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ENVIRONMENTAL MANAGEMENT FOR PUGET SOUND:
CERTAIN PROBLEMS OF POLITICAL ORGANIZATION
AND ALTERNATIVE APPROACHES

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Introduction

This paper is an attempt to describe alternative means by which the uses of water and the adjacent land of the Puget Sound region can be organized and managed. In the process, attention will be given both to relevant literature concerning environmental policy and management and to structural arrangements as they either have been proposed or currently exist in managing water resources. However, some unique aspects of the Puget Sound situation may limit the application of standards, forms, and practices developed elsewhere. First and most basic, because Puget Sound is an extremely large estuary the concepts generally accepted in estuarine management (in itself a small and new-enough field) may apply only in part or not at all to Puget Sound in either a biophysical or a socio-political-economic sense; both the "estuarine dynamics" and the pattern-of-use demands may be at variance. Puget Sound, in fact, exhibits the constantly interrelated characteristics of estuary, bay, and coastal region combined.

Furthermore, being a saltwater body, it is somewhat outside the scope of most American water resource management, organized primarily around the river-basin concept which often necessitates interstate cooperation and structural arrangements. Although the Canadian province of British Columbia abuts the northern edge of the Sound's adjacent waters, the management of Puget

Sound itself presents what should be a simpler requirement for single-state action.

Finally, while there is some public concern over environmental problems in the Sound region, the condition of the Sound is not yet of critical or disastrous proportions in the same sense as Lake Erie or the San Francisco Bay. Because population is of lower density and because the state and various counties and communities within the Puget Sound area have been somewhat responsive to efforts to protect the quality of the Sound, no major crisis has yet occurred. On the one hand, this circumstance offers the region lead time to structure and tool itself for more comprehensive water quality and resource management and thus to avert a comparable debacle. On the other hand, if there is no crisis, support for pre-emptive steps to deal with environmental deterioration is extremely difficult to mobilize. Even if solutions can be agreed upon for the management of the Sound, their political implementation would still remain a formidable problem.

The need for some kind of management, even in present conditions, has already made itself felt. The Puget Sound region has experienced a period of considerable growth, both in economic and demographic terms--a trend that is likely to continue. This growth already has placed heavy and sometimes conflicting land and water use demands on the Sound resulting in some damage to the biophysical environment. Any estuary is subject to hazards, both natural and man-made, to its ecological balance. The man-made ones appear to be the more critical; man apparently acts with greater facility to counter natural threats to his environmental well-being than to cease, redress, or undo the damage caused by his own activities. Puget Sound, then, is vulnerable to many demands and problems, current and potential, particularly as a consequence of its size and variety.

A brief listing of such uses and problems will serve here to suggest the complex interrelations implicit in exploitation of the Sound. Among potential activities and uses are: waste disposal and dumping; exploiting and processing of mineral and other nonliving resources; power-plant construction; recreation; commercial fishing; shoreline reclamation and development; transportation and navigation; port development and redevelopment; conservation and preservation of the natural environment. Among problems which must be anticipated are water pollution, air pollution, engineering modification of flow and tides, dredging and filling, habitat and wildlife destruction, beach erosion and loss, ecological upset, urban waterfront decay, and land use and development conflicts. Such activities often have spillover effects on other users, and redress is a highly difficult proposition.

At present, such conflicts are managed inadequately, on a scale too small to internalize the spillover effects, and usually through the courts--a time-consuming process of too limited focus for the task of regional (or even local) policy-making.¹ Thus, there is an apparent need for organizing the Sound region, politically, for management of its waters and adjacent land: to manage more flexibly the effects of externalities and conflicts of usage, and to provide a public policy-making mechanism to integrate the competitive and consumptive uses of the resource.

Before the organization of such a mechanism is undertaken, adequate and reliable information about the Sound itself must be provided by multidisciplinary research to provide dimensions for basic policy decisions. The report prepared by the University of Washington for the Federal Water Pollution Control Administration (August 15, 1969) under the direction of Prof. James Crutchfield noted that the greatest threat to an optimal use of the Sound is posed by "the failure to identify and evaluate estuarine effects of land use, not

only on the waterfront, but upstream."² Elsewhere in the same report, as well as in much of the literature on marine and water resources management, needs are noted for research, surveys, and training, and for a mechanism to set them in motion. A major task of any governmental arrangement for managing the Sound must be to generate its own information-producing activities while simultaneously tapping other sources; this includes the capacity to assemble, to store, to retrieve, and to disseminate information. It should be noted that the cost of such information is likely to be high, and its justification may prove to be difficult.³

Some General Organization Criteria, Principles and Considerations

Certain general organizational criteria for environmental management should be considered before discussing specific proposals in relation to the Sound. Kneese and Bower suggest four widely applicable criteria for water-quality management: (1) the ability to evaluate and implement a wide range of alternatives; (2) the ability to integrate related water and land uses; (3) the ability to articulate private and local governmental decisions to increase efficiency; and (4) the opportunities for affected parties to influence decisions.⁴

In an optimal sense, an agency or system established for environmental management and control should be capable of executing the following functions: (1) selective and continuous monitoring of the environment to identify problem areas and to provide a data base for projections and time-series comparisons; (2) research and planning to anticipate emerging problems and to counter them by technical and policy innovations; (3) identification and consideration of differences in value preferences in determining the public interest in policymaking; (4) development of standards and criteria as general guidelines

to policy regulation; (5) coordination of activities of agencies having major and "peripheral" consequences for estuarine management; (6) establishment of necessary administrative and control mechanisms; and (7) generation of adequate funding.

In particular organizational situations, other points can be suggested. Consideration should be given to separating basic research activities from policy formation and enforcement without entirely isolating each from the other. If personnel and other resources are used interchangeably for these two functions both may suffer, but especially research due to problems of bias and the need for continuity.⁵ The organization also should be as flexible as possible to permit the extension of policy to differing conditions, circumstances, and needs. Such a requirement, again, tends to make the political-administrative approach preferable to a judicial one. Furthermore, the personnel and procedures of the organization must be oriented to an integrated interdisciplinary approach employing the physical, biological, and social sciences. Such organizations must be sensitive to technical and economic environmental interrelationships and to concepts of integrated resource uses.

The organizational arrangement also needs to provide unity of approach in both a territorial and a functional sense. The consumer as well as the producer must be represented in its efforts to identify the public interest. Thus, while the management system should be able to exercise adequate authority at the appropriate area-wide scale, it should also be prepared to initiate a process of bargaining where it otherwise might not have occurred by impelling parties to give attention to problem areas.

Several basic alternative forms are available for environmental policy-making. The options involve federal, state, and local units and their

interrelationships. The following sections will consider each of these three levels as well as regional possibilities.

It is traditional to think of governmental structures in America in terms of federal-state relationships. However, in fact, there are three interacting levels of government--federal, state, and local. While the formal-legal status between states and their communities is unitary, localities can and do act with a good deal of autonomy, particularly in their participation in federal programs. Thus, this three-tiered relationship is a convenient and an apt starting point from which to examine the questions of who should manage the environment and what form the organization should take.

Local Governments

Cities, special districts, and counties are the units of smallest scale likely to have consequences for estuarine conditions. These localities have traditionally been of paramount importance in matters of water quality, particularly in land use regulation and in the provision of water and waste disposal systems. The customary dilemma of local jurisdictions in environmental questions, as in other political problems, is that their scale is often too small, or their boundaries do not fit the region necessary, to internalize all essential externalities. This problem is compounded when established governments or political interests resist necessary adjustments of boundaries or establishment of new agencies.

The scale problems of local governments in estuarine management are similar to those in the organization of metropolitan areas. Essentially they revolved around the question of who benefits, how and when, and under which kinds of scale arrangements.⁶ In a relatively decentralized system,

residents might be able to order matters better and more flexibly to suit local tastes and needs. In a more centralized arrangement, flexibility, choice, and preferences may be lost to uniformity and to decisions of those regarded as outsiders; however, centralization does provide a mechanism for handling externalities and for bringing all relevant interests into the decision arena.

Both sides of the debate have theoretical merits. For example, no one boundary is optimal for all decisions affecting the same estuary. Land use regulation, the treatment of effluent, and the management of public recreational facilities each might well be organized at different scales.

Decisions concerning the centralization or decentralization of functions must be made both empirically and pragmatically, and no small balancing of values enters the process. Some values will be lost in either arrangement. Most of the literature on the subject eschews local jurisdiction and the fragmentation of local authority--and for good reasons both theoretical and historical. The Commission on Marine Science, Engineering, and Resources probably expresses the prevalent view when it says, "With increased awareness and consideration of the marine environment for health, recreational, ecological, aesthetic, and psychological purposes, the limitations of local government in providing adequate planning and regulatory practices become increasingly pronounced, and concepts of regional or state-wide government become desirable or necessary."⁷

Nonetheless, environmental issues encompass an extremely broad functional scope, and local government is capable of managing some of its environmental problems. The Municipality of Metropolitan Seattle (METRO) is a subcounty, multicity governmental unit formed to collect and treat sewage on a regional basis. It has had considerable success in improving the sewage situation in and around Lake Washington and "may well serve as a model for other metropolitan areas bordering on the Sound."⁸ There is no question

that local jurisdictions can and will be important components in a system of environmental policy-making and management. However, the Metro experience has been exceptional and there is little to indicate that the precedent it sets will become a pattern elsewhere in Washington State, including the Puget Sound Region. Furthermore, the Metro arrangement might not be even transferrable elsewhere. Finally, local governments have been typically either unable to or unwilling to engage in comprehensive environmental management. The inability has been due primarily to insufficient scale and inadequate resources, the unwillingness to a greater preoccupation with values which are often inimical to environmental management. Calculations of a given local government's ability to handle environmental problems must take account of these reservations.

If local government is considered generally inadequate to manage an environmental resource or system, the next governmental level to approach would logically be some form of intrastate regional arrangement. However, the examination of such structures will be postponed until both the state and the federal levels have been discussed.

State Government

Environmental management literature tends to view the role of the states with a mixture of trepidation, hope, frustration, and expectation. Past performances of states have been regarded as less than adequate.⁹ Many state functions exert a strong impact on environmental resources, yet state authorities generally have been slow to enact comprehensive or integrative legislation, or to implement existing statutes effectively, for reasons that are technical, economic, and political. On this record, there is some reluctance to nominate states as the environmental managers of the future.¹⁰

However, it also appears impossible to ignore this level of government or to consider by-passing it entirely. Besides the growing political, popular, and academic pressure to reinvigorate the state, there are sound reasons for allocating a central role in environmental policy-making to this level, especially in western states. In most instances, including the Puget Sound Region, the state is large enough to internalize most spillover effects. In addition the state can maintain and further both federal and state objectives.¹¹ As applied specifically to the State of Washington, the Crutchfield report suggests that this is the appropriate unit to exercise control over the management of the Puget Sound system.

Even while the Marine Science Commission suggests state-managed systems, it appears ambivalent as to the primacy of the state or the directness of its control. For example, in summarizing its recommendations for coastal zone management, the Commission suggests thirty-one courses of action, of which twenty-one call for federal action, four for state action, and six for joint action or activity at either level. It might be concluded that, even allowing for the perspective of federal authorship, this is less than a ringing endorsement of the state's role in managing coastal lands and waters.¹²

In its discussion the Commission considers a number of possible arrangements for state-oriented management systems. Among these are: (1) a state-wide agency with direct management responsibility; (2) a state agency with state-wide authority over water use and shared authority with local governments over land use; (3) state-established local-regional agencies; (4) state-established special districts (which would cause minimal disturbance of existing units, but which might have funding problems while adding to the proliferation of existing units); and (5) a state-established multipurpose regional agency, which would be more comprehensive and better able to weigh various needs and

to balance, coordinate, and accommodate competing demands for use, but which would also meet heavy resistance from those established agencies and units which would either be absorbed, superseded, or modified. After reviewing these options, the Commission recommends yet another type: a federally established in-state "Coastal Zone Authority," having power to plan, regulate, acquire, and develop. In endorsing this approach the Crutchfield report suggests that both unity and some independence from state intervention would be given the zonal authority through federal funding and review. The Crutchfield report also approvingly notes that such an authority would avoid any tendency to link estuarine with non-estuarine activities.¹³ However, this point raises a troublesome question (which will be examined later in greater detail): if problems of water quality management differ between saltwater and freshwater environments, the effects are nonetheless interrelated; a geographically limited scope can be just as arbitrary and insufficient as a functionally limited one. This concern could be applicable to any regional entity, and the coastal zone concept is essentially a regional arrangement in spite of its apparently direct and formal ties to the state.

Therefore, the Commission proposal is not essentially different from that of Kneese and Bower, who conceive the states' role largely in terms of organizing regional agencies and providing technical and financial assistance. Kneese and Bower suggest that the state operate directly in those areas where lack of size or lack of development disqualifies the establishment of a regional agency (a concept which could apply to portions of the Puget Sound region, but not to the region as a whole). This restrictive view of a direct administrative role of the state is probably the prevalent one among scholars, but it does not deny that specific conditions may make the state the desirable operating agency. Any future exploration of those conditions should be

accompanied by a rigorous comparison with the strengths and weaknesses of various federal-state-local forms as set forth or assumed by the Commission.

Federal Involvement

The federal role is conceived in terms which vary from a limited to a total administration. Usually emphasized is the federal ability to provide direction, unity, information, technical assistance, and money. It is seen by Daniel Grant as the entity best able to give direction in resolving complex conflicts of interest over environmental issues,¹⁴ an attitude which typically assumes that many state governments are unlikely to find or to apply a unity of conception among or within themselves. Even when a regional organization is proposed, as with Earl Finbar Murphy's "problem shed" approach, overlapping "sheds" would still necessitate national coordination.¹⁵ From time to time, an even stronger federal role is suggested, as by Nathaniel Wollman, who predicates hierarchically structured boards of environmental experts having power equivalent to the military establishment.¹⁶ Such a proposal may trigger schizoid reactions among those who seek drastic action to improve the environment but to whom large, bureaucratic "establishments" are anathema. Furthermore, it raises the spectre of "rule by expertise", a technocracy too far removed from the people and democratic political processes. The fears may not be justified,¹⁷ but they do indicate the awkward position of the federal government. By and large, it has probably been more sensitive to growing environmental problems than have the other levels of government, and it has access to greater resources to apply toward the management of such problems. However, it is handicapped by its insulation from the mass of decisions which daily affect the environment.

The foregoing is not to suggest that the federal government has no present role in environmental management, particularly regarding water resources. It does; and therein lies another problem of the federal role. Several federal agencies are already involved in the management of water resources, and this in itself complicates unity of policy. As the Crutchfield report suggests, the functional alignment of many federal (and state) agencies results in an inability of agencies to relate their own missions to those of other agencies.¹⁸ Kneese and Bower point out that the manner in which an agency approaches problems and their solutions is markedly influenced by its perception of its own mission.¹⁹ Furthermore, agencies have often shown a jealous and competitive unwillingness as well as inability to coordinate their activities with each other.²⁰ This suggests that the federal government perhaps should not bear primary responsibility in managing most environmental policies. Such is probably the case with Puget Sound. However, the existence in the region of federal activities and federal agency roles cannot be overlooked and may provide either conflict or assistance for any policy-making arrangement at the state, regional, or local level.

Regional Forms

We turn now to the alternative of regional government for environmental management of water resources. The concept of regional government, consistently gaining prominence, has a number of attractive features. When a regional organization can be established to govern a geographically homogeneous "problem shed," it offers a coherence, a relevance, and a propriety found in few more traditional jurisdictional arrangements. Furthermore, by its relative newness and the very absence of precise definition the regional approach offers unique possibilities for experimentation and flexibility.

The "region" as a geographically defined area of problem solving is new in a relative sense only. In this country and abroad, tradition and precedent underlie current proposals. Interstate river valley and basin organization has been utilized for several decades. Proposals for metropolitan regional organization have been frequently made, infrequently adopted. In addition, intrastate regional authorities have existed for some time in the form of single-purpose special districts and agencies,²¹ although current proposals are shifting the emphasis to multipurpose organizations to manage regional environmental problems, including those of salt-water bodies, within the state.

This section will examine the approaches to regional water quality management as practiced by a number of river basin commissions. Two different approaches to regional planning and/or management will then be examined--the San Francisco Bay situation and proposals and the Puget Sound Governmental Conference--as providing some insight into a potential regional approach to managing Puget Sound. In the next section, a number of considerations and questions regarding the Sound itself will be approached.

Kneese and Bower describe four relatively successful approaches to managing water quality, one each in Germany, England, France, and the United States.²² In Germany, the Ruhr-area Genossenschaften (river associations) have broad powers to implement a wide variety of measures. They are governed by an Assembly and a governing board of directors which represent businesses, industrial establishments, and similar facilities; communities; and the public reservoir management agencies within the area. The Assembly elects the board of directors and approves and disapproves plans, methods of calculating levels of changes, and the assessment of charges. The governing board

maintains a technical staff to monitor and investigate the environment, and plans and proposes policy. Financing is accomplished through charges on waste disposal which make the system virtually self-sustaining.

The British and French arrangements are more centrally organized. The policy in England and Wales is set by the central government, then administered by regional River Authorities which have broad functional powers. Financing is effected through a combination of grants and loans from the central government and of user charges and fees.²³

The French basin agencies are likewise creations of the national government; they are, in effect, regional branches of the national government whose function is to implement regional management programs, under national coordination and supervision. At the basin level, private users, local communities, and the administration are represented in an organization whose policy-making function is limited to advice, with execution only after approval by the national government. Organizations may also be formed at the subbasin regional and local levels, although this provision has yet to be carried out. The agencies have broad discretionary authority, particularly in the levying of charges at the basin level to induce private and local control of waste discharges. Financing is effected through these charges and through national subsidies.

In the United States, the Delaware River Basin Commission is the only such arrangement fully organized for purposes other than relatively specialized tasks or high level planning and study. A multipurpose federal-interstate compact agency, the Commission has five members--the governors of each of the four basin states and the Secretary of the Interior. Each member appoints a voting surrogate more specifically knowledgeable in water quality management. The Commission has broad powers of planning, review, design, construction,

maintenance, and financing, although these capabilities have yet to be forthrightly exercised or implemented. Funding may be accomplished through a variety of means , including federal and state subsidies, federal-state cost-sharing arrangements, borrowing (through bonds), sale of products and services, and application of special benefit assessments.

The experience of the foregoing approaches to water resource control, limited though it is, suggests that the regional concept is a feasible one. Although the agencies are somewhat narrowly circumscribed as to purpose, their range of authority is sufficiently broad to permit the making and administering of regional policy while still taking account of more localized interests and needs. Of particular interest are the varied ways of raising revenue and of providing representation for interests affected by regional policy. While these specific techniques may not be particularly desirable for Puget Sound (functional representation seems to have limited appeal in the United States, at least in a formal-legal sense), their variety suggests that some strategy could be devised for managing the Sound on a regional basis.

San Francisco Bay

The San Francisco Bay area presents a particularly useful focus for the question of regional organization. One governmental agency, the Bay Area Conservation and Development Commission (BCDC) was established in 1965 with jurisdiction over part of the Bay shoreline. Since then, a number of studies and reports have proposed the creation of a comprehensive regional government for the entire Bay Area.

Over the past eight years, four study commissions have been prominent in this activity: the Bay Area Transportation Study Commission (BATSC, set up in 1963), the Bay Area Conservation and Development Commission (BCDC, 1965), the San Francisco Bay-Delta Water Quality Control Program (Bay-Delta, 1965), and the Joint Committee on Bay Area Regional Organization (BARO, 1967). The work carried on by these groups since their inception has been excellently summarized by the staff of the Senate Committee on Governmental Efficiency of the California Legislature.²⁴ A brief review of recommendations made by the study commissions may suggest organizational possibilities, options, and questions for the Puget Sound region.

BATSC was organized primarily as a transportation study, but it recommended that a multipurpose regional organizational structure be set up for the Bay Area, within which regional transportation functions could be carried out. In the event such a structure did not materialize, as seemed likely, BATSC recommended a Bay Area Metropolitan Transit Authority with responsibility for study and planning, for review, comment, and coordination of both federally and state-funded programs and projects, and for policy-making regarding Bay crossings, rapid transit, and metropolitan highways. The MTA would approve plans, capital improvement programs, priorities, location, and design, and would oversee and conduct activities of construction, operation, and maintenance. BATSC also recommended that the members of the MTA be appointed rather than elected; of the twenty-five members, eighteen would be appointed by the eighteen Bay Area Assemblymen and seven by the Association of Bay Area Governments (ABAG).

The mission of BCDC was oriented to diking, dredging, and filling in the Bay. Recommendations by BCDC did not detail the internal structure of the proposed regional organization but simply suggested that an administrative

staff be empowered to control filling and dredging (though a permit system, with public hearings financed by applicants, and having mechanisms of inspection). Other functions would include planning, engineering and ecological consultation, engineering review and inspection, and legal and technical assistance related to recreation and/or wildlife lands. BCDC proposed that the regional unit might be financed through a variety of public sources (subsidies and appropriations from federal, state, and local governments, in addition to the sale of regional bonds), through some private sources (in the process of development), and perhaps through the levy of a small property tax. It was also suggested that if the regional unit were to be multipurpose in nature (which the Commission considered preferable) it might then avail itself of sales, income, and/or excise taxes.

The Bay-Delta study was also directed toward a specific function, in this case the control of water quality--i.e., antipollution. As did the two preceding studies, Bay Delta recommended the establishment of an independent regional agency, preferably multipurpose. Bay Delta considered and rejected two alternative structures: a regional organization based on joint exercise of power by existing entities, which it felt to be lacking in enforcement capacity; or a state agency which it judged to be less responsive to specific regional needs, besides facing funding problems in the morass of the state's appropriations process. A variety of sources of income was proposed for the regional unit, together with mandatory powers and functions to include planning, ownership, construction, maintenance, design, regulation, and review of systems and programs.

BARO's mission was to recommend a system of political management for the Bay Area if it felt a regional government was needed. The outcome was a proposal for a nine-county multipurpose independent regional government for the area. The powers and functions suggested by BARO were drawn largely

from the three previous plans, with the additions of the power to acquire and operate regional parks and open spaces, to coordinate major utilities, and to serve as a kind of clearing house in the conduct of programs of research and development and of manpower training and placement. The regional entity would also be charged with the task of designing and enforcing a comprehensive regional plan, to be completed within five years which would consist of the following elements: (1) relevant physical, social, and economic factors related to area growth and development; (2) consideration of major problems with respect to the factors just cited; (3) priorities, patterns, characteristics, and probable consequences of future development; (4) definition of specific programs necessary to effect the desired regional government; and (5) specific provisions and planning for all forms of transportation, environmental quality, parks and open spaces, Bay conservation and management, and public utilities. The regional government would be established by referendum in the nine-county area in 1970. Its governing board of thirty-six members would be directly elected from districts for staggered terms of four years. The government would be financed through a combination of sources: a one percent income surtax and gross receipts tax, plus bonding and a variety of service charges. The property tax would be allowed only for the purpose of securing bonds.

The BARO proposal was a logical outcome of the preceding studies, all of which had endorsed independent multipurpose regional government and endowed their proposed creations with a variety of functions, sources of funding, and concomitant powers. The chief variation among the plans underscored what could be one of the knottiest problems in structuring a regional government--whether to make its governing membership appointive or elective. The choice implies a number of assumptions about the entity's

expected performance and responsibilities, a subject which should be scrutinized thoroughly in considering new organizational structures.

The staff of the California Senate Committee on Governmental Efficiency made a number of interesting recommendations of their own, by and large paralleling and supporting those of BARO. However, the staff additionally recommended that the governmental structure include a regional data bank or research center and a Technical Advisory Commission comprising representatives from relevant government agencies at all levels. The staff also recommended that the governing board be composed of twenty-five appointive members: six to be chosen by the Governor, three by the President pro tem of the Senate, three by the Speaker of the Assembly, one by each of the nine counties, and four by ABAG.

This last recommendation by the staff, deviating sharply from BARO's recommendation of a popularly elected governing board, may have been based on sound technical performance calculations, but it is of more than passing interest to note that the staff recommendation distributed appointive power to the existing political and institutions actors likely to have greatest impact on the passage of the plan through the California Legislature. This point suggests the sobering fact that the most ideally conceived plans and proposals must run the gamut of powerful established political interests that are highly motivated by both substantive issues and institutional prerogatives. Under such circumstances, there are intense pressures to effect minimal feasible change and then as much as possible within the existing institutional framework. The 1969 amendments to the original BCDC statute serve to illustrate the point.

Bay Area Conservation and Development Commission

One governmental agency did operate with specific estuarine environmental responsibilities during the period of these studies, the BCDC.

Its history has had stormy political periods, particularly during the 1969 session of the California Legislature when changes were made in its structure and authority.²⁵

When established by the Legislature in 1965, the Commission was empowered to regulate Bay filling by issuing or denying permits and to prepare a plan for the Bay and the shoreline. From 1965 to 1969, BCDC processed eighty-four development applications and granted sixty permits allowing a total of 383 acres of Bay fill. The BCDC Bay Plan, presented to the Governor and the Legislature in 1969, after three years of work, was designed to protect the waters of the Bay and to provide for long-range shoreline development and conservation.

The statute of 1965 authorized the BCDC for four years. After a major political fight, the legislation was amended in August, 1969, with the following results: 1) the agency was made permanent, with a few changes in membership; 2) its authority to control Bay fill and development was substantially broadened to include the 276-mile Bay shoreline, salt evaporation ponds, and the managed wetlands bordering the Bay; and 3) BCDC's plan was adopted in principle.

Under the 1965 statute, BCDC was a twenty-seven member commission made up of unaffiliated citizens and representatives of federal, state, and local governments. Under the 1969 amendments, the size of the commission remained the same, but some changes were made in the composition and methods of selecting members. The same two federal representatives were retained (one each from the Corps of Engineers and Health, Education, and Welfare) as was their non-voting status on permit decisions. Also retained were single representatives of the state agencies concerned with transportation,

resources, state lands and regional water quality. One agency was newly represented (Finance), and two were dropped (State Planning and BATSC, the latter of which expired).²⁶ The seven public representatives (five appointed by the Governor, one by the Senate Rules Committee, and one by the Assembly Speaker) were retained. The number of county representatives stayed at nine, while the number of city representatives was increased from three to four, but in each case it was now stipulated that all city and county representatives must be elected officials instead of "any" Bay area citizen, as before. As before, the county members are selected by their respective boards of supervisors, the city representatives by ABAG. Together with the elimination of proxy voting under the 1969 amendments, the change in membership criteria for local representatives effectively removed several commissioners having scientific, engineering, or conservationist backgrounds, while simultaneously strengthening the position of established local government on the commission.

The Commission's jurisdiction was extended by the 1969 amendments from areas subject to tidal action to encompass a hundred foot band of shoreline terra firma around the Bay. The Commission was directed to define, by November, 1970, the boundaries of areas within this shoreline band to be retained for priority uses, after which any priority designations or changed boundaries will require approval of the State Legislature. Lands are to be reserved only for essential water-oriented uses; on lands not so designated, BCDC jurisdiction is limited to requiring maximum public access to the Bay consistent with the type of proposed development. New provisions placing salt ponds and managed wetlands under BCDC's jurisdiction specified that before any such areas are filled for development, the public must have an opportunity to purchase the parcels to the end of preserving them as tidelands or open waters.

The 1969 legislation designated the BCDC Bay plan as interim and intended to guide the Commission in granting development permits; it also provided for amendment of the plan by the Commission or the Legislature. BCDC's authority to require permits for filling or extracting materials from the Bay was retained and augmented by the added power to require permits for projects proposing substantial changes in the use of any water, land, or structure within its jurisdiction. Thirteen affirmative votes from among the twenty-five voting commissioners are still required for the granting of developing permits; such permits are automatically awarded, however, if the Commission fails to act within ninety days. Finally, BCDC is directed to make a continual review and annual recommendation concerning properties under its jurisdiction that might be acquired for public use.

Puget Sound Governmental Conference

The experience in the San Francisco Bay area represents one of the few cases in the United States where there has been research and discussion linked to comprehensive regional action concerning estuarine or marine resource management. The BCDC and the alternatives outlined offer several organizational choices. Another type of regional agency was established in the Puget Sound area in 1957. The Puget Sound Governmental Conference encompasses four of the lower Puget Sound counties, King, Pierce, Snohomish and Kitsap. Like ABAG, it is a voluntary organization of county and city governments with advisory planning and research functions. The PSGC was one of the first metropolitan councils of government in the nation and has been primarily oriented to land rather than aquatic regional planning. Its major work has included studies of economic and demographic data, the social and physical environment, urban form, transportation, fiscal policy and

governmental structure. Although PSGC's interests are comprehensive, its functional and authoritative scope is relatively limited. However, its stature has been magnified by the necessity for regional coordination of many federal aid programs, and the Conference is in the process of developing a comprehensive regional plan.

In addition to projects for which review is requested by state and local agencies, the Conference exercises review authority for federally assisted projects under Section 204 of the Demonstration Cities and Metropolitan Development Act of 1966. The review function is designed to assist applicants in qualifying for federal funds and comment on and encourage project compatibility with the developing regional plan.²⁷

No formal veto power rests with the Conference. Normally, if there are questions about a proposal, the matter is informally discussed with the local unit of government, and other appropriate state and local agencies are consulted. Other things equal, a negative evaluation by the Conference would probably raise serious questions about the project at the federal level. In 1968, there were 113 projects reviewed, of which 110 were reported favorably,²⁸ a proportion that may reflect the skills of project designers or may reflect an unwillingness by the Conference staff to assert itself so critically as to alienate its member governments. Two of the three projects receiving critical comments were subsequently modified; the third did not obtain federal approval.

An important function of the PSGC is its ability to provide a focal point and forum for issues relating to the Sound. For example, a 1969 citizens task force recommended that the Conference's activities be expanded from land use policy to encompass environmental planning. In response, a program designed to include wide community participation was undertaken in 1970 to produce an "environmental ecology study," "socio-technological

survey and regional prognosis," and formulate a "long-range plan." While the study will not focus primarily on the Sound itself, there will be some attention to land-water relations in the four counties. The study has an educational and community involvement component and should turn some public attention to estuarine-related issues. The Conference staff also acted to review the federal-state Puget Sound and Adjacent Waters Study for the region during 1970 when it was presented for public discussion.

A number of projects reviewed by the PSGC have pertained directly to Puget Sound, and more activity related to the Sound will probably be undertaken by the Conference in the future. In this sense, it does perform a limited amount of monitoring of local governmental activity having estuarine consequences. Furthermore, the organization has been conducive to regional planning and coordination. More activity directly related to the Sound will probably be undertaken by the Conference in the future.

The PSGC's existence makes it a potential candidate for assuming some direct public authority. If this possibility were to develop, several problems would have to be resolved in terms of its utility as a vehicle for estuarine management. The principal orientation of the Conference will probably remain directed to metropolitan planning. Without formal governmental power, acting only in an advisory capacity, its decision-making structure tends to emphasize consensus rather than conflict resolution. The present geographic boundaries of the Conference cover four counties and would serve only for subregional regulation in relation to the total body of water. Finally, the ability of a multifunctional agency to engage in estuarine management activities is a matter that requires critical evaluation.

The Puget Sound Region

As mentioned at the beginning of the paper, conditions in and around Puget Sound have not, as yet, reached critical proportions. Existing governmental arrangements have apparently been adequate to avoid calamity in coping with the short-run problems of human development which have been faced in the region. However, little has been done to monitor the less obvious long-run processes which can result in serious environmental deterioration as has occurred in Lake Erie, San Francisco Bay, Galveston Bay, and numerous other major water resource sheds in this country alone. Such contemporary lessons in disastrous mismanagement and nonmanagement should post a warning that what has happened there probably will also happen to the Puget Sound region unless adequate regional policy-making intervenes.

Such a regional organization can be either an independent, home-rule entity or a part of the state's government. Either basic form presents problems. Under a state agency, the interests and needs of the region become subject to the authority and competition of extraregional interests within the state, a situation unlikely to satisfy fully the specific local needs.

A regional government appears, at least theoretically, the more appropriate medium for management of the Sound. However, the concept also poses serious problems. For one thing, the region would presumably have to rely on the state to initiate the regional government through legislative fiat or through provision for a regional referendum--a difficult enough proposition. Then, what is to become of those agencies and governments which at present share in the jurisdiction over the Sound, particularly those performing their functions adequately such as METRO? Is their authority to be absorbed into or superseded by the regional structure or would the new government be expected to work in cooperation with them? The former would

probably make for more efficient management, but its proposal would probably also generate more widespread and intense hostility from existing and threatened authorities.

At present, Puget Sound is subject to a wide array of public authorities. The Crutchfield report cites a number of federal agencies, fifteen single-purpose state agencies, twelve counties, and over thirty incorporated municipalities which share in its jurisdiction.²⁹ In addition, the functions and decisions of over 200 special districts exert some impact on the Sound and adjacent lands. The Sound and its adjacent waters are bordered by at least ten Indian reservations, seven military reservations, two national parks, and eighty-nine state parks.³⁰

Delineation of jurisdictions is difficult for two reasons: (1) precise information on existing jurisdictional units is hard to come by; and (2) the relevance of jurisdictions for this kind of cataloguing is dependent on definition. The definitional problem will be discussed after a comment on the difficulties in obtaining information.

For the eventual purpose of making a jurisdictional map of the Sound region, the special districts were catalogued to locate those whose boundaries abutted the Sound or its adjacent waters and whose functional mission was such that decisions could affect the Sound and the coastal lands. As far as could be determined, nowhere in the state is this information gathered and available. Information regarding special district boundaries was sought directly from the twelve regional counties, and the listings of special districts and municipalities in the Appendix reflect the fruits of this effort. No reply was received from one county and that from another was incomplete. Responses from the rest of the counties were probably generally complete, but several question marks remain. In some cases, correspondents noted that they were unable to locate districts within their counties. In other

instances, districts were identified as existing but inactive or non-functioning. Other districts may be equally lost or dormant. The picture is complicated by the fact that the counties apparently have little access to or possession of maps of the special districts within their boundaries. If jurisdictional maps of the Puget Sound region are to be constructed, it appears that the final resort will be the districts themselves and that map-making will prove lengthy and arduous.

The second difficulty, that of defining the boundaries of the Puget Sound region itself, has obvious implications for the structuring of a regional governing authority. The effort at jurisdictional mapping of the region began with the notion of dealing with the coastal region and entities whose boundaries are enclosed inside it. By and large, the cataloguing in the Appendix reflects this intent. However, it is apparent that a request for the enumeration of special districts whose boundaries abut on the Sound or its adjacent waters could lead to variable responses. In this case, it did. "Adjacent waters" was interpreted by the Skagit County respondent to include streams and rivers draining into the Sound. Other responses may have been based on similar interpretations, but this cannot be verified without maps or precise description of location. The listing in the Appendix therefore includes districts on freshwater tributaries for Skagit County; for the other counties, we assume for the present that only districts with coastal boundaries are included, but the assumption is highly tentative.

The Skagit interpretation was extremely reasonable, and the question posed by it suggests a need for some precise definition of the geographic area to be included in a regional governing system. The Crutchfield report asserted that the scope of the Puget Sound task is geographical rather than functional. If this is the case, where should the geographic boundaries

be drawn? The fact is that the task is not as simple as might first appear, for Puget Sound is affected by uses and practices which occur miles inland from its coasts, chiefly on the rivers which drain into it. This implies that the process of managing the Sound must include areas beyond and interacting with the Sound and its coastline. It seems probable that even when regional boundaries are drawn to encompass the total area of the twelve regional counties, some small part of the relevant area may yet be excluded. Such boundaries, however, would enlarge the number of existing jurisdictions cited here as potentially directly affected by the establishment of a regional government.

The task of defining the boundaries of a regional management system is also difficult in a functional sense. The position of the Crutchfield report notwithstanding, the scope of the Puget Sound task is functional as well as geographical, and the matter of "authority to do what" is very much to the point. Management of the resources of the Sound is inextricably interwoven with uses of coastal and of inland water, air, and land. The question then becomes, how extensive should the functional scope of the regional government be? That it should have some powers over waste discharges, water recreation and transportation, and water and coastal conservation is commonly accepted; but how far does it go from there? Since air and land pollution is effectively related to water quality, should control of all air, land, and water pollution be given to the regional unit? Since some aspects of transportation policy affect the Sound and coastal land uses, should the regional government assume control of transportation policy for the entire twelve-county area? These and similar questions ultimately pose the query whether such functions can or should be separated within the region. Finally, it becomes extremely difficult to conceive of a governmental unit

that can be limited either geographically or functionally to the Sound and its coastal regions. Regional government for the entire Puget Sound area involves more than just estuarine management, or coastal area management, or water resource management. It becomes a concern greater than the Sound itself.

The alternative, of course, is to draw some arbitrary functional lines restricting the regional structure to matters which are "central" to estuarine and coastal management, omitting those which are "peripheral." The criteria for making such distinctions are less than clear, but possibly they can be elucidated. It is a challenging task for future research.

A number of other tasks call for research, additional to those of a technical variety suggested at the beginning of this paper. There is need for further work on existing political behavior and performance as related to the Sound. Perhaps patterns and models of uses and conflicts can be offered which will heighten our knowledge of the needs of the region and the potential effects of management decisions. Such studies of the region as a decision-making system are already contemplated. Other research could follow the lines of BARO's prescribed study areas: (1) the need, desirability, and feasibility of regional government in the region (Puget Sound, in this case); (2) the proper functional scope of regional government; (3) a definition of the regional area; (4) the powers required to perform the allotted functions; (5) the essential financing and its possible sources; (6) the size and method of selection of the policy-making body of the regional government; and (7) the socioeconomic efforts of the regional government.³¹

Another line of research should examine the feasibility of regional government for the Sound. This is not just a matter of trying to answer the questions: "Will it work?" "How will it work?" or "Who will benefit, how, and under what circumstances?" All of these are obviously important questions.

But by jumping to them we ignore a matter of fundamental importance, expressed in terms of the presently critical query: "What can we get?"

The history of attempts to establish new structures and forms for environmental management does not encourage optimism. Areas have usually acted only under pressure of imminent disaster, and often not even then. The threat to Puget Sound is looming but not immediate. The question then becomes whether the region is ready to act positively as a unit and under what circumstances it could be expected to do so. The experience of the San Francisco Bay area indicates that the absence of public support for regional action is fatal--and highly possible. Do we have any idea of the base of support for regional government in the Sound area? Probably little, beyond generalized impressions.

A necessary line of research, then, must explore attitudes within the Sound region, to try to ascertain whether enough sense of regional community is available to support regional government. Attempts to establish regional forms elsewhere have often foundered on fears of "supergovernment," or concern over encroachment by big city and county interests, and on the desires of localities for autonomy. Such attitudes should be explored among public officials, private groups, community leaders, and other influentials as well as within the general public itself. It may be that any regional scheme is doomed to failure by the very nature of the political environment: it is probable that the awareness of a need for regional management is generally dormant, or perhaps barely conscious. Such studies may be able to tell us what limits must be faced in our aspirations for the Sound. They may also serve a tactical purpose in suggesting political approaches of relatively high efficiency and feasibility in approaching the public with proposals. If regional management is a necessity, such an approach not only is justified but must be achieved.

Postscript: Shorelines Legislation, 1971

Since the original completion of this paper, several developments have occurred further defining the conditions under which environmental management of the Puget Sound region will probably proceed in the future. By the end of the 1971 session of the Washington State Legislature, a Shorelines Management Act³² was passed, becoming effective on June 1, 1971. The act will also be placed on the 1972 general election ballot as a companion measure to the Shorelines Protection Act, Initiative 43, an initiative to the Legislature sponsored by the Washington Environmental Council (WEC). The ballot will pose two questions to the electorate: 1) Should there be a system of statewide comprehensive shorelines planning and management?; and 2) Which of the two proposals to that end is preferable?

If the electorate answers the first question in the negative, the second becomes moot. However, if such occurs, the whole question of the environmental management of Puget Sound and the state's other water and water-related land resources is re-opened with the added difficulty that two alternatives for statewide action had been attempted and rejected.

If the first question is answered affirmatively, a number of further questions will remain regarding environmental management of the Sound. A few remarks highlighting the background of the two proposals will serve to illustrate some of the major assumptions underlying each, the principal differences between them, and the questions still to be resolved.

On December 4, 1969, the State Supreme Court announced its decision in the case of Wilbour v Gallagher, also known as the Lake Chelan case. The decision imposed severe restrictions on the ability of private owners of shorelands to fill or otherwise alter their land in a manner that interferes

with the public right of navigation and corollary rights. The Court's opinion suggested that only the public through the Legislature, could permit such interference with public rights. The effect of this decision was to enshroud with uncertainty the legitimacy of all pending and future development of shoreland areas, at least in the absence of legislative determination and direction.

The timing of that decision was coincidental with the preparation of a Seacoast Management Act by the office of Governor Daniel Evans in consultation with a variety of interested parties, of which the WEC was prominent. The bill had been impelled primarily by political developments regarding BCDC and the San Francisco Bay earlier in the same year. The bill's intent was to establish a system of planning and management of the state's marine coastal lands and waters on a scale that would involve both local and state governments. The Lake Chelan decision augmented the need for such legislation, although its immediate impact, which continued through the 1970 legislative session, was to confuse the issue. Interests which opposed the general thrust of the bill were unsure of the decision's effective magnitude, but in any event continued their efforts to either oppose or weaken the bill. Environmental interests such as the WEC were generally enthused over the decision and were little inclined to compromise the bill in any manner which might be construed to erode the substantial protection apparently afforded by the Court.

Due primarily to this confusion and resulting attitudes, the Seacoast Management Act failed to pass the Legislature in 1970. Following the session, the WEC entertained serious doubts regarding the Legislature's ability and willingness to enact seacoast or shorelines legislation which would sufficiently protect environmental values. As such, the organization determined to utilize the device of an initiative to the Legislature as a means of assuring that

a satisfactory bill would be considered by the lawmakers and, if rejected by them, would go to the people in a general election. The WEC drafted the Shorelines Protection Act over a period of months, then secured a record number of signatures, more than enough to force the bill to the Legislature's attention as Initiative 43.

As an initiative to the Legislature, Initiative 43 offered three options: 1) the Legislature might pass it with no alteration, in which case it is treated as any other statutory enactment, requiring no further action but subject to possible referendum; 2) the Legislature might reject or take no action on the measure, in which case it is referred to the electorate for decision; or 3) the Legislature might propose an alternative measure on the same subject, in which case both proposals go onto the ballot where the electorate must determine if it wants that kind of legislation at all, and if so, which one is preferable.

In the history of the state, the third option had never been used. However, by mid-1970, it was apparent that at least one alternative to Initiative 43 would be offered for legislative consideration in 1971. A number of provisions in the initiative aroused opposition, but the most crucial apparently involved the almost total grant of statewide planning and management authority to the state Department of Ecology. The focus of alternative legislation would be a greater degree of direct local responsibility.

Two alternative proposals were prepared during the last half of 1970. The Legislature's interim committee structure was active in the development of a bill and held several hearings on it. However, it was never introduced to the 1971 Legislature. The second bill was prepared by the Governor's Office, was introduced, and was eventually enacted as the Shoreline's Management Act, the legislative alternative to the initiative.

Both the initiative and the alternative expanded the geographic scope of the 1970 Seacoast bill in apparent recognition of the fact that the ecological characteristics of marine waters cannot be entirely divorced from those of the fresh waters which feed them. As such, the great majority of the state's freshwater (lake and river) shorelines are included in the scope of the two proposals. The effect of this on the Sound is to enhance the potential for more comprehensive management than would otherwise have been the case. However, the broad scope of the bills' geographic (and institutional) mandates may remove the Sound from the specific attention it would have received under a less comprehensive scheme. The question will probably turn on the ability of the Department of Ecology to gather and assimilate sufficient information to treat each water-related ecosystem in terms of its particular characteristics. To say that the task is formidable is a generous understatement.

Both proposals provide for comprehensive planning for the uses of shorelines, the plans to be implemented by permit systems regulating particular developments. Each bill has a different set of criteria for defining the specific shorelines and uses to be managed, but the differences are not crucial to this discussion. Of greater importance is that both bills regulate (with a few limited exceptions) the entire span of possible uses of shoreline areas. In this respect, both proposals may exceed the functional scope of the BCDC arrangement. However, the BCDC may prove a comparatively more effective system of supra-local resource management; BCDC has far less shoreline to monitor and manage than does the Department of Ecology.

The primary difference between Initiative 43 and the Shorelines Management Act is the degree of direct involvement of the state, through the Department of Ecology, in the planning and management process. Under the initiative,

the department is solely responsible for the development of the state-wide plan and for the issuance of permits, although the latter function may be delegated to local governments for all but the more sizable developments. Under the alternative act, local governments are responsible for producing plans according to Department of Ecology guidelines and subject to departmental review and approval. Authority to grant permits also rests with the local units, although provision is made for departmental monitoring of permits and departmental action in cases where it finds that a proposed development is contrary to either the effective plan or the policy of the act.

This difference in state-local relationship is an important one, reflecting differing philosophical dispositions and perceptions of the efficacy and responsiveness of the two levels of government. However, the difference is also deceptive, and a critical examination of certain assumptions implicit in each proposal suggests that the operational effects of the bills might easily minimize the apparent contrast.

The initiative was, in large measure, a product of skepticism regarding the ability of local government to be satisfactorily responsive to environmental as opposed to economic values. The solution offered by the initiative is to transfer responsibility and authority to the state. However, local government is unlikely to be as removed from the process as the language of the initiative suggests. In practice, the Department of Ecology does not have the resources to directly plan and manage the shoreline areas placed under its jurisdiction. As originally created in 1970, Ecology was primarily an amalgam of pollution control agencies.³³ The responsibilities imposed by the shorelines legislation represent a substantial augmentation of agency mission in a qualitative as well as quantitative sense. Thus far and in at least the immediate future, Ecology's manpower and budget will be insufficient for all the tasks imposed by the initiative.

Although it will have access to other outside resources, Ecology will have to rely heavily on the planning input and cooperation of local government under the initiative. This condition moves the initiative substantially closer to the alternative act which provides for direct local responsibility at the outset. On the other hand, under the alternative measure, local governments are unlikely to be unresponsive to cues and guidance from the department. Few localities are likely to risk the disapproval of their plans by the department and the subsequent revision that would be entailed. Furthermore, many localities being short on both financial and technical resources will probably have to rely heavily on the assistance of the department, (for which assistance, the department will probably rely heavily on aid from the federal government). In this respect, the alternative proposal moves closer to the initiative in the enhancement of Ecology's role.

The initiative and the alternative would probably operate similarly regarding permit allocations. The processing of all permits, as provided in the initiative, would impose costly and possibly insuperable burdens on Ecology. Hence, the vast majority of permit approval functions would probably be delegated to localities, an option provided in the bill. The practical effect would be similar to that of the alternative in which permit functions are delegated to local governments in the first place.

The preceding remarks are not intended to imply that the drafters of Initiative 43 were insensitive to the desirability of local participation in the shorelines management process. Their means of ensuring local involvement was to bypass established local governments (an endeavor of dubious efficacy, as we have seen) in favor of regional citizens councils as vehicles to assist Ecology in the development of its comprehensive plan. The concept is one which deserves attention on two points: 1) the apparent assumption that such

councils will assure a viable local citizen input; and 2) the effort to provide for planning activity on a regional basis.

Regarding the first point, there is reason to question the viability of such councils. Each council would be comprised of more than thirty members, some of whom would be local governmental officials. However, a majority of each council must be comprised of citizens who are not also public officials, each citizen appointed by the Governor. A council of such size and composition is likely to be unwieldy for the deliberate and detailed consideration of the many details of a comprehensive plan. Further, there is some doubt that the councils would be heeded any more (or less, to be honest) than other forms of public opinion solicitation (such as public hearings and other less defined forms provided in both shorelines proposals) or the voices of special interests in their various modes of expression. Although there is great positive potential in such councils, past experience with such forms should suggest prudence in our expectations of their impact.

Regarding the initiative's effort to structure a regional basis for the planning process, the Director of Ecology is directed to divide the state into at least seven regions of his own determination, each to contain whole counties and reflect the geography of river basins and shoreline similarities. As suggested earlier in this paper, the process of identifying the boundaries of regions is not an easy task, even where Puget Sound, the state's most recognizable region, is concerned. This almost certainly means that many of the regional boundaries will be set arbitrarily and with only marginal justification. This may or may not be a harmless exercise, but it certainly undermines the original premises for regional structures.

The disposition of the Puget Sound region under both shorelines proposals is a completely open question. Under the initiative, the region may be

defined as a totality or it may be subdivided in order to satisfy the requirements of the act. Indeed, there may be justification for such a division. For example, the designation of King, Pierce, Kitsap, and Snohomish counties as a single region would more easily permit Ecology, if it so chose, to take advantage of the resources of the existing regional planning agency, the Puget Sound Governmental Conference.

The Shorelines Management Act is even more vague as to the role of regional planning than is the initiative. The act simply provides that the Director of Ecology may identify regions and mandate localities to plan jointly for those regions. Under such a provision, regional planning might be more flexible and conform to more realistic regional qualities than under the initiative. On the other hand, regional input may be ignored entirely.

In summary, the two shorelines proposals, so apparently different in structure, in underlying assumptions and philosophy, and in the political responses evoked, are remarkably similar in terms of consequences and uncertainties. Further, this discussion of presumed versus effective traits should not overlook the fundamental and over-riding similarity in the basic intent of each measure--to provide for rational and comprehensive planning and management on a basis which recognizes the validity, if not primacy, of environmental values and which internalizes on a state-wide scale the consequences of coastal resource uses.

A final observation remains. No legislation, no formal structuring is sufficient to determine the course of events. This is as true for the procedures of administration as for the resultant public policies. In the first instance, for example, the relationships of state land-owning agencies, local special districts, and Indian tribes to the shorelines management process may yet have to be defined, as most certainly will be the case of Ecology's

informal relationships with local governments. In the second instance, there are many chances that the purposes of the measures will not be fulfilled. At the worst, it is possible that shorelines legislation will become a vehicle which legitimizes the rape of Puget Sound and other Washington shorelines. It would not be the first time that regulatory legislation had led to effects almost diametrically opposed to intent. For those who believe that the victory will be achieved if and when the electorate adopts one of the shorelines proposals in November, 1972, a word of caution is in order. Their fight has barely begun.

NOTES

1. See Earl Finbar Murphy, Governing Nature (1967), pp. 373-76, for a discussion of the limits of the judicial remedy in protecting resources.
2. James A. Crutchfield, and others. Socioeconomic, Institutional, and Legal Considerations in the Management of Puget Sound (August 15, 1969), p. 211.
3. See Allen V. Kneese, "Economics and the Quality of the Environment--Some Empirical Experiences," and the following "Discussion" by John Chamberlain, in Morris E. Garnsey and James R. Hibbs, Social Sciences and the Environment (1967), for suggestions for additional technical and economic research questions vis pollution. Kneese and Bower evaluate studies of the Potomac and Delaware estuaries, suggesting criteria and uses for water quality studies, in Allen V. Kneese and Blair Bower, Managing Water Quality: Economics, Technology, Institutions (1968), pp. 217-35.
4. See Kneese and Bower, op.cit., Ch. xiii, for a critical application of these criteria to several specific water quality management approaches.
5. See Murphy, op.cit., pp. 244-5, and President's Science Advisory Committee, Restoring the Quality of Our Environment (1965), p. 51.
6. See Vincent Ostrom, Charles M. Tiebout, and Robert Warren, "The Organization of Government in Metropolitan Areas: A Theoretical Inquiry," American Political Science Review, LV (December, 1961), pp. 831-42.
7. Commission on Marine Science, Engineering and Resources, Science and Environment, Panel Report, I (1969), III-108.
8. Norman K. Maleng, "Regulation of Water Quality in Puget Sound," in Crutchfield, op.cit., p. 40.
9. See Commission of Marine Science, etc., op.cit., Appendix D, for a summary of state activities in coastal management.
10. See Deil Wright, Intergovernmental Action on Environmental Policy: The Role of the States, Vol. II of Lynton Caldwell, ed., Environmental Studies, 4 vols., (1967).
11. Crutchfield, op.cit., pp. 224-25, and Commission on Marine Science, etc., op.cit., Chapter 10.
12. Commission on Marine Science, etc., op.cit., pp. III-2-6.
13. Crutchfield, op.cit., pp. 221-25.
14. See Daniel R. Grant, "Carrots, Sticks, and Consensus," in Caldwell, op.cit., Vol. I, Political Dynamics of Environmental Control, pp. 19-41.

15. Murphy, op.cit.
16. See Nathaniel Wollman, "The New Economics of Resources," Daedalus (Fall, 1967), pp. 1099-1114.
17. See Aaron Wildavsky, "Aesthetic Power, or the Triumph of the Sensitive Minority over the Vulgar Mass: A Political Analysis of the New Economics," Daedalus (Fall, 1967), pp. 1115-1128; as a contrast to Wollman see also John H. Romani, "The Administration of Public Health Services," pp.1-21, and Lynton Caldwell, "The Application of Engineering Technology," in Caldwell, op.cit., Vol. III, Politics, Professionalism and the Environment, for discussions of the role of technical experts.
18. Crutchfield, op.cit., p. 212.
19. Kneese and Bower, op.cit., pp. 215-16.
20. See Norman Wengert, "Perennial Problems of Federal Coordinating," in Caldwell, op.cit., Vol. I, pp. 42-62. This problem, however, is one that afflicts state and local governments as well.
21. See Harold Gilliam, "The Fallacy of Single-Purpose Planning," Daedalus (Fall, 1967), pp.1142-1157, for a good critique.
22. Kneese and Bower, op.cit., Chapter 13.
23. For the most recent discussion of English experience, see Lyle E. Craine, Water Management Innovations in England (Washington, D. C.: Resources for the Future, Inc., 1969).
24. California Legislature, Senate Committee on Governmental Efficiency, Regional Government and Resource Preservation in the San Francisco Bay Area: A Staff Appraisal (April 1, 1969). In the case of Bay-Delta and BARO, the staff based its summaries and comments on preliminary documents and rough drafts, since the final reports had not yet been submitted by April 1, 1969.
25. California Stats, 1969. c. 713. See also "San Francisco Bay Conservation and Development Commission: 1969," Metropolitan Area Digest, XII (November-December, 1969).
26. In 1970, a Metropolitan Transportation Commission was established to provide regional transportation planning for the Bay area. Calif. Stats. 1970, c. 891.
27. Puget Sound Governmental conference, "204 Planning Review: Criteria and Procedures," (second draft); mimeo; (May 2, 1969).
28. Puget Sound Governmental Conference, Perspectives: 1968. Annual Report (May, 1969), p. 31.
29. Crutchfield, op.cit., p. 221.

30. See Appendix for listings. The exact status of state parks and Indian lands is open to some question and further clarification. Not all state parks are located on state-owned land; some are used via lease or other form of agreement. Further, the respective jurisdictions of the state agency and local governments on these lands have not been defined with unchallengeable precision. In the case of Indian lands, many portions of the original reservations have been sold, "alienated." However, there is some feeling that only Congress can alter the terms of treaties and that alienated land is still part of Indian land and subject to tribal government. Both problems may require and receive legislative or judicial resolution.
31. California Legislature, etc., op.cit., pp. 96-97.
32. Wash. Laws, 1971, 1st. ex sess. Ch. 286.
33. Wash. Laws, 1970, Ch.62.

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APPENDIX

GOVERNMENTAL JURISDICTIONS BORDERING PUGET SOUND AND ADJACENT WATERS

Indian Reservations

Port Madison (Kitsap County)
 Tulalip (Snohomish)
 Swinomish (Skagit)
 Lummi (Whatcom)
 Makah (Clallam)
 Port Gamble (Kitsap)
 Skokomish (Mason)
 Squaxin Island (Mason)
 Lower Elwah (Clallam)
 Puyallup (Pierce)

Military Reservations

Fort Warden (Clallam)
 USCG Reservation (Clallam)
 Fort Flagler Military Reservation (Jefferson)
 Indian Is. Naval Reservation (Jefferson)
 Bangor Naval Station (Kitsap)
 Ault Field Naval Air Base (Island)
 Fort Lawton (King)

National Parks

Olympic National Forest
 San Juan National Historical Park (under development)

State Parks and Monuments

In Whatcom County:

Birch Bay
 Larrabee

In Skagit County:

Bayview

In Snohomish County:

Mukilteo
 Everett Jetty

In King County:

Saltwater

In Thurston County:

Jones Beach

In Mason County:

Jarrel Cove
 Belfair
 Potlatch
 Squaxin
 Twanoh

In Island County:

South Whidbey
 Fort Casey
 Camano Island
 Fort Ebey
 Useless Bay

In San Juan County:

Jones Island
 Matia Island
 Moran
 Prevost Harbor
 Posey Island
 Reid Harbor
 Spencer Spit
 Sucia Island
 Turn Island
 Barren Island
 Battleship Island
 Black Rock
 Cemetery Island
 Clark Island
 Danger Rock
 Doe Island
 Dot Rock
 Freeman Island
 George Island
 Gull Reef
 Gull Rock
 Guss Island
 Halftide Rocks

In Kitsap County:

Illahee
 Blake Island
 Fort Ward
 Fay-Bainbridge
 Scenic Beach
 Kitsap Memorial

In Pierce County:

Kopachuk
 Eagle Island
 Cutts Island
 Penrose Point

In Jefferson County:

Dosewallips
 Fort Flagler
 Old Fort Townsend
 Fort Worden
 Pleasant Harbor
 Wolfe Property

In Clallam County:

Sequim Bay
 Graveyard Spit
 Dungeness (Cline Spit)

In Island and Skagit:

Deception Pass

In Pierce and King:

Dash Point

In San Juan County:

Hall Island
 Iceberg Island
 James Island
 Knob Island
 Lawson Island
 Lopez Island
 Low Island (W. of Shaw)
 Low Island (NW San Juan I.)
 Mouatt Reef
 Mummy Rocks
 North Pacific Rock
 North Peapod
 Olga
 Parker Reef
 Peapod Rocks
 Pointer Island
 Ripple Island
 Rock Island
 Secar Island
 Shag Rock
 The Sisters
 Skipjack Island
 Skull Island
 South Peapod
 Unnamed Island
 Victim Island
 Wasp Island
 White Rock

Municipalities

Thurston County:

Olympia

King County:

Seattle
 Normandy Park
 Des Moines

Island County:

Coupeville
 Langley
 Oak Harbor

Whatcom County:

Bellingham
 Blaine

Snohomish County:

Marysville
 Everett
 Mukilteo
 Edmonds
 Woodway

Kitsap County:

Winslow
 Poulsbo
 Port Orchard
 Bremerton

Jefferson County:

Port Townsend

San Juan County:

Friday Harbor

Clallam County:

Port Angeles
 Sequim

Pierce County:

Tacoma
 Fircrest
 Gig Harbor
 Ruston
 Steilacoom

Information not received from Skagit and Mason Counties.

Special Districts

Pierce County (Respondent: County Engineer):

Port of Tacoma
 Point Defiance Metropolitan Park District
 Diking District #1
 Fire Protection Districts: #2
 #3
 #5
 #13
 #16

Snohomish County (Respondent: County Assessor's Office):

Port Districts: Everett Port District
 Edmonds Port District
 Public Utility District #1
 Water Districts: Mukilteo Water District
 Alderwood Water District
 Olympia View Water District
 Olympic Terrace Sewer District
 Fire Protection Districts: #1
 #2
 #12
 #14
 #15

Skagit County (includes districts bordering fresh-water tributaries)
 (Respondent: County Planning Department):

Port Districts: Port of Anacortes
 Port of Skagit County
 Public Utility District #1
 Anacortes Housing Authority
 Sewer District #1
 Diking Districts: #'s 1-5, 8,9,12,13,15-21.
 Drainage Districts: #'s 14-19, 21,22.
 Fire Districts: City of Anacortes Fire District
 Guemes Fire District
 LaConner Fire District
 McLean Fire District
 Conway Fire District
 Cedardale Fire District
 Mount Vernon Fire District
 Burlington Fire District
 Edison-Bow Fire District
 Bayview Fire District
 Samish Fire District
 Allen Fire District
 Summit Fire District
 Sedro Woolley Fire District

Clallam County (Respondent: County Engineering Department):

Port of Port Angeles
 Public Utility District #1
 Park and Recreation District #1
 Clallam County Housing Authority
 Clallam Soil and Water Conservation District
 Olympia Health District (joint district with Jefferson County)
 Irrigation Districts: Cline Irrigation Company
 Dungeness Irrigation
 Eureka Ditch Company
 Sequim Prairie Irrigation Company
 Independent Ditch Company
 Clallam Irrigation Company
 Fire Protection Districts: #'s 1-5

Whatcom County (Respondent: County Planning Commission) (Information regarding Diking and Ditch, Drainage, Flood Control, and Soil and Water Conservation Districts not available):

Bellingham Port
 Public Utility District #1
 Townships: Point Roberts
 Custer
 Semiahmoo
 Mountain View
 Marietta
 Water Districts: Marietta, #2
 Point Roberts, #4
 Semiahmoo, #6
 Birch Bay, #8
 King Mountain, #9
 Fire Protection Districts: Point Roberts, #5
 Chuckanut, #6
 Marietta, #8
 Lummi Is., #11
 Birch Bay, #13
 Lummi Indian Reservation, #15
 Sandy Point, #17

San Juan County (Respondent: County Auditor's Office)

Port Districts: Orcas
 Friday Harbor
 Lopez
 East Sound Water District (may be inactive)
 Fire Protection Districts: #2 (Orcas Is.)
 #3 (San Juan Is.)
 #4 (Lopez Is.)
 #5 (Shaw Is.)

Special Districts (continued)

Island County (Respondent: County Engineer)

Port Districts: Port of Langley
 Port of Coupeville

Water Districts: Penn Cove
 Bayview (Austin Precinat)
 Clinton-Deer Lake
 Freeland
 Rhodena Beach

Sewer Districts: Penn Cove
 Maple Grove

Drainage Districts: #5
 Camano Island

Diking Districts: #1, #3

King County (Respondent: Department of Public Works, Engineering Services):

Port of Seattle

Housing Authorities: North
 Southwest

Shoreline Park and Recreation District

Water Districts: #'s 4,19,24,54,56,61,85,100,106

Sewer Improvement District #3

Sewer Districts: Highlands
 Vashon
 Greenwood
 Blue Ridge
 North Beach
 Southwest Suburban
 Des Moines
 Lakehaven

Fire Protection Districts: #'s 4,2,11,13,26,30,32,39

METRO (Municipality of Metropolitan Seattle)

Jefferson County (Respondent: County Engineer's Office):

Port of Port Townsend

Mason County Public Utility District (joint with Mason County)

Olympia Health District (joint with Clallam County)

Water Districts: #'s 1 & 2

Fire Protection Districts: #'s 1-4

Thurston County (Respondent: Thurston Regional Planning Council):

Port of Olympia

Thurston County Soil & Water Conservation District

Fire Protection Districts: #'s 7-10

Kitsap County (Respondent: County Auditor):

Port Districts: Bremerton
 Brownsville
 Colby
 Eglon
 Hansville
 Illahee
 Indianola

Special Districts (continued)

Kitsap County (continued):

Port Districts: Keyport
 Kingston
 Manchester
 Pearson
 Poulsbo
 Sheridan
 Silverdale
 Tracyton
 Waterman
 Fire Districts: Silverdale #1
 Bainbridge #2
 Keyport #3
 Suquamish #4
 Indianola #5
 #7
 Navy Yard City #8
 North Perry #9
 Kingston #10
 Tracyton #11
 Erlands Point #13
 Hansville #14
 Brownsville #15
 Lemolo #17
 North Kitsap #18
 Westgate #19
 Public Utility District #1
 Sewer Districts: #1 Navy Yard City
 #2 Manette (inactive since 1941)
 #3 Manchester
 #4 Keyport
 #5 Annapolis
 #6 Silverdale
 #7 Bainbridge Island
 Water Districts: Annapolis
 Chico
 Crystal Springs
 Hansville
 Indianola
 Keyport
 Kingston
 Manchester
 Marine Drive
 Silverdale
 Tracyton
 Phinney Bay
 South Bainbridge

