Memorandum of Agreement outlining bank operating procedures is the cornerstone of any mitigation bank.

3. Definition of the obligations and responsibilities of the participants;
4. Establishment of an interagency bank overview team;
5. Definition of the decision making and conflict resolution processes;
6. Identification of who will hold the title or other legal agreement for bank land(s);
7. Geographic limits of sites eligible to use the bank;
8. Establishment of the size of the bank;
9. Identification of the standardized methodology to be used in evaluating credits and debits (as well as the accounting process);
10. Specification of the resource types that are eligible to be offset by the bank; and
11. Establishment of monitoring and evaluation procedures for mitigation projects and any related adjustments in bank management or credits.

Mitigation Bank Operator

The mitigation bank operator is the legal entity established to develop the mitigation bank program and to create and maintain environmental resources at the mitigation bank site. The bank operator is responsible for the day-to-day management of the bank site as well as the long-term integrity of the resource. The operator's duties include monitoring the biological, chemical and physical conditions of the created resource, and summarizing the results in reports to be reviewed by resource agencies, environmental groups and development associations. If the bank operator is an agency, it may also be the operator's responsibility to issue permits to allow resource alterations for which compensation will be made within the banking system.

Mitigation bank operators are responsible for maintaining bank resources in perpetuity. The mitigation banking study makes the following recommendations regarding the selection of a mitigation bank operator.

1. A coalition of regulatory agencies and local governments can be the bank operator. Local governments may act as the lead agency, and provide regular maintenance and monitoring; state and/or federal agencies should be used in a supervisory and review capacity.
2. MOAs should be used to specify responsibilities of each member of the bank operator coalition.
3. Environmental groups should become involved. Qualified members could be trained to perform monitoring and maintenance in the created habitat. Without direct environmental group involvement, there cannot be sufficient influence to balance that

of the development community, however volunteers are not a substitute for government and agency actions.

Establishment and Use of Credits and Currency

Compensatory mitigation banking somewhat resembles a conventional bank account. The following description of the establishment and use of mitigation banking credits is excerpted from a 1988 US. Fish and Wildlife Service Report (#88(41)) by C. Short.

A developer undertakes measures to create, restore, or preserve fish and wildlife habitat in advance of an anticipated need for mitigation for projected construction impacts. The benefits attributable to these measures are quantified, and the developer receives mitigation credits from the appropriate regulatory and/or planning agencies. These credits are placed in a mitigation bank account from which withdrawals can be made. When the developer proposes a project involving unavoidable losses of fish and wildlife resources, the losses (debits) are quantified using the same method that was used to determine credits, and a withdrawal equal to that amount is deducted (credited from the bank). This can be repeated as long as mitigation credits remain available in the bank.

Entities besides developers could sponsor mitigation banks. Expanding public facilities (schools, treatment plants, roadways, pipelines, etc.) also may impact shorelines. In these instances, agencies such as public works and transportation departments may wish to create mitigation banks.

Mitigation credits are the "currency" of a banking program. The mitigation banking study recommends the following points regarding the use of mitigation banking credits.

1. Credit allotment should be based on specific resource functional values or an established resource criteria.
2. A standard environmental evaluation technique, should be used to assess resource functional values.
3. Wherever feasible, shoreline functional values should be quantified. While some other shoreline functions are difficult to quantify, others such as water quality and wildlife usage can be measured.
4. Mitigation fee banking should be considered only if large sums of money can be committed at the outset of the program and only if some means can be established of ensuring that money will continue to be available for the life of the bank site.

Criteria for Use

Mitigation banking programs are designed to compensate for permitted resource losses in those instances when on-site mitigation is either unfeasible or undesirable from an environmental resources perspective. Shorelines or wetlands which may be altered as part of

a mitigation banking program are often identified prior to the creation of the bank site (although the alterations are not permitted until well after the bank site has been created, restored or enhanced and proven successful). The mitigation banking study summarizes the criteria which are used for determining which areas may be considered for inclusion in a mitigation banking system.

Criteria for use determines which shorelines or wetlands may be altered and subsequently compensated for at the mitigation banking site. The study makes the following recommendations regarding establishing criteria for use.

1. Only projects that have unavoidable and necessary impacts should be considered for incorporation in a banking program.
2. Only projects which meet all regulatory requirements should be considered for incorporation in a banking program.
3. All feasible and ecologically sensible means of on-site compensation must be explored before incorporation into a banking system is considered.
4. Eligible development sites should be comprised of the same habitat type(s) as the bank site, so that compensation will be accomplished in-kind.
5. Eligible development sites should be in the vicinity of the compensation site. Ideally, the candidate environments and the bank site should be located in the same drainage basin, especially if water quantity and quality issues are of primary importance.
6. If habitat availability is the primary concern, then the candidate sites should be near enough to the bank site so that wildlife can become established at the bank site, but far enough away so that development activities do not adversely impact the bank site.
7. Candidate development sites should be small, isolated and preferably degraded (hence, of low value) to such a degree that permitting alterations to the shoreline or wetland in "exchange" for one large, high value environment is ecologically desirable.

Long-term Management

A mitigation bank operator is responsible for the short-term management of a banking program, from creating the banking program to constructing the compensation site, issuing credits and maintenance and monitoring of the site until all credits have been issued.

Once all credits have been issued, ongoing mitigation banking activities include monitoring, maintenance and remedial actions. Without these measures, compensatory mitigation may be only temporary and thus ineffective.

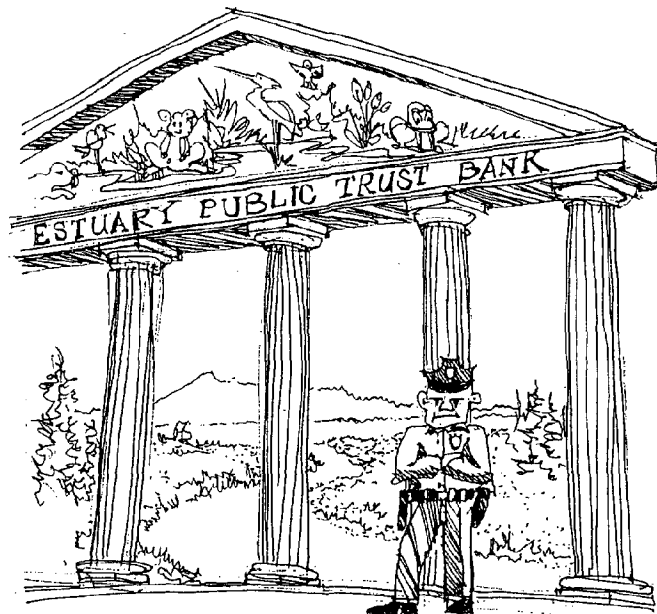
The long-term mitigation bank manager may either be the original bank operator or a public agency, port district or conservation group, but the bank must be preserved as part of the public trust.

One advantage of retaining the original bank operator as the long-term manager is that the original operator would be familiar with the bank site and its history (including any problems which have occurred). The funding mechanism, monitoring and maintenance protocol and procedures for reporting to regulatory agencies will be well established by the time all mitigation credits are issued. A disadvantage of retaining the original bank operator for public agencies may be the inability of the program to absorb unexpected cost increases.

It may be advantageous for an environmental group to become the long-term manager because much of the labor is performed on a volunteer basis, so incremental increases in costs will not limit their activities as much as it would an agency. However, volunteers can lose interest and there may be no mechanism to guarantee their long-term involvement.

When the long-term manager is a public agency, there may be a greater public cost if the expenses for bank operation increase beyond those levels which are calculated when the credits were issued. When the long-term manager is an environmental group, then unexpected public expenses are not as likely to be incurred. This is partly because most environmental groups have considerably lower operating costs than do public agencies. In addition, entrusting long-term management to conservation groups results in a greater perceived and realized involvement for the environmental community. This is important, especially in areas where environmental groups oppose the implementation of mitigation banking programs.

In order to provide regulatory compliance during that period in which mitigation credits are being issued, and to provide for the long-term ecological success of the bank site, the short-term operator team could include representatives of the conservation group to which long-term management will be entrusted. Thus continuity in monitoring, maintenance and remedial action will be preserved in perpetuity.



A mitigation bank must have a legal means to protect the resource.

Long-term management of mitigation banks begins when all mitigation credits have been issued and long term preservation procedures approved. Long-term management activities center on monitoring, maintenance and remedial actions. The following recommendations are made for long-term mitigation bank operation.

1. Both public agencies and conservation groups or land trusts should be involved with mitigation bank management.
2. Public agency involvement should decrease after all mitigation credits are issued, but agencies should always be responsible for overseeing regulatory compliance.
3. Conservation group involvement should increase as the banking program enters the long-term management phase. Monitoring, maintenance and remedial actions should be their responsibility from the outset of the program.

Bank Permitting and Design

Once a site has been selected and the basic administrative procedures and organization outlined in an implementation strategy, work can begin on the bank site's design and permitting. The Biringer Berry Farm proposal provides a local example of this process.

EXAMPLE: BIRINGER BERRY FARM

The firm of Biringer and Ebert has developed a plan to create a 363 acre intertidal salt marsh and associated wetlands in the City of Everett. The firm has engaged Reid Middleton and Pentec Environmental to provide potential cost effective site designs to revert the property back to a tidally influenced wetland. Upon obtaining permits, the firm's objective is to market land to area developers in need of quality off-site mitigation for wetlands displaced or altered by their developments. The entire site could also be transferred to a public or private entity. The project has already received a DNS and a Shoreline Substantial Development/Conditional Use Permit from the Snohomish County Planning Department.

The Biringer Farm is located on the northern portion of Spencer Island in the lower Snohomish River Delta. The site is east of Interstate 5, bordered by Union Slough to the south and Steamboat Slough to the north and west. The site has been used as agricultural land for the past 20 years or more, is considered to be prior converted corpland, and produces crops that include strawberries, vegetables, seeds, and trees. Features of the site include 350 acres of privately owned diked farmland, 2.5 acres of waterfront on Steamboat Union Sloughs, and proximity to adjacent county and state owned wetlands and marshes.

The proposal compliments recommendations made in the Snohomish River Wetlands Management Plan and the Snohomish County Public Work's Comprehensive Flood Control Management Plan (1990). Figure B-3 illustrates the project site.

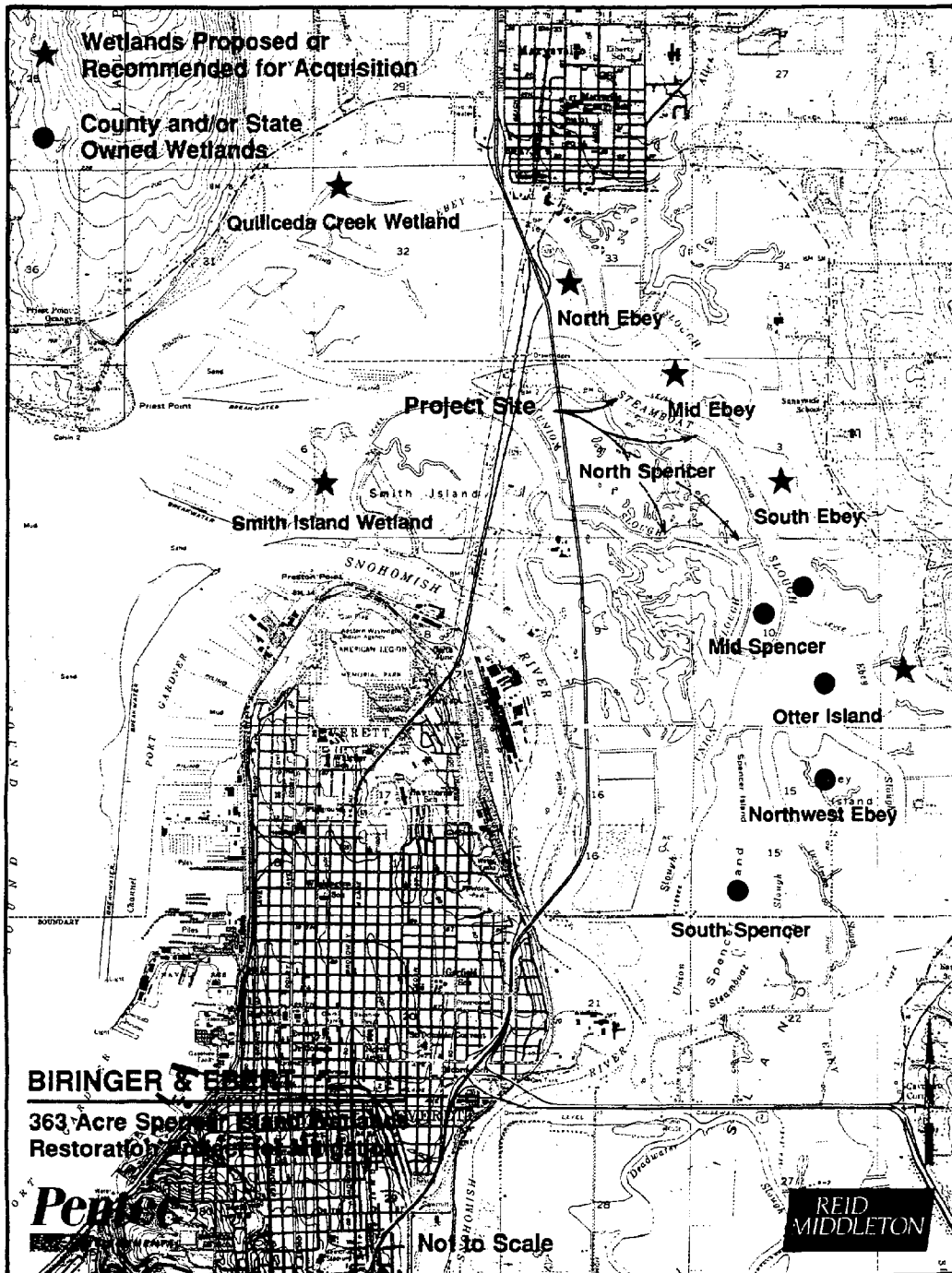


Figure B-3. The Biringner Berry Farm is a proposal to revert approximately 365 acres of existing farmland to its former habitat as an intertidal wetland. The proposal compliments recommendations made in the Snohomish River Wetlands Management Plan and the Snohomish County Public Work's Comprehensive Flood Control Management Plan (1990). Graphic prepared by Pentec Environmental and Reid Middleton and provided courtesy of Biringner and Ebert.

Financing

Procuring funds to establish a mitigation bank is one of the most difficult hurdles in the process. Essentially, a mitigation bank is a long-term investment and unless there are unusual circumstances, it takes public sector funds to initiate a banking program.

Financing options for wetlands restoration programs were examined in two publications: *Review of Wetland Restoration Programs* and *Financing State Wetlands Programs*, prepared by Apogee Research, Inc. for U.S. Army Corps of Engineers Institute for Water Resources Ft. Belvoir, Virginia. Though these programs are focused on wetlands, not necessarily shoreline resources or mitigation banking per se, the publications offer some useful information regarding resource protection program financing.

The first publication identified sixty-eight programs that conduct or facilitate wetland restoration or creation and explores the potential to link the implementation of these programs to compensatory mitigation as required under Section 404 of the Clean Water Act. The second publication is organized to provide information on what states are doing to protect wetlands, how to pay for these activities using alternative financing mechanisms, and how to evaluate which alternative financing mechanisms are appropriate.

Non regulatory programs play a significant role in state wetlands protection by promoting public and private stewardship to protect and manage wetlands resources. Non regulatory programs include acquisition programs, public land management and government programs providing incentives or technical assistance for private land management to promote wetlands functions. Acquisition programs include: fee simple acquisition, easements, acquisition by private, non-profit organizations (Nature Conservancy, The Trust for Public Lands), private land management and government programs promoting private land management for example tax advantages or subsidies offering incentives. The Washington State Ecosystems Conservation Program provides cost-share funding and technical assistance to landowners for upland wildlife restoration and wetland, riparian and endangered species habitat restorations; other federal and state agencies and landowners are partners contributing funds or in-kind services. The program is funded by allocations from the U.S. Fish and Wildlife Service through annual appropriations to wildlife refuges.

Alternative financing mechanisms include: fees, taxes, waterfowl or habitat stamps, "sin" taxes, fines and penalties, bonds, lottery revenues, voluntary contributions, income tax checkoffs and matching funds.

Michigan, New Jersey, Oregon, Maine, Pennsylvania, Ohio and Louisiana all have permit application fees related to development activities affecting aquatic resources. Permit application fees typically cover the cost of regulating the resource but do not generate funds for purchase, creation, restoration or enhancement activities.

In New Jersey, if off-site mitigation options are not feasible, the permittee must make a monetary donation to the Wetland Mitigation Bank created by New Jersey's 1987 Freshwater Wetlands Protection Act.

Tennessee maintains a dedicated fund for the acquisition of wetlands and bottomland hardwood forests financed through a portion of the state's property transfer tax which is deposited in the Wetlands Acquisition Fund.

State and federal grants will be another source of funds for mitigation banks. As the concept of mitigation banking becomes more widely accepted such projects may become eligible for a variety of state and federal grants. For example, the recently introduced Intermodal Surface Transportation Efficiency Act (ISTEA) identifies mitigation banks as projects eligible for funding. The EPA and the Department of the Interior funded some of the upfront cost of wetlands purchase as part of the West Eugene Wetlands Plan. Following is a partial list of **potential** funding sources at the federal, state and local levels. Note that the following list does not constitute an endorsement of mitigation banking on the part of any of these organizations.

Federal Sources

1. U.S. Fish and Wildlife Service
 - a. Land and Water Conservation Fund
 - b. Urban Wetlands Initiative
 - c. Fish and Wildlife Enhancement Fund
 - d. Fish and Wildlife Enhancement Fund
2. North American Wetland Conservation Act
3. Bonneville Power Administration/Northwest Power Planning Council (for Washington Counties adjacent to the Columbia River)
4. Community Development Block Grant Funds
5. Water Resources Conservation Fund
6. Migratory Bird Conservation Fund
7. North American Wetlands Conservation Fund
8. Army Corps of Engineers Water Resources Development Act
9. Intermodal Surface Transportation Efficiency Act

State Sources

1. Coastal Zone Management Funds
2. Flood Control Assistance Account Funds
3. Centennial Clean Water Funds
4. Interagency Committee for Outdoor Recreation (IAC)
5. Aquatic Lands Enhancement Account (ALEA)

Local Sources

1. Local Improvement District
2. Systems Development Charge/Impact Fee
3. Storm-water Utility
4. Property Tax
5. Water-control district
6. Dedicated Revenue source

EXAMPLE: THE WEST EUGENE WETLANDS PLAN

The West Eugene Wetlands Plan will be funded primarily by (1) securing state and federal funds, (2) insituting a local, city-wide stormwater utility, (3) sale of "credits" in the regional mitigation bank, and (4) private contributions through or to nonprofit organizations or foundations.

The City secured \$3,000,000 in funding over two years through the Department of the Interior's Land and Water Conservation Fund. The fund was established in 1964 for conservation and outdoor recreation projects. The funds are allocated through the US Fish and Wildlife Service initially sought a federal sponsor in the the US Fish and Wildlife Service but the agency determined that the Plan was too "urban" to fit the agency's mission. BLM ultimately became the Plan's federal sponsor.) (2) Oregon Senator Marc Hatfield (a senior Senator who sits on the Senate Appropriations Committee) who worked on obtaining funding for the project for several years and (3) a local coalition which included the City, the County, The Nature Conservancy, BLM, COE, and the Division of State Lands. The coalition makes a showing in Washington D.C. annually to report progress on local activities and to lobby for funding. The local coalition, which involved all interested parties early in the process, was a big selling point for the plan. The City also retains full time lobbyists in Washington D. C (Bjorklund, personal communication, 7/19/93).

An effective support building tool for the West Eugene plan was taking people, including local elected officials, interest groups, environmental groups, chamber of commerce, legislators, state and federal agency people, and congressional delegates on tours of the City's most valuable wetlands sites. The tours were led by people who knew the sites and their values well, and the political factors that were most important to the project (Bjorklund, personal communication, 7/19/93).

Shoreline Master Program Tools

For jurisdictions anticipating the development of an environmental mitigation banking program, Shoreline Master Program regulations can be a useful tool. Each of the elements identified in the 1991 Mitigation Banking Study, has an implication for shoreline management and the Master Program can provide policy and/or regulatory direction for their implementation. In some cases, such as the comprehensive inventory and location of bank sites, the SMP amendment process will include important planning information or a shoreline use perspective. The following are suggestions for ways in which SMP regulations can direct formulation of each of the mitigation banking program elements. Suggested environmental mitigation banking provisions are presented at the end of this chapter. The provisions may be included under a "Environmental Mitigation Banking" subheading under the "Environmental Impacts" section of an SMP's General Provisions.

Program Goals and Objectives

SMP provisions for mitigation banking should, at a minimum further the goals recommended by the 1991 mitigation banking study plus any others developed by the local advisory committee. This will serve notice that the banking program is not established merely to aid developers.

Site Identification and Selection

The comprehensive planning effort involved in an SMP amendment will help in identifying potential mitigation bank sites as well as potential shorelines areas where banking credits may be appropriate. An SMP may identify where a bank may be located by either designating a specific site or by identifying environment designations where a bank may be appropriate. SMP policies and regulations should also include performance criteria that help in evaluating bank sites.

Bank Operator

The SMP should call for the designation of a bank operator and require that a Memorandum of Agreement (MOA) be signed by involved parties and approved by the Department of Ecology. It may be advisable to permit the establishment of a mitigation banking program with a designated site as a conditional use only. Since it is critical that the bank be developed and its value demonstrated prior to any credits being issued, and since the Department of Ecology will be involved in any permits granted through the banking program, the Department should be included in any MOA.

Establishment and Use of Credits and Currency

Determining the method of credit allocation and impact evaluation is a complex technical issue. It will be advantageous to allow flexibility in determining the credit system unless a specific study is undertaken prior to the SMP amendment. The suggested language includes some non-specific policies for credit systems.

Criteria for Use

SMP provisions should set general policy guidelines and, in some cases, regulatory standards for the use of bank credits in development projects. Since determining whether or not banking credits are appropriate in mitigating a development project, it may be advisable to require that all projects involving the use of mitigation bank credits obtain a "conditional use" permit. In this way the Department of Ecology's technical services will be available and the Department will be involved early in the permit evaluation.

Mitigation Options

The SMP regulations should clearly state that off-site mitigation shall be permitted only where avoiding impacts, minimizing impacts, rectifying impacts or reducing the impacts on-site are either unfeasible or undesirable from a natural resources perspective. Effective on-site mitigation is preferred to off-site mitigation, even when a mitigation bank is available.

Long Term Management

SMP policies and regulations should require that some mechanism for long term maintenance of the resource and contingency measures be established. The terms of this long term management strategy should be stated in the MOA and should be subject to Department of Ecology approval. If possible, the SMP should identify conditions that trigger the application of contingency measures.

Construction, Maintenance, Monitoring and Reporting

Since new techniques for these activities are constantly emerging and vary with the type of shoreline or wetland environment, the requirements for construction and scientific work should be stated in general terms. The suggested language for this element is placed in the policies section to provide guidance rather than a strict regulatory standard.

Model Language for Environmental Mitigation Banking

The Department of Ecology's recommended Shoreline Master Program provisions for environmental mitigation banking are currently evolving. These provisions represent the most recent policies developed by the Department.

Policies

1. Shoreline environmental mitigation banking programs should pursue the following objectives:
 - a. To protect and enhance existing shoreline resources and to prevent a net loss of shoreline resource quantity (area) and quality (functions and values);
 - b. To restore and/or create shoreline resources which are integral to a connected shoreline system;
 - c. To insure that off-site mitigation shall be integral to a connected shoreline system;
 - d. To aggregate many shoreline development projects into one compensation site;
 - e. To balance natural resource preservation and development interests; expediting the shoreline permit review process;
 - f. To preserve bank environments in perpetuity through long-term monitoring and management; and
 - g. To promote cooperation and administration among the various regulatory authorities.

2. All mitigation bank sites should be:
 - a. Of ample size, as determined by the program goals;
 - b. Ecologically linked with proximal natural areas;
 - c. Isolated or buffered from disruptive adjacent land uses; and
 - d. Available for acquisition;
 - e. Selected on the basis of a natural resource inventory and a comprehensive environmental enhancement plan;
 - f. Evaluated according to set criteria developed in the program planning.
3. The procedures and administration of the mitigation banking program should be clearly stated in a Memorandum of Agreement (MOA) or similar device. The Washington State Department of Ecology and City/County should be participants in the agreement.
4. Unless there is another overriding concern, a coalition of regulatory agencies and local governments should be the bank operator. Local governments should act as the lead agency, and provide regular maintenance and monitoring; state and/or federal agencies should be used in a supervisory and review capacity.
 - a. MOAs should be used to specify responsibilities of each member of the bank operator coalition.
 - b. Environmental groups should be involved. Consideration should be given to training qualified members to perform bank monitoring and maintenance.
 - c. Funding for creating the banking program should be provided by those groups who apply for permits to alter shoreline resources.
5. The allocation of credits should adhere to the following principles:
 - a. Credit allotment should be based on the net increase in specific ecological functional values provided through creation, restoration or enhancement of the bank site.
 - b. A standard environmental evaluation technique, should be used to assess natural system functional values.
 - c. Wherever feasible, ecological functional values should be quantified.

6. Bank credits should be considered only for projects which demonstrate on-site impacts have been avoided, minimized, rectified, or reduced through design; mitigation of the project site is unfeasible due to conflicting uses; or the project requires a shoreline location to fulfill its purpose.
7. Both public agencies and conservation groups or land trusts should be involved with mitigation bank management.
 - a. Public agency involvement should decrease after all mitigation credits are issued, but agencies should always be responsible for overseeing regulatory compliance.
 - b. Conservation group involvement should increase as the banking program enters the long-term management phase. Monitoring, maintenance and remedial actions should be the responsibility of a conservation group from the outset of the program.
8. Construction and management practices should incorporate current best management practices.
9. A plan for the regular monitoring of the bank should be established.
10. Bank reporting standards should be established which include the following:
 - a. A summary of the progress of the banking program to provide a means for concerned groups other than the bank operator to assess the relative success of the site, and to document potentially successful mitigation strategies which others may wish to emulate. The methods and results of the monitoring protocol should be summarized in reports which should be made available to regulatory agencies, researchers, conservation groups, developer associations and the general public.
11. A contingency plan should be established in the event that the bank program is not meeting its objectives. If all success criteria are not being met, all or portions of the contingency plan should be pursued.

Regulations

1. Environmental mitigation bank sites shall:
 - a. Be selected on the basis of an environmental resource inventory and comprehensive environmental enhancement plan.
 - b. Be selected on the basis of objective specified criteria.
 - c. Not be a high value natural resource (state appropriate classification).

- d. As much as possible, be functionally equivalent to those resources likely being impacted by development.
 - e. As appropriate, recognize regional environmental management issues related to type of resource, diversity of habitat and geographic patterns.
 - f. Be of ample size, as determined by the program goals;
 - g. Be ecologically linked with proximal natural areas;
 - h. Be isolated or buffered from disruptive adjacent land uses.
2. The procedures, responsibilities, administration and financing of a mitigation banking program shall be specified in a memorandum of agreement (MOA) or other legal instrument. The MOA or other instrument must specify:
- a. The name and responsibilities of the bank operator;
 - b. Specific criteria for use, such as determination that project re design, on-site mitigation and other off-site mitigation options are unfeasible or undesirable from a natural resources perspective;
 - c. Inclusion of, or reference to, a comprehensive environmental enhancement plan and/or other planning documents with similar and related goal objectives;
 - d. Definition of the obligations and responsibilities of the participants;
 - e. Establishment of an interagency bank overview team;
 - f. Definition of the decision making and conflict resolution processes;
 - g. Identification of who will hold the title or other legal agreement for bank land(s);
 - h. Limits of the use of the bank to a specific geographic area; establishment of the site of the bank;
 - i. Identification of the standardized methodology to be used in evaluating credits and debits (as well as the accounting process);
 - j. Specification of the shoreline resources that are eligible to be offset by the bank; and
 - k. Establishment of monitoring and evaluation procedures for mitigation project and any related adjustments in bank management or credits;
 - l. Mechanism for the long term preservation and maintenance;

- m. Funding and financing of the program.
- n. That bank credits may be used only after bank creation has proven successful.
- 3. The criteria for mitigation credit allotment shall be approved by the Department of Ecology.
- 4. The establishment of a designated mitigation bank site shall be approved by conditional use only.
- 5. All projects utilizing mitigation banking to mitigate environmental impacts shall require a conditional use permit.
- 6. Projects eligible for mitigation banking shall meet the following criteria:
 - a. Only projects that have unavoidable and necessary impacts should be considered for incorporation in a banking program.
 - b. Only projects which meet all regulatory requirements should be considered for incorporation in a banking program.
 - c. All feasible and ecologically sensible means of on-site compensation must be explored before incorporation into a banking system is considered.
 - d. Candidate shorelines or wetlands should perform the same or less valuable habitat function as the bank site, so that compensation will be accomplished in-kind.
 - e. The candidate wetlands or shoreline to be developed should be in the vicinity of the compensation (bank) site or in a location that is functionally equivalent so that the bank site can accomplish the same function as the development site.
 - f. If habitat availability is the primary concern, then the candidate sites should be near enough to the bank site so that wildlife can become established at the bank site, but far enough away so that development activities do not adversely impact the bank site.
 - g. Candidate environments should be small, isolated and preferably degraded (hence, of low value) to such a degree that permitting alterations to these shorelines or wetlands in "exchange" for one large, high value wetland is ecologically desirable.

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Glossary

Accessory use - Any structure or use incidental and subordinate to a primary use or development.

Accretion - The growth of a beach by the addition of material transported by wind and/or water. Included are such shoreforms as barrier beaches, points, spits, hooks and tombolos.

Act - The Shoreline Management Act (Chapter 90.58 RCW and Chapter WAC 173-14-030(1) WAC).

Adjacent lands - Lands adjacent to the shorelines of the state (outside of shoreline jurisdiction). 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).

Administrator - The City/County Manager, Planning Director, Public Works Director, etc. or his/her designee, charged with the responsibility of administering the shoreline master program.

Agriculture - The cultivation of the soil, production of crops, and/or raising of livestock, including incidental preparation of these products for human use.

Alluvium - Unconsolidated fragmented material deposited by streams in river beds, floodplains, lakes, fans at the foot of mountain slopes and estuaries.

Anadromous fish - Species, such as 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 procreate.

Appurtenance - A structure or development which is necessarily connected to the use and enjoyment of a single-family residence and is located landward of the ordinary high water mark and also of the perimeter of any marsh, bog, or swamp. (On a state-wide basis, normal appurtenances include a garage, deck, driveway, utilities, fences and grading which does not exceed two hundred fifty cubic yards [except to construct a conventional drainfield]) (see WAC 173-14-040(1g)).

Aquaculture - The cultivation of fish, shellfish, and/or other aquatic animals or plants, including the incidental preparation of these products for human use.

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

Average grade level - The average of the natural or existing topography of the portion of the lot, parcel, or tract of real property which will be directly under the proposed building or structure; provided that in 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 elevations at the center of all exterior walls of the proposed building or structure (WAC 173-14-030(3)).

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

Beach - The zone of unconsolidated material that is moved by waves, wind and tidal currents, extending landward to the coastline.

Beach enhancement/restoration - Process of restoring a beach to a state more closely resembling a natural beach, using beach feeding, vegetation, drift sills and other nonintrusive means as applicable.

Beach feeding - Process of replenishing a beach by delivery of materials dredged or excavated elsewhere.

Beach scarp - A steep slope produced by wave erosion.

Benthic organism - Organisms that live in or on the bottom of a body of water.

Berm - A linear mound or series of mounds of sand and/or gravel generally paralleling the water at or landward of the line of ordinary high tide. Also, a linear mound used to screen an adjacent activity, such as a parking lot, from transmitting excess noise and glare.

Best available technology (BAT) - The most effective method, technique, or product available which is generally accepted in the field, and which is demonstrated to be reliable, effective and preferably low maintenance.

Bioassay - Bioassays are laboratory tests involving exposure of select organisms to a sampling of material to determine the potential for acute or chronic effects from such exposure. Bioassays are typically run on potentially contaminated materials proposed for in-water disposal, however, testing protocols are also available to assess dredged material proposed for upland disposal.

Biofiltration system - A storm water or other drainage treatment system that utilizes as a primary feature the ability of plant life to screen out and metabolize sediment and pollutants. Typically, biofiltration systems are designed to include grassy swales, retention ponds and other vegetative features.

Biota - The animals and plants that live in a particular location or region.

Boathouse - A structure designed for storage of vessels located over water or in upland areas. Boathouses should not be confused with "houseboats".

Boat launch or ramp - Graded slopes, slabs, pads, planks, or rails used for launching boats by means of a trailer, hand, or mechanical device.

Bog - A wet, spongy, poorly drained area which is usually rich in very specialized plants, contains a high percentage of organic remnants and residues and frequently is associated with a spring, seepage area, or other subsurface water source. A bog sometimes represents the final stage of the natural process of eutrophication by which lakes and other bodies of water are very slowly transformed into land areas.

Breakwater - Offshore structure aligned parallel to shore, sometimes shore-connected, that provides protection from waves.

Buffer area - A parcel or strip of land that is designed and designated to permanently remain vegetated in an undisturbed and natural condition to protect an adjacent aquatic or wetland site from upland impacts, to provide habitat for wildlife and to afford limited public access.

Bulkhead - A solid wall erected generally parallel to and near the ordinary high water mark for the purpose of protecting adjacent uplands from waves or current action.

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act ("Superfund"); 1986 amendments are known as Superfund Amendments and Reauthorization Act or SARA.

Channel - An open conduit for water either naturally or artificially created, but does not include artificially created irrigation, return flow, or stockwatering channels (WAC 173-14-030(8b)). See also stream.

Chord diking - A means of utilizing small dikes or berms setback from the streamway of a river far enough to allow for the natural meandering and side channel formation to occur within the diked off corridor.

Clean Water Act - The primary federal law providing water pollution prevention and control; previously known as the Federal Water Pollution Control Act. See 33 USC 1251 et seq.

CFR - Code of Federal Regulations.

Clearing - The destruction or removal of vegetation ground cover, shrubs and trees including, but not limited to, root material removal and/or topsoil removal.

Coastline - The line where terrestrial processes give way to marine processes, tidal currents, wind waves, etc.

Commercial feedlot - see Feedlot.

Community structure - A building, dock, or other structure which is intended for the common use of the residents of a particular subdivision or community. It is not intended to serve as a public facility.

Cottage industry or business (home occupation) - A commercial or light industrial use which is commonly conducted within a residence and/or appurtenance, which does not require the construction of any new structures, parking areas, signs, etc. and which does not generate significant additional traffic, noise, fumes, or glare.

Covered moorage - Boat moorage, with or without walls, that has a roof to protect the vessel.

Critical saltwater habitats - Kelp beds (members of the brown algal family Laminariales including Alaria marginata, Alaria nana, Alaria tenuifolia, Egregia menziesii, Eisenia arborea, Pterygophora californica, Agarum cribosum, Agarum fimbriatum, Costaria costata, Cymathere triplicata, Hedophyllum sessile, Laminaria spp., Pleurophycus gardneri, Dictyoneuropsis reticulata, Dictyoneurum californicum, Lessioniopsis littoralis, Macrocystis integrifolia, Nereocystis luetkeana and Postelsia plamaeformis), eelgrass beds (Zostera spp.), surf smelt (Hypomesus pretiosus) spawning beds, Pacific herring (Clupea harengus pallasii) spawning beds, Pacific sand lance (Ammodytes hexapterus) spawning beds, rock sole (Lepidopsetta bilineata) spawning beds, rockfish (Sebastes spp.) settlement and nursery areas, and lingcod (Ophiodon elongatus) settlement and nursery areas.

CZMP - Coastal Zone Management Plan.

Degrade - To scale down in desirability or salability, to impair in respect to some physical property or to reduce in structure or function.

Delta - see River Delta.

Development - 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 subject to Chapter 90.58 RCW at any state of water level (RCW 90.58.030(3d)).

DNS - Determination of Nonsignificance, under SEPA.

Dolphin - A cluster of piles bound together.

Downdrift - The direction of movement of beach materials.

Dredge spoil - The material removed by dredging. Same as Dredge Material.

Dredging - Excavation or displacement of the bottom or shoreline of a water body. Dredging can be accomplished with mechanical or hydraulic machines. Most dredging is done to maintain channel depths or berths for navigational purposes; other dredging is for shellfish harvesting or for cleanup of polluted sediments.

Drift sector - A particular reach of marine shore in which littoral drift may occur without significant interruption, and which contains any and all natural sources of such drift, and also any accretion shoreform(s) accreted by such drift. Each normal drift sector contains these shore process elements: feeder bluff or estuary, driftway, littoral drift and accretion shoreform.

Drift sills - Small groins which hold sediments in place without blocking longshore drift.

Driftway - That portion of the shore process corridor, primarily that lower backshore and the upper intertidal area, through which sand and gravel are transported by the littoral drift process. It is the critical link between the feeder bluff and the accretion shoreform.

Dune - A hill or ridge of sand piled up by the wind and/or wave action.

EA - Environmental Assessment, under SEPA/NEPA.

Ecology (WDOE) - The Washington State Department of Ecology. Use of "Ecology" or "WDOE" is preferred over "DOE" to avoid confusion with the federal Department of Energy.

EIS - Environmental Impact Statement.

Emergency - An unanticipated and imminent threat to public health, safety, or the environment which requires immediate action within a time too short to allow full compliance with the master program. Emergency construction is construed narrowly as that which is necessary to protect property from the elements (RCW 90.58.030(3eiii) and WAC 173-14-040(1d)).

Enhancement - 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.

Erosion - The wearing away of land by the action of natural forces.

Estuary - The zone or area of water in which freshwater and saltwater mingle and water is usually brackish due to daily mixing and layering of fresh and salt water. Estuarine shores are rich in aquatic and other bird and animal life, and in their natural condition are the most productive of all shoreline habitats in terms of the marine food chain.

Exemption - Certain specific developments as listed in WAC 173-14-040 are exempt from the definition of substantial developments and are therefore exempt from the substantial development permit process of the SMA. An activity that is exempt from the substantial development provisions of the SMA must still be carried out in compliance with policies and standards of the Act and the local master program. Conditional use and/or variance permits may also still be required even though the activity does not need a substantial development permit (RCW 90.58.030(3e); WAC 173-14-030(6) and -040).

Extreme low tide - means the lowest line on the land reached by a receding tide (RCW 90.58.030(2a)).

Factory built housing - A single family residential structure constructed in a factory of factory assembled parts and transported to the building site in whole or in units which meets the requirements of the Uniform Building Code. The completed structure is not a mobile/manufactured home.

Fair market value - The expected price at which the development can be sold to a willing buyer. For developments which involve nonstructural operations such as dredging, drilling, dumping, or filling, the fair market value is the expected cost of hiring a contractor to perform the operation or where no such value can be calculated, the total of labor, equipment use, transportation and other costs incurred for the duration of the permitted project (WAC 173-14-030(7)).

FCAAP - Flood Control Assistance Account Program.

FCZMA - Federal Coastal Zone Management Act.

Feeder bluff, erosional bluff - Any bluff (or cliff) experiencing periodic erosion from waves, sliding or slumping, whose eroded earth, sand or gravel material is naturally transported (littoral drift) via a driftway to an accretion shoreform. These natural sources of beach material are limited and vital for the long term stability of driftways and accretion shoreforms.

Feedlot - An enclosure or facility, of any size, used or capable of being used for confinement feeding of livestock hay, grain, silage, or other livestock feed, but shall not include land for growing crops or pasture for livestock feeding and/or grazing, nor shall it include normal livestock wintering operations (RCW 90.58.030(3eiv); WAC 173-14-040(1e)).

Fetch length - The horizontal distance along open water over which the wind blows and generates waves.

Floating home - A structure designed and operated substantially as a permanently based over water residence. Floating homes are not vessels and lack adequate self-propulsion and steering equipment to operate as a vessel. They are typically served by permanent utilities and semipermanent anchorage/moorage facilities. See also houseboat.

Floodplain - Synonymous with 100-year floodplain. The land area susceptible to being inundated by stream derived waters with a 1 percent chance of being equaled or exceeded in any given year. The limits of this area are based on flood regulation ordinance maps or a reasonable method that meets the objectives of the SMA (WAC 173-22-030(2)).

Floodway - Those portions of the area of a river valley lying streamward from the outer limits of a watercourse upon which flood waters are carried during periods of flooding that occur with reasonable regularity, although not necessarily annually, said floodway being identified, under normal conditions, by changes in surface soil conditions or changes in types or quality of vegetative ground cover conditions. The floodway does not include 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. The limits of the floodway are based on flood regulation ordinance maps or by a reasonable method which meets the objectives of the SMA (RCW 90.58.030(2g); WAC 173-22-030(3)).

FONSI - Finding of No Significant Impact, under NEPA.

Foreshore - In general terms, the beach between mean higher high water and mean lower low water.

Forest practices - Any activity conducted on or directly related to forest land and relating to growing, harvesting, or processing timber. These activities include but are not limited to: road and trail construction, final and intermediate harvesting, precommercial thinning, reforestation, fertilization, prevention and suppression of disease and insects, salvage of trees and brush control. See WAC 222-16-010(21).

Gabions - Structures composed of masses of rocks, rubble or masonry held tightly together usually by wire mesh so as to form blocks or walls. Sometimes used on heavy erosion areas to retard wave action or as foundations for breakwaters or jetties.

Grading - The physical manipulation of the earth's surface and/or drainage pattern in preparation for an intended use or activity.

Grassy Swale - A vegetated drainage channel that is designed to remove various pollutants from storm water runoff through biofiltration.

Guidelines - Those provisions contained in Chapter 173-16 WAC entitled "Shoreline Management Act Guidelines for Development of Master Programs". The Guidelines were adopted to implement the policy of Chapter 90.58 RCW for regulation of use of the shorelines of the state prior to adoption of master programs. This state law also provides criteria to local governments and the Washington State Department of Ecology in developing and amending master programs.

Groin (also referred to as a spur dike or rock weir) - A barrier-type structure extending from the backshore or stream bank into a water body for the purpose of the protection of a shoreline and adjacent upland by influencing the movement of water and/or deposition of materials.

Habitat - The place or type of site where a plant or animal naturally or normally lives and grows.

Height - 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 it obstructs the view of a substantial number of residences on areas adjoining such shorelines (or the master program provides otherwise):

Provided further, That temporary construction equipment is excluded in this calculation (WAC 173-14-030(9)).

High energy riverine - This term includes river systems with dry summer/heavy winter flowing, and excludes flash flooding rivers with extreme event channel formation.

Hook - A split or narrow cape of sand or gravel which turns landward at it's outer end.

Houseboat - A vessel, principally used as an over water residence. Houseboats are licensed and designed for use as a mobile structure with detachable utilities or facilities, anchoring and the presence of adequate self-propulsion and steering equipment to operate as a vessel. Principal use as an over-water residence means occupancy in a single location, for a period exceeding two months in any one calendar year. This definition includes liveaboard vessels.

HPA - Hydraulic Project Approval. The permit issued by the Washington State Departments of Fisheries or Wildlife pursuant to the State Hydraulic Code Chapter 75.20.100-140 RCW.

Hydric soils - Generally, soils which are, or have had a history of being, wet long enough to periodically produce anaerobic conditions, thereby influencing the growth of plants (WAC 173-22-030(5)).

Hydrophytes - Those plants capable of growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content (WAC 173-22-030(5)).

In-kind replacement - To replace wetlands, biota or other organisms with substitute flora or fauna whose characteristics closely match those destroyed, displaced or degraded by an activity.

Interested party - Synonymous with "party of record", and means all persons who have notified local government of their desire to receive a copy of the final order on a permit under WAC 173-14-070 (WAC 173-14-030(12)).

Intertidal - The substratum from the extreme low water of spring tides to the upper limit of spray or influence of ocean-driven salts. It includes all land that is sometimes submerged, but sometimes exposed to air. Source: M. N. Dethier, *A Marine and Estuarine Habitat Classification System for Washington State* 10 (Department of Natural Resources, Washington Natural Heritage Program, 1990).

Jetty - A structure(s) usually projecting out into the sea at the mouth of a river for the purpose of protecting a navigation channel, a harbor or to influence water currents.

Lacustrine (also lacustrian) - Of, on, or pertaining to lakes.

Lake - 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 (RCW 90.58.030(1d); WAC 173-20-030; WAC 173-22-030(4)).

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.

Liberal construction - A legal concept instructing parties interpreting a statute to give an expansive meaning to terms and provisions within the statute. The goal of liberal construction is to give full effect in implementing a statutes requirements. See RCW 90.58.900.

Littoral - Living on, or occurring on, the shore.

Littoral drift - The mud, sand, or gravel material moved parallel to the shoreline in the nearshore zone by waves and currents.

Liveaboard vessel - See "houseboat".

Marine travel lift - A mechanical device that can hoist vessels off trailers and transport them into the water. Often associated with dry land moorage.

Marine railway - 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.

Marshes - Soft, wet area periodically or continuously flooded to a shallow depth, usually characterized by a particular subclass (monocotyledons) of grasses, cattails and other low plants.

Marshes, Bogs and Swamps - Lands transitional between terrestrial and aquatic systems where saturation with water is the dominant factor determining plant and animal communities and soil development. Such lands must have one or more of the following attributes: a) at least periodically, the land supports predominately hydrophytes; and/or b) the substrate is predominately undrained hydric soil (WAC 173-22-030 (5)). See also hydrophyte, hydric soil.

Mean higher high tide (MHHT) - The arithmetic mean of the higher of two daily high tides calculated from the most recent nineteen-year tidal cycle.

Merchantable trees - All live trees 8 inches in diameter at breast height (DBH) and larger unless documentation of current, local market conditions are submitted and accepted by the local jurisdiction indicating nonmarketability. "Merchantable trees" shall not include trees smaller than 4 inches DBH.

Midden - An ancient refuse heap. Since much of what archaeologists have discovered about the past is based on what man has lost or discarded as no longer useful, middens are a very valuable source of material.

Mitigation - The process of avoiding, reducing, or compensating for the environmental impact(s) of a proposal. See WAC 197-11-768.

Mobile/manufactured home - A residential unit on one or more chassis for towing to the point of use and designed to be used with a foundation as a single family dwelling unit on a year around basis. A commercial coach, recreational vehicle or motor home are not mobile/manufactured homes.

Mooring buoy - A floating object anchored to the bottom of a water body that provides tie up capabilities for vessels.

Mulching - The addition of organic materials (e.g. woodchips, sawdust, straw, grass clippings, or compost, etc.) to bare soils or in planting beds.

Multi-family dwelling (or residence) - A building containing two or more dwelling units, including but not limited to duplexes, apartments and condominiums.

Natural riparian habitat corridor - 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.

NEPA - National Environmental Policy Act. NEPA requires federal agencies to consider environmental factors when making decisions, especially for development proposals of a significant scale. As part of the NEPA process, EISs are prepared and public comment is solicited.

NFIP - National Flood Insurance Program.

NOAA - National Oceanic and Atmospheric Administration.

Nonconforming development - A shoreline use or structure which was lawfully constructed or established prior to the effective date of the applicable SMA/SMP provision, and which no longer conforms to the applicable shoreline provisions (WAC 173-14-055(1)).

Normal maintenance - Those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition (WAC 173-14-040(1b)). See also normal repair.

Normal protective bulkhead - A bulkhead, common to single-family residences, constructed at or near the ordinary high water mark to protect an existing single-family residence, and which sole purpose is for protecting land from erosion, not for the purpose of creating new land (WAC 173-14-040(1c)).

Normal repair - To restore a development to a state comparable to its original condition within a reasonable period after decay or partial destruction except where repair involves total replacement which is not common practice or causes substantial adverse effects to the shoreline resource or environment (WAC 173-14-040(1b)). See also normal maintenance.

OCS - Outer Continental Shelf.

Off-site replacement - To replace wetlands or other shoreline environmental resources away from the site on which a resource has been impacted by a regulated activity.

OHWM, Ordinary High Water Mark - 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, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the department: Provided, That in any area where the ordinary high water mark cannot be found, the ordinary high water mark adjoining salt water shall be the line of mean higher high tide and the ordinary high water mark adjoining fresh water shall be the line of mean high water. See RCW 90.58.030(2)(b) and WAC 173-22-030(6).

On-site replacement - 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.

Out-of-kind replacement - To replace wetlands or other shoreline environmental resources with substitute wetlands whose characteristics do not closely approximate those destroyed or degraded by a regulated activity.

Oil separator - Specialized catch basins that are designed to trap oil and other materials lighter than water in the basin while allowing the water to escape through the drainage system. Commonly employed in parking lots and streets.

Perched beach - A beach or fillet of sand retained above the otherwise normal profile level by a submerged dike or sill.

Percolation - Water seepage through spaces between sediment particles or through porous structures.

Perforated pipe - Plastic pipe containing an array of holes used to facilitate drainage of otherwise impervious soils.

Periodic - Occurring at regular intervals.

Person - An individual, partnership, corporation, association, organization, cooperative, public or municipal corporation, or agency of the state or local governmental unit however designated (RCW 90.58.030(1d)).

Pocket beach - An accretion beach which does not depend on littoral drift accretion. It depends on the erosion of immediately adjacent sources. In rare instances a pocket beach may also be a berm beach.

Point - A low profile shoreline promontory of more or less triangular shape, the top of which extends seaward. A point may be the wavecut shelf remnant of a headland bluff or a purely accretional deposit which began as a hooked spit and became a point by subsequently closing

the lagoon gap between the headland and the tip of the hook. Points are characterized by converging berms that normally enclose a lagoon, marsh, or meadow, depending on the point's stage of development.

Port - Any harbor area which is largely devoted to marine commerce, shipping and cargo handling or a special purpose unit of local government created for the purpose of managing port related lands, facilities and activities.

Practicable alternative - An alternative that is available and capable of being carried out after taking into consideration short-term and long-term cost, options of project scale and phasing, existing technology and logistics in light of overall project purposes. 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.

Public interest - 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 173-14-030(14)).

RCW - Revised Code of Washington.

Recreational vehicle - A vehicle licensed, designed and operated for recreational purposes as temporary living quarters, which has a means of self-propulsion or is readily towable by a car or pickup truck, and is not used as a residence in any one location for extended periods of time (i.e. more than three months).

Residential development - Development which is primarily devoted to or designed for use as a dwelling(s).

Restoration - To revitalize or reestablish characteristics and processes of a wetland or habitat diminished or lost by past alterations, activities, or catastrophic events.

Revetment - Facing of stone, concrete, etc., built to protect a scarp, embankment, or shore structure against erosion by waves of currents.

Riparian - Of, on, or pertaining to the banks of a river.

Riparian management zone - A specified area alongside a shoreline where specific measures are set out in the Forest Practice Regulations to protect water quality and fish and wildlife habitat. The zone is a minimum of 25 feet wide, measured horizontally from the ordinary high water mark, and can be up to 100 feet wide depending on the width of the stream and the width of the wetland vegetation adjacent to the stream (see WAC 222-30).

Riprap - A layer, facing, or protective mound of stones placed to prevent erosion, scour, or sloughing of a structure or embankment; also, the stone so used.

River delta - Those lands formed as an aggradational feature by stratified clay, silt, sand and gravel deposited at the mouths of streams where they enter a quieter body of water. The upstream extent of a river delta is that limit where it no longer forms distributary channels (WAC 173-22-030(7)).

Runoff - Water that is not absorbed into the soil but rather flows along the ground surface following the topography.

Salmon and Steelhead Habitats - 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.

Salt tolerant vegetation - Vegetation which is tolerant of interstitial soil salinities greater than or equal to 0.5 parts per thousand.

Scarification - Loosening the topsoil and/or disrupting the forest floor in preparation for regeneration.

Seawall - A structure separating land and water areas primarily to prevent erosion and other damage by wave action. Generally more massive and capable of resisting greater wave forces than a bulkhead.

Seaward - To or toward the sea.

Sediment - The fine grained material deposited by water or wind.

Selective timber cutting - Removing individual trees scattered throughout the subject area. The unharvested trees should be as evenly distributed as possible throughout the shoreline area and should be representative of the species and size classes of the preharvest stand.

SEPA (State Environmental Policy Act) - SEPA requires state agencies, local governments and other lead agencies to consider environmental factors when making most types of permit decisions, especially for development proposals of a significant scale. As part of the SEPA process, EISs may be required to be prepared and public comments solicited.

Setback - A required open space, specified in shoreline master programs, measured horizontally upland from and perpendicular to the ordinary high water mark.

Shoreline environment designations - The categories of shorelines established by local shoreline master programs in order to provide a uniform basis for applying policies and use regulations within distinctively different shoreline areas. The basic recommended system classifies shorelines into four distinct environments (natural, conservancy, rural and urban). See WAC 173-16-040(4).

Shoreline jurisdiction - The term describing all of the geographic areas covered by the SMA, related rules and the applicable master program. Also, such areas within a specified local government's authority under the SMA. See definitions of "shorelines", "shorelines of the state", "shorelines of state-wide significance" and "wetlands, jurisdictional".

Shoreline Master Program (SMP) - The comprehensive use plan and related use regulations which are used by local governments to administer and enforce the permit system for shoreline management. Master programs must be developed in accordance with the policies of the SMA, be approved and adopted by the state, and be consistent with the rules (WACs) adopted by Ecology.

Shoreline permit - A substantial development, conditional use, revision, or variance permit or any combination thereof (WAC 173-14-030(13)).

Shorelines - All of the water areas of the state, including reservoirs and their associated uplands, together with the lands underlying them, except those areas excluded under RCW 90.58.030(2)(d). See RCW 90.58.030 (2)(d) and WAC 173-18, 173-19 and 173-22.

Shorelines Hearings Board (SHB) - A six member quasi-judicial body, created by the SMA, which hears appeals by any aggrieved party on the issuance of a shoreline permit, enforcement penalty and appeals by local government on Ecology approval of master programs, rules, regulations, guidelines or designations under the SMA. See RCW 90.58.170; 90.58.180; and WAC 173-14-170; 173-14-174.

Shorelines of state-wide significance - A select category of shorelines of the state, defined in RCW 90.58.030(2)(e), where special policies apply. See RCW 90.58.020.

Shorelines of the state - Shorelines and shorelines of state-wide significance.

Sign - A board or other display containing words and/or symbols used to identify or advertise a place of business or to convey information. Excluded from this definition are signs required by law and the flags of national and state governments.

Single-family residence (SFR) - A detached dwelling designed for and occupied by one family including those structures and developments within a contiguous ownership which are a normal appurtenance (WAC 173-14-040(1g)).

Slash - The organic debris which is produced by logging operations.

SMA - The Shoreline Management Act of 1971, Chapter 90.58 RCW, as amended.

Soil bioengineering - 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.

Spit - An accretion shoreform which extends seaward from and parallel to the shoreline. They are usually characterized by a wave-built berm on the windward side and a more gently sloping, muddy or marshy shore on the leeward side. A curved spit is normally called a hook.

Stream - 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 (WAC 173-22-030(8)). See also channel and tidal water.

Streamway - A general term describing the bed and banks of a stream.

Structure - A permanent or temporary edifice or building, or any piece of work artificially built or composed of parts joined together in some definite manner, whether installed on, above or below the surface of the ground or water, except for vessels (WAC 173-14-03015)).

Subdivision - The division or redivision of land, including short subdivision for the purpose of sale, lease or conveyance.

Substantial development - Any development of which the total cost or fair market value exceeds two thousand five hundred dollars, or any development which materially interferes with the normal public use of the water or shorelines of the state; except as specifically exempted pursuant to RCW 90.58.030(3e) and WAC 173-14-040. See also definition of "development" and "exemption".

Subtidal - Any substratum that is constantly submerged. Source: M. N. Dethier, *A Marine and Estuarine Habitat Classification System for Washington State* 11 (Department of Natural Resources, Washington Natural Heritage Program, 1990).

Surge plains - Riverine areas where salt water meets freshwater, extending upstream as far as tidal influence.

Swamp - A depressed area flooded most of the year to a depth greater than that of a marsh and characterized by areas of open water amid soft, wetland masses vegetated with trees and shrubs. Extensive grass vegetation is not characteristic.

Terrestrial - Of or relating to land as distinct from air or water.

Tidal flats - Marshy or muddy areas of the seabed which are covered and uncovered by the rise and fall of tidal water.

Tidal prism - The volume of water present between mean low and mean high tide.

Tidal range - The difference in height between consecutive high- and low- tides.

Tidal water - Includes marine and estuarine waters bounded by the ordinary high water mark. Where a stream enters the tidal water, the tidal water is bounded by the extension of the elevation of the marine ordinary high water mark within the stream (WAC 173-22-030(9)).

Tidelands - Land on the shore of marine water bodies between the line of ordinary high tide and the line of extreme low tide.

Tombolo - A causeway-like accretion spit that connects an offshore rock or island to the main shore, or to another island.

Undrained hydric soils - Those soils which are wet long enough to periodically produce anaerobic conditions, thereby influencing the growth of plants. See WAC 173-22-030(5).

Upland - Generally described as the dry land area above and landward of the OHWM.

USC - United States Code.

Variance - A means to grant relief from the specific bulk, dimensional or performance standards specified in the applicable master program. Variance permits must be specifically approved, approved with conditions, or denied by Ecology (See WAC 173-14-150).

Vessel - Ships, boats, barges, or any other floating craft which are designed and used for navigation and do not interfere with normal public use of the water (WAC 173-14-030(18)).

WAC - Washington Administrative Code.

Water-bar - A diversion ditch and/or hump in a trail or road for the purpose of carrying surface water runoff into the vegetation duff, ditch, or other dispersion area so that it does not gain the volume and velocity which cause soil movement and erosion.

Water-dependent - A use or a portion of a use which can not exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations. Examples of water-dependent uses may include ship cargo terminal loading areas, ferry and passenger terminals, barge loading facilities, ship building and dry docking, marinas, aquaculture, float plane facilities and sewer outfalls.

Water-enjoyment - A recreational use, or other use facilitating 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 the location, design and operation assures 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. Primary water-enjoyment uses may include, but are not limited to, parks, piers and other improvements facilitating public access to shorelines of the state; and general water-enjoyment uses may include but are not limited to, restaurants, museums, aquariums, scientific/ecological reserves, resorts and mixed-use commercial; PROVIDED, that such uses conform to the above water-enjoyment specifications and the provisions of the master program.

Water-oriented - Refers to any combination of water-dependent, water-related, and/or water enjoyment uses and serves as an all encompassing definition for priority uses under the SMA.

Non-water-oriented serves to describe those uses which have little or no relationship to the shoreline and are not considered priority uses under the SMA. Examples include professional offices, automobile sales or repair shops, mini-storage facilities, multi-family residential development, department stores and gas stations.

Water-related - 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. of 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 commercial activities and the proximity of the use to its customers makes its services less expensive and/or more convenient. Examples include manufacturers of ship parts large enough that transportation becomes a significant factor in the products cost, professional services serving primarily water-dependent activities and storage of water-transported foods. Examples of water-related uses may include warehousing of goods transported by water, seafood processing plants, hydroelectric generating plants, gravel storage when transported by barge, oil refineries where transport is by tanker and log storage.

Wave diffraction - The phenomenon by which wave energy passes around barriers (such as breakwaters and jetties) and through narrow openings to spread into sheltered areas.

Wave direction - The direction from which waves approach an observer.

Wetlands -

**NOTE: For regulatory purposes, local governments are encouraged to make a distinction in their master programs between the definition of wetlands used in the SMA (that technically includes dry upland areas), and biological wetlands that address only associated marshes, bogs, and swamps.*

In addition, when defining wetlands as used in a master program, local government needs to be clear as to the extent of SMP jurisdiction in floodplain areas. RCW 90.58.030(2)(f) gives discretion to local government to "determine that portion of the one-hundred-year floodplain to be included in its master program as long as such portion includes, as a minimum, the floodway and the adjacent land extending landward two hundred feet therefrom". The definition of jurisdictional wetlands presented below represents the minimum allowable area that must be covered by a master program. If coverage of the entire floodplain area is desired, the jurisdictional wetland definition should be revised to read "... as measured on a horizontal plane from the ordinary high water mark; contiguous floodplain areas; and all marshes, bogs and swamps...". Local government must either cover the minimum required (see definition below), the maximum allowable (the entire floodplain), or something (specifically spelled out) in between.

Wetlands, jurisdictional - Those areas extending landward for two hundred feet in all directions, as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred feet from such floodways; and all marshes, bogs and swamps and river deltas associated with the streams, lakes and tidal waters subject to the Shoreline Management Act (RCW 90.58). For the purposes of this master program, the term "associated wetlands" includes biological wetlands and other dry upland areas contained within SMA jurisdiction. This definition has the same meaning as "wetlands or wetland areas" as defined in RCW 90.58.030(2)(f).

Wetlands, biological - Those areas defined in WAC 173-22-030(5) as "marshes, bogs, and swamps". For the purposes of this master program, the terms "biological wetland" or "marsh, bog, or swamp" are used as a subcategory of "jurisdictional wetlands" and are analogous to the term "wetland", as commonly used.

Wetland mitigation - Avoiding and minimizing adverse impacts to wetlands, including, in the following order of preference:

- (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 during the life of the action; and
- (5) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments.

Wind rose - A diagram illustrating the frequency, velocity and direction of wind at a specific location.

Zoning - To designate by ordinance, including maps, areas of land reserved and regulated for specific land uses.

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