DEPARTMENT OF GEOGRAPHY DISCUSSION PAPER SERIES

ALTERNATIVE APPROACHES TO PACIFIC COASTAL ZONE MANAGEMENT

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ALTERNATIVE APPROACHES TO PACIFIC COASTAL ZONE MANAGEMENT

by

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DISCUSSION PAPER NO. 5

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TABLE OF CONTENTS

TABLE OF CONTENTS (cont'd)

LIST OF FIGURES AND MAPS

FIGURES

MAPS

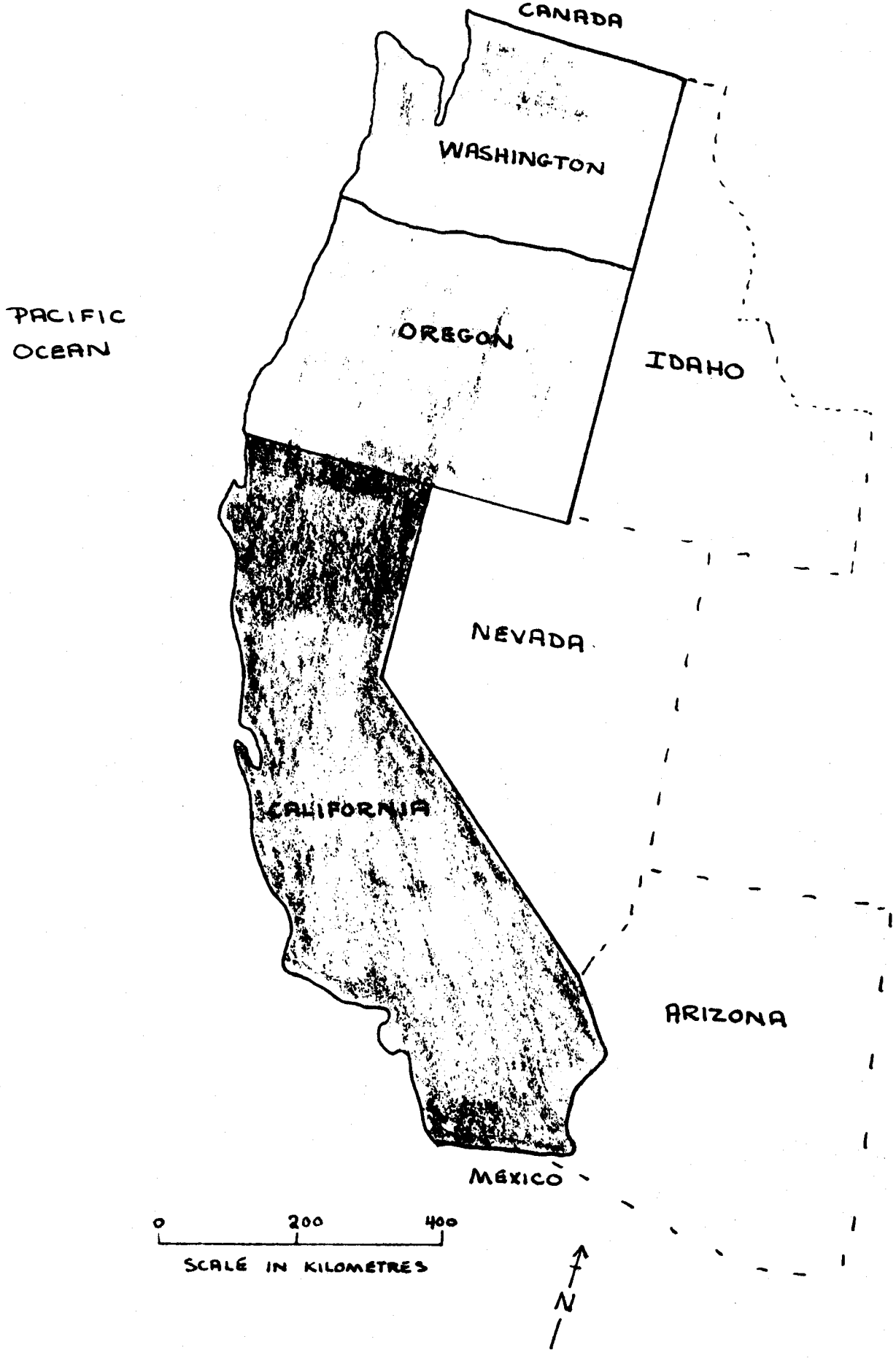
CHAPTER 1

INTRODUCTION

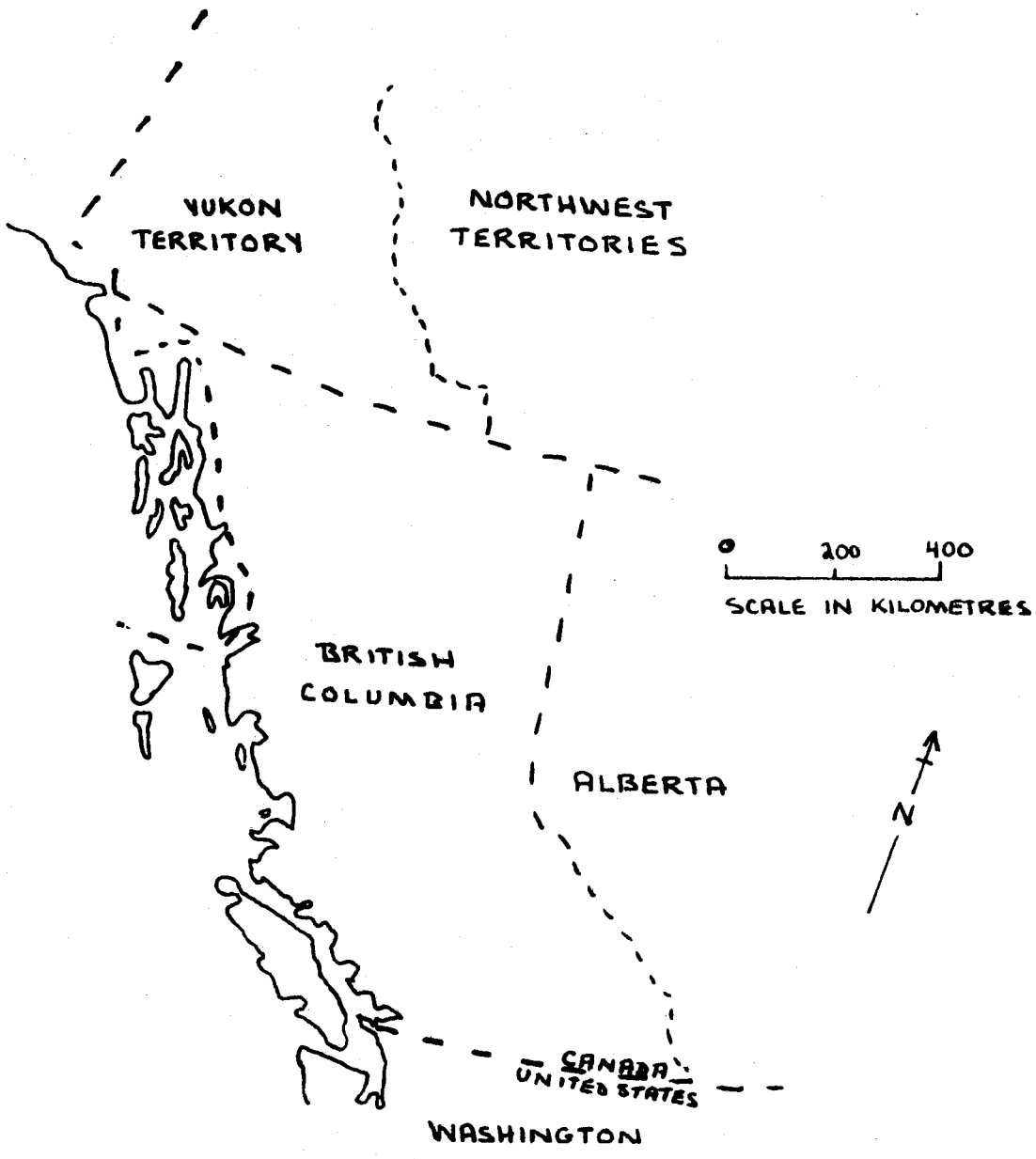
During the past few years an increased awareness of the importance of coastal areas has been developing in the United States and Canada.[1] In the United States this interest resulted in the passage of the Coastal Zone Management Act in 1972. This Act made provision for the development of individual management policies in each of the coastal states. On the west coast, Washington, Oregon and California have designated management authorities charged with overseeing the development of their respective coastal zones.

In Canada, and more specifically in British Columbia, there has not been a concerted effort to control development within the coastal zone although there is some indication that a movement in this direction is underway.[2] The main goal of this paper will be to provide a clear understanding of the management systems which have been created in Washington, Oregon, and California. Once this is achieved the present status of coastal zone management in British Columbia will be reviewed to determine the direction of current policy. Suggestions, based upon the experience in the three states, will then be presented concerning possible directions for coastal zone management in British Columbia. The areas being studied in this paper are illustrated in maps 1 and 2.

MAP 1
WASHINGTON OREGON CALIFORNIA



MAP 2
BRITISH COLUMBIA



In general terms, the coastal zone is that region of land, marine, and estuarine space in which both the marine and terrestrial elements interact. In its broadest interpretation this is defined as extending inland to the nearest coastal mountain range. However, in many management strategies the coastal zone has been delineated with respect to existing administrative structure rather than recognizing a biophysical systems approach. The choice of the coastal zone is, therefore, dependent upon the physical nature of the coastal area and the type of administrative framework desired.

JUSTIFICATION OF COASTAL ZONE MANAGEMENT

The justification for selecting a coastal zone and managing this area in a manner different from other land and water resources is based on several interelated factors. The first of these is the common-property nature of many of the major resources of the coastal zone. Russell and Kneese illustrate the dilemma in managing these resources when they state, "Since these resources are, for legal or technical reasons, the property of all, they are the concern of none."[3] If the allocation of coastal resources among competing uses is left to the free market mechanism alone, net benefits are unlikely to be maximized because the market does not reflect all the costs and benefits associated with the full public use of those resources. As a result, government intervention has been necessary to control the use of the resources of the coastal zone.

Due to the diverse nature of the resources of the coastal zone the responsibility for their management does not rest with one specific government agency or department. Proprietary rights and legislative authority of both federal and provincial/state governments are represented within the coastal zone. As a result the resources tend to be managed on an individual basis rather than considering their relation to the coastal zone. This provides another indication of the need for comprehensive coastal zone planning. Without a specific government agency designated to manage these resources the coastal zone will not receive the level of planning necessary to ensure its proper management.

The coastal zone is the interface of three environments: land, water and air. However, it is the interactions between biological and physical processes that take part here that contribute to its high biological productivity and hence to its high value. The coastal zone is home to many species of fauna and flora which depend upon the marine environment for their existance. Areas such as wetlands and marshes are integral links in the coastal food chain which, in turn, supplies food chains farther inland. These factors also contribute to the need for a specific coastal zone management strategy.

The coastal zone is not only an important ecological system but it is also crucial to the economic and social structure of maritime states and nations. Economic development in British Columbia, Washington, Oregon and California has been tied to

their west coast location. Coastal dependent activities such as shipping, commercial fishing, and sea-based recreation have made significant contributions to the growth of each of these areas. The coastal zone (defined as the set of counties contiguous to the ocean and its estuarial arms) in Washington, Oregon, and California is the site of 10 percent of the industrial work force in the United States. The entire American coastal zone, as defined above, is the site of approximately 35 percent of total industrial employment.[4] In British Columbia approximately 88 percent of the population lives within 50 miles of the coast.[5] As a result of this concentration of population in the coastal zone the cummulative development pressures are more pronounced than in other natural resource areas. This is due to the combination of diverse resources and the necessity of developing the coastal zone for the economic well-being of the state or province.

In summary there are four major reasons for the development of a coastal zone management strategy. These are: the need for managing the common property resources of the zone; the present division of coastal management responsibility between the various levels of government; the diversity of the coastal zone ecosystem; and the intense development pressures which exist in the coastal zone.

GOVERNMENTAL RESPONSIBILITY

As mentioned previously one of the major problems in managing the coastal zone is the division of management responsibility

between the federal and state/provincial governments. As an understanding of this division is crucial to the analysis of the four management strategies to be studied, the Canadian and American legislative division will now be discussed.

In Canada the division of power between the federal and provincial governments is given in the British North America Act (1867). Within this Act there is provision for both federal and provincial legislation stemming from proprietary and regulatory rights within the coastal zone. The provincial government may have greater proprietary rights (including Crown upland, the foreshore and the bed of inland waters, marine and terrestrial wildlife, resident wildfowl and fish, shellfish, and marine plants) than the federal government (sub-tidal lands, and migratory wildfowl). However, the federal government's regulatory rights over foreign and interprovincial trade, navigation, marine and anadromous fish, and migratory waterfowl, afford it considerable jurisdictional influence over the use of land, water, fish, and wildfowl in the coastal zone. Provincial regulatory rights, based on proprietary rights, are also very significant in the coastal zone, affecting agriculture, forestry, mining, fishing, transportation, recreation and preservation.[6]

In the United States the division of ownership and legislative control of water and land resources between the federal and state government is set forth in the Constitution. The states own and control most of the land and water resources within their boundaries in a framework of proprietary rights.[7] In the coastal zone this

ownership includes all navigable waters and the tidelands and beds beneath them.[8] In areas such as land use planning and regulation the state authority has been delegated to municipal and county government.[9] As in Canada, the division of authority is not always clear with some ownership questions remaining unanswered. This is especially true in the coastal zone due to the diversity of natural resources to be managed.

DEVELOPMENT OF AMERICAN FEDERAL POLICY

In the United States, federal interest in the establishment of a coastal management policy for the nation began in 1966. In that year a bill was presented to Congress which proposed the establishment of a federal agency to develop a coastal management system. This bill was rejected in 1966 but a revised version was passed in the following year. Unfortunately the bill which was passed by Congress had been greatly weakened and was of little value. However, it represented a step forward as the concept of coastal management had been presented for political discussion.[10]

During the same period, Congress approved the Clean Water Restoration Act (1966). One section of this bill directed the Secretary of the Interior to "prepare recommendations for a comprehensive national program for the preservation, study, use, and development of estuaries of the nation and respective responsibilities that should be assumed by the federal, state, and local governments and by provate interests."[11] This resulted in the appointment of a Commission which proposed a system of coastal

zone management in which primary responsibility would be vested in the states, with federal legislation to encourage and support state coastal zone authorities in carrying out specified national objectives.[12] This recommendation was incorporated into the Coastal Zone Management Act of 1972.

The purpose of the Coastal Zone Management Act is to assist states in exercising their responsibility in the coastal zone through the development and implementation of management programs. The basic incentives for the states to achieve this goal was the availability of federal funding if certain requirements were met. The first type of federal assistance were grants to aid in the development of a management program. Federal grants were available to cover two-thirds of the annual operating costs for a maximum of three years. In order to qualify for this Section 305 grant the state had to meet certain requirements, which included:

1. identification of the coastal zone boundaries;
2. definition of permissible land and water uses;
3. inventory and designation of areas of particular concern;
4. identification of the means of enforcement;
5. a set of development priorities; and
6. outline of the organizational structure proposed.[13]

The second level of assistance (section 306) is provided when the federal government approves the state's coastal zone management program. Two-thirds of the costs of administering the state's management program will be covered by federal grant if the following provisions have been met:

1. the state has developed and adopted a management program in accordance with the rules and regulations set up in the Act;

2. the program has been coordinated with local, areawide, and interstate plans;

3. there has been an effective mechanism established for ensuring cooperation between the management agency and all other levels of government;

4. public hearings have been an integral part of program development;

5. the Governor has approved the program;

6. a single agency has been designated to receive and administer the grants; and

7. the state has the authority to implement and enforce the program.[14]

In 1972 the National Oceanic and Atmospheric Administration (Department of Commerce) created the Office of Coastal Zone Management which is responsible for evaluating state programs for compliance with all the above requirements. At present, all three west coast states have received, or are receiving section 305 grants. Washington and Oregon are the first two states in the nation to receive section 306 administration grants.

BASIS OF COMPARISON

The following chapters of this paper will discuss coastal zone management programs in Washington, Oregon and California. There are three critical elements in any coastal zone management program: the definition of the coastal zone, the type of management strategy selected, and its implementation.

The definition of a coastal zone boundary will determine the

range of choice available within the other two elements. An understanding of the criteria used in choosing the size of the coastal zone will provide an important insight into the significant coastal pressures and into the type of management control desired. For example, a narrow coastal zone may indicate that pressures for development have played a significant role in the coastal zone designation process. At the same time the choice of a limited coastal zone may indicate a desire to impose strict controls within the zone. Whatever the reasons for the boundary decision, a knowledge of the selection criteria is crucial to understanding the operation of the management program.

Once the coastal zone has been designated, the next decision is the type of management regime to be exercised within the zone. This involves the choice of uses and activities to be permitted within the coastal zone, and may include the designation of certain areas for specific purposes. By determining use priorities the program begins to 'zone' the coastal area for particular uses and activities. This choice process will determine the trade-off between conservation and development. It is important to understand this component of the management program as it determines the allowable landscape elements of the coastal zone and how they will be permitted to develop.

The final link in the management program is the type of regulation and enforcement which will be used to implement the goals of the program. Administrative arrangements will vary with the size of the coastal zone and the degree of management control.

Without an effective enforcement procedure, the goals and guidelines of the program will not achieve the desired results.

Each of the three states has taken a different approach to managing its coastal zone. By comparing these three components in Washington, Oregon, and California it will be possible to determine the relative merits of different management policies.

The final section of the paper will discuss the present status of coastal zone management in British Columbia. By analysing the present policy it will be possible to determine the purpose and direction of current management strategies. Lessons drawn from the United States' experience will be used as a basis for suggesting directions to be pursued and pitfalls to be avoided in the British Columbia context.

FOOTNOTES - CHAPTER 1

1. An indication of this increasing awareness can be found in the type of material being covered in the following references.

   D.M.Johnston, Coastal Zone: Framework for Management in Atlantic Canada (Halifax: Institute of Public Affairs, Dalhousie University,1975)

   W.B. Merselis, Coastal Zone Management and the Western States Future (Washington:Marine Technology Society,1974)

2. Evidence regarding this movement can be found in several British Columbia provincial programs which will be discussed in chapter 6.

3. C.S. Russell and A.V. Kneese, Establishing the Scientific, Technical and Economic Basis for Coastal Zone Management (Unsourced mimeo) p.2.

4. W.H. Spencer, Environmental Management for Puget Sound: Certain Problems of Political Organization and Alternative Approaches (Seattle: University of Washington,1971), p.12.

5. Province Of British Columbia Land Resources Steering Committee, The Management of Coastal Resources in British Columbia (Victoria,1977), p.2.

6. Ibid., p.11.

7. J.M. Heikoff, Coastal Resources Management (Ann Arbor: Ann Arbor Science Publishers Inc.,1975),p.7.

8. Puget Sound Task Force of the Pacific Northwest Basins Commission, Comprehensive Study of Water and Related Land Resources: Puget Sound and Adjacent Waters, Appendix 2: Political and Legislative Environment (Seattle,1970), p.6-1.

9. M.L. Barker, Water Resources and Related Land Uses: Strait of Georgia - Puget Sound Basin (Ottawa: Department of the Environment,1974), p. 46.

10. J.C. Hite and J.M. Stepp, eds., Coastal Zone Resource Management (New York: Praeger Publishers,1971), p.20.

11. Ibid., p.21.

12. Ibid., p.22.

13. United States Coastal Zone Management Act Section 305.

14. Ibid., Section 306.

DEFINITIONS

There are several key terms which should be clarified before the main body of the paper is presented.

COASTAL DEPENDENT ACTIVITIES are those activities which to be able to function at all require a site on, or adjacent to, the coast.

COASTAL RELATED ACTIVITIES are those activities which are more economically feasible if they locate along the coast.

CONSERVATION is the planned management of a natural resource to prevent its exploitation, neglect, or destruction; wise utilization.

DEVELOPMENT means a use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of sand or gravel; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which causes changes in the natural state of the coastal zone.

PRESERVATION means the maintenance of the present landscape, especially in those areas which have not been developed.

CHAPTER 2

WASHINGTON

In the state of Washington a serious governmental concern for the protection of the state's shoreline predates the approval of the federal Coastal Zone Management Act in 1972. The sequence of events which led to the establishment of the Washington coastal management policy can be traced to a state Supreme Court decision in December, 1969 which ordered the removal of a landfill from a major Washington lake. At the time of this decision the presiding judge urged the Legislature to establish a comprehensive shoreline planning and use regulation program.[1]

In the following year the Washington State Department of Ecology was created. The underlying philosophy of the Department was that it was a "fundamental and inalienable right of the people of the state of Washington to live in a healthful and pleasant environment and to benefit from the proper development and use of its natural resources."[2]

Despite governmental concern for the protection of the state's natural resources it was the residents of Washington who brought the coastal zone management question to a climax. A petition which called for the establishment of statewide shoreline controls was circulated by the Washington Environmental Council.[3]

Under the Washington State Constitution, a citizen petition which contains sufficient signatures forces the Legislature to take

action. In response, the Legislature developed an alternative proposal and included both choices in the November, 1972 state election. The differences between the two proposals concerned the size of the coastal zone and the institutional arrangements for its management. The proposed coastal zone of the Washington Environmental Council extended 500 feet inland and was to be administered by local government. The Shoreline Management Act proposed by the Legislature designated a 200 foot boundary limit which would be under the jurisdiction of the State Department of Ecology. The Shoreline Management Act was approved by the voters and ratified by the Governor in November, 1972.[4]

With the provisions of the Shoreline Management Act already established, Washington was in a very good position when the federal Coastal Zone Management Act was passed by Congress in 1972. Rather than having to establish a new program, the state of Washington had only to demonstrate to the Office of Coastal Zone Management that the Shoreline Management Act met all of the requirements of a coastal zone management program.

THE COASTAL ZONE

As outlined in the first chapter there are several key aspects which must be understood in a coastal management program. The first of these is the definition of areas and activities to be managed. In Washington the concern was not only with the coastal zone but also with other shorelines in the state. As a result, state controls apply to marine waters and their associated

wetlands, including at a minimum all upland area 200 feet landward from the ordinary high water mark; streams with a mean annual flow of 20 cubic feet per second or more; and lakes larger than 20 acres. In total there are 791 lakes, 965 rivers and streams, some 2,400 miles of marine shoreland, and over 3,000 square miles of marine waters subject to the Act.[5] Along with the 200 foot provision, the Shoreline Management Act also designates guidelines for 'shorelines of statewide significance'. These areas are not bounded by definition but rather by specific geographic location (i.e. Birch Bay - from Point Whitehorn to Birch Point).[6] It should be noted that all federally owned lands which fall within the coastal zone are excluded from the state regulations, as specified in the federal Coastal Zone Management Act.

Within the scope of this paper the primary interest lies in the marine shoreline boundary. The Washington program involves a two-tier concept within the management strategy. The first tier is the Shoreline Management Act boundary which extends 200 feet inland from the high water mark, and also includes state-controlled coastal waters. This is the most important tier in terms of shoreline management responsibility as the provisions for its management are clearly defined in the Shoreline Management Act. The second management tier comprises the area contained by the fifteen coastal counties which border on saltwater. Within these counties, the management responsibility falls upon environmental legislation other than that of the Shoreline Management Act. Examples of thie legislation includes the State Pollution Control

Act (1973) which controls wastewater discharges and the Forest Practices Act (1974) which oversees the harvesting methods used to ensure that erosion, stream pollution, and related problems are minimized.

It is very important to have coordinated management beyond the coastal zone, especially when the zone is so limited in extent. Many of the problems which affect the coastal zone originate upstream and thus it is crucial to have supporting environmental protection beyond the coastal zone boundary. At present, the coordinative effectiveness of the many state environmental provisions has not been fully demonstrated. Until this supportive legislation is fully operative the management of the narrow coastal zone will be jeopardized by activities beyond the jurisdiction of the Shoreline Management Act. The necessity for this support has been recognized and as the program matures the coordination of environmental legislation should result in a stronger shoreline management program.

MANAGEMENT STRATEGY

The second important factor in a coastal management program is the type of management policy implemented. The approach in Washington was to design a system in which all proposed developments within the coastal zone would have to receive a permit. The guidelines for developing the permit system are stated in the Shoreline Management Act and have been further developed by the state Department of Ecology. Once the guidelines and priorities

were designated, local government was involved in the implementation of the system. Each of these steps in the development process will be detailed in the following sections.

From the beginning of the program there was a concern for balancing the conservation and development of the shoreline. The Shoreline Management Act was designed to plan for all 'reasonable and appropriate' uses and the following priorities were established:

For Shorelines of Statewide Significance

1. Recognize and protect the statewide interest over local interest;
2. Preserve the Natural Character of the shoreline;
3. Emphasize long-term over short-term benefit;
4. Protect the resources and ecology of the shoreline;
5. Increase public access to publicly owned areas of the shoreline;
6. Increase recreational opportunities for the public in the shoreline.[7]

For Regular Shorelines (where alterations of natural conditions are permitted)

1. Single family residences;
2. Ports
3. Shoreline recreational uses;
4. Industrial and commercial developments that are particularly dependent upon their location on or use of shorelines; and
5. Other developments which will provide an opportunity for substantial numbers of people to enjoy the shorelines.[8]

The importance of a shoreline location to the applicant is also given careful consideration in the permit process. Those

activities which are considered to be shoreline-dependent are given priority over those which are shoreline-oriented or non-shoreline oriented.

It was the responsibility of the Department of Ecology to develop these broad goals into guidelines that local government could use to manage their shoreline areas. This involved the classification of shoreline environments, permissable and priority uses, and the identification and management of shorelines of statewide significance.

The initial step was to establish a system for categorizing shoreline areas that local governments could use in evaluating their shoreline land use. The categorization system is designed to encourage uses in each type of environment which enhance the character of the environment and to utilize performance standards which regulate use activities in accordance with the locally defined goals and objectives, rather than to simply exclude any use for any one environment.[9] The four types of environments designated were natural, conservancy, rural, and urban.

The purpose of the natural environment is to preserve and restore those natural resource systems which exist relatively free from the influence of man. Activities which may result in the degradation of this environment are restricted. The designation of this category has been sparing as a result of its restrictive regulations and on the whole it is more likely to be found in publicly owned rather than privately owned areas.[10]

The conservancy environment has been designed to protect,

conserve, and manage existing natural resources and valuable historic and cultural areas. The general purpose is to maintain the existing character of these areas, emphasizing nonexploitative uses of the physical and biological resources of the region.[11]

The prime objectives of the rural environment designation are to protect agricultural land from urban expansion, restrict intensive development along undeveloped shorelines, provide a buffer zone between urban areas and to maintain open space and opportunities for recreational uses compatible with agricultural uses. In essence, activities which reduce the pressure of urban expansion on prime farming lands will be encouraged.[12]

Within the urban environment category the emphasis is upon maximizing the utilization of the shorelines, incorporating the guidelines for use priorities. The development is to be managed so that it enhances and maintains shorelines for a wide variety of urban uses. One of the suggestions for accomplishing this goal is to require new developments to provide public access to the shoreline. Priority is also given to planning for public visual access to the sights of the shoreline.[13]

Once the land use environments had been designated, the Department of Ecology turned to developing controls for specific activities. Each activity had a set of guidelines imposed which controlled the impact of use on the coastal zone.

The guidelines for Forest Management Practices have been chosen as they have a significant impact upon the protection of the coastal zone in a state where the forest products industry

plays a dominant role. The general goal of this section is to ensure that the harvesting of timber and its related activities do not severly affect the coastal zone. The specific guidelines designed to achieve this goal are as follows:

1. Seeding, mulching, matting, and replanting should be accomplished where necessary to provide stability on areas of steep slope which have been logged. Replanted vegetation should be of a similar type and concentration as existing in the general vicinity of the logged area.

2. Special attention should be directed in logging and thinning operations to prevent the accumulation of slash and other debris in contiguous waterways.

3. Shoreline area having scenic qualities, such as those providing a diversity of views, unique landscape contrasts or landscape panoramas should be maintained as scenic views in timber harvesting areas.

4. Timber harvesting practices, including road construction and debris removal, should be closely regulated so that the quality of the view and viewpoints in shoreline areas of the state are not degraded.[14]

The guidelines for Forest Management Practices also include regulations for road construction, harvesting practices, and buffer zones.

Similar guidelines are also given for the following coastal activities: agricultural practices, aquaculture, commercial development, marinas, mining, outdoor advertising, residential development, utilities, ports, water-related industry, bulkheads, breakwaters, jetties and groynes, landfill, solid waste disposal, dredging, shoreline protection, road and railroad design and construction, piers, archeological areas and historic sites, and recreation.

PROGRAM IMPLEMENTATION

Using the guidelines set out in the Shoreline Management Act and by the Department of Ecology, each local government has been responsible for formulating a development plan to guide proposed activities along its own shoreline. As required by the Act and the final guidelines of the Department of Ecology, master programs are to include goals, policies, a map of generalized shoreline environmental designations (using the four designations described earlier, if possible), and specific use regulations.[15]

The first step taken by the city or county was an inventory of its shoreline resources, including a map or series of maps depicting existing land uses, ownership patterns, topography and other analysis which lends itself to graphic presentation. A written analysis which accompanied the map described the non-quantifiable resources of the coastline. Due to the restricted time, money, and training of the local government staff these two data sources provided a broad overview of the coastal resources rather than a detailed analysis.

The Department of Ecology outlines three factors which determine the effectiveness of the management effort in the coastal zone. These factors are the quality of the applicable legislation, the data base upon which decisions are formulated, and the skill of the user in synthesizing the data and legislation into a management decision. Without the data base the other two factors are limited in their application. The Washington Coastal Zone Atlas,

being prepared by the Department of Ecology should serve to fill many of the information gaps left by the local governments.

The second step in the local master program was the formation of citizen advisory committees to participate in the planning process. These committees worked in coordination with the local government staff during the development of the master plan. The main purpose of this coordinated effort was to incorporate a wide scope of opinion and to maintain local character in the final plan.

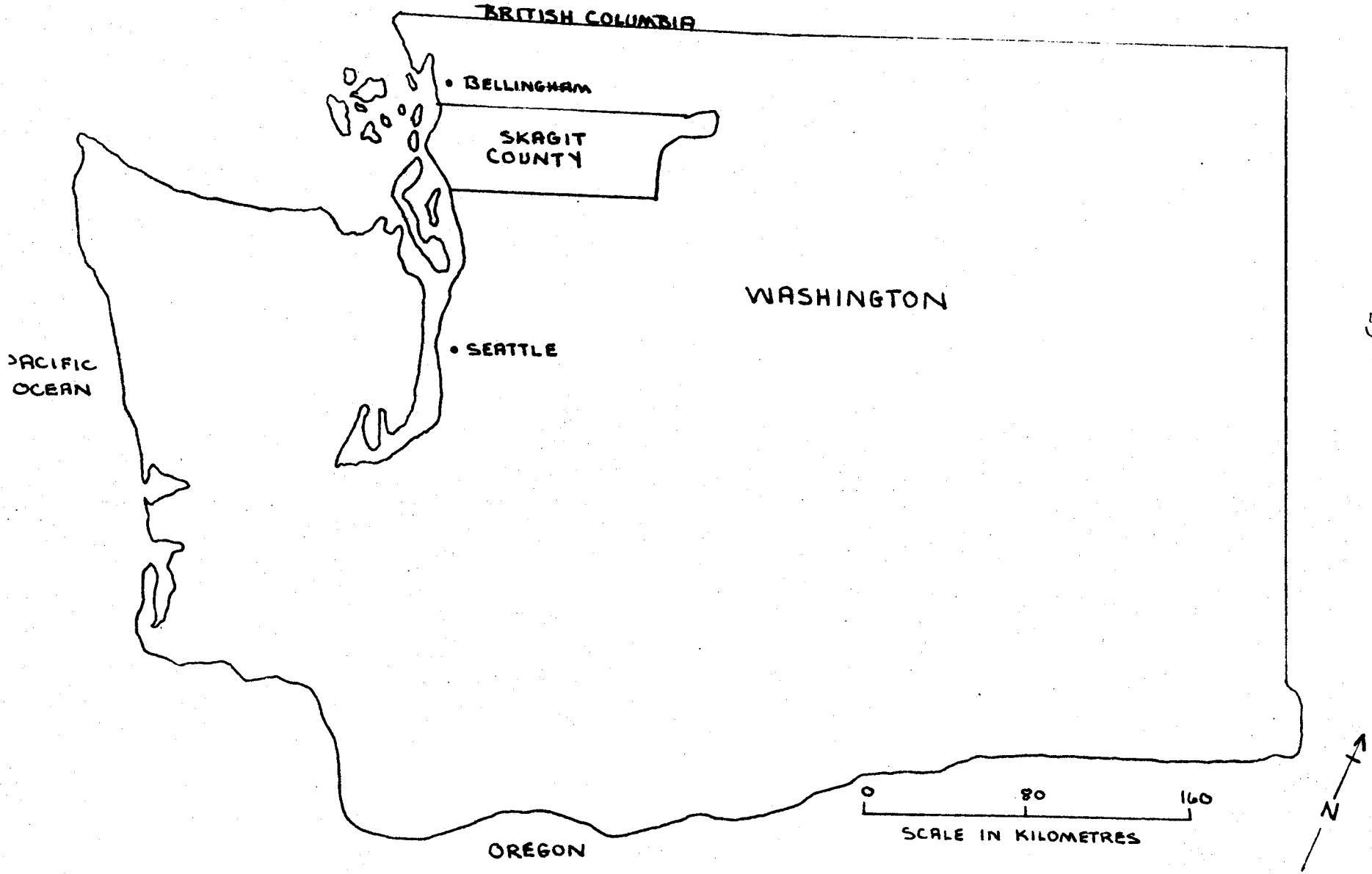
After the local planners and citizen advisory committee had completed the plan for their area, it was forwarded to the Department of Ecology for review. The Department reviewed the program to ensure that the guidelines of the coastal management program had been incorporated into enforceable local legislation. Within 90 days the program would either have to be approved or sent back to the local government for modification.

In order to present a more detailed picture of the formulation of the local master program and the type of controls which are designated in such a plan, a selected review of the Shoreline Management Master Program for Skagit County will be given.[16] Map number 3 indicates the location of Skagit County.

Essentially a local master program sets forth civic or county legislation to enforce the shoreline management provisions as indicated by the Shoreline Management Act and the Department of Ecology. As a result, each type of activity mentioned on page 22 is noted with specific policies and regulations attached. As would be expected, the range of allowable uses narrows as one moves from

MAP 3

LOCATION OF SKAGIT COUNTY



the urban designation towards the natural environment designation. However, in most cases the uses within the environmental designation are subject to more specific regulation within the activities legislation. An example of this can be found by looking at the residential development classification. In the urban and rural residential (a fifth category created by Skagit County) zones residential development is permitted subject to general regulations, but in the rural shoreline area an additional clause appears. In this environment "alterations to the natural topography, the shore-water interface, and vegetation of the site shall be minimized to that extent necessary to the placement of the residence."[17] The Conservancy environment residential restrictions again tighten while in the Natural environment classification residential use is prohibited.

These increasing restrictions also occur in the allowable building height limits. In an urban designated area the height limit for a building within 100 feet of the ordinary high water mark is 35 feet, a limit which drops to 25 feet in the conservancy environment area. The shoreline setback is also very sensitive to the type of designated environment as it rises from 35 feet in urban areas to 75 feet in the conservancy areas.[18] From these examples it is possible to note the type of action taken to enforce the state guidelines and also the importance of the original designation of type of environment.

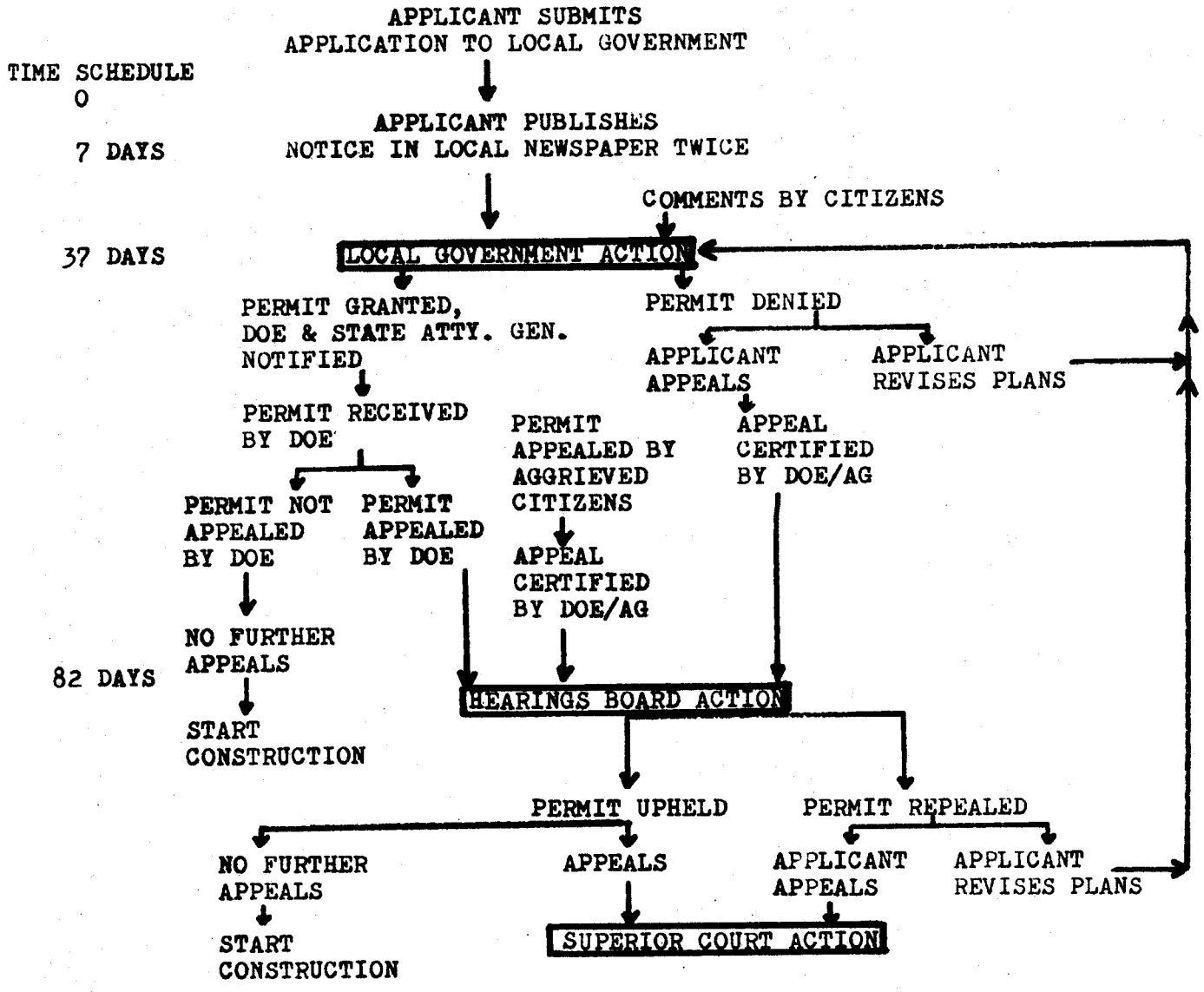
Under the permit system set up in the Shoreline Management Act all substantial developments and shoreline modifications must

receive a permit before work begins. This includes private development and all state projects within the coastal zone. (Federal projects are excluded from the provisions of the program but ehere has been cooperation between the state and federal governments to ensure that this privielege is not abused.) The type of projects which are excluded from applying for a permit include those that will not exceed $1,000 in total cost as long as they will not interfere with normal public access to the shoreline; normal maintenance and repair; protective bulkheads for single family residences; most agricultural construction, and some special exceptions.[19]

Upon filing an application for a substantial development permit the applicant must publish two public notices a week apart in a newspaper of general circulation within the area in which the development is proposed. Once the local government has received the application it must wait 30 days in order to ensure that all objectors have a chance to voice their opinion. In the case of a major development proposal the local government may use public hearings to help formulate and assess public opinion. After the local government has given notice of approval the application must be forwarded to the Department of Ecology and the Department of the Attorney General which have 45 days to appeal the decision to the Shoreline Hearings Board. If the applicant receives approval from all government agencies he will be able to proceed in a minimum of 82 days. The shoreline permit procedure is shown in graphic form in figure 1.

FIGURE 1

WASHINGTON SHORELINE PERMIT PROCEDURE



The Shoreline Hearings Board was created by the Shoreline Management Act to provide for both appeals by applicants who have been rejected by the local government and for local governments which take exception to regulations and guidelines adopted by the Department of Ecology. Once a decision has been handed down by the Shoreline Hearings Board the final level of appeal is the State Superior Court. However, due to the efficiency of the appeals system those appeals which move on to the judicial system represent only 7 percent of all certified appeals received by the Board.[20]

In summary a brief review of the major highlights of Washington's shoreline management program is appropriate. The Washington system as outlined in the Shoreline Management Act of 1971 involved the preparation of guidelines by the Department of Ecology which could be enforced by local government. Under this plan a 200 foot shoreline zone was adopted along with controls for development within its boundary. Local Government is faced with the initial evaluation of permit applications but final approval must be received from the Department of Ecology before construction begins.

There are several aspects of the Washington plan which should be emphasized. The first of these is Washington's concern with shoreline management as opposed to coastal management. This wider term of reference has helped to alleviate many of the problems which would seem to arise out of a restrictive 200 foot boundary limit. For example, by having jurisdiction over the major streams

and rivers which flow through the coastal zone and into the Pacific Ocean many of the sources of upstream pollution can be controlled and thus their impact on the coastal areas negated. As a result, the 200 foot boundary in Washington has proved effective even though it is considerably smaller than those in Oregon and California.

The implementation of the permit system has worked well in the state, partly as a result of an effective appeals system which has avoided long court cases and kept the paperwork to an acceptable level. Another factor in the success of the system has been the ability to formulate and administer the plans at a local level. From all indications local control is working successfully and is providing the kind of close contact between the citizens and government agencies necessary to maintain a good working relationship. This must be in part due to the use of the citizen advisory committees in the development of the local planning programs.

Washington has been the first state to fully implement a coastal zone management program. As a result, it will be studied carefully and possibly used as a model for other programs. The type of controls which have been developed work well within the narrow Washington coastal zone but may not be as successful in a larger management area. However, a good deal of the work which has gone into the development of this program will provide a firm foundation for other states to base their programs on.

FOOTNOTES - CHAPTER 2

1. State of Washington Department of Ecology, Washington State Coastal Zone Management Program (Olympia,1976),p.2.
2. Ibid., p.1.
3. The Washington Environmental Council is a citizens group which has been involved in several environmental disputes in the state. It is important to note that the proposal made by this group is much more preservationist oriented than the government proposal.
4. State of Washington Department of Ecology, op. cit., p. 2.
5. Ibid., p.29.
6. Ibid., p.29.
7. Ibid., p.30.
8. Ibid., p.31
9. Interview with Don Peterson, Washington State Department of Ecology Coastal Zone Specialist,January 31,1978.
10. State of Washington Department of Ecology, op. cit., p.32.
11. Ibid., p.33.
12. Ibid., p.33.
13. Ibid.,p. 34.
14. Washington Administrative Code 173-16-060(3)
15. State of Washington Department of Ecology, op. cit., p.37.
16. State of Washington Department of Ecology, The Shoreline Management Master Program of Skagit County (Skagit County/Olympia,1976), p. 1.
17. Ibid., p.7-90.
18. Ibid., p.7-95.
19. Ibid., p. 7-95.

20. Washington State Department Of Ecology, Washington State Coastal Zone Management Program (Olympia,1976), p.42.

CHAPTER 3

OREGON

The development of Oregon's coastal management program reflects a long-standing concern for protecting and managing the state's coastal resources. As early as 1913 the state had declared all its wet sand beaches to be a public highway while in 1967 legislation was passed which provided for public use of the ocean shore in perpetuity.[1] This 'Beach Bill' provides that the entire ocean shore, from low water to the line of vegetation, be for public use, recreation and enjoyment. This approach contrasts greatly with Washington state where private ownership has been an accepted characteristic of many shoreline areas.

In March 1970 the Oregon Coastal Conservation and Development Commission was established to initiate a coordinative process for coastal management. Between 1971 and 1975 this Commission worked to evaluate Oregon's coastal resources and to develop plans and policies for their management.[2]

During the same period a move towards statewide planning controls was underway which resulted in the formation of the Land Conservation and Development Commission. The purpose of this Commission was to develop comprehensive statewide planning controls, a part of which would, in time, include those controls deemed necessary for coastal zone management. As a result, the

resource management responsibilities of the Oregon Coastal Conservation and Development Commission were incorporated into the wider perspective of statewide land use controls.

It was during this period that the Federal Coastal Zone Management Act was introduced and, as a result, the Oregon program set out to comply with the federal regulations in order to receive funding aid. As in the case of Washington, it was a matter of proving to the Office of Coastal Zone Management that the controls which were being developed met all of the federal requirements for a coastal zone management program. With this brief overview in mind of coastal zone management up to the establishment of the Oregon Conservation and Development Commission, it is now possible to study the development of Oregon's coastal zone strategy.

THE COASTAL ZONE

Oregon's coastal zone extends from the Washington border on the north to California on the south, seaward to the extent of state jurisdiction as recognized in federal law (3 miles), and inland to the crest of the nearest coastal mountain range. As a result of this broad definition, the coastal zone varies in width from approximately 8 to 45 miles. This results in a total land area of 7,811 square miles.[3]

Several criteria were used in the establishment of the nearest coastal range as the inland boundary limit. The most important of these was the establishment of a boundary which coincided with most biophysical processes, such as the coastal watershed, while

at the same time providing effective administrative units. For the most part the coast range boundary closely follows the shoreline counties boundary limit which results in the combination of both the biophysical and administrative requirements. The final selection of management boundaries for the coastal zone reflects the need to control enough area to manage the uses which directly impact upon the coastland. As an example, one of the key problems to be controlled is the sedimentation of coastal waters. Without control of upstream uses, such as logging practices, no positive steps towards its control could be made. In many ways the choice of coastal zone in Oregon reflects a scientist's view of the management area but as will become evident the establishment of such a large area resulted in the loss of some administrative control.[4]

As in all states which comply with the federal Coastal Zone Management Act there is an exemption for certain federally-owned lands. However, this provision does not exempt federal agencies from the consistency requirements of the Coastal Zone Management Act or from existing state authorities over federal lands. These final two points are very important as federal lands represent approximately 36 percent of the land area of Oregon's coast.[5] Without full federal cooperation the management of the coastline would be placed in a very uncertain position.

MANAGEMENT STRATEGY

The second component in establishing the scope of the Oregon

Coastal Zone Management program is the degree of control placed on land use within the coastal zone boundary. Oregon's program is based on two major components. The first of these is the regulations set out by the Land Conservation and Development Commission to control land use development throughout the state. The second component consists of those statutes which deal with related issues such as water quality.

The purpose of the Land Conservation and Development Commission is to develop goals for the management of the state's land, air, and water resources which could be included in the legislative jurisdiction of cities and counties. The Land Conservation and Development Commission will review the city and county plans for consistency with statewide goals and help to coordinate other agencies in the management of the state's resources. The agency is also responsible for issuing permits for activities of statewide significance which do not conform with the guidelines and for identifying areas of critical state concern along with plans for their management.

As an initial step in its planning process the Commission developed a set of planning Goals with associated guidelines. The Goals are regulations intended to enforce the authority of the Act, while the guidelines are suggested directions to be taken to achieve the Goals. The Commission adopted Goals and supporting guidelines for 12 specific resource elements or uses. The 12 Goals concern agricultural lands, forest lands, open spaces, scenic and historic areas and natural resources, air, water, and

land resources quality, areas subject to natural disasters and hazards, recreational needs, economy of the state, housing public facilities and services, transportation, energy conservation, and urbanization.

Once the coastal zone management program was underway four more statewide Goals were adopted. These additional Goals were estuarine resources, coastal shorelands, beaches and dunes, and ocean resources.[6] It is important to note that these four new categories were in addition to the existing goals so that the coastal zone not only receives specific coastal management control but also receives the added protection of the initial 12 Goals. All four of the coastal Goals require that the natural resources and values associated with these areas be protected, that development be planned to minimize the threat from natural hazards to life and property, and that appropriate areas and facilities be reserved for water dependent uses and activities.[7]

As a more specific example of the type of Goals and guidelines set forth, a brief review of the Forest Lands Goal (one of the original 12) and the Coastal Shorelands Goal (one of the four additional Goals) will be given. The general goal of the Forest Lands category is to conserve the forest lands for forest uses.[8] All existing lands suitable for forest uses are to be inventoried and designated as permanent forest lands. Two of the specific guidelines for achieving this Goal stipulate that before forest land is changed to another use the productive capabilities of both uses should be evaluated, and forestation and reforestation should be encouraged on land suitable for such pruposes,

including marginal agricultural land not needed for farm use.[9]

It is very important to note the differences between this approach to forest management in the Oregon coastal zone and the one adopted by the state of Washington. In Washington the emphasis, in a narrower coastal zone, was on the protection of the coastland habitat while in Oregon the emphasis is on the maintenance of a viable forest industry. As a result it is questionable whether the Goals which do not specifically deal with the coastal zone will be able to provide the intensity of protection necessary to encourage orderly development.

The Coastal Shoreland's Goal sets as its overall objective the conservation, protection, and where appropriate the development and restoration of the resources and benefits of all coastal shorelands. In order to inventory and evaluate the resources of the shorelands a planning area was designated which includes most lands west of the Oregon coast highway and all lands within an area defined by a line measured horizontally 1,000 feet from the shoreline of estuaries, and 500 feet from the shoreline of coastal lakes. Once these inventories are completed there is to be a series of comprehensive plans which will identify coastal shorelands and develop policies for their management.[10] Fragile coastal resources such as marshes and significant wildlife habitats would be strictly regulated with only those uses allowed which would not interfere with their protection.

Shorelands in rural areas would be available for a wide variety of uses as long as these activities did not significantly

change the character of the landscape and could not be located in upland locations or in urbanized areas along the coastline. Shorelands in urbanized areas which are suitable for water-dependent uses will be preserved for those uses. This includes deep water areas necessary for ports, protected areas for marinas, and areas with potential for recreational utilization of coastal waters.[11]

In addition to these specific priorities for designated coastal land uses there are also overall priorities of use for development in shoreland areas. Ranked from highest to lowest these include:

1. Promotion of uses which maintain the integrity of estuaries and coastal waters;
2. Provision for water-dependent uses;
3. Provision for water-related uses;
4. Provision for non-dependent, non-related uses which retain flexibility of future use;
5. Provision for development compatible with existing or committed uses;
6. Permanent or long-term uses which create a permanent change in the features of the coastland.[12]

It is interesting to note that the Shorelands Goal serves as a specific coastal management strategy. It has its own boundary, designation of allowable uses and a system of enforcement. In essence, it is very similar to the entire Washington program and thus provides the necessary protection for the coastal resources in the immediate shoreline area.

PROGRAM IMPLEMENTATION

Once the planning Goals and guidelines had been established the Land Conservation and Development Commission require an administrative system to enforce the regulations. As in Washington, the decision was made to make local government responsible for the development of coordinated comprehensive plans. These plans will serve to implement the Goals, and will establish the basis for specific local government regulations and ordinances. As the coastal management program is a component of the overall planning scheme in Oregon, information about the process applies equally to the four coastal Goals and the 12 overall land use Goals.

In Oregon the development of the coordinated comprehensive plans for local government is currently underway. When one considers that this plan serves as the single, common basis for decisions regarding conservation and development within an area one realizes the magnitude and importance of this undertaking.

As in the case of Washington there is a strong emphasis on public participation in the formulation of the local plan. One of the Goals set forth by the Land Conservation and Development Commission deals specifically with citizen involvement and sets guidelines to ensure that the maximum use is made of local input.

The procedures followed in the preparation of the local comprehensive plan will vary somewhat with each locality. However, there are certain requirements of each plan. These include:

1. A clear indication of the specific land, air, and water

use problems, issues and needs of the local jurisdiction;

2. Inventory data and other information which establishes the basis for decision making;

3. Information showing how each applicable planning Goal has been met; and

4. An evaluation of alternative courses of action.[13]

As a result of the emphasis on local orientation, each plan should interrelate the capability of an area's natural resource and man-made systems to support existing and future needs with demands for economic stability, housing, environmental quality, and efficient public facilities and services.[14]

Once the local plan is completed it will be forwarded to the Land Conservation and Development Commission which will review it for consistency with the Goals. Once the plan has been approved there is provision for adjustment using the same process as used in the development of the initial plan, including approval by the Commission.

Once the plan is approved the administration of coastal development is in the hands of local government. There is some concern over the scope of local government control as the only tie to the Commission will be an annual report. This may not be a strong enough bond to ensure that all of the requirements of the Goals are being enforced.[15] Washington's Department of Ecology has been criticized for maintaining a close watch over the local plans but perhaps this is a necessary precaution to ensure that state interests are given priority over local concerns.

As mentioned earlier the development of the local comprehensive

plans is only half of the Oregon Coastal Management Program. The second half consists of those statutes and authorities of state agencies which address specific natural resource management concerns within the coastal zone. The permit requirements of these agencies, along with any other regulations, provide a supportive arm to the ordinances set forth in the local comprehensive plans. Some of the most important agencies in terms of their requirements for the coastal zone include: the Division of State Lands which has ownership and management responsibilities for submerged and submersible lands; the Department of Transportation's Highway Division which manages the ocean shores and beaches for public use and recreational access; and the Department of Forestry which administers the Forest Practices Act, which establishes policies and standards for forest management and harvest practices on forest lands in the state.[16] State agencies with permit authority in the coastal zone cannot authorize actions in the coastal zone which would conflict with the statewide planning Goals. Regulatory agencies are required to examine their standards and procedures for consistency with the Goals and are to adjust any discrepancies.

In summary, there are several key points which should be emphasized. The first, and most important of these, is that the Oregon Coastal Management Program is part of a statewide comprehensive, coordinated land use planning program. As a result, the coastal management strategies are supplemented by the provisions of all the other land use controls. However, in many cases,

there is too much reliance on these supplementary Goals which weakens the protection of the coastal zone. Only in the Coastal Shorelands Goal is there enough protection given to the resources of the coastal zone.

The second characteristic to be noted in Oregon's program is the broad definition of the coastal zone which extends inland to the nearest coastal mountain range. Using this geographical boundary allows control of most of the elements which effect the coastal area. However, the establishment of such a large coastal zone has resulted in a different approach to management than is found in either Washington or California. Rather than using a permit system to monitor development the Oregon plan combines the legislative authority of state agencies with the regulations and ordinances designed by local government to enforce the Goals set forth by the Land Conservation and Development Commission. As a result someone who wants to proceed with a project on the coastal zone must meet all local and state agency requirements rather than applying for a specific coastal development permit.

In conclusion, it appears that the success or failure of the Coastal Zone Management Program in Oregon will depend upon the effectiveness of state agency permit review procedures and on how the local governments develop ordinances to enforce the principles of the Goals. Without the necessity for state agency approval of coastal projects the emphasis has been squarely placed upon the ability of the local governments and state agencies to coordinate their efforts in managing the coastal zone.

FOOTNOTES - CHAPTER 3

1. Oregon Land Conservation and Development Commission, Oregon Coastal Management Program (Salem, 1976), p.1.
2. Ibid., p.2.
3. Ibid., p.15.
4. Interview with Neil Coenen, Coastal Zone Specialist, Oregon Land Conservation and Development Commission. Salem: February 2, 1978.
5. Oregon Land Conservation and Development Commission, op. cit., p.23.
6. Ibid., p.8.
7. Ibid., p.8.
8. Ibid., p.149.
9. Ibid., p.150.
10. Ibid., p.195.
11. Ibid., p.197.
12. Ibid., p.198.
13. Ibid., p.33.
14. Ibid., p.33.
15. Interview with Neil Coenen, op. cit.
16. Oregon Land Conservation and Development Commission, op. cit., p.12.

CHAPTER 4

CALIFORNIA

As in the other two states the history of coastal zone management in California can be traced to past efforts at shoreline protection. In 1931 a joint legislative committee issued a report on seacoast conservation which probably marks the initial expression of concern over the loss of ocean shorelands to development forces. Despite the continued rapid growth of development along the shoreline it wasn't until 1965 that the first significant attempt at coastal management was made. In that year the San Francisco Bay Conservation and Development Commission was established, largely as a result of public outrage over the seemingly uncontrolled use of the San Francisco Bay shoreline for industrial and commercial purposes which conflicted with recreational and aesthetic values. In spite of the apparent need for statewide coastal controls it was not until the issue was placed on the state ballot in November 1972 that any meaningful action was taken. With the passage of Proposition 20, the California Coastal Conservation Act of 1972, coastal management in California became a reality.

THE COASTAL ZONE

The choice of the coastal zone boundary in California has been

one aspect of the coastal plan which has been under constant attack and revision. As originally set out in the enabling legislation of Proposition 20 there were two boundary limits. The first of these extended 1,000 yards inland from the mean high tide line and was referred to as the 'permit area'. The purpose of this designation was to create an area in which permits for development would be required during the preparation of the actual coastal plan. Without this permit control it was felt that coastal growth pressure would accelerate during the plan development period and thus worsen the situation. The second boundary limit was referred to as the 'coastal zone' and extended inland to the highest summit of the nearest coastal mountain range, except in Los Angeles, Orange, and San Diego counties where it extended to the nearest coastal range or five miles, whichever was the shorter distance.[1]

When the Coastal Plan was completed by the Coastal Commission in late 1975 it contained a proposal for two jurisdictional areas. The first of these was basically the same as the initial zone established in Proposition 20, that is inland to the nearest coastal mountain range. The second area was termed the 'coastal resource management area' and replaced the 1,000 yard permit area. The criterion for this new designation were resource-based. The zone extended from the high tide line to include all 'significant coastal resources' and those adjacent areas in which development could adversely effect the coastal zone.[2] The significant coastal resources included beaches, dunes,

wetlands, estuaries, significant wildlife habitat areas, agricultural areas influenced by the coastal climate, and existing public recreation areas.

When the coastal plan reached the state legislature, the representatives were not bound to accept or reject the plan but could alter provisions of which they did not approve. As a result of this opportunity they struck a compromise between the 1,000 yard boundary and the resource-based limit. The official Coastal Act of 1976 defined only one boundary termed the 'coastal zone'. The inland boundary of this zone is set at 1,000 yards with the exception of significant coastal estuaries, habitat and recreational areas where it may be extended to the first major ridgeline or five miles from the mean high tide line, whichever is less. It may also be adjusted downward in developed urban areas.[3] This boundary is illustrated on a series of maps which provide the exact inland limit of the coastal zone. Any significant changes in the coastal zone may be made only by the state legislature, although the Coastal Commission has authority to shift a boundary up to 100 yards to avoid conflicts with either physical or legal boundaries.[4]

Although the 1976 Coastal Act has been approved and is being implemented there is still pressure to adjust the coastal zone boundary seaward. At present there are two proposals before the state legislature, one of which would reduce the coastal zone to 500 yards, the other to 200 yards.[5]

MANAGEMENT STRATEGY

In order to properly discuss the degree of management control in California it is first necessary to review the goals which the plan is expected to achieve. Within the California Coastal Act (1976) the state legislature set forth five major objectives for coastal management in the state. These are designed to:

1. Protect, maintain, and, where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and man-made resources.

2. Assure orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the state.

3. Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resource conservation principles and constitutionally protected rights of private property owners.

4. Assure priority for coastal-dependent development over other development on the coast.

5. Encourage state and local initiatives and cooperation in preparation of procedures to implement coordinated planning and development for mutually beneficial uses in the coastal zone.[6]

These general goals are converted into specific policies in the Act; policies which provide the basis for the California Coastal Plan as they determine the acceptability of both local coastal programs and individual permit applications. This point will be clarified later when the development of local plans and the permit system are discussed. Suffice it to say that these individual policy statements are the backbone of the California coastal management program. The shoreline uses and activities dealt with in these statements are public access, recreation,

land resources, marine resources, development, and industrial development. Each of these statements has its own goals and methods of achieving them but for the purpose of this chapter the overall priorities will be summarized. In all cases if there is to be a change in the present landscape coastal-dependent uses are given the highest priority. For example, the highest priority for recreation use are those activities which cannot be accommodated at inland water locations. The other overall stipulation is that, wherever practical, new development should be located in areas which have already been developed for that type of use or activity. The purpose of this regulation is to control low density strip development along the coast, especially in the construction of new housing.

Supplementing these general priorities are individual policies to ensure the protection of a particular shoreland resource or to regulate the effect of a use on the shoreland area. As an example of coastal resource management, agricultural lands are protected through restricting their fragmentation into small parcels which would no longer be economically viable.[7] As an example of a use restriction, industrial development is only allowed in a previously undeveloped area if there are no alternative sites and all adverse environmental effects are mitigated to the maximum extent feasible.[8]

PROGRAM IMPLEMENTATION

The agency responsible for coastal zone management in

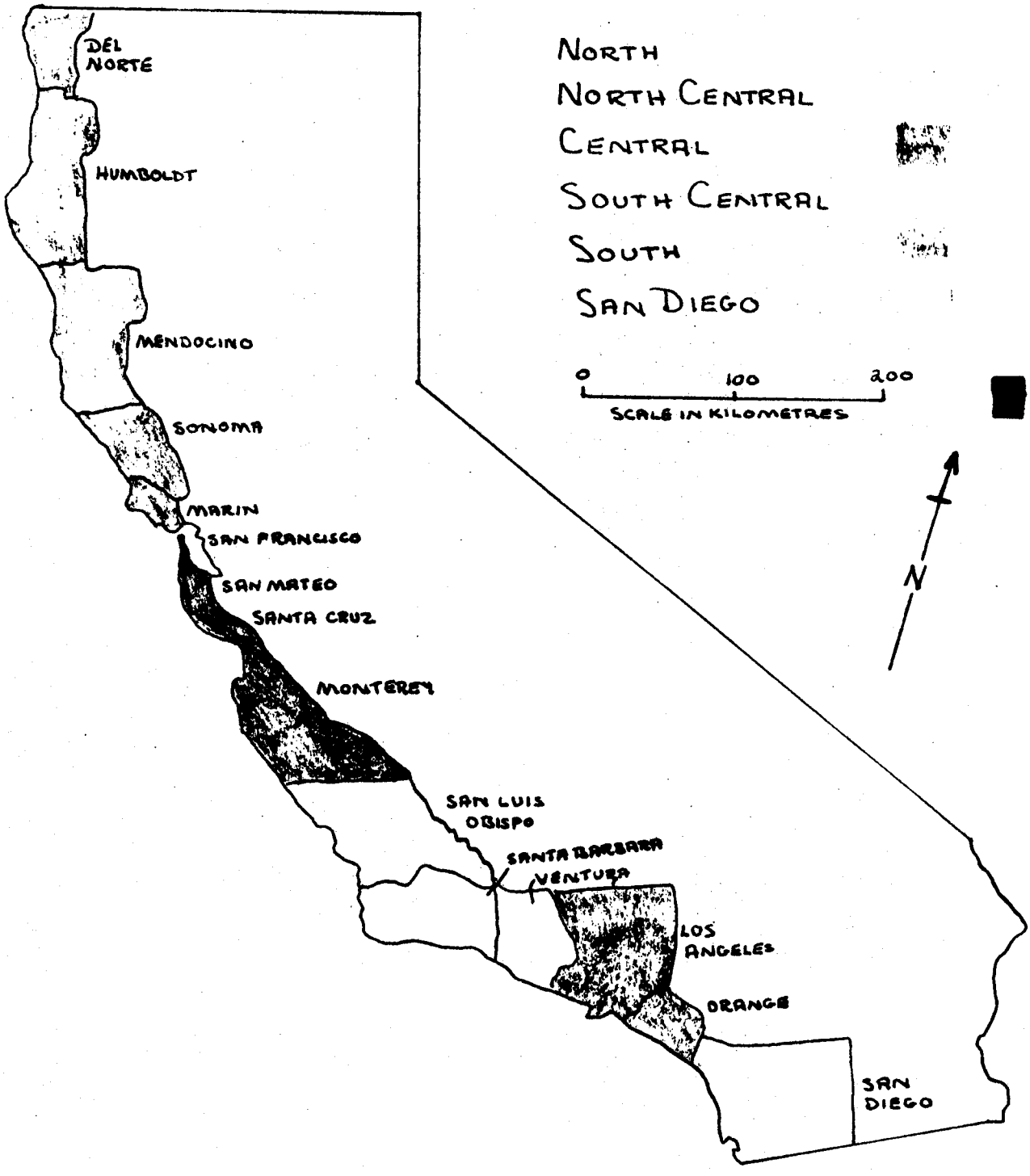
California is the California Coastal Commission, which lies within the Resources Agency. The Commission was responsible for the development of the California Coastal Plan of 1975 which was the basis for the California Coastal Act (1976). At present the state is divided into six regions (map number 4) each with its own coastal commission which is responsible for administering the Act's policies. This is only a temporary situation as local government controls are being developed which will be responsible for the administration of the Act. As a result the Regional Commissions are due to be phased out no later than June 30, 1979. Until the local governments take over the responsibility, the regional commissions are reviewing all coastal development permit applications in their jurisdictions. As the local coastal controls are destined to become the administrative backbone of the management strategy it is important to understand their jurisdiction and responsibility.

The Coastal Act places a great deal of administrative responsibility on the shoulders of local government. The reasons for this decision include:

1. The avoidance of duplication at a state level by using the existing local government land use planning and development review system.
2. The accessibility and accountability of local government to the citizens.
3. Local governments are best able to reflect the different conditions and values of the many communities along the 1,072 mile coastline.

As a result of this opinion, each of the 15 counties and 53 cities along the California coast is required by the Coastal Act

MAP 4
CALIFORNIA REGIONAL COASTAL COMMISSIONS



to prepare a local coastal program.

These local programs will include a land use plan, zoning ordinances, zoning district maps and, where required, other implementive actions applicable to the coastal zone. The most important of these is the land use plan as it indicates the kinds, location, and intensity of water and land use allowed. The land use plan also indicates the resource protection and development policies which will be used to accomplish the objectives of the Coastal Act. The Commission has adopted regulations outlining a basic method for analyzing proposed land uses within the plan for conformity with the Act's policies. These guidelines suggest that the following steps are necessary in the development of an acceptable land use plan.

1. The evaluation of the needs of development and their potential impact upon coastal resources. For example, will the improved access created by a new highway result in overcrowding problems along the coast.

2. The determination of the types of activities which are suitable for habitat areas, agricultural lands, and natural hazard prone areas.

3. The designation of certain areas for uses such as public and commercial recreation, port and coastal dependent energy facilities, and commercial fishing, all of which are given high priority in the Coastal Act.

4. The assessment of the long term effects of the development which would be allowed and the coordination of this growth with public service and recreation facility expansion.[9]

Once the land use plan is complete it must be certified by the Coastal Commission. The plan is first sent to the regional commission which has 90 days to review the submission. If the regional commission approves the plan it is sent on to the state

commission which has an additional 60 days to assess its adequacy. If either commission finds the local plan does not meet the requirements of the Act it will be returned to the local authority for revision.

The final step in the development of the local program is the formulation of zoning ordinances to carry out the land use designations and policy. These must also be approved by the regional and state commissions before they are enacted into law. Once this has been accomplished the responsibility for coastal zone management is placed in the hands of local government.

The final cog in the California coastal zone mechanism is the permit system which has been designed to enforce the provisions of the Coastal Act. In addition to any other local, state, or regional permits required a person wishing to undertake any development in the coastal zone must obtain a coastal development permit. At present these permits are being processed by the regional commissions but once the local programs have been approved the permit administration will become a local government responsibility. Regional commission-issued permits will still be required for developments on tidelands, submerged lands, and public trust lands.

Permits are not required for the following types of developments:

1. Most single family residence improvements;
2. Maintenance dredging as long as the material is disposed of outside the coastal zone; and
3. Repair or maintenance activities.[10]

The application process itself is quite simple. Once the necessary forms are received by the governing body it has 21 to 42 days to schedule a hearing. A decision is required within 21 days of the hearing and it becomes final if an appeal has not been made within 10 days. Work on a project can be started 42 days after the application is filed if all things go smoothly.

There are two key characteristics of the California coastal zone management program which differentiate it from the programs in Washington and Oregon. The first of these is the 1,000 yard boundary limit which is a result of compromise from previously-suggested boundaries which were more extensive. Although this is strictly a politically-designated boundary limit, it has proved to be an effective boundary in terms of controlling development along the immediate shoreland strip. It is important to take into consideration the enormous development pressures in the California coastal zone (as evidenced by the proposals for boundary revisions to 500 or 200 yards) when evaluating the chosen limit. At present the California Coastal Commission would be very happy if it could maintain the existing coastal zone.

The other important characteristic is the degree of management control as expressed in both the Act's guidelines and in the extent of permit coverage. By reviewing nearly all developments for compliance with the intent of the Act, the California system ensures close scrutiny of coastal activity while at the same time delegating the administrative responsibility to local government

which should be both accessible and willing to listen to local citizens.

Until the local coastal programs have been implemented, it is impossible to evaluate the entire management strategy. However, if the local governments are able to implement the policies of the Coastal Act the future of the California coastal zone would appear to be secure from the indescriminate development of the past several decades.

FOOTNOTES - CHAPTER 4

1. United States Department of Congress, State of California Coastal Management Program and Final Environmental Impact Statement (Washington: Department of Commerce,1977), p.31.
2. Ibid., p.32.
3. Ibid., p.32.
4. Ibid., p.33.
5. Interview with Paul Minx, Public Information Officer, California Coastal Commission. San Francisco, February 6,1978.
6. California Coastal Act of 1976 Section 300001.5
7. Ibid., Section 30260
8. Ibid., Section 30241
9. California Coastal Commission, California Coastal News December, 1977.
10. California Coastal Act of 1976 Section 30610.

CHAPTER 5

COMPARISON OF MANAGEMENT STRATEGIES IN WASHINGTON, OREGON, AND CALIFORNIA

So far, the coastal zone policies of the three states have been dealt with in isolation. It will be the purpose of this section to compare and contrast the components of each of the three plans in order to gain a better insight into the strengths and weaknesses of each coastal management strategy. In order to maintain consistency, the major points of comparison will be the three criteria discussed in chapter 1: the definition of the boundary, the type of management control exercised within the coastal zone, and the implementation of the management plan.

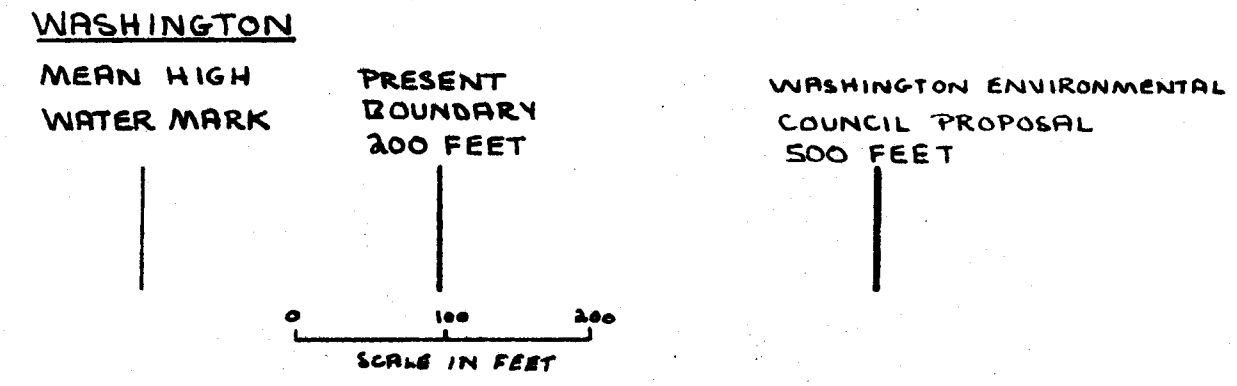
THE COASTAL ZONE

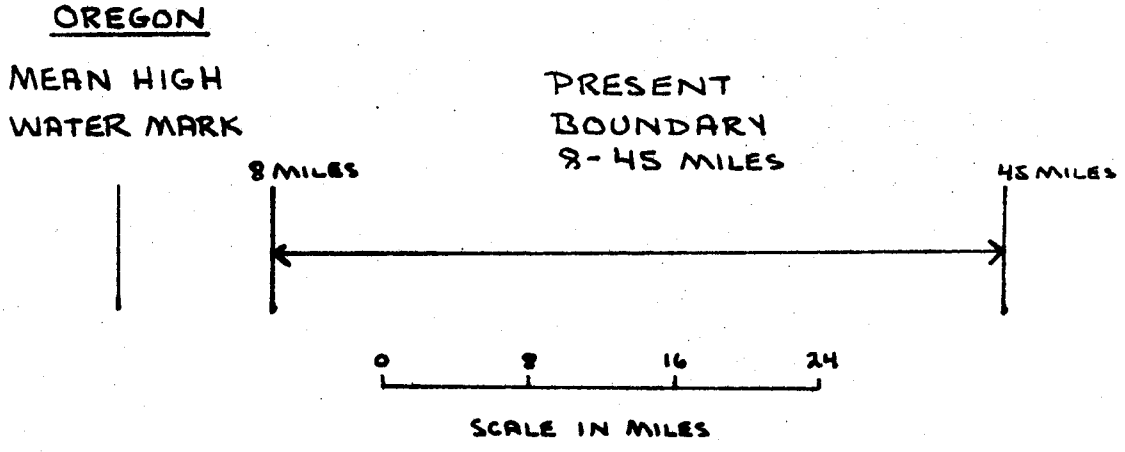
The most significant difference in the coastal plans is the choice of the inland boundary limit of the coastal zone. The three boundaries which have been chosen are: Washington - 200 feet; Oregon - the nearest coastal mountain range (creating a zone which varies from 8 to 45 miles in width); and California - 1,000 yards. Figure 2 gives a graphic illustration of these zones.

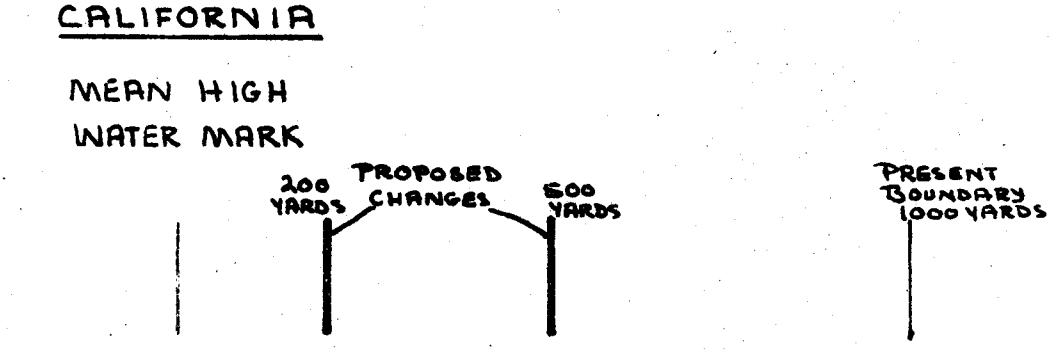
With such a wide range of boundary limits there are obviously some very different management capabilities in each of the three states. Only in Oregon is there a specific explanation for the

FIGURE 2

DEFINITION OF COASTAL ZONE BOUNDARIES







choice of the boundary: a decision was made to use a biophysical boundary rather than an administratively chosen line. As a result, Oregon has the potential to be the most inclusive of the three plans: a plan which has the boundary authority to control the entire upstream watershed.

Contrasting this relatively secure, broad coastal zone are the narrower zones of Washington and California. Both of these zones are the result of compromise between the development and conservation forces within the respective states. The trade-off between the forces of development and conservation has occurred in two areas: first, in the designation of the boundary and second, in the uses allowed within the zone. These two decisions are interrelated as the size of the coastal zone determines the extent of management control in each of the three states. There is an inverse relationship between the size of the zone and the degree of control. In Washington and California, narrow zones are strictly regulated through the use of a permit system while in Oregon the zone is much larger and the controls proportionately weaker. In both examples it is the development pressure which has resulted in the trade-off between physical extent and administrative control. Proof of the significance of the development forces can be found in the reduction of the California coastal zone from a once-proposed five miles to the present 1,000 yards which is still under pressure to be reduced to 500 or 200 yards. In Washington there is a distinct hesitancy to try to expand the shoreland boundary for fear of the efforts of the development

lobby to reduce already attained power.[1] It seems therefore, that the major determinant in the coastal zone boundary decision process is the strength of the development lobby. In Oregon, which has the least-developed of the coastlines, there has only been a limited amount of anti-coastal control feeling and this has allowed the wide coastal zone to be established.[2] However, along the more fully-developed Washington and California coastlines the anti-coastal control lobby has kept the coastal zone to the narrowest possible extent through consistent pressure on state politicians.[3]

MANAGEMENT STRATEGY

The second point of comparision is the degree of management control exercised in the coastal zone. As mentioned previously, this factor is directly related to the size of the coastal zone. In all of the states the government agency in charge of coastal zone management developed the overall strategy for the management of the coastline. This included determining which uses and activities would be regulated, the degree of regulation, the priorities of use, and the locations for different uses and activities. The most important decision to be made is the definition of permissible uses. In Washington this decision is based upon restrictions on the activity and the proposed location, in Oregon upon the type of shoreland resource (i.e. estuary, beach, dune), and in California upon a combination of the activity and the proposed location.

Because coastal controls are included in the overall state land use plan, Oregon's program approaches the question of permissibility of uses in a different manner than the other two states. The four coastal resource Goals created by the Land Conservation and Development Commission outline procedures for the preservation or strictly controlled development of estuarine resources, coastal shorelands, beaches and dunes, and ocean resources. When a project is proposed for the coastal zone it has to meet the requirements for the type of resource environment (estuary, dune, beach) it will be located in. As a result, a proposed housing subdivision will have to meet different standards in a shoreland environment than it would in a beach environment. No type of use is completely restricted from locating in the coastal zone but it may be restricted in several of the coastal zone environments. The key point is that it is the type of physical environment which determines the permissibility of an activity or use locating on it.

Washington is similar to Oregon in that the plan designates environments in which certain activities are permitted while others are restricted. However, in this case the areas are designated according to land use and not physical characteristics. Each of the four major categories, natural, conservancy, rural and urban, have their own restriction on the type of activities allowed to locate within them. The analysis of the Skagit County Master Program (page 24) illustrated how building requirements vary between the four land use categories. It is the type of land

use which determines the permissibility of an activity or use.

The Washington plan also differs in that restrictions are placed upon activities located in the shoreland area rather than on the shoreland itself. Each activity which is considered to have a significant impact in the coastal zone has restrictions which control its effect on coastal resources. The Washington strategy can be illustrated by referring to page 22 where the Forest Management Practices guidelines are presented. The emphasis in this case is on how to harvest timber in a way which will minimize the effects on the coastal zone. The coastal resource use is being managed to control its impact on the coastal zone.

The approach to permissible uses in California varies from those in Washington and and Oregon. The coastal zone has not been sub-divided into either physical or land use environments. It is strictly the kind of use proposed at a specific location that determines whether a project will receive a development permit. The Coastal Act has provided specific guidelines for those activities which it feels create a significant impact on the coastal zone. These activities are described on pages 49 and 50. If an applicant complies with all of the guidelines for his proposed development he will be allowed to proceed.

Of the three policies, Washington's is the most specific in detailing what may or may not be developed, and if it is going to be developed, where it may be located. This is a result of specifying many different types of coastal activities (such as aquaculture, dredging, marinas, and residential development)

along with guidelines which set standards for their development. When these use and activity guidelines are coupled with the allowable uses in each of the four environments (natural, conservancy, rural, and urban) it becomes very clear which uses will be allowed and where.

One of the most important overall points to note is that no use has been totally restricted in any of the three coastal zones. All uses are permissible as long as they are located in a designated area. The need for continued economic expansion has forced each policy to leave room for industrial uses along the coastline. However, in all cases industrial development must show that there are no other suitable locations before developing a new coastal location.

Despite the difference in assessing the suitability of an activity there is one key area of agreement between the three plans. In an area which is to be developed, water-dependent uses are assigned the highest priority, followed by water-related activities, and then all other uses. If a shoreline area is going to be developed it will be done in a way to maximize the use of that location. This will also control the unnecessary loss of coastal areas to expansion which could have, and should have, been located elsewhere.

PROGRAM IMPLEMENTATION

Now that the boundary definitions and management guidelines have been compared, it is possible to move on to how they have

been implemented. It has been noted that all three states have opted for local government administration of the coastal guidelines and controls. As only Washington has reached this stage it is not possible to compare the local plans. However, it is possible to look at the degree of control local government will have once the planning stage is complete.

The main issue being addressed in the delegation of management authority is the degree of centralization which should be incorporated in the coastal program. There seems to be general agreement that administration of coastal zone management is best carried out at a local level of government. In a decentralized arrangement, local residents and planners may be able to design a plan which will suit local tastes and needs. In a more centralized situation these preferences may be lost to uniformity on a state-wide basis. In order to achieve local control there must be decentralization from the state level, where overall responsibility properly and inevitably belongs. The key in doing this is for the state to spell out its objectives, which then become guidelines for local government. Only under these conditions can both the state responsibility and local administration criteria be met.

At present it appears that local government in Oregon will have the greatest degree of autonomy in carrying out the provisions of the Land Conservation and Development Commission. As there is no coastal development permit in Oregon the local governments will be responsible for enforcing the coastal Goals

through their own building permits, by-laws, and other ordinances. No state approval is required once the local plans have been certified and so the local authorities will have an important role in the interpretation of their own administrative ordinances. At present, the only stipulation is that local governments submit an annual report covering all land use developments in their jurisdiction. There is some concern that this will not provide a sufficient local-state link, and it may be changed before the plan is implemented.[4]

The California local governments will also have a wide range of control as they will process all development permits except those if fragile ecological areas. As they are bounded by the permit and appeal system they do not have quite as wide a scope as in Oregon, but none-the-less the bulk of the responsibility will be local.

The situation in Washington is all together different as all permits must be sent to the Department of Ecology for approval even after being accepted by local government. This results in much slower processing with a minimum 82 day period from the time of application to the start of construction. This compares with a minimum of 42 days in California.

After reviewing the local program systems it is clear that there is a move toward decentralization of authority once the management program has been approved by the state. All three states cite the advantages of being close to the people and being able to tailor the plans to local needs but only in Oregon

and California is this a reality. Once fully implemented, the plans in these two states will allow the local governments to administer their coastlines, subject to their local plans which have been certified by the state, in a way which they see fit. Washington local government would appear to have the same scope of authority but with the Department of Ecology reviewing all permits the local government authority is greatly diminished. Local government control would appear to be very beneficial, but with Washington being the only state to have implemented local control and at the same time giving no indication of wanting to give up its power of permit review there may be some underlying problems to be worked out which are not obvious on the surface.

One other important administrative comparison deals with the governmental responsibility for drawing up the coastal zone management guidelines. In all three states there was a specific body delegated with the responsibility of developing and implementing their programs. Rather than having a committee of all interested agencies try to take action, a lead agency, department, or branch was chosen to coordinate the management program. In Washington it was the Shorelands Division of the Office of Land Programs within the Department of Ecology, in Oregon it was the Oregon Coastal Conservation and Development Commission which was later incorporated into the Land Conservation and Development Commission, and in California it was the California Coastal Commission. With the appointment of a lead agency it was

clear where the responsibility for the program rested. This has resulted in organized planning mechanisms in each of the three states.

The final administrative comparison concerns the method of enforcing the coastal controls. In both Washington and California the systems hinge on the application for, and receipt of, a coastal development permit. With the exception of minor home renovations and some improvements and maintenance, a person wishing to undertake a project within the coastal zone must obtain a permit in both of these states. In Oregon there is no specific coastal permit but applicants for development must comply with all other regulations including those being developed by local government in the comprehensive coordinated plans for land use.

Permit decisions can be appealed in both Washington and California. In Washington the appeal goes to the Shoreline Hearings Board while in California the appeal goes to the regional commission. Once the local plans have been approved in California only those appeals which dispute a ruling in favour of the applicant will be sent to the regional commission. All other appeals will remain at the local level.

In conclusion, it seems appropriate to comment on the general philosophies adopted towards coastal zone management. Both Washington and California have designated a coastal zone and designed specific policies for its conservation and development. They have accepted a need for managing the coastal resources in a manner which is different from the other land resources of the

state. The major argument in favour of this management strategy is the common-property nature of many of the major resources of the coastal zone. Without government intervention, these resources tend to be overused or misused which results in their ultimate destruction. This situation is further complicated by the division of proprietary and regulatory responsibility for the resources of the coastal zone among numerous federal and state agencies. By specifically managing the coastal zone, the authorities in Washington and California, with support from the federal government, have set a precedent for the management of individual resource areas rather than adopting an overall resource conservation and development policy.

In Oregon the philosophy shifts to one of treating the coastal resources as part of the overall land-water resource base of the state. The coastal resources are not considered separately but as one component in a plan whose sum is greater than the total of its individual parts. By developing a state-wide approach to land use problems, all resources and all regions are incorporated, providing a unified base to make land use decisions from.

It can be seen that there are many possible approaches to the question of coastal zone management. Variations occur in the initial statement of philosophy, the development of guidelines, and in implementation. It is hoped that this chapter has presented and clarified some of these differences and will provide a basis for considering the application of some of the management techniques to British Columbia.

FOOTNOTES - CHAPTER 5

1. Interview with Don Peterson, Coastal Zone Specialist Washington Department of Ecology, Olympia: Jan. 31,1978.

2. Interview with Neil Coenen, Coastal Zone Specialist, Oregon Land Conservation and Development Commission, Salem: Feb. 2,1978.

3. Interview with Paul Minx, Public Information Officer, California Coastal Commission, San Francisco: Feb. 6,1978.

4. Interview with Neil Coenen, op. cit.

CHAPTER 6

BRITISH COLUMBIA

At present, coastal zone management policy in British Columbia has not been developed into a unified program such as the ones in Washington, Oregon, and California. This is, in part, due to the federal/provincial division of proprietary and regulatory rights over the many coastal resources discussed in chapter 1. However, there have been some examples of specific coastal management policy. The purpose of this section is to review these policies to determine the direction which is being taken in regard to coastal zone management in British Columbia. Once this present direction has been determined, some suggestions for future policy concerning our coastal resources will be made.

COASTAL COMMISSION ACT

The first major indication of concern for managing British Columbia's coastal resources occurred in 1975. At that time the British Columbia Coastal Zone Commission Act was presented to the Legislative Assembly as a private members bill by Harold Steves, Member of the Legislative Assembly for Richmond.[1] This Act proposed the establishment of a Commission consisting of persons representing government, industry, labour, environmental groups, and the general public which would have overall authority for the planning, zoning, and classification of lands within the coastal

zone in British Columbia. The coastal zone was defined as those coastal and tidal waters, foreshore watersheds, and adjacent uplands which directly or indirectly affect the coastal environment.

The Commission was to assess the land use capability of the coastal zone and from this inventory develop an overall plan for the conservation and development of the natural resources of the coastal zone. Once this was accomplished the regional districts within the coastal zone were to develop a coastal plan which would incorporate the guidelines of the Commission. The enforcement of the Act would be based on a permit system which required the developer to receive a land use permit before starting his project.

During the second reading of the bill in the Legislative Assembly, there was general support for its intent from the Members who participated. Despite this encouragement, Mr. Steves chose to withdraw the bill from consideration. In explaining this decision Mr. Steves stated:

> The minister of Lands, Forests and Water Resources, (Honourable R.A. Williams) has been carrying on some resource management in the area of coastal zoning in the province... While this is not right along the lines of the coastal zoning bill, as I have suggested, he has assured me that in the next couple of years - in fact, in the next year - they will make some decisions as to whether they should go the line of expanding the resource management teams in the coastal areas, or go along the lines of a coastal management authority, as I have suggested in this bill.[2]

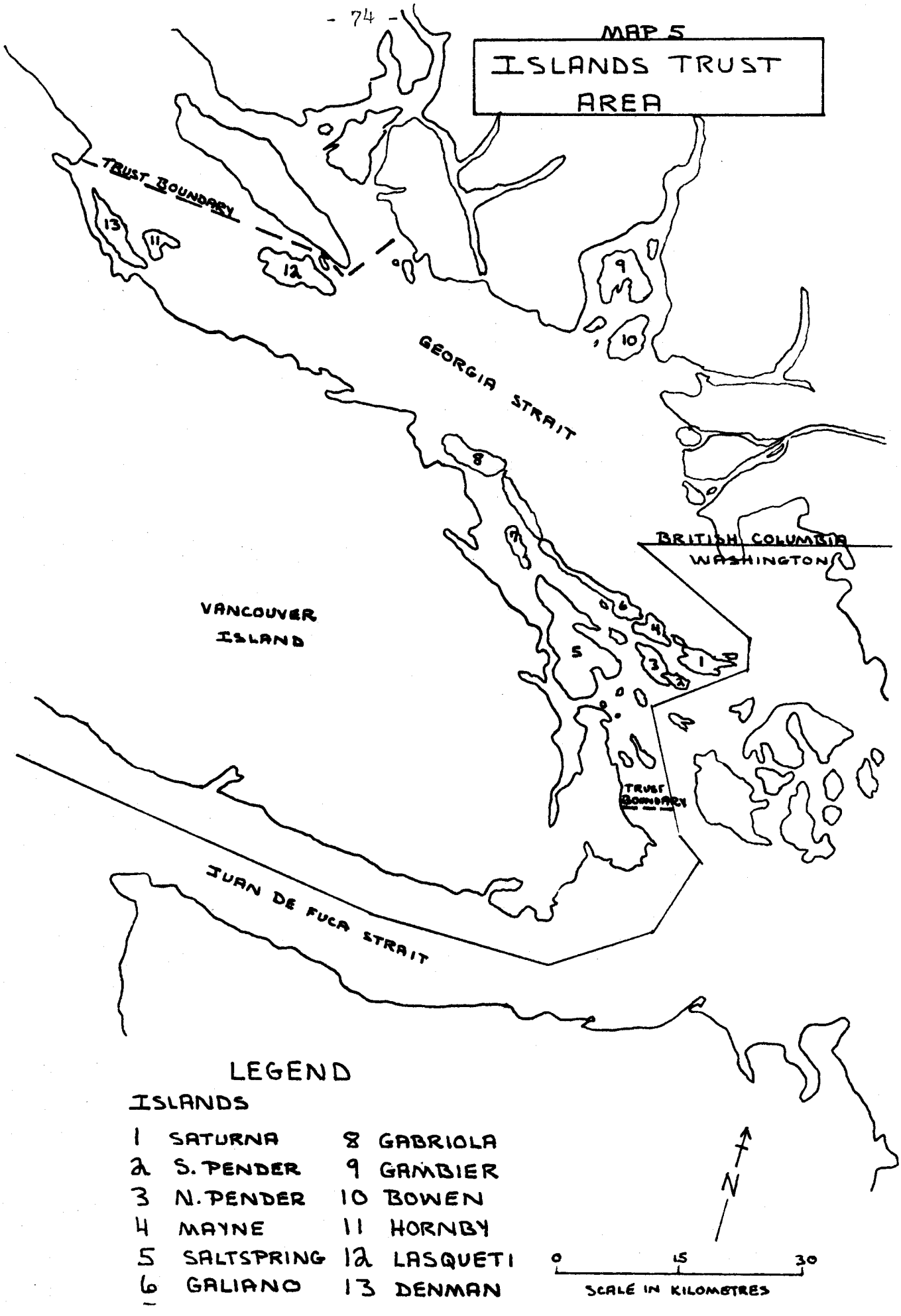
ISLANDS TRUST

It is now possible to study current coastal zone management policy to determine what direction has been taken in British

Columbia. The first example of a coastal zone management project in British Columbia is the work being done by the Islands Trust. Established by the British Columbia Legislature in 1974, the purpose of the Trust is to preserve and protect "the trust area and its unique amenities and environment for the benefit of the residents of the trust area and of the province generally."[3] The islands which are included in the Trust are indicated on map number 5. As well as the major islands shown on this map there are approximately 200 smaller islands within the Trust's jurisdiction.

The basis for planning has been the establishment of local trust committees on each of the major islands. These committees have developed community plans for their island which will serve as the basis for planning decisions. The community plan sets broad guidelines for the development of the islands which are incorporated into more specific regulations through the use of zoning by-laws. The development of these community plans has been under the guidance of the regional district for the island with the Islands Trust serving in an advisory capacity.

The role of the Islands Trust in the management of the islands in its jurisdiction is currently being revised. In 1977 the Legislature ammended the Islands Trust Act to transfer authority for all planning matters on the islands to the Islands Trust from the regional districts. This should result in a more uniform management policy as under regional district control regulations varied between the districts. However, the final decision on each


MAP 5
ISLANDS TRUST AREA
TRUST BOUNDARY
GEORGIA STRAIT
BRITISH COLUMBIA
WASHINGTON
VANCOUVER ISLAND
TRUST BOUNDARY
JUAN DE FUCA STRAIT
LEGEND
ISLANDS
1 SATURNA
2 S. PENDER
3 N. PENDER
4 MAYNE
5 SALTSPRING
6 GALIANO
8 GABRIOLA
9 GAMBIER
10 BOWEN
11 HORNBY
12 LASQUETI
13 DENMAN
N
0
15
30
SCALE IN KILOMETRES

island will still rest with the local trust committees which will preserve the individual character of each island.

Up until this point in time the role of the Islands Trust has been limited due to its advisory nature. With the recent addition of planning authority the Trust has the opportunity to play a much more decisive role in the management of the islands. It is hoped that this new opportunity will be carefully developed and provide a basis for future coastal zone management policy in British Columbia.

LAND MANAGEMENT BRANCH PROGRAMS

The Land Management Branch of the British Columbia Ministry of the Environment is responsible for the coordination and management of the shoreland resources of the province. In order to obtain an indication of the Branch's direction in terms of coastal zone management, several Branch programs will be reviewed. The 1976/77 Shoreland Management Program was focussed on the geohydraulic analysis of several coastal locations in order to develop a knowledge of the physical resource base before starting to develop planning techniques. In the next planning period, 1977/78, the importance of the physical shoreland inventory is maintained but there is also a move towards application of this information. An indication in this growing interest in applying the physical data to planning decisions is given in one of the goals of the program which reads in part, "Preparation of guidelines for the application of diagnostic biophysical shoreland

process data to Regional and Community planning efforts throughout the province."[5]

The first pilot project using this approach was conducted within the Capital Regional District on Vancouver Island. Within the boundaries of this District there are 210 miles of marine shore which is experiencing many of the problems associated with urban development, home construction in slump prone areas, septic tank effluent contamination, and the disruption of beach processes.[6]

An analysis of the physical nature of the District's shoreline was made using the Wolf Bauer classification system which links the physical shore type with the type of biological ecosystem existing on it. The basic premise behind this system is that once the physical and biological nature of the shoreline is understood, development can be located where it will conflict the least with marine shore environments. Each of the marine shore types in a selected portion of the Capital Regional District had controls placed on development which occurs on it. For example, on rocky shores the first 50 horizontal feet landward from the mean high water mark is to be kept free from development of any kind. In concluding the booklet which describes the Capital Region program there are some recommendations for future objectives of shoreland management in the Region; recommendations which provide an indication of the direction which the Lands management Branch is taking in relation to shoreland management. These recommendations include:

1. That a classification be made of the various shore types

and their physical and biological characteristics in the Capital Region.

2. That the land use demands for marine shorelands be identified.

3. That a regional coastal management policy be prepared allocating shoreland uses in a manner that will not conflict with the physical and biological characteristics of the shore resources.

4. That local municipalities incorporate marine shore management policies in community plans.

5. That an administrative framework be established to facilitate the coordination of federal, provincial, and local responsibilities over marine shorelands.

6. That a similar management program be developed for freshwater lakes, creeks and streams within the Capital Region.[7]

The emphasis on physical process and the delineation of marine shore environments is similar to the Oregon plan with its four coastal Goals. Using a system such as this the management responsibility is centered on restricting uses in a particular area rather than determining the overall suitability of coastal activities. This would result in an activity being judged not on its effect upon the coastal environment in general but rather upon its impact on a specific type of coastal environment.

ORDERS-IN-COUNCIL

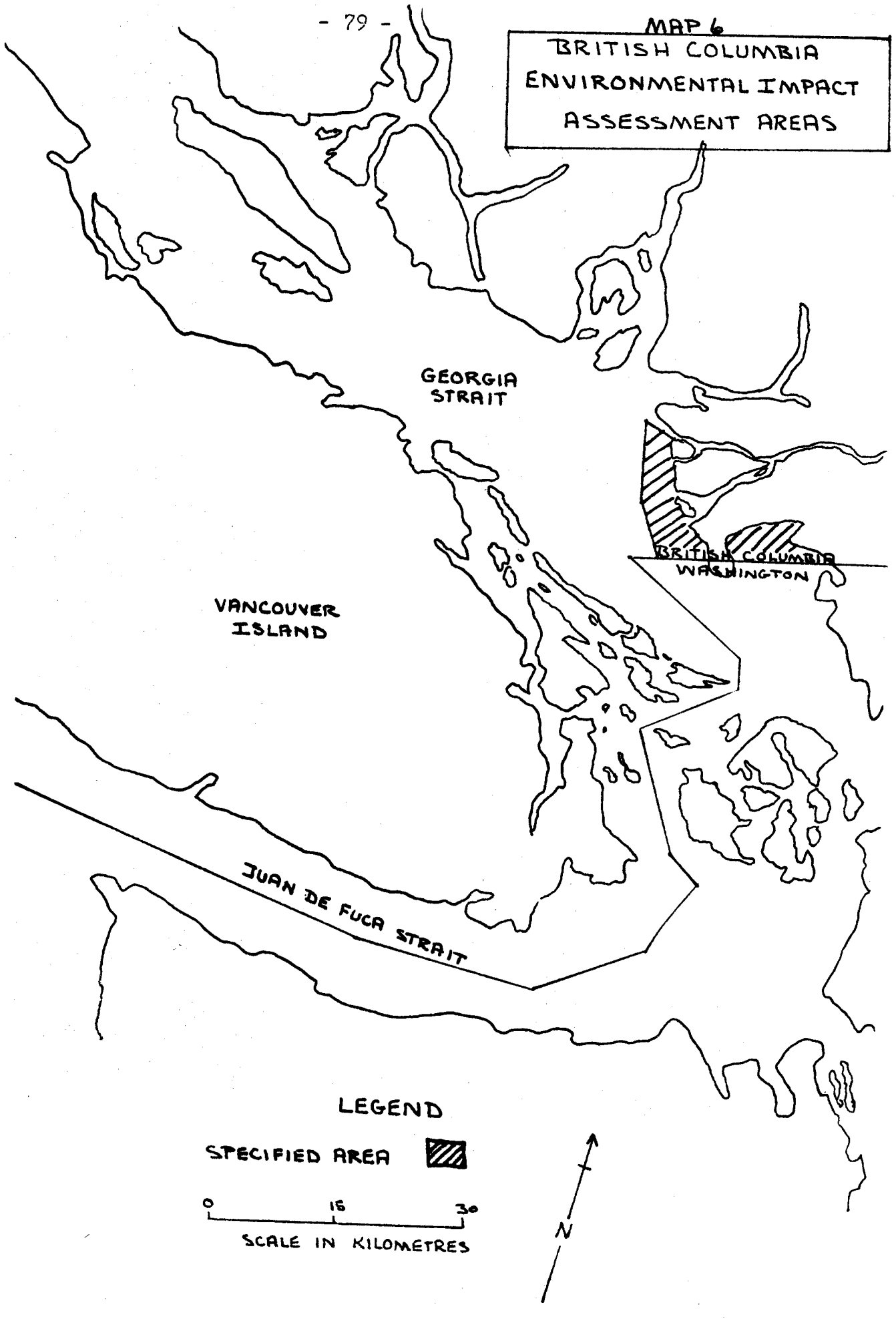
The next important example of coastal zone management policy has been the use of the Order-in-Council powers of the provincial government to restrict development in specified coastal areas. So far this power has been exercised in relation to two areas: 1) the common estuary of the Cowichan and Koksilah Rivers and

adjacent submerged lands of Cowichan Bay, and 2) Sturgeon and Robert Banks and Boundary and Semiahmoo Bays. These areas are illustrated in maps 6, 7 and 8. Within both of these areas, which are said to possess natural environmental significance to British Columbians, every proposed development is subject to a mandatory environmental impact assessment prepared by the proponent. Until the assessment is approved by the Minister of the Environment, no person shall:

1. approve a subdivision of land;
2. issue a building or development permit;
3. issue a lease on Provincial Crown lands;
4. issue a pollution control or sewage disposal permit;
5. approve a land use permit;
6. undertake any new or further construction, alteration, extension or renovation of any building or structure; or
7. undertake any dredging or filling of land.[8]

The Environmental Services Unit of the Land Management Branch is designated as the authority to implement the Order-in-Council guidelines on behalf of the Ministry of the Environment. The Unit has created administrative bodies in each of the two areas to determine the level of environmental impact study required to supervise the assessment study to ensure compliance with the terms-of-reference, and to make recommendations for approval or rejection to the Minister.

The type of approach being followed in the two Order-in-Council areas reflects a continued emphasis on the type of


MAP 6
BRITISH COLUMBIA
ENVIRONMENTAL IMPACT
ASSESSMENT AREAS
GEORGIA
STRAIT
BRITISH COLUMBIA
WASHINGTON
VANCOUVER
ISLAND
JUAN DE FUCA STRAIT
LEGEND
SPECIFIED AREA
0
15
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SCALE IN KILOMETRES
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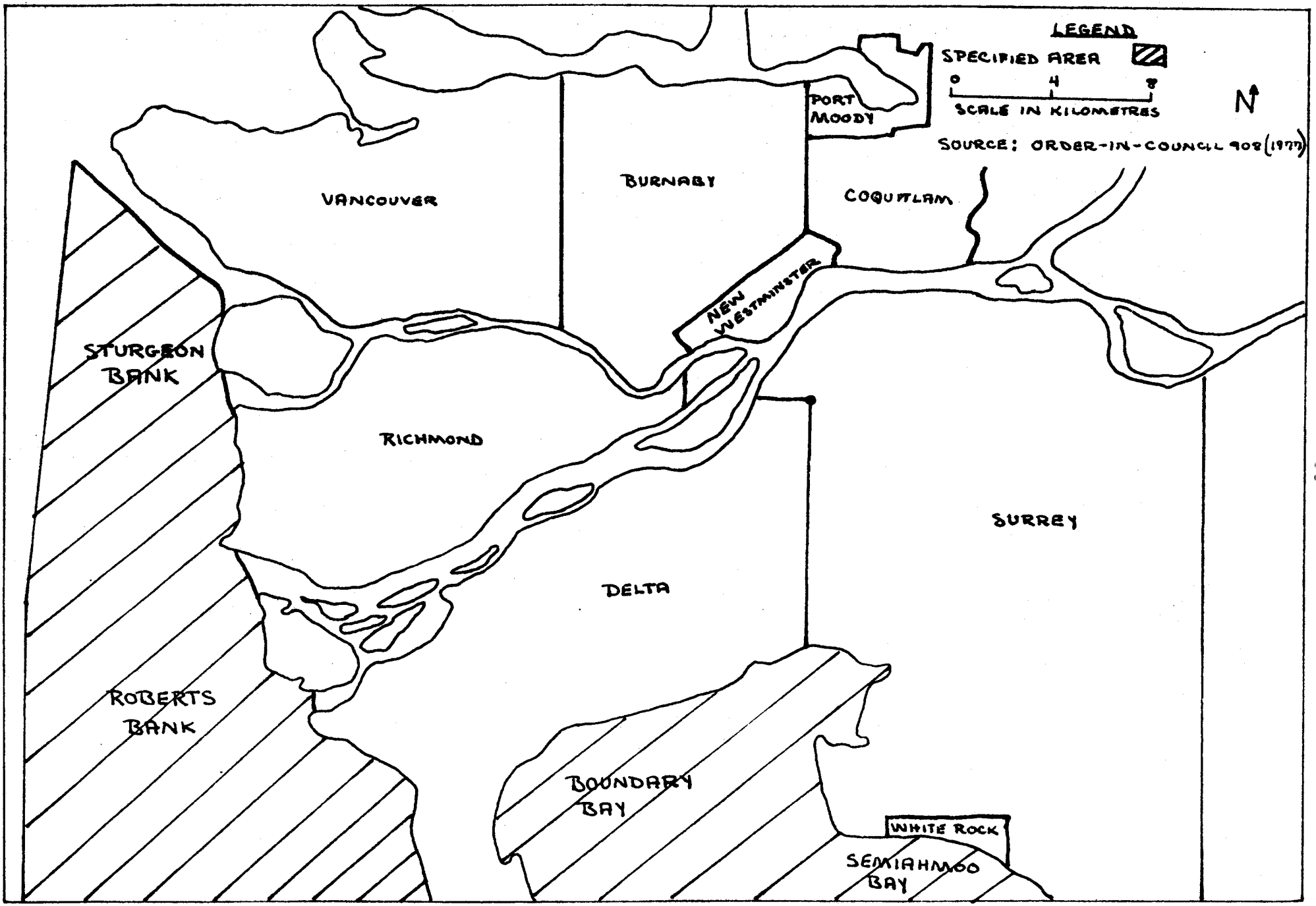
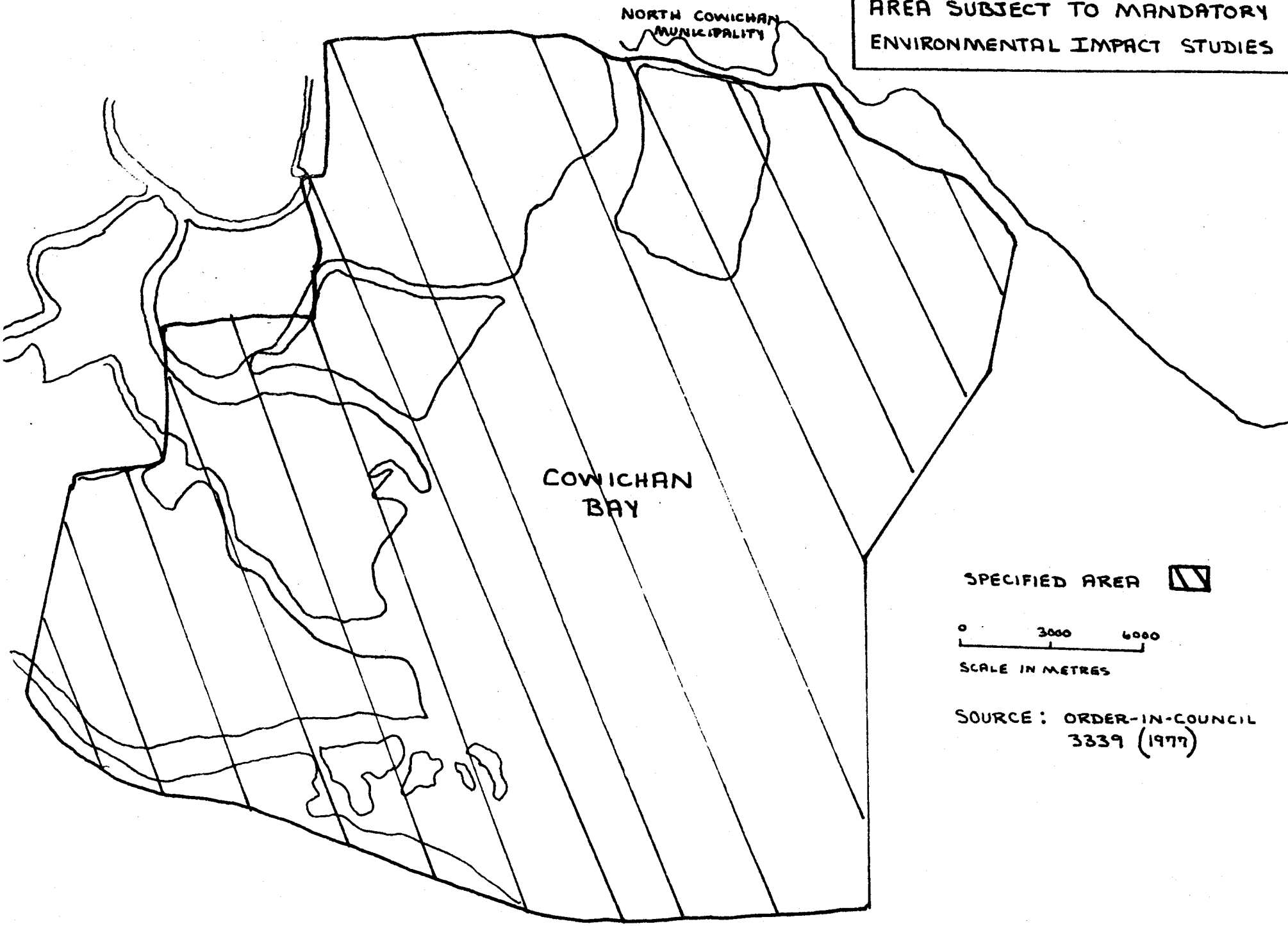
MAP 7

AREAS SUBJECT TO MANDATORY ENVIRONMENTAL IMPACT ASSESSMENTS



MAP 8

AREA SUBJECT TO MANDATORY ENVIRONMENTAL IMPACT STUDIES



SPECIFIED AREA

0 3000 6000

SCALE IN METRES

SOURCE: ORDER-IN-COUNCIL 3339 (1977)

shoreline area being considered for development as the major determinant in evaluating a project. There is an indirect preference for preservation, the impact of which will be determined by the evaluation of the required environmental impact assessments. By stating that these two areas possess environment significance to British Columbians, the theme of protection and conservation is being set. The question remains as to how British Columbia will deal with the management of coastal areas which are desirable for both development and conservation.

SHORE-RESOURCE MANAGEMENT CONFERENCE

Another indication of present policy direction in British Columbia can be derived from the proceedings of a provincial Shore-Resource Management Conference which was held in February of 1976. Participants in this workshop represented most of the agencies dealing with shoreland management on a provincial basis as well as some regional and federal interests. The major recommendation of this workshop was that there was need for a coordinative body to assist in the development of a shore resources classification, assessment, and management system.

At present, the Environmental Services Unit of the Land Management Branch has informally been given this responsibility but until the Environment and Land Use Committee, which coordinates provincial resource management decisions, appoints a lead agency to carry out the type of duties suggested by the workshop, the management of British Columbia's shoreland resources will remain

uncertain.

The other significant point to come out of this workshop was the growing emphasis on the biophysical knowledge of the shoreland area. One of the conclusions of the session reads, "The provision of a biophysical basis for planning is considered to be the appropriate essential approach to land and resource management."[9] This concern with understanding the environment and processes which will be managed, at an early stage in the planning process, will allow much better planning in the long run. All three of the states studied in this paper are improving their knowledge of coastal resources after the management strategies have been decided upon. Having the information base to begin work from will certainly create a much better foundation for British Columbia's management program.

Although the Coastal Zone Commission Act was withdrawn some of its proposed features are being implemented in present policy actions. These include the emphasis on understanding the physical nature of the resources being dealth with and the use of Regional government to enforce the management guidelines. However, the main thrust of the proposed Act has been ignored. If implemented, the Act would have created a Commission whose primary responsibility was the coordination of processes to manage our coastal resources. At present, there is no indication that such a coordinative body is under consideration. The management of British Columbia's coastal resources is still dependent upon informal cooperation between the many responsible federal and provincial departments

and agencies. Until this situation is resolved the management of our coastline will remain uncoordinated, and as a result, ineffective.

PRESENT LEGISLATION

The examples presented in the previous section have been cases where the goal in mind was specifically coastal resource management. However, in the statutes of both the federal and provincial government there are many other regulations which have not been designed for coastal management, but nevertheless could be used for that purpose. Due to the wide range of coastal resources, there are dozens of applicable regulations at all levels of government which are in effect and, without intent, constitute coastal zone management. For the purpose of this paper only the most significant of these which deal with upland crown lands will be discussed in order to gain an appreciation of coastal regulations which are already 'in the books'. The coordination of these powers could provide the basis for developing a unified coastal management program.

Within the broad range of upland crown lands, which are under the jurisdiction of the provincial government, there are several agencies armed with legislation which effects the coastal zone. The most important of these is the Environment and Land Use Act which, through the resolution of conflicts, regulates the adverse use of crown lands. The Environment and Land Use Committee Secretariat is the regulatory agency in charge of

administering this Act, a very important task as this Act supersedes all other legislation. The Land Act is also very important as it enables the Ministry of the Environment to reserve, allocate, lease, and dispose of lands for specific purposes. Other Acts which have partial jurisdiction over upland crown resources include the Pollution Control Act, Land Commission Act, Municipal Act, and the Forest Act in the provincial field; the Fisheries Act, National Harbours Board Act, and Environment Contaminants Act in the federal field. This brief list only provides a small sample of the type of existing legislation affecting one resource, but it is hoped that this will provide an indication of possible management strategies which are already available.

This concludes the assessment of the present status of coastal zone management in British Columbia. It has been shown that the program is in the early developmental stages but that the type of work being done will provide a solid base for future management decisions. It was also noted that there is a great deal of existing legislation which indirectly manages the coastal zone and could possibly be coordinated to provide a basis for coastal zone management.

POSSIBLE FUTURE DIRECTIONS

Now that the management strategies in Washington, Oregon and California have been analysed, and the present status of management in British Columbia described, it is possible to suggest some possible directions for future coastal zone management policy in

British Columbia.

The first point which must be made before suggesting some specific management strategies is a clarification of the author's view towards the necessity of coastal zone management. After studying the plans in British Columbia, Washington, Oregon, and California it has become apparent that coastal resources are of such a unique nature and under such intense development pressures that there is a real need for specific policies to ensure their proper management. This situation is further complicated by the division of authority over many of the coastal resources between the federal and provincial governments. If this management responsibility is incorporated with other land use policy the coastal resources do not receive the degree of protection necessary for their development and conservation; a situation which may well develop in Oregon and presently exists in British Columbia. As a result, the following thoughts and ideas are presented from a pro-coastal zone management viewpoint. However, rather than accepting the objectives of coastal zone management in the American systems the proposal strives for a balance between the forces of preservation and development. In Washington and California the main emphasis is on the development of the coastline while in Oregon the coastline's preservation is stressed. The proposal for British Columbia attempts to balance these two forces to accommodate all coastal uses and activities.

The first suggestion is that it will be necessary to make a full committment to the ideals and goals of coastal zone manage-

ment. If the coastlands of British Columbia are to be protected, an agency whose primary function is the management of coastal resources must be established to coordinate the development and implementation of a coastal plan for the province. This agency does not have to be a permanent administrative fixture as once the program is under way the enforcement of any regulations could be incorporated into other permit and licence procedures. The support for such an agency can be found in each of the three American states studied as all three established an agency to set up their program. In Washington and Oregon the initial agency has been successfully absorbed into a previously existing department for the purpose of enforcing the coastal guidelines.

Once this management agency has been established the first objective should be to inventory the resources of the coastal zone. An understanding of the biophysical basis of the coastal area is essential for the establishment of an effective management system. This inventory should not be limited to an ecological framework but must also include economic and social factors which impact the coastal zone. These include land use characteristics such as urban, agricultural, industrial, resource industry, recreation, and wilderness, as well as areas of cultural and historical significance.

Due to the diversity of the British Columbia coastline it will be necessary to create several different types of management areas, each of which will have varying restrictions on the types of use to be permitted. The goals of coastal management should be

to coordinate the trade-offs between conservation and development which are inevitable in a province which depends so greatly upon its coastal resources. The first step in this process will be to isolate all of the fragile ecological environments, as well as those of cultural significance, into areas which will prohibit all types of development. The trade-off process always works against the natural or cultural resources so these must be protected before areas for development are designated. Too often we have allowed development to occur in irreplaceable environments which are felt to be numerous and extensive only to find that they are not as numerous as once thought. This process could easily occur along the coast with marshlands and wetlands being dredged and filled without reference to their scarcity and value.

After these selected areas have been designated, the rest of the coastline can be categorized into areas such as rural, urban, and natural. Within each of these areas there will be varying degrees of restrictions depending upon the present and proposed types of activity, along the lines of the Washington state environments. This will result in no activities being totally restricted, but directed to areas with other compatible uses. The industrial and commercial development which is crucial to the economy of the province will be allowed to use the coastal zone, but only in areas where their use will not interfere with fragile environments and recreational areas. The key to managing the conflict between conservation and development is to

designate areas for each type of use. By setting aside areas for the entire spectrum of coastal development possibilities, all types of activities will know where and under what conditions they can locate.

As mentioned earlier, it is proposed that the enforcement of these regulations would be accomplished through existing permit and licence requirements. Rather than creating a specific coastal permit, the coastal controls would be incorporated into municipal and civic building and zoning regulations. In meeting the requirements for a building permit, the developer will automatically have to comply with the coastal regulations. In addition, the guidelines could be included in the provincial water licence and pollution control permit procedures which would regulate another level of development. All federal and provincial agencies would be expected to revise their procedures to meet the coastal zone requirements.

In conclusion, it has been shown that the present management of coastal resources in British Columbia is dependent upon an unorganized collection of legislation which is administered by many provincial and federal government departments and agencies. As a result of this situation, there has been little attention paid to the development of a specific coastal zone management policy for the province. The few attempts at coastal zone management which have been made have been isolated and small scale.

In light of this situation, the author recommends the establishment of a British Columbia Coastal Zone Commission whose

function will be the delineation of a coastal zone and the development of policies for its management. The decision to establish such a Commission must be made in the near future so that we can develop our coastline in an organized, controlled manner.

FOOTNOTES - CHAPTER 6

1. Province of British Columbia, Debates of the Legislative Assembly (Hansard), 5th Session 30th Parliament May 15,1975.

   Province of British Columbia, First Readings of the B.C. Legislative Assembly, Bill 14,1975.

2. Province of British Columbia, Debates of the Legislative Assembly, op. cit.

3. The Islands Trust, A Review of the First 15 Months of the Islands Trust (Victoria: The Islands Trust,1975). p. 3.

4. Interview with Lorna Barr, Reasearcher, Islands Trust, Victoria: April 4,1978.

5. British Columbia Lands Management Branch, British Columbia Shoreland Management 1977/78 Program (Victoria,1977.)

6. Capital Regional District Planning Department, The Marine Shorelands of the Capital Region (Victoria, 1977), p.1.

7. Ibid., p.12.

8. British Columbia Order-In-Council 3339(1977).

9. British Columbia Land Management Branch, Proceedings of the Qualicum Beach Shore-Resource Management Conference (Victoria,1976), p.4.

ADDENDUM TO CHAPTER 6

BRITISH COLUMBIA*

Since the completion of this paper in May 1978, the author has had the opportunity to gain a better insight into shore management policy in British Columbia as a member of the staff of the Environmental Services Section of the British Columbia Ministry of the Environment. Although none of the statements made in relation to the work of the Environmental Services Section are factually misrepresented in Chapter 6, it is felt that some clarification will increase the reader's understanding of this Section's role in British Columbia's shore management policy.

The major shore management involvement of the Environmental Services Section continues to be the administration of Orders-in-Council 908 (1977) [Fraser River Estuary and Delta] and 3339 (1977) [Cowichan and Koksilah River Estuaries]. Although the Section has been transferred from the Land Management Branch to the Water Investigations Branch of the Ministry of the Environemnt, the responsibilities in regard to the administration of the two Orders-in-Council remain intact.

In both the Fraser and the Cowichan-Koksilah areas, there are major inter-governmental studies currently underway which are

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*The editorial views presented in this addendum to Chapter 6 are solely those of the author, and should not be interpreted as representing the viewpoint of the British Columbia Ministry of the Environment or of its Environmental Services Section.

attempting to develop management plans which will adequately resolve the conflicts between preservation and development. Until these management plans are complete, the two Orders-in-Council are designed to evaluate any proposals for development within the boundaries of their jurisdiction.

Evaluation of proposals for development within the Orders-in-Council boundaries is the responsibility of the Environmental Assessment Committee and the Environmental Steering and Review Panel. Each of the Orders-in-Council has its own Environmental Assessment Committee, while the Environmental Steering and Review Panel is selected on the basis of the expertise required for the evaluation of each proposal. Both bodies are composed of government representatives from agencies with particular responsibilities and expertise related to the effective management of the areas in question. The purpose of the Assessment Committee is to determine the level of assessment which is required for each proposal, while the Steering and Review Panel sets the terms of reference and reviews the assessment submitted by the proponent. The decision of the Steering and Review Panel is reviewed by the Assessment Committee and a recommendation is submitted to the Deputy Minister of the Environment.

In addition to the Orders-in-Council administration, the Environmental Services Section also represents the Province on federal Environmental Assessment and Review Panels which deal with proposed development in shore areas. The Section is also called on to review environmental impact assessments which have

been completed on projects proposed for the shore areas of the Province. In both of these last two representations it is recognized that the Environmental Services Section can provide an overall analysis of a project from the generalized shore management viewpoint, rather than a specific analysis which could be provided by an agency, such as the Fish and Wildlife Branch of the Ministry of Recreation and Conservation.

In summary, the Environmental Services Section continues to be the major facet of British Columbia's shore management policy through the administration of Orders-in-Council 908 and 3339 (1977) and through the provision of shore management analysis where required by the Province. However, although an effort is being made to coordinate the shore involvements of agencies throughout the Provincial government, the attempt has yet to provide a solid basis from which to develop an effective shore management policy for British Columbia.

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