RECREATION 76

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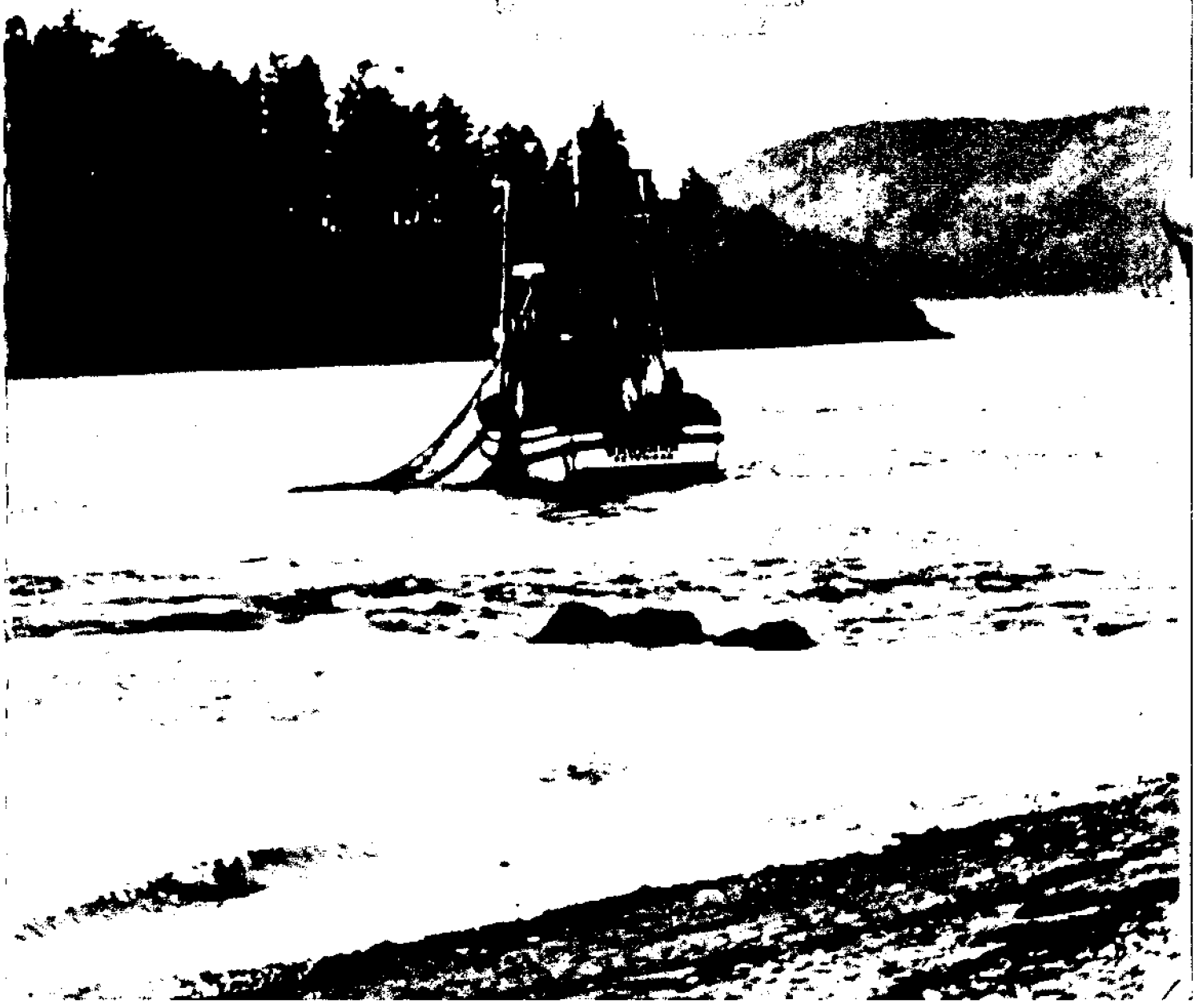

A WASHINGTON SEA GRANT/ COOPERATIVE EXTENSION SERVICE REPORT

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RECREATION '76
CONFERENCE PROCEEDINGS

February 23 and 24, 1976
UNIVERSITY OF WASHINGTON

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FOREWORD

The outdoor recreation industry, particularly its marine component, is subject to myriad forces affecting its organizational structure, operations and profitability. Legislation, judicial decisions, regulations and market changes can affect recreational resources -- land, water, fish and wildlife; the services necessary to use those resources -- marinas, campgrounds; vehicles, boats and fuel to run them; or the quality of the amenity which the recreationist seeks out for his enjoyment or relaxation.

RECREATION '76 CONFERENCE addressed three key issues affecting the outdoor recreation industry in Washington State. First, and most controversial, was the Boldt Decision reaffirming Indian treaty rights in the allocation of opportunity to harvest anadromous fish. The judicial history and management implications of United States v. Washington were analyzed in a series of papers representing most of the interests in the case, with particular attention to the charterboat industry.

Second, recent environmental legislation protecting air and water quality and fragile coastal environments -- particularly the Washington State Shorelines Management Act and the federal Coastal Zone Management Act -- were examined and their economic consequences for marine recreation discussed. An exemplary case study of resolving land- and water-use conflicts in a public marine park illustrated tools and solutions for sound environmental management in the shorelines.

Third, and finally, trends in campground business for 1976 were identified, and organizational structures and operating principles for campground management discussed.

Some excellent presentations on all three topics were given from informal notes and do not appear in these proceedings. However, their absence should in no way demean the contribution made by those participants.

ACKNOWLEDGMENTS

We extend our thanks to the individuals and agencies who contributed their valuable time and energy preparing and delivering presentations at this conference. To the participants whose questions, comments and attentive involvement made this conference a pleasure to coordinate, goes our appreciation.

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Additional copies of these conference proceedings may be obtained from the Washington Sea Grant Communications Program, Division of Marine Resources, University of Washington, Seattle, Washington 98195, for $2.50 each. Checks should be payable to University of Washington.

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THE BOLDT DECISION AND SPORT FISHING

THE BOLDT DECISION: INTRODUCTORY REMARKS

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The consensus among our congressional delegation appears to be that the Supreme Court's decision declining to hear the appeal of Judge Boldt's decision has both positive and negative implications for recreational fisheries. The good news is that national attention has been focused upon the problems of fisheries management in the Pacific Northwest, resulting in substantial federal appropriations for enhancement programs in the state. The bad news - a viewpoint which I'm sure will be expressed by some of our speakers today - concerns the fate of the steelhead sports fishery. But even here an optimistic note is struck in the form of congressional proposals to substitute the ubiquitous salmon for the more elusive steelhead runs in the equitable allocation of anadromous fish among Indians and non-Indians. Mitigating against the adverse impact of Judge Boldt's decision on both sports and commercial salmon fisheries is the emerging 200 mile economic zone which has already passed the Senate. Dr. Thompson of National Marine Fisheries Service will amplify upon this point later in the day.

As co-sponsors of this workshop it is not our intention to provide a forum for recrimination concerning past injustices, nor to question the equity of the decision to allocate the fisheries equally between treaty Indians and citizens of the State of Washington - both the principle and the particulars of that decision have been upheld by the highest court in the land, thus making further debate fruitless and unnecessary. What we are concerned about here today are the implications of that decision in the management over anadromous fisheries; any legislative changes in state law necessary to support effective management; and, finally, the creation of on-going institutions which will insure the cooperation necessary between the state regulatory agencies and the tribal fisheries management arrangements. George Dysart's comments concerning the Columbia River Basin Fisheries Alliance are of particular interest in this regard.

Judge Boldt's decision and the subsequent affirmation of that decision by higher courts mark the beginning of very substantial social and economic change in the relationships between native Americans and we more recent occupants of the Pacific Northwest. The problem before us today and to be addressed by our notable panel of speakers concerns the adjustments necessary for peaceful coexistence and cooperation. That sentiment of conciliation runs through all the papers to be presented here today, which I have had a chance to preview.

May I introduce this first session by quoting from David Getches's paper to be presented this morning:

> The olive branch is out. Let's work together on common problems. Indians may find allies in sportsmen whose quest of the fish has a special and hard to express personal meaning for them just as it does for Indians. And sportsmen may find, as did a salmon fisherman-judge, that the Indians' right is soundly based in law and need not clash with conservation or well-managed fisheries.

THE BOLDT DECISION ON INDIAN FISHING RIGHTS
A BACKGROUND REVIEW AND ANALYSIS

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The question of off-reservation fishing rights of treaty Indians in the Pacific Northwest and the degree--if any--to which those rights may be regulated by the state government have been matters of deep and continuing controversy for over a century. Perhaps more than any other single issue this controversy has been the major source of Indian distrust of state government and state authority.

The landmark case of United States v. Washington brought by the United States in 1970 represents the first time that a court has had this problem before it in its broad aspects rather than some limited and narrow segment of the issue. Judge Boldt's comprehensive and thoroughly documented opinion (384 F. Supp. 312) covers some 112 pages in the printed law reports. This initial decision contains some 253 specific Findings of Fact and 48 specific Conclusions of Law dealing with virtually every aspect of the controversy. Additional findings and conclusions have been entered in subsequent proceedings under the court's retention of continuing jurisdiction in the case. The printed opinion has some 121 legal headnotes, which is far above the normal for a single court decision. These headnotes are points of law which are covered by the opinion and are used by lawyers in determining whether a particular case addresses a specific legal point with which a lawyer might be concerned in other legal controversies or cases.

The Ninth Circuit Court of Appeals affirmed Judge Boldt in all respects (520 F.2d 676), and on January 26, 1976, the United States Supreme Court gave an element of finality to the ruling by declining to review these decisions. Thus, those decisions will constitute the framework for future relations between the Indian tribes, the state authorities, and non-Indian users of the fishery resource for many years to come.

There is little likelihood that Congress will modify the treaties. In fact, the present Congress appropriated over six million dollars for implementing the Boldt and Belloni decisions. This monev will be expended through federal, state and tribal agencies and Congress has directed that there be cooperation among them in the proper utilization of these funds.

Since it was first handed down in February 1974, Judge Boldt's decision has been one of the most widely discussed legal opinions ever to come out of the Pacific Northwest. Judge Boldt has been a federal judge for over 22 years and he has undoubtedly written hundreds of opinions. Yet when reference is made today in

the news media or in private discussions to "the Boldt decision" there isn't any doubt in anyone's mind which decision the speaker or writer has in mind. Certainly not among those who have any connection whatsoever with either fish or Indians. And yet I would dare say that among the many people who freely and frequently discuss the decision, relatively few have any real idea of what it actually holds or says. Considering its length and complexity and the highly emotional subject with which it deals, this is not too surprising.

Today I would like to discuss some background as to how the Boldt decision came about, some of the specific findings which the court made, and some of the legal principles which it announced. I will also make a few observations as to where we go from here. For one thing is certain, we do not go back to pre-1974. And it will not gain any of us anything to simply carry on an unending, acrimonious debate about how terrible, or how good, the Boldt decision is. Neither the Indian tribes nor the non-Indian sport and commercial fishermen nor the state fisheries regulatory agencies is going to go away. For better or worse, they are going to have to live together and share this resource into the future. The sooner we realize that and start to develop workable programs for both sharing and enhancing that resource in a manner that will recognize the rights and interests of all parties, the better off we will all be.

Judge Boldt observed that:

> . . . More than a century of frequent and often violent controversy between Indians and non-Indians over treaty right fishing has resulted in deep distrust and animosity on both sides. . .
>
> . . . in the past, root causes of treaty dissension have been an almost total lack of meaningful communication on problems of treaty right fishing between state, commercial and sport fishing officials and non-Indian fishermen on one side and tribal representatives and members on the other side, and the failure of many of them to speak to each other and act as fellow citizens of equal standing as far as treaty right fishing is concerned. . . (384 F. Supp. at 329.)

But he expressed his confidence that the vast majority of Washingtonians, whether of Indian heritage or otherwise, are fair, reasonable and law-abiding people who will accept and abide by treaty rights decisions even if adverse to interests of their occupation or recreational activities. He urged giving high priority

> . . . to further improvement in communication and in the attitude of every Indian and non-Indian who as a fisherman or in any capacity has responsibility for treaty right fishing practices or regulation.

Hopefully symposiums such as this can be one means by which this improved communication and understanding can be brought about.

Recently a highly significant step was taken on the Columbia River to bring together Indian, non-Indian, commercial, and sports interests into a common effort to work for the enhancement of fish runs for the mutual benefit of all concerned. A Columbia River Basin Fisheries Alliance was organized and established earlier this month at a meeting in Yakima, Washington, among organizations representing these diverse interests. The four Columbia River treaty tribes, the Columbia River gillnetter's organization, the troll fishermen's organization, the Northwest Steelheaders, the Washington Sportsmen Council, the Oregon Wildlife Federation, the Oregon Packers and Guides Association, and others, held a series of meetings extending back to last summer and formed an organization and adopted a common statement of purpose. Each of those organizations is represented on the board of directors of the alliance. A five-man executive committee consists of one representative of the treaty Indian tribes, one representative of the commercial fishermen, one representative of the sports fishermen, one representative of packers, guides and charterboat operators, and an executive secretary. Let me read you the statement of purpose which those people drafted and approved. It shows what can be done when people direct their efforts at improving cooperation and understanding rather than at emphasizing differences. The statement was drafted at a meeting at the Warm Springs Reservation in January and adopted at the organization meeting in Yakima on February 10 of this year.

> "The anadromous fish resources of the Columbia River and its tributaries are but a sad reminder of what this great river system once produced. Much discussion has been wasted on placing blame for the reduction of the fish runs and too little attention has been focused on seeking a solution for these problems. Those groups and individuals concerned with the perpetuation, enhancement and wise use of the resource refuse to stand and watch this resource continue to dwindle until it is gone forever. There are long-standing, deeply held and, in many cases, bitterly fought differences of viewpoint between the user groups. But all recognize that the primary concern must be for the resource. Toward that overriding goal, we have agreed to work together to re-establish the once bountiful runs of anadromous fish in the Columbia River Basin. Differences of opinion will still exist, but we pledge today to lay those differences aside and work toward common goals. Each individual member or group shall be free to pursue their own objectives outside of the Alliance, and the other members shall respect his right. The Alliance shall take no position adverse to any individual member or group and shall advance only those issues and positions which have the unanimous support of the Alliance."

Now let's return to how the Boldt decision came about. To understand the controversy we must go back in history. These facts which I am about to recite are taken from the Findings of Fact which Judge Boldt made on the basis of the extensive evidence presented during the 18-day trial he conducted in 1973.

In 1848 Congress passed an Act establishing the Oregon Territory which included not only the present state of Oregon but also what are now the states of Washington, Idaho and the western part of Montana. That Act specified that nothing contained in it "shall be construed to impair the rights of persons or property now pertaining to the Indians in said territory, so long as such rights shall remain unextinguished by treaty between the United States and such Indians." The Act also extended to the Oregon Territory the provisions of the famous Northwest Ordinance of 1787, one of the landmark statutes of our nation which was adopted by the United States even prior to the adoption of the United States Constitution and was later reaffirmed after the present United States Government was created and established. That Ordinance provided that "good faith shall always be observed toward the Indians; their land and properties shall never be taken from them without their consent."

In 1850 Congress directed the negotiations of treaties with the Indian tribes in the Oregon Territory, and particularly for extinguishing their claims to lands lying west of the Cascade Mountains. The treaties with which we are concerned are the result of that direction and of the ensuing negotiations. It was through those treaties that the Indian title to this vast and bountiful region was peaceably extinguished and the land opened to non-Indian settlement. The question before us today is do we keep the terms which our negotiators agreed to and our Government accepted as one of the conditions for the cession of those vast tracts of land which were acquired and transformed by the non-Indian settlers and their successors.

Governor Stevens and his fellow treaty negotiators soon discovered the importance of fishing to the Indians of this region, and the intensity of their concern with maintaining their right to take fish at all places where they had customarily done so. This concern continues to this day and Judge Boldt found that

> The right to fish for all species available in the waters from which, for so many ages, their ancestors derived most of their subsistence is the single most highly cherished interest and concern of the present members of the plaintiff tribes, with rare exceptions even among tribal members who personally do not fish or derive therefrom any substantial amount of their subsistence. (384 F. Supp. at 340.)

Judge Boldt made numerous findings on the pre-treaty role of fishing among Northwest Indians. He found that the "one common cultural characteristic among all of these Indians was the almost universal and generally paramount dependence upon the products of an aquatic economy, especially anadromous fish, to sustain the Indian way of life. . . These fish were vital to the Indian diet, played an important role in their religious life, and constituted a major element of their trade and economy." (FF #3.)

Governor Stevens commented on this latter aspect in transmitting his first treaty, the Treaty of Medicine Creek, for submission to Congress. He said the fishing rights provision in the treaty had reference to the fact that the Indians "form a very considerable portion of the trade of the Sound. . . They

catch most of our fish, supplying not only our people with clams and oysters but salmon to those who cure and export it. Whilst they cultivate small patches of potatoes, their principal food is fish and roots and berries." And it should be kept in mind in interpreting that letter that in those days, and indeed for many years afterwards in the statute laws of the State of Washington, the term salmon was used as including steelhead.

Indian fishing practices at treaty times were largely unrestricted in geographic scope. Generally, individual Indians had primary use rights in the territory where they resided and permissive use rights in the natal territory (if this was different) or in territories where they had consanguineal kin. Subject to such individual claims, most groups claimed fall fishing use rights in the waters near to their winter villages. Spring and summer fishing areas were often more distantly located and often were shared with other groups from other villages. Indian fishermen shifted to those locales which seemed most productive at any given time, depending upon such factors as changes in river flow, turbidity, or water course. Several tribes fished in marine areas. The pre-treaty Indians had developed a wide variety of specialized techniques for taking fish involving both group and individual efforts. These ranged from the highly efficient weirs extending completely across streams, reef nets and beach seines, to individual gill netting, trolling, spearing and dip netting techniques. Indian food preservation techniques enabled the Indians to store fish for use throughout the year and to transport it over great distances. Fish was a basic element of Indian trade throughout a wide geographic area.

The Indians were assured by the treaty commissioners that they would have freedom to take salmon and steelhead at their usual and accustomed fishing places, but that white men would also be allowed to fish. Consequently, each treaty contained the provision under which the United States agreed to secure to the Indians "in common with all citizens of the territory" the "right of taking fish, at all usual and accustomed grounds and stations." No limitations were specified as to the means to be used for taking fish, the amount to be taken, or the purpose for which the fish would be taken. Of one thing we can be certain--recreational purpose was not uppermost in the minds of those Indians when they insisted upon the inclusion of these provisions. The Idaho Supreme Court recognized this fundamental fact two years before the Boldt decision. It said "the treaty Indians usually do not hunt and fish for the reasons that motivate ordinary sportsmen. . . [They] have subsistence and cultural interests in hunting and fishing that are rooted more deeply than the recreational interests asserted by sportsmen." The Idaho court said that as part of the state's conservation program, it "must extend full recognition to these rights, and the purposes which underlie them." (Emphasis added) State v. Tinno, 497 P.2d 1386 (Ida. 1972).

The United States District Court for Oregon had said essentially the same thing in 1969 in Sohappy v. Smith, 302 F. Supp. 899. That court found that "Oregon's conservation policies are concerned with allocation and use of the state's fishery resource as well as with their perpetuation" and that the state had not given any consideration to the Indian treaty rights "as an interest to be recognized or a fishery to be promoted in the state's regulatory and developmental program." It called this as a discriminatory aspect of the state's

conservation policy.

So Judge Boldt is not alone in holding that the purpose of the treaty provision must be taken into account in any state fisheries management program. The primary purpose to the Indians, apart from the religious and cultural aspects of the fishing activity, was their subsistence and economic well-being. They gave up the land but they retained a right to a share of those resources which were most important to them.

Judge Boldt made several pages of findings on matters pertaining to fisheries conservation and management. To begin with he had the advantage of an extensive Joint Statement Regarding the Biology, Status, Management and Harvest of the Salmon and Steelhead Resources of the area which had been prepared by the staffs of the United States Fish & Wildlife Service, the Washington Department of Fisheries and the Washington Department of Game; and this was introduced as a joint exhibit at the trial.

One of these findings dealt with the different purposes for which fisheries are managed and the different management principles that apply to these purposes. It says:

> Fisheries management takes into consideration both the resource itself and the objectives and needs of the societies which control and seek to utilize it. The commercial, sport and Indian fisheries are managed for different use objectives and user interests. Accordingly, the objectives of fisheries management vary in accordance with the purposes and constituency for which the particular fishery is being managed. Commercial fisheries are managed to achieve a maximum sustained yield in terms of food and economic profit, whereas sport fisheries are managed to obtain a maximum sustained recreational experience and a high yield of personal use food and 'trophy' product. The Indian tribes have as their primary use objectives the fostering of Indian economic well-being, the preservation of Indian cultural heritage and way of life, and the provision of a significant element of Indian diet. (FF #169.)

Another says:

> Management for Indian objectives is closer to commercial management than to sport inasmuch as pursuit of an economic livelihood and the efficient procurement of a food supply are major purposes. In addition, salmon and steelhead have special significance in the religious and cultural mores of the Indian people. Because of traditions, treaty provisions, and location of Indian communities, the Indian fisheries are largely place-oriented. Management for Indian fishery objectives must consider this factor. (FF #174.)

Noting that the anadromous fishery resource "is both perishable and renewable" the court said:

> Thus while an overharvest would impair its renewability, an underharvest during a limited time it is available would result in an irreplaceable waste of the resource.

In all of his decrees and orders, Judge Boldt has been consistently guided by this basic principle. He has stressed repeatedly that preservation and perpetuation of the resources comes first and that the only fish we're talking about dividing up are the harvestable portion of each run--that is, those that are above the need for perpetuation. And he has accepted the state agencies' determination as to what the harvestable portion of each run is. Similarly, the only cutbacks on non-Indian fishing that he has required have been those that can be made consistently with assuring the full harvest of the harvestable portion. He has not required cutbacks on non-Indian fishing if the Indians could not take the resulting additional numbers of fish that would be available to them. This is one reason why the non-Indian catch has continued to exceed the Indian catch even under Judge Boldt's orders. He is not interested in promoting any theoretical equal availability of fish if the result would merely be a waste of harvestable fish because of the inability of one party to fully harvest the share that would be available to it.

In discussing fisheries management Judge Boldt said:

> Assuring proper spawning escapement is the basis element of conservation involved in restricting the harvest of salmon and steelhead. Once that has been achieved, the regulations on time and manner of fishing are designed to facilitate the harvest of the excess and distribute it among users in a manner consistent with meeting use objectives of the people who are going to harvest.

Judge Boldt has directed the preparation and implementation of an interim program for management of the fisheries resource. He has refined the program on the basis of experience and changing conditions. He said that such a program must be flexible enough to accommodate the needs of all parties and the practical realities which exist as a new approach to fisheries management is effectuated.

In other words, the court recognized that the full objectives of the decision could not be achieved overnight. There would be difficulties of adjusting to the new requirements for fisheries management; requirements that greater attention be given to the Indians' right to a portion of this resource and to the Indians' objectives with respect to its use. Difficulties would also arise from bringing the Indians into the regulatory and management decision-making process.

A key feature of the decision is its recognition of Indian tribes as governmental bodies entitled to represent their people in the management of this resource, which, under the treaty, must be shared between Indians and

non-Indians. Many of the difficulties of the last two years have arisen as parties tried to adjust to the fact that another entity, the Indian tribes, must be brought into the decision-making process. All concerned with fisheries management, both the Indian tribes and the state agencies, and, in some instances, the Federal Government, must work together, must coordinate their activities and cooperate with each other in the successful execution of a joint fisheries management program. It has been done in other areas. The United States and Canada jointly manage runs which they both have a right to share; Washington and Oregon jointly manage the Columbia River runs which they have the equal right to share. There is no reason why Indian and non-Indian authorities can't work together to manage runs on which those groups each have rights.

Both Judge Boldt and Judge Belloni in the case of the Columbia River runs have called upon the states and the tribes to practice co-management and have backed this with provision for continuing judicial oversight and interposition wherever either party fails to respect the rights of the other.

A principal feature of the Interim Plan is that all Indian off-reservation fishing places are closed unless specifically opened by tribal regulations filed with the court.

The plan also provides the following:

1) The states will recognize provisions of tribal regulations (subject to its right to challenge them in court) and any Indians fishing contrary to them are subject to state law as applied to the general public.

2) The tribes must give the state an opportunity to review proposed tribal regulations before they are adopted.

3) The states must make significant reductions in non-Indian fishing as necessary to achieve the ultimate objectives of the decision. Mathematical precision is not required.

4) The state and tribes will monitor the fishery and exchange data.

PROGRAM TO IMPLEMENT INTERIM PLAN

The court has also adopted a "Program to Implement the Interim Plan" developed by the parties. It provides for the following:

1) All parties are to prepare guideline principles for the regulation of the fishery.

2) The tribes and the state agencies are to exchange data and proposed regulations on a fixed time schedule.

3) Closure of either the Indian or non-Indian fishery when such fishery had taken its share and such closure would benefit the other fishery and not result in a waste of harvestable fish.

4) Prompt and standardized catch reporting so as to improve both the timeliness and the accuracy of the available data.

5) An interim method allowing recently intervened tribes to fish after making a prima facie showing of treaty entitlement.

6) An interim method for preliminary determination of treaty entitlement to harvest non-anadromous fish.

One of the more significant and also more controversial aspects of Judge Boldt's decision is the provision for tribal exercise of regulatory authority. Judge Boldt recognized that the Supreme Court has held that the states may exercise their police power over Indian off-reservation activities by imposing restrictions on the exercise of treaty fishing rights which are necessary for the conservation of the fish. The treaties didn't say anything about this. They didn't mention state control. But the Supreme Court said that implicit in the treaties was an obligation on the part of both parties not to exercise their respective rights in a manner that would destroy the resource which they both must share.

Under our federal system the states rather than the Federal Government are the primary instrumentalities for protecting, preserving and regulating the use of fish and wildlife resources. Such regulation is an element of the police power. What the Supreme Court was saying was that the state's police power was adequate to assure that Indians would not exercise their treaty rights in a manner that would destroy a fish run.

Judge Boldt noted two other points in his opinion. He found that state regulation of treaty right fishing is highly obnoxious to the Indians and in practical application "adds greatly to already complicated and difficult problems and may stimulate continuing controversy and litigation long into the future." He also pointed out that ever since the first Indian treaties were ratified, Congress has recognized that they established "a self-government by treaty tribes, excepting only as limited in the treaties, judicial interpretation thereof or by Congress." He noted that this basic principle was confirmed in the first Supreme Court decision dealing with such a treaty and has been repeated again and again both in judicial decisions and in congressional legislation. He pointed to the intent and philosophy of Congress in recent years to increase rather than diminish the exercise of tribal self-government. He concluded that the time had now arrived "to take a step toward applying congressional philosophy to Indian treaty right fishing in a way that will not be inconsistent with" the Supreme Court decisions and also "will provide ample security for the interests and purposes of conservation."

Since he had found that the right to fish "is the single most highly cherished interest and concern" of present members of the Northwest Indian tribes, it logically follows that the furtherance of the congressional policy of increasing

tribal powers of self-government should encompass a greater degree of self-government with respect to the exercise of this significant tribal treaty right; for it should be remembered that the right is a tribal right. The treaties were negotiated with tribes and the rights were reserved by tribes.

Judge Boldt held that any of the plaintiff tribes is entitled to exercise its governmental powers by regulating the treaty right fishing of its members free of state regulation, provided that the tribe maintains the qualifications, and abides by the conditions, which he set forth. Failure of a tribe to do so shall suspend its self-regulation.

The qualifications which Judge Boldt specified are:

a. Competent and responsible leadership.

b. Well-organized tribal government competent to adopt and apply proper regulations.

c. Indian personnel trained and competent to enforce the regulations.

d. Readily available fisheries experts to advise on regulations.

e. An officially approved membership roll.

f. Membership certification and appropriate I.D. cards with photograph.

The conditions specified are:

a. Adopt full and complete tribal fishing regulations, including reasonable and necessary conservation restrictions, after consultation with state agencies.

b. Permit state monitoring of off-reservation Indian fishing.

c. Provide on and off-reservation catch reports to state.

The Yakima and Quinault Tribes were found to be presently qualified for self-regulation.

The decision stressed that state regulations for nonself-regulating tribes is strictly limited to specific measures which have first been found, to the satisfaction of the affected tribes of the Court, to be "reasonable and necessary to prevent demonstrable harm to the actual. . .perpetuation of a particular run or species of fish." However, this provision has been suspended during the period of the Interim Plan.

INDIAN MANAGEMENT OF THE FISHERY RESOURCE

Conservation of wildlife has been an important part of the Indians' religious and cultural heritage for centuries. The tribes' survival often depended upon preservation of the salmon runs. Today fishing is still important to their livelihood and it is in their own self-interest to manage the resource wisely.

The Joint Biological Statement which I mentioned earlier points out that "contemporary expertise in fishery management has grown considerably within the Northwest Indian community since 1965 as a number of Indian students have been trained as fishery technicians and a few have received college degrees in fishery biology."

The Statement notes that Indian fishery management objectives include the development of their economic well-being and the preservation of their cultural heritage and way of life. They seek to maintain fishery stocks at a level compatible with the carrying capacity of the environment and provide the needed harvest."

"Indian Tribes," the Statement notes, "have been cognizant of the deteriorating conditions of the freshwater habitat. Many have called attention to, and requested assistance in correcting, the adverse effects of poor logging practices and industrial, municipal, agricultural, and other water development for power and flood control."

In addition to their own developing expertise, the Indians have technical assistance available to them from the U. S. Fish & Wildlife Service and the Washington Departments of Fisheries and Game. An increasing number of tribes and Indian organizations such as the Small Tribes of Western Washington (STOWW) have hired biological advisors.

The Quinault National Fishery Hatchery, operated by the U. S. Fish & Wildlife Service, is now in full production on that reservation and will help build back the runs lost by destruction of spawning areas, to the benefit of both Indian and non-Indian fishermen. National Fish Hatcheries also are under construction on the Makah and Warm Springs Indian reservations.

Several tribes, including the Tulalip, the Quinault and the Squaxin Island, have operated salmon rearing projects for years. The Lummi Indians have helped re-establish runs through their aquaculture project financed by tribal money, private funds and federal grants.

Several tribes, such as the Yakima, Umatilla, Warm Springs, Quinault, and Skokomish, have shared their reservation fishery resource with non-Indians through a permit system.

At the time that Judge Boldt's decision was issued I was asked by the news media to comment on it. I said:

> "Judge Boldt has opened the way for tribal assumption of

> responsibility for regulating their members' exercise of their federal treaty fishing rights. If the tribes will accept and meet the qualifications and conditions which he has prescribed and if the state agencies will cooperate with those tribes in the spirit in which the decision is written, there is no reason why we should not see a more harmonious relationship between Indians and non-Indians and a more equitable accommodation of the rights of both to this resource."

Despite what has happened in the last two years, I still believe that statement to be true. Unfortunately, I do not believe that either side has yet fully measured up to the standards that Judge Boldt set, although certainly the Indian tribes have come a long way. There is still a great deal of suspicion and mistrust on both sides and I suppose on occasion each side has given the other grounds for that mistrust. We have been in court on far too many issues that could and should have been settled outside of court if there had been a greater willingness to do so.

From the Indians' standpoint I think that great strides have been made in developing tribal capabilities to participate in fisheries management and regulation and control of their members. And there has been a great change in Indian attitude. The Indians are taking a greater interest in formal conservation measures--the need to develop regulations that will fix the limitations on where, when and how their members may fish. They are showing a more active interest in positive fisheries management and improvement--getting necessary data on run sizes, spawning and rearing habitat, and catches and promoting artificial propagation efforts and the like. They are getting over some of their former reluctance to cooperate and exchange information with state and federal management and enforcement agencies and even private fishermen's groups.

Our problems or differences are not all behind us by any means. We still have a long way to go. But we are moving. Two years isn't very long when you consider the magnitude of the problem and the intensity of the suspicion and frustration that Indians felt before the Boldt decision.

Judge Boldt has given meaning to the Indians' treaty right and given them a standing to determine how it will be administered. This is very important. By and large I think they are measuring up to the challenge and responsibility he has given them.

The tribes have been helped by the 1974 decision of the Ninth Circuit Court of Appeals in the case of Settler v. Lameer, 507 F.2d 231, decided a few months after Judge Boldt's decision. There the court upheld the Yakima Tribe's authority to adopt regulations governing its members' exercise of its tribal fishing rights whether on or off the reservation and its right to arrest members off of the reservation and try them in tribal court for a violation of those regulations. Thus, the tribes were recognized as having an off-reservation enforcement authority which was not clear prior to that decision.

Judge Boldt's decision merely re-emphasizes what the courts had repeatedly said long before the decision--namely, that state authority to regulate Indian

exercise of their treatv-protected fishing right is severely limited. Tribes on the other hand have considerable authority to regulate their members' exercise of this right that belongs to the Indian people in their collective capacity. By working together, the tribes and the state agencies can achieve an enforceable program for managing, protecting and enhancing these fish runs that neither entity could accomplish independently. The Boldt decision stresses that aspect and seeks to encourage such cooperative action.

TRIBAL GOVERNMENTS AND THE BOLDT DECISION

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In 1855, Governor Stevens was sent to Washington Territory to secure the land for settlement. He was told to make treaties with the tribes he found there and move them to reservations. He was successful, he made the treaties, the Indian tribes moved to reservations, and the land was available for the incoming rush of settlers.

Now remember that the constitution says a treaty is "the supreme law of the land--anything in the constitution or laws of any state to the contrary notwithstanding. And that is what the United States and the Indian tribes signed--and still is in effect today. When the tribes signed these treaties they reserved their right to fish in their "usual and accustomed places", and that meant to them both on and off the reservations. There is another important point to remember here also. When the Indian tribes signed treaties with the United States in most cases they relinquished title to the land they had occupied. But it was not a question of the tribes getting something from the federal government. They gave up something; and what they did not specifically give up, they reserved. So they reserved their right--and that is an important word--to fish in their usual and accustomed places, both on and off the reservations. And the United States agreed to that. That was upheld in a United States District Court and reaffirmed unanimously in the Ninth Circuit Court of Appeals and the Supreme Court refused to review the lower court ruling. And as trustee for Indian rights and resources the Bureau of Indian Affairs has an obligation--a legal one as well as a moral one--to see that those rights and court orders are upheld.

I also think it is important to see the distinction here between a treaty rights fisherman and other fishermen.

The other fisherman fishes because he buys a license from the State of Washington or Oregon and it is a privilege granted by the state. The license buyer is subject to certain conditions, and if he does not abide by them, he loses his license and the privilege of fishing. Now in the court decisions that were handed down by Judges Boldt and Belloni, certain conditions also were placed on the tribes and they must abide by them. The individual treaty rights fisherman is subject to regulations set down by his tribal government and he must abide by them also if he is to fish.

There are many reasons why these decisions have become so controversial and emotional. First, there are the obvious economic reasons. Then there is the failure to make the distinction between treaty rights and privileges. A third

reason is the depletion of the resource. And this is not something for which the Indian can be blamed. On the other hand, while I'm not here to tell you that we cannot have progress, or that progress is bad, it is a factor in less salmon coming up the Columbia River or into Puget Sound.

Our streams and rivers are carrying an increased load in being the power generators for the area, for commercial waterways, for water supplies for an increasing population, and for much-needed irrigation projects. No one is going to say, "Take out the dams on the Columbia. We want Celilo Falls back." That same electricity lights Indian homes, heats Indian homes, operates labor-saving devices to make Indian lives easier, and provides the power necessary to operate the industry which also gives Indian people greater economic opportunities. But we must act together to see that this valuable natural resource, the Pacific salmon, is conserved and preserved for the future. And remember this: the Indian fisherman does not prosper if there are no more fish to catch. He is just as anxious as others to see that the resource is preserved.

We all believe in the constitution of the United States, and that the United States should honor its treaties. We all agree that we must obey the laws of the land to insure the greater welfare of all of us. And we must work together in a spirit of cooperation, not within an aura of fear and distrust. Let me read you what the Honorable James M. Burns wrote while sitting on the Ninth Circuit Court of Appeals to hear the appeal of the Boldt decision.

> I concur, but I want to add a brief comment from the viewpoint of a District Judge. As was suggested at oral argument, any decision by us to affirm also involves ratification of the role of the District Judge as a 'perpetual fishmaster.' Although I recognize that District Judges cannot escape their constitutional responsibilities, however unusual and continuing duties imposed upon them, I deplore situations that make it necessary for us to become enduring managers of the fisheries, forests, and highways, to say nothing of school districts, police departments, and so on. The record in this case, and the history set forth in the Puyallup and Antoine cases, among others, make it crystal clear that it has been recalcitrance of Washington State officials (and their vocal non-Indian commercial and sports fishing allies) which produced the denial of Indian rights requiring intervention by the District Court. This responsibility should neither escape notice nor be forgotten.

STATUS OF TRIBAL GOVERNMENTS

After treaties were completed with Indian groups it was the policy of the government and the Congress to destroy tribal governments. This policy continued from treaty times until the 1920's. The policy virtually destroyed most tribal governments. The efforts to destroy tribal governments and the individualization of tribal assets had not resolved "the Indian problem" by the late 1920's. In

1934, Congress enacted the Indian Reorganization Act and began efforts to reorganize and strengthen tribal governments as the beginning of a new long-range approach to Indian affairs. Many tribal governments reorganized under the provisions of that act and began a redevelopment process. Others chose not to reorganize under that act but in their own way began the rejuvenation of their governmental activities.

As tribal governments began this redevelopment, World War II intervened and tribal governmental activities were reduced to a "back burner operation." In 1942, a decision in Tulee v. Washington provided that Indians could fish without a license, but were subject to regulation by the state for purposes of conservation. There was no definition of conservation.

The Bureau of Indian Affairs did little to continue the policy of strengthening tribal governments because the sense of Congress had changed during World War II. Beginning in the early 1950's, Congress clearly set forth their policy that the Bureau of Indian Affairs should proceed with the orderly termination of all special operations relating to Indian affairs. While the termination policy affected some of the tribes in the State of Oregon, none of the tribes in Washington were terminated, even though there were some proposals made.

In 1960, a new administration appointed a task force to review Indian affairs. In the Pacific Northwest, many complaints were received from Indian groups about the failure of the United States to protect their fishing rights. Subsequently, an in-depth study of the western Washington area caused the Bureau of Indian Affairs and the Department of the Interior to review its responsibilities as trustee.

In 1961, the Bureau of Indian Affairs established the Branch of Tribal Operations whose primary mission was to work with Indian tribes in the development of stronger, more effective tribal governments. Tribal governments are considered as "quasi-sovereignties." They have responsibilities for all governmental activities involving their lands and people that are not governed by federal statutes. In some instances, jurisdiction over criminal and civil affairs has been turned over to state and local governments pursuant to Public Law 280. That act of Congress, though, specifically exempts fishing rights. The Boldt decision clearly outlines that tribal governments have the responsibility of regulating these treaty rights. They have authority to administer these rights without interference from the state so long as they meet the requirements for self-regulation. Further, tribal governments have the right to regulate the conduct of their members off reservation where it involves a treaty right to fishing. The court decisions in the Settler cases upheld that right.

The Boldt decision is rated by many people as being destructive to salmon and steelhead runs. If one studies the court decision, it is apparent that this is not true. The decision provided first for the conservation of the fish resource. All off-reservation fishing was closed until it might be opened in the future by tribal regulation which provided for proper conservation. The Bureau of Indian Affairs is working with Indian tribes in the continued development of responsible tribal governments and the issuance of identification cards as prescribed by the court in order that all management agencies can quickly determine if an individual is, or is not, fishing in accordance with tribal rules.

The Fish and Wildlife Service is assisting in the development of tribal regulations which will insure the conservation of fish runs.

The Department of the Interior, Washington State, and Indian tribes in the western Washington area have secured funds by federal appropriation. State fisheries agencies will have federal funds to enhance their program of development and improvement of fish runs. Funds are now available to the Northwest Indian Fisheries Commission and treaty tribes through the Bureau of Indian Affairs to carry out their responsibilities under the Boldt decision.

It is interesting to note that in the years following the treaties, up until about the turn of the century, the greater percentage of "commercial fishing" for salmon and steelhead was done by Indians. At about that time, other citizens of the state began to take advantage of the increased demand for fish and fish products by a slow, but steady encroachment into the Indian rights.

These fishermen conducted their activities at the expense of the Indian. The Indian was lost sight of by the general citizenry through this general encroachment until we reached the point that it became necessary for the United States to take action to restore to the Indians their rights they expressly reserved through the "supreme law of the land."

The "opportunity" to take 50 percent of the harvestable catch is an economic opportunity for the Indians provided in some minds at the expense of the sports and commercial fishermen in this state. I would remind you, however, that sports and commercial fishermen gained their opportunities in the first place at the expense of the Indian contrary to the provisions of the treaties.

It has been the attitude of the state and others that fisheries management must be a single agency responsibility if it is to be effective. For many years, the State of Washington and the State of Oregon have been involved in co-management activities. The effective management of the Northwest fisheries must include Indian participation if such a program is to be effective. I can assure you that the Bureau of Indian Affairs will be doing everything within its power to work with all concerned in the cooperative efforts that will be required in the management of the resource. I would emphasize, however, that the Bureau of Indian Affairs has a legal responsibility to protect the Indian rights.

SPORT FISHING AND THE DECISION IN UNITED STATES V. WASHINGTON

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When United States v. Washington, 384 F. Supp. 312 (W.D. Wash. 1974), commonly called "The Boldt Decision," was decided in February, 1974, the public knew little of what the decision said and why, except that a federal judge in Tacoma had found that Indians were entitled to take more fish than they had in the past, based upon some 120-year-old treaties with the United States.

Almost before the ink was dry on the lengthy, complicated decision, hundreds of sport fishermen had mustered around the Tacoma Federal Building where they marched with pickets and hung effigies of Judge George Boldt. Registering displeasure with laws that people do not like is in the highest tradition of our country and is carefully protected by the Constitution. What was distressing to me as I crossed through the picket lines to attend a hearing in that courthouse was the almost certain knowledge that no one there had attended the lengthy trial that led up to the decision, let alone read or understood the decision itself. This situation is especially disconcerting in light of Judge Boldt's perceptive statement early in his decision that

> To this Court the evidence clearly shows that, in the past, root causes of treaty right dissension have been an almost total lack of meaningful communication on problems of treaty right fishing between state, commercial and sport fishing officials and non-Indian fishermen on one side and tribal representatives and members on the other side, and the failure of many of them to speak to each other and act as fellow citizens of equal standing as far as treaty right fishing is concerned.

384 F. Supp. at 329.

The judge expressed a principle that all of us here should be able to agree upon: that there has been inadequate communication and understanding between Indian and non-Indian fishermen. In the two years since the district court handed down its decision, there has been some growth in understanding of Indian treaty right fishing and of the decision itself. But Judge Boldt's belief that "high priority should be given to further improvement in communication and in the attitude of every Indian and non-Indian who as a fisherman or in any capacity has responsibility for treaty right fishing practices or regulation" (384 F. Supp. at 329) is as apt today as when he wrote it.

The discussion which is occupying the attention of this workshop on "Sport Fishing

and the Boldt Decision" is precisely the kind of effort that is needed to lay to rest the misunderstandings and lack of communication which have plagued us in the past. It is to the credit of the Cooperative Extension Service and to every participant here that such a concentrated and sincere effort is being made to understand and live with the existing law.

It is in the spirit of fostering better communication and mutual understanding that I have come here. While it is unlikely that any of us will leave with different opinions, hopefully all can leave with a fuller comprehension of what happened in United States v. Washington and why. This will make easier the future tasks of fish managers, the recreation industry, and individuals who as sportsmen and citizens want to maximize enjoyment of the splendid natural resources of this state, consistent with biological necessity and a rule of law.

My role here is not to get you to embrace the decision in United States v. Washington, only to try to explain how it was reached. Accordingly, I will not dwell at length on the tremendous importance that fishing has played in Indian life historically and to the present time. We all understand the economic importance of fishing and, as sportsmen, it is easy to accept the strong personal preference expressed by most Indians for fishing as a pasttime and lifestyle. Perhaps it is harder to understand how fishing can function as the very basis of a culture, how fishing activity can be the "glue" which holds together family life and social structure, and why, as testimony indicated in United States v. Washington, an Indian worker would forego a secure, $12,000 a year job to labor at fishing for $6,000 a year. To help us understand we would need the assistance of sociologists, psychologists, anthropologists, and others. We do not have time for that and it is not our task. I am a lawyer and will devote the little time that I have with you to the legal process and the principles which underlie United States v. Washington.

BACKGROUND OF THE CASE

Throughout the last century Indians have insisted that they held a treaty-based fishing right which exempts them from state regulation. In the sixties there were demonstrations on the river banks resulting in arrests not only of Indians but some of their "friends" such as Marlon Brando and Jane Fonda. The courts had concerned themselves with the matter, but most of the judicial activity was in the area of criminal cases. Decisions in nearly all of the cases which reached the appeal level recognized that the Indian treaties were still alive, that they vested in the Indians special rights distinct from other citizens, and that state law could not conflict with those rights. But the decisions dealt incompletely with the problem and often were inconsistent with one another. They were interpreted by state agencies and law enforcement people as applying only to their narrow facts. In a criminal situation, this can mean it applies only to a particular person at a particular time and place in relation to a particular law or regulation.

The records in most cases were not very complete. Indian defendants did not have the wherewithal to put on evidence of biological and historical facts to support their cases. Without a full record and without wider issues before them, the courts were not in a position to make broad, general pronouncements. Nevertheless,

any attorney could determine before this case was brought some basic principles which were well established by the Supreme Court and other courts regarding the extent of state regulatory power over Indian treaty fishing:

1. Indian treaty fishing rights are special, distinct rights protected by federal law which cannot be qualified by state action (Puyallup Tribe v. Department of Game, 391 U.S. 392 (1968));

2. Indians exercising treaty fishing rights outside their reservations cannot be prevented from crossing private lands (United States v. Winans, 198 U.S. 371 (1908)) and need not pay license fees to the state for exercising their federally secured treaty rights (Tulee v. Washington, 315 U.S. 681 (1942));

3. The Indians got their rights in exchange for giving up most of the State of Washington and those rights constituted the most valuable part of the treaty bargaining process to the Indians (United States v. Winans, supra);

4. State regulation of Indian fishing can occur only when the state uses a reasonable regulation which is necessary for the conservation of fish and which does not discriminate against Indian fishermen in the exercise of their treaty rights (Puyallup Tribe v. Department of Game, supra);

5. The treaties mean that Indians should be able to take a "fair share" of all the fish which are taken (Sohappy v. Smith, 302 F. Supp. 899 (D. Ore. 1969));

6. The Indians' treaty rights guarantee them a right to take, at their "usual and accustomed places," fish using means which were feasible to them, i.e., nets (Sohappy v. Smith, supra)).

All of these things were established law before United States v. Washington was begun. Presumably, they should have guided state agencies in their decision-making and regulation of Indian fishing as well as the management of non-Indian fishing. Perhaps the Indians' indignance and even outrage at state enforcement actions which did not seem to line up with what the courts had said to be law is explainable when one is aware of these earlier decisions.

Non-Indians too believed in the righteousness of their cause. There was little attempt to explain to the general public the extent of Indian rights which had been determined by the courts.

Indians did not and do not have tribal public relations departments, so they had no means of letting the public know the law. State agencies which do have such departments were reluctant to beat the drum too loudly for Indian fishing rights when those rights were in conflict with the constituencies of the agencies. The Departments of Game and Fisheries could not even agree on a single position to take as to what they would accept as the law of Indian treaty fishing. Sport and commercial fishermen were themselves expanding in number and demanding a greater availability of fishery resources. Thus, even if the agencies had been so

inclined, politics rendered any agency apologies for Indian rights unpalatable. So the agencies themselves did little to educate the public about the clear direction of the law in the Indian fishing rights area.

To make matters worse, the agencies, by reason of the same pressures, continued to regulate, construing the Indians' treaty rights as narrowly as possible. And they argued and re-argued publicly and in the courts of law subtle questions which had already been decided. In fairness, the average citizen had little way of knowing what was right other than to spend hours plodding through the law library trying to make sense of the cases or by consulting a lawyer.

By 1971, confrontations between Indian fishermen on one side and state authorities and non-Indian fishermen on the other had intensified. What was essentially a legal dispute had degenerated to violent conflicts on the riverbanks.

THE LAWSUIT

Then in the Fall of 1971, the United States filed a complaint in United States District Court attempting to obtain a formal judicial declaration that the Indians' treaty rights existed, the extent of those rights, and the degree to which the State of Washington could regulate Indians exercising the rights. Soon after the action was filed, several tribes intervened. There were several reasons for their interventions:

1. The United States brought the action only on behalf of seven of the many Western Washington tribes;

2. The government encouraged the tribes to intervene and assert facts and legal theories particular to them through their own attorneys;

3. The tribes wanted consideration of special problems some of them had; and

4. The tribes wanted to put forth additional and different legal theories.

I became involved in the case as attorney for five Indian tribes all of whom were covered by one of three of the Stevens Treaties. A series of meetings which continued as needed through and after the trial commenced among the attorneys for the United States, Mr. Pitkin, lead trial counsel Stuart Pierson, George Dysart of the Department of the Interior's Solicitor's Office, and attorneys for the several tribes. It was necessary to map out a strategy for developing the facts, researching the law, preparing briefs, and generally preparing for trial. One early concern of the tribal attorneys was attempting to move the United States from what we believed to be compromise position on the question of the degree of permissible state regulation. The tribes urged a tougher line on that issue.

Another matter which concerned attorneys on the plaintiffs' side of the case was the fact that it was assigned to Judge George Boldt of Tacoma. Everyone knew that Boldt was respected nationally in judicial circles, but there were other indicators that worried us. He did not appear to be a judge who would look favorably upon Indian claims. He had handled a few Indian cases during his many

years on the federal bench, but none of them emerged as what might be called "pro-Indian." For instance, he ruled in 1962 that the Skokomish Indians, one of our tribal clients, did not have title to their tidelands. Skokomish Tribe v. France. Furthermore, he was a salmon fisherman and longtime resident of the Tacoma area. If subtle pressures and prejudices could work on a judge we were afraid that Judge Boldt would be particularly susceptible. We knew also that he was not known as a "liberal"--the appellation normally given to people who are expected to be sympathetic to minority rights. He was known for meting out tough criminal sentences and had dealt severely with radical political activists who had thrown a can of paint at the Seattle federal building in the celebrated "Seattle Eight" trial. Our clients were tribes of predominantly responsible Indian people asserting property rights founded in solemn federal treaties, but many of their vocal spokesmen who deserve credit for drawing public attention to the problem had engaged in demonstrations and subjected themselves to arrest. All these factors added up to some serious doubts about our prospects with Judge Boldt. Ultimately, we reconciled ourselves to building a comprehensive, carefully wrought record so that if we could not convince Boldt, at least we would have sufficient material to support an argument for reversal on appeal.

There was a hiatus during which Judge Boldt was appointed by President Nixon to the federal Pay Board. During this time, another judge temporarily handled the case. We did not have frequent occasion to go before him because the case was in intensive preparation stages at the time. Our greatest concern with the other judge was what appeared to be a complete lack of interest in the case. When Judge Boldt returned from the Pay Board, however, he asked to be reassigned to the case. This was heartening because it indicated to us that, at a minimum, he would probably be willing to hear out both sides fully and we would not be foreclosed from building the record which we knew would be so important.

Trial preparation consumed several years. There were dozens of depositions of state fisheries and game personnel and policymakers, state and federal fishery biological experts, and tribal leaders. The plaintiffs commissioned a major anthropological report to be done covering the treaty status of each tribe, the intent of the United States and the Indian parties to the treaties and the importance of fishing to Indians. A report comprising some 555 pages was produced. Simultaneously, state and federal biologists were working together to prepare a 338 page joint biological statement that would be submitted on behalf of the plaintiffs and defendants describing the biology of the Western Washington anadromous fish resources, management practices, harvesting techniques and their effects and the various river systems in the state. Legal research was an ongoing obsession. And there were occasional needs for court appearances on motions made by both sides attempting to narrow the issues, seeking temporary relief, and dealing with procedural matters.

Attorneys for the Departments of Game and Fisheries along with attorneys for federal and tribal plaintiffs held occasional meetings, exchanged interrogatories, requests for admissions, and other devices for learning about factual matters that the other side was relying on. Ultimately, and at the direction of Judge Boldt, attorneys for both sides spent hundreds of hours together agreeing on language to be included in a final pre-trial order of some 189 pages which set out the facts that the parties agreed upon, those which they did not agree upon, and the issues which the court had to decide, and the contentions of each side

on those issues.

Finally, in the late Summer of 1973, trial in the case began. Judge Boldt is, among other things, a workhorse and a stickler for efficiency. He insisted on having virtually all of the exhibits admitted in advance of trial and the direct testimony of nearly all the witnesses submitted in writing before the trial began. Then most of the courtroom time could be devoted to cross-examination and redirect examination of the witnesses and exploration of the contents of the various exhibits. The 19-day trial was characterized by long days. Often we broke only for a half-hour lunch having sandwiches brought into the courthouse to be wolfed down while we collected our thoughts for the afternoon's proceedings. Rarely did we break before 5:00 p.m. When the Judge felt we were falling behind our schedule, we met on Saturday and even on Labor Day. By the end of the trial some 50 witnesses had testified, 350 exhibits were admitted and court reporters working tandem day and night generated daily court transcripts totalling 6,400 pages.

Anyone who attended the trial knows that the most alert and interested person in the room was the judge. His demeanor was the epitome of fairness. Only when an attorney would occasionally digress from the main point or "beat a dead horse" by requesting a witness about subjects that had already been explored--which I was guilty of on a couple of occasions--would the judge lose his patience. Recalling the trial tempts me to regale you with anecdotes about the tense moments and some of the lighter ones during the trial. I will only relate one, however.

When an officer for the Steelhead Trout Club was testifying about the importance of sport fishing to non-Indians, he went on about the pleasures of enjoying nature, the thrill of feeling the tug of the giant rainbow trout on the line, then summed up by saying: "I mean, if you have ever made love, I guess that's about the nearest I can express it." He was then asked where he fished locally. He reeled off a list of about a dozen rivers after which the judge said: "That doesn't give you much time for making love." The Steelheader brought down the house with his response: "You have to sandwich it in."

When the trial ended, several months of suspenseful waiting began while the judge and his law clerk perused the evidence and massive record. Neither side knew what to expect. We felt that we had done a good job but kept thinking of things we might have done better. We knew that attorneys for the Departments of Game and Fisheries had done a top-notch job themselves and the court had before it extensive post-trial briefs not only from these parties but from the Reefnetters Association, the Northwest Steelheaders, the State of Idaho, and several commercial fishing associations.

THE COURT'S DECISION

Needless to say, we were delighted when the court's decision was rendered in February, 1974. The lengthy opinion was supported by 253 findings of fact and 48 conclusions of law. All of the issues and relevant facts were painstakingly discussed.

The court found that Indian treaties are very much alive today. Like any other

contract, they do not wilt and die with time. The court found that these treaties had been violated by the State of Washington and its citizens and that present state enforcement efforts were unlawful and unconstitutional in view of the supremacy clause of the Constitution which makes treaties the supreme law of the land.

The court's decision noted the Supreme Court's well-established principle that treaties are to be interpreted based on the understanding of the Indians at the time they were negotiated. For the Northwest Indians, tribal practices, family life, religion, and economy revolved around fishing. The treaty minutes, records kept and produced on behalf of the non-Indians, not the Indians, made it clear that both the Indian parties to the treaties and the United States wanted this fishing to continue wothout restriction. The decision relied upon a principle that any ambiguities in a treaty must be resolved in favor of the Indian parties. This principle was developed because Indians were not in an equal bargaining position and, in the case of the Northwest treaties, few, if any, of the Indians spoke or understood English let alone the legal terms used in the treaties. Finally, the dimensions of the transaction dictated that Indian rights be respected. The Indians, after all, had agreed to give up their claims to most of the State of Washington in exchange for their ability to continue fishing in perpetuity as they had in the past.

The court also found several aspects of state management of the fisheries to be inadequate and inconsistent with Indian treaty rights. Furthermore, the court expressed some surprise when it found that there had been no evidence which the state could prove showing that Indians fished in a manner inconsistent with conservation. The court said:

> With a single possible exception testified to by a highly interested witness and not otherwise substantiated, notwithstanding three years of exhaustive trial preparation, neither Game nor Fisheries has discovered and produced any credible evidence showing any instance, remote or recent, when a definitely identified member of any plaintiff tribe exercised his off reservation treaty rights by any conduct or means detrimental to the perpetuation of any species of anadromous fish.
>
> Unfortunately, insinuations, hearsay and rumors to the contrary, usually but not always instigated anonymously, have been and still are rampant in Western Washington. Indeed, the near total absence of substantial evidence to support these apparent falsehoods was a considerable surprise to this court.

384 F. Supp. at 338 n. 26.

The clear holding of Judge Boldt's decision was that Indians still had the right they reserved in the treaties--a right to fish at their usual and accustomed places outside the reservations. Because the treaty spoke of the right to fish "in common with the citizens of the Territory," the court found that the Indians agreed to share these fishing places with non-Indians. But they did not agree that the state could regulate their exercise of the reserved fishing rights. The court held, nevertheless, based upon Supreme Court precedent (Puyallup Tribe v.

Department of Game, 391 U.S. 392 (1968)), that state regulation of Indian off-reservation fishing is permissible when those regulations are reasonable, necessary to preserve and maintain the fishery resource, and do not discriminate against the exercise of Indian treaty fishing.

The parties also asked the court to determine how many fish the sharing concept entitled Indians and non-Indians to take at the Indians' usual and accustomed places. The court found that it would be inconsistent with what any of the parties of the treaties intended if the non-Indians took more than half of the fish destined for the Indians' usual and accustomed places.

Other parts of the decision dealt with the ability of Indian tribal governments to restrict fishing by their members, Indian subsistence and ceremonial fishing, and several corollary issues.

Of course the decision was appealed, and decided in 1975 by a three judge United States Court of Appeals which upheld Judge Boldt's decision in virtually all respects. United States v. Washington, 520 F.2d 676 (9th Cir. 1975). Attempts by the defendants to get the Supreme Court to review the case were rejected last month. The decision is now unequivocally the law of the land. And as can be readily seen, the judge gave nothing to the Indians. He studied the facts and the law more completely than had ever been done in a case before, and rendered the decision he found to be in accord with them. Other courts have upheld and followed the decision. None has said he was wrong.

THE FUTURE

A tremendous amount of the resources of our legal system have been devoted to determine what the law is, and, in recent months, to making the law work. It is beginning to work. There have been no disasters. The Indian catch increased from about 5% of the harvestable fish available to them before the decision to 12.6% in 1974. Their 1975 catch will be about the same. But the salmon sport fishery enjoyed a bumper year in 1975. Puget Sound sport fishermen had their second best year in history. Steelhead fishing is down, but the catch was affected by a considerably decreased fishing effort, combined with last Fall's adverse weather conditions and heavy runoffs.

There are indeed problems in the commercial fishery, but only action such as the state's new limited entry and vessel buy-back program will avoid the business failures of the past. The state simply cannot issue an unlimited number of licenses for a relatively stable fish resource. Last year the state allowed the number of licensed commercial fishermen to increase by nearly one third, fully aware of the marginal nature of the businesses of many licensees and the fact that they were required by law to assure more fish to Indians. They are to be commended for finally initiating long-overdue remedial action this year.

The mission of those present here--people interested in the health of the recreational fishery--is to preserve and enhance that fishery and to use it as fully as biology and the law permits. The past holds some lessons for us as we pursue that goal:

1. The anadromous fish resource is limited and fragile. All users--sport, commercial, and Indian--must insist on the very best management and propagation practices.

2. Facts are essential. Much time, money and energy have been wasted by all fishing interests in the past by pointing fingers of blame and fighting each other, based on insufficient or plainly incorrect facts. For years the anti-treaty fishing fires were fueled by a belief that Indian fishing was squarely contrary to conservation. This notion was debunked in United States v. Washington by the inability of the State to prove any such thing.

3. Making the law work is in everyone's best interest. True, ignoring or disbelieving the existence of Indian treaty fishing rights has bought time for non-Indian fishermen--valuable fishing time--in the past. But the result was a need to reorder the state's fisheries far more drastically than would have been necessary if the state had seen the handwriting on the wall, made its citizens aware of the need to operate in conformity with Indian treaties, and voluntarily begun changing its management scheme years ago. Had this been done, the case might have been unnecessary. As a judge on the U. S. Court of Appeals stated:

> The record in this case, and the history set forth in. . .others make it crystal clear that it has been recalcitrance of Washington State officials (and their vocal non-Indian commercial and sports fishing allies) which produced the denial of Indian rights requiring intervention by the district court. This responsibility should neither escape notice nor be forgotten.

520 F.2d at 693.

So, work to change the law if you will. Congress does have the power to abrogate Indian treaties without the Indians consent. But Congressional action, if it is feasible to expect a majority of Congress to take such a drastic step at all, may take several years. In the meantime, it is irresponsible to pretend the Indians' rights are not law.

4. Finally, Indians and recreational fishermen should explore their common interests--

a. Both have substantial interests in maintaining the strength of river fisheries;

b. The chief competitor of both is the commercial fishing industry. Thus, both should urge better management of that highly competitive, profit-motivated fishery;

c. Both have a history of resisting pollution and habitat destruction. This conservation orientation may lead to a new alliance. A second phase of United States v. Washington is dawning. It will

seek controls on activities which destroy fish habitat--industrial pollution, streambed alteration, gravel taking, logging operations, water diversions, etc. Consider the possibility of sportsmen and Indians working together to assert their common interest in these matters in Phase II of the case.

The regularity of the salmon's migration is a wonder of nature beyond comparison. Just as predictable as the salmon's instinct is friction between fishermen competing for an inadequate resource. We can expect more conflicts. But we can also expect that, in the words of Judge Boldt:

> The vast majority of the residents of this state, whether of Indian heritage or otherwise, and regardless of personal interest in fishing, are fair, reasonable and law-abiding people. They expect that kind of solution to all adjudicated controversies...and they will accept and abide by those decisions even if adverse to interests of their occupation or recreational activities.

384 F. Supp. at 329.

The olive branch is out. Let's work together on common problems. Indians may find allies in sportsmen whose quest of the fish has a special and hard to express personal meaning for them just as it does for Indians. And sportsmen may find, as did a salmon fisherman-judge, that the Indians' right is soundly based in law and need not clash with conservation or well-managed fisheries.

WHAT HAPPENS NOW WITH THE BOLDT DECISION - CHARTER BOAT INDUSTRY

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Washington State Commercial Passenger
Fishing Vessel Association
Seattle, Washington
Presentation by Earl Spencer, Manager

THE LAW OF THE LAND

The Boldt decision is now the law of the land and henceforth will be impacting the non-Indian fishermen in the State of Washington. The United States Supreme Court has put an end to any further court action with respect to the controversial decision issued by Judge Boldt, in February, 1974, refusing to grant certiorari. This means they will not hear the appeal by the State of Washington and other interested parties. The non-Indian fishermen must now look to other areas to obtain relief from the effect of the Boldt decision.

ALTERNATIVES AND SOLUTIONS

Several solutions have been suggested to resolve the conflict and the real possibility that anadromous fish may become endangered in the State of Washington.

An effort is presently under way to secure a meeting with the congressional delegation in Washington, D. C. The congressional delegation will be asked to assist in a number of ways: (1) Buy out all or some of the Indian fishing rights; (2) Renegotiate the treaty in such a way as to re-establish the authority of the State of Washington to manage anadromous fisheries for both Indian and non-Indian off-reservation; and (3) call congressional hearings in the State of Washington to establish the facts and to determine whether or not legislation will be needed to resolve the widening conflict between user groups in the anadromous fishery.

A meeting was held the day after the election in November, 1974, with our congressional delegation, including Senator Magnuson, a representative of Senator Jackson's office, Representatives Pritchard, Meeds, Hicks and representatives from Congressmen Adams and Foley.

We were advised at that time that the delegation would hear the grievances of non-Indian user groups at such time as court action was concluded. The time has now come to request the congressional delegation to live up to that promise.

1976 REGULATIONS

The 1976 regulatory scheme for the non-Indian fishery has been promulgated by the Department of Fisheries.

A review of the regulations reflects a studied plan by the Department of Fisheries to look to the enhancement program and the total year for 1976 regulatory scheme. This plan will be submitted to Dr. Whitney, Special Master appointed by Judge Boldt, to review the fisheries biology questions with respect to the continuing jurisdiction of the court. It is recognized there will be a great deal of controversy generated as a result of the 1976 regulations promulgated by the Department of Fisheries. The Charter Boat Industry has attempted to work closely with the Department of Fisheries in connection with the promulgation of these regulations. It is recognized that all segments of the salmon industry, as well as the sports fishermen, will suffer some loss as a result of the Boldt decision. However, it is also important to recognize that with respect to the charter boat industry, there is a need to survive until a viable solution can be found over the next several years. The problem is that, if the decision were implemented to a full 50% (not to include on-reservation catch, ceremonial fishery and all fish for personal consumption) the across-the-board cut to all segments of the non-Indian salmon fishery would be disastrous. It is predicted that the charter boat industry would suffer a fatal blow if this were to happen. Consequently, it must be recognized that interim measures are necessary in order to permit the Department of Fisheries to fully implement its enhancement program.

FURTHER COURT ACTION AS RESULT OF 1976 REGULATIONS

It is anticipated that additional court action will be brought to test the 1976 regulations. The unfortunate result of these proceedings could be to plunge the entire matter back into controversy and for Judge Bold to re-establish his continuing jurisdiction, even if he had previously approved the 1976 regulatory scheme promulgated by the Department of Fisheries. It is impossible, then, to predict what would be the effect on the non-Indian user groups for salmon if this were to happen.

It is also possible that these actions, be they in State or Federal courts, might subject the matter to further uncertainty since the appeal process would be available in both courts.

COURT ACTIONS PENDING AFFECTING OUTCOME OF CONTROVERSY

The case of Sohappy, decided by Judge Belloni in 1969, has been extended by Judge Belloni in a memorandum decision in May, 1974 to cover 50% of the spring chinook run. The State of Washington has subjected itself to the jurisdiction of the Oregon Federal Court and has appealed that decision.

The Puyallup III case has been appealed by the Puyallup Indian Tribe to the Washington Supreme Court and it is anticipated that a decision will be

rendered by the Washington Supreme Court soon as to this matter. In this case, Judge Brown of the Pierce County Superior Court ruled that the Indians only had a right to participate in the fishery consisting of natural spawn fish. In this case evidence was introduced which indicated that approximately 50% of the steelhead spawning in the Puyallup River watershed were of natural origin. Consequently, the Indians were permitted to participate only to the extent of the natural spawn fish. If the Washington Supreme Court upholds Judge Brown, this decision could have implications with respect to not only other steelhead streams in the State of Washington, but with respect to the salmon spawning as well.

EFFECT OF TWO-FISH LIMIT

If the two-fish limit of a comparable restriction were imposed on salmon fishing in the coastal waters for the 1976 season, the charter boat industry would suffer disastrous consequences. Presently there is an economic survey underway, sponsored by the Sea Grant, to determine the relative value of a sport-caught salmon. It is anticipated the study will indicate that a sport-caught salmon is much more valuable to the total economy for a number of reasons: The coastal sport angler trip is measured in terms of money expended for the entire fishing trip. This would include meals for approximately a two-day trip, lodging, travel and the amount of money expended on a charter boat. In contrast, a commercially caught salmon is measured simply in terms of price per pound brought on the open market.

PRESENT LEGISLATION AFFECTING NON-INDIAN USER GROUPS

House Bill No. 1334 gives the Director of the Department of Fisheries the authority to manage the fishery for the best economic good of the citizens of the State. There is presently an appeal pending in the Washington State Supreme Court by the State of Washington wherein the Washington Charter Association was able to successfully cause a permanent injunction to be filed against the Director of Fisheries, preventing the reduction of the sports salmon limit in the 1974 season from three to two fish. One of the reasons for this decision was that the Director did not have the power to allocate among user groups. It is anticipated that argument on this case will take place before the Washington Supreme Court in late spring or early fall of this year.

The purpose of HB 1334 is to permit the Director the power to manage the salmon fishery in such a way as to produce the greatest economic benefit for the citizens of the State. Charter fishermen consider this to be a positive step toward enabling the Department of Fisheries to put forth its enhancement program.

Further, this is a recognition that the decision of Judge Boldt must be dealt with in a responsible and reasonable manner by all parties affected. The regulatory scheme of the Department of Fisheries must be integrated with their enhancement program presently under consideration. Unfortunately, the 1975

season saw much controversy in the courts attempting to second-guess the Department of Fisheries. Hopefully, this year a more responsible approach will be made by all parties.

WHERE DO WE GO FROM HERE WITH RESPECT TO THE BOLDT DECISION?

We must assume that there is little possibility of immediate action by Congress to relieve the situation with respect to the non-Indian user groups as to salmon fishing. Consequently, we must look to the Department of Fisheries for leadership as to what can be done to alleviate a hazardous situation with respect to all people concerned with the continuation of a healthy anadromous fishery in the State of Washington. The Department of Fisheries has advanced an ambitious enhancement program which will have the effect of putting more fish in the water and thus permitting survival of sports and commercial fishing in this State. The problem with the enhancement program is that it will take some time, perhaps four years, to accomplish. There must be reason and logic applied to the interim situation regarding the implementation of the Boldt decision.

We urge all sports groups to support the enhancement program advanced by the Department of Fisheries.

We urge all sports groups and recreation enthusiasts to support HB 1334 which will give the Director the power to properly manage the fishery in the State of Washington.

We also encourage mounting a campaign to impress the congressional delegation of the urgency of holding hearings in the State of Washington to determine the severity of the problem and to propose legislation to remedy problems found to exist in the anadromous fishery in this State as a result of the Boldt decision.

We urge that all responsible non-Indian user groups establish liaison with the Indians which will lead to a closer understanding of the problems of each group. It is important that we learn to live together under the status of the law as it presently exists.

CONCLUSION

The charter boat industry believes that the Boldt decision is not the death knell for non-Indian anadromous fishing in the State of Washington. However, a positive program of enhancement must be pursued, together with a reasonable approach to the regulation of the anadromous fishing in the interim.

PARTICIPATION OF SPORTFISHERMAN/CONSERVATIONIST IN THE BOLDT DECISION

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Northwest Steelheaders Council
National Director - Trout Unlimited

ABSTRACT

The role of Northwest Steelheaders Council of Trout Unlimited has been long, costly, and sometimes frustrating. A brief history of the organization as well as the involvement in the Boldt decision is discussed, also plans for future involvement in the implementation of this decision.

HISTORY OF NORTHWEST STEELHEADERS COUNCIL OF TROUT UNLIMITED

Trout Unlimited was formed on September 5, 1959 in Grayling, Michigan by a small group of dedicated sportsmen and concerned anglers. The goal of the newly-formed organization was conservation of the cold water fishery. This group has grown to include such noted personalities as Otto Teller, Curt Gowdy, Bing Crosby and many other dedicated anglers and conservationists.

At approximately the same time in Portland, Oregon, another small group of dedicated men were concerned over the deterioration of the runs of steelhead and salmon in the Columbia River and its tributaries. On April 4, 1960, Mr. Luhr Jensen was elected first president of the new group known as the "Association of Northwest Steelheaders." This new group set goals similar to those of Trout Unlimited: conservation and enhancement of anadromous fish.

Both organizations continued to grow and, in November of 1970, joined with the Northwest Steelheaders, to become a council of Trout Unlimited. The goal of this newly-formed alliance was the conservation and preservation of anadromous fish. Today Northwest Steelheaders Council of Trout Unlimited is the largest sport-fishing/conservation organization in Washington and Oregon, with 58 chapters and over 6,200 active members.

THE BOLDT DECISION

In September, 1970, the United States government, and later 14 Indian tribes, brought suit against the State of Washington seeking a declaratory judgment concerning off-reservation fishing rights and sought injunctive relief for enforcement of Indian fishing rights.

After reviewing the case, and many hours of investigation, the Northwest Steelheaders sought intervenor status before Judge Boldt which, after due deliberation, was denied. However, Amicus Curiae (friend of the court) status was granted. The prime reason for this action by the Northwest Steelheaders was to attempt to assure conservation and preservation of the species, since it was assumed at that time, and later proven true, that Judge Boldt would allow some sort of self-regulation by each of the Indian tribes. Since intervenor status was not granted, the Steelheaders worked in close conjunction with the State of Washington, Department of Fisheries, and Department of Game in supplying background data, doing investigative work, etc., in support of their case.

While involved in the U. S. v. Washington case, additional lawsuits, Puyallup II and III, were addressing the status of the Puyallup Indians and the status of their reservation, which had been sold in the late 1800's. In this case, the Steelheaders were granted intervenor status and worked in conjunction with the State of Washington in preparing briefs and pleading their cases.

When Judge Boldt's decision was rendered in February of 1974, it was determined by the Steelheaders that they would again seek intervenor status with the Ninth Circuit Court of Appeals and appeal Judge Boldt's decision, based primarily on their initial belief that conservation of the resource could not be managed properly by a judge, sitting as fishmaster, and 26 tribes, together with the state, setting their own regulations. When these petitions were heard in Seattle the Steelheaders' attorney, Don Wilner, led off the appeal process on the grounds that fish runs must be managed on a day-to-day basis, using careful, biological studies and historical data to establish the estimated, total quantity of the anticipated runs. He pleaded with the court to allow the State to manage the resource in the essence of conservation. This appeal was denied by the Ninth Circuit Court of Appeals, and being an intervenor, we again petitioned to appeal the decision to the United States Supreme Court. That was done in a timely manner, and in conjunction with the State Department of Fisheries and the Game Department.

While the Boldt decision and the appeal process was in motion, the United States Supreme Court reversed the decision of Judge Brown in Puyallup II and said that yes, the Puyallup Tribe does have off-reservation fishing rights, or has fishing rights on what used to be their reservation -- the lower portion of the Puyallup River. But since there was still a question of fish runs that were of both natural and hatchery origin, they remanded to Judge Brown the determination of who was entitled to the hatchery fish. Judge Brown has ruled that the hatchery fish belong to the citizens of the State of Washington since they were paid for with funds derived through the sale of Steelhead Punch Cards. That decision was appealed to the Washington State Supreme Court. Northwest Steelheaders had hoped that appeal would be heard and sent on to the United States Supreme Court, prior to the Supreme Court rendering a decision on the appeal of Judge Boldt's decision. This was not done, and at the present time this appeal is still pending in the Washington State Supreme Court. No matter what that decision is, it will be appealed to the United States Supreme Court either by the Northwest Steelheaders or the Puyallup Indians.

THE COST OF THIS GAME

At the onset of this legal battle, the Steelheaders had a total membership of approximately 3,000, but even with that small membership chose to tackle the federal government and the Indian tribes with their unlimited resources. Since the average Northwest Steelheader is a middle-class, working citizen, legal counsel was engaged to represent them. As of January 1, 1976, this legal involvement has cost the Northwest Steelheaders in excess of $60,000, all raised from individual, or company contributions, and with no assistance from public money.

WHERE DO WE GO FROM HERE

Although not agreeing with Boldt's decision from a conservation standpoint, the Northwest Steelheaders plan to attempt to assist in the implementation of this decision in the states of Washington and Oregon. There are many options that must be investigated and many crucial decisions to be made. Northwest Steelheaders Council of Trout Unlimited plans to be a part of these investigations and decisions and provide input, wherever possible, so that responsible conservation and preservation of anadromous fish in the states of Washington and Oregon can be achieved.

SUMMARY

The Northwest Council of Trout Unlimited does not agree with Judge Boldt's decision. They feel this is a bad decision and not in the best interests of the people in this free country of ours nor in the interests of responsible conservation. However, as law-abiding citizens, they will do all in their power to assist in the implementation of this decision and to fight for conservation with the needs of the resource in mind. It is the firm belief of the Northwest Steelheaders that, even with this decision, responsible management of the resource can be achieved, if all parties work toward a common goal that will provide adequate supplies of anadromous fish for future generations to enjoy.

MANAGING OUR FISHERY RESOURCES

IMPLICATIONS OF THE BOLDT DECISION

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Washington State Department of Fisheries

I might begin my comments with some statistical trivia to point out some effects of the Boldt decision on Department of Fisheries' operations. For example, in 1973 (pre-Boldt) the Department promulgated 63 emergency regulations, in 1974 this rose to 77, and in 1975 to 161. In the number of affidavits used to prove the validity of the Director of Fisheries' regulations in court cases, there were 94 in 1974, and 530 in 1975. To keep the fishermen and general public informed about what happened, the number of news releases increased from 110 in 1974 to 325 in 1975.

THE BOLDT DECISION IN PERSPECTIVE

In a more serious vein, today more than ever before, there is a strong sense of concern about the way we use and manage our fishery resources. The need for conscientious management of our salmon resources has increased rather dramatically with the Boldt decision. Management involves not only the catch, but also the legal, social, economic, and biologic aspects which affect its use. The rulings stemming from the original decision have acted as a catalyst to change the rules so that our resources and the fisheries thereon are managed in a rational manner.

In past years little was done to manage fisheries so that all user groups could share fairly and equitably in the resource. The Boldt decision has had a curious and somewhat ironic effect on the share of salmon taken by offshore ocean fishermen in comparison to non-Indian inshore fishermen. Commercial fishermen have resisted this (Boldt) decision principally by assuring through court action that the Washington Department of Fisheries does not have the authority to allocate salmon to treaty Indians. Since the decision talks about a 50-50 catch division, court actions have occurred after it became clear that the Indians couldn't get their share late in the season. This in turn means that all of the impact falls on the tail-end sport and commercial fisheries; and because the Department can't allocate, it can't spread the effects of a 50% reduction more fairly over all non-treaty fisheries. The offshore fisheries had been taking a continuously greater catch share pre-Boldt simply because they got the first crack at the fish; so far, the Boldt decision has compounded this effect. It should be obvious, then, in order to more nearly reach the conditions set down in the Boldt decision, there is need for legislation which permits the Department of Fisheries to allocate amongst user groups.

If these preliminary remarks are related to the inshore salmon sport fisheries, it must be obvious that from a management aspect, inshore net fisheries, both Indian and non-Indian, are potentially the most compatible. Inshore nets, for the most part, zero in on mature fish which have ceased feeding, whereas offshore fisheries take actively feeding fish which, depending on the species, may either be one or two years from maturity, or in any event with all species, are substantially less in weight and, therefore, in value.

THE OFFSHORE FISHERIES - EFFECT ON INSHORE NETS

We have two primary offshore salmon fisheries; troll and sport. The values derived from each are quite different; one provides income from sale of salmon as food, the other is primarily a service industry involving recreation where the food value of the catch is valuable but incidental. Therefore, the applicable seasons, and size possession limits, and so forth, are not, or at least should not be, based on the same criteria.

There are classical and well-known arguments against high seas commercial salmon fisheries, some of which also apply to offshore sport fisheries. These arguments involve both the waste from catching small fish that would be worth more when mature and much larger, even when subtractions for natural deaths over the period are included, and the difficulty of sensible management of mixed-stock fishing. There is the further question, particularly obvious in an energy shortage, of why anyone would pursue a salmon on the high seas for commercial purposes when this strange creature returns to shore where it can be harvested for trivial cost and greater value. I would like to add to this the point that the offshore fisheries, troll and sport, typically involve major interceptions because they fish on mixed stocks and consequently tend to reduce incentive to those who nurture the young salmon (e.g., enhancement by artificial means). So much for some rather basic biologic and economic aspects of ocean fishing. The Department of Fisheries believes that it is in the best interest of the state, in view of the court ruling, to take advantage of the compatibility of the inshore sport fishery and the net fisheries and manage accordingly.

ENHANCEMENT AND COMPATIBILITY

You've all heard of the term "enhancement." By producing more fish that are available to everyone, certain aspects of the decision are met. We believe it's easier to add "new" fish to the fisheries than to take away "old" fish from the present users. (Incidentally, enhancement is not confined only to recreational species - in several areas of Washington there is good water to enhance those species of major importance to commercial fisheries.) In any event, many of you are aware of our delayed release program for Puget Sound chinook and coho. These programs produced a record sport catch in this area in 1975. These catches occurred primarily on actively feeding fish programmed to stay in the Sound. On the other hand, the sport fishery had little impact on the mature stocks returning from the ocean. These, in turn, were taken extensively in terminal net fishing areas where managers could impose time-area and other restrictions which

best "fit" resource needs.

One of the best examples of enhancement and sport-net compatibility occurred on southern Puget Sound's Minter Creek Hatchery coho in 1975. The extended rearing program (enhancement) produced in excess of 100,000 mature fish to the net fishery when these fish returned to the station after the sport fishery had full opportunity to take actively feeding fish over several months. An additional 23,000 fish returned to the hatchery where Indians harvested them through a cooperative agreement with the state. This was an additional noncompetitive, non-conflict fishery which benefited the Indian community and took nothing away from the sport fishery. In each instance, the mature fish catch by Indians counted toward the share established by the court for this user group.

Compatibility can take other forms also. For example, it terms of the state as a whole and if benefit/costs are appropriate, we believe it makes sense to reduce conflicts by "trading" salmon for steelhead. The freshwater biting proclivities of steelhead, the fact that few are taken in marine waters, plus the extremely high regard these fish are held in by the sport fishing community makes this concept worthwhile. Obviously, this would have to occur on a tribe-by-tribe or river-by-river basis.

In return, we would produce high quality river fish such as early returning, bright coho for the Indian net fisheries for an agreement to lay off steelhead. The Indian net fisheries would be provided a longer season since they could fish the "new" early run while profiting from normally timed salmon runs also.

Finally, the enhancement program established some years ago by the Department has produced, as previously noted, a record Puget Sound sport catch. It can continue to do this provided that Indian fisheries cease fishing specifically on these smaller, feeding fish. We do not believe it to be wise resource management to take these fish for <u>commercial</u> purposes when there is the potential for added benefits after substantial growth occurs. The fishery experienced at Minter Creek last year is merely an example of the benefits that can accure when management takes into account the philosophies inherent to each user group.

THE FISH AND WILDLIFE SERVICE AND THE BOLDT DECISION

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ABSTRACT

The U. S. Fish and Wildlife Service provides technical assistance and anadromous fish stocks to the Treaty Indian Tribes of the case area to help implement Judge George Boldt's decision. This Service also helps coordinate fishery resource activities among the Indian and State Game and Fisheries Departments.

Where does the Fish and Wildlife Service Fit Into the Implementation of the Boldt Decision?

In answer to that question, let me explain the functioning and responsibilities of the Fish and Wildlife Service in relation to our involvement here.

The Fish and Wildlife Service, first and foremost, has a mandated obligation to the American people for the stewardship of the Nation's fish and wildlife resources on all lands. The Fish and Wildlife Act, Fish and Wildlife Coordination Act, and other authorities stipulate this responsibility.

Second, the Service has an obligation to assist the Secretary in fulfilling his Indian trust responsibilities. This obligation is carried out through a Department of Interior directive that directs the Fish and Wildlife Service to provide technical assistance and services to the Indian tribes through the Bureau of Indian Affairs.

Department of the Interior
DEPARTMENTAL MANUAL

Multi-Program Management — Part 501 Indian-Fish & Wildlife Resources
Chapter 2 Bureau of Indian Affairs and Fish and Wildlife Service — 501.2.1

.1 Objective. The arrangements provided for by this chapter are designed to promote the maximum conservation, development, and utilization of the fish and wildlife resources of land and waters under the administration and jurisdiction of the Bureau of Indian Affairs. In carrying out this objective, full

consideration and recognition will be given to the fact that the vast majority of the lands subject to BIA management control are not public lands, but represent the principal resource available for economic and social advancement of the Indian people as beneficial owners. However, in its capacity as trustee, the Bureau of Indian Affairs will strive to establish and maintain policies and practices comparable to those carried out by the United States Fish and Wildlife Service, or by well-informed private conservationists in protecting fish and wildlife resources.

.2 Respective Roles of the Bureau. The Bureau of Indian Affairs is the agency primarily responsible for the administration of Indian property, including lands within Indian reservations, and for the enforcement of treaties, laws, and regulations pertaining to the affairs and welfare of the American Indians. Wildlife (including fisheries) is an integral factor in the social and economic life of the Indians, and must always be so managed as to furnish a maximum contribution to their welfare consistent with a continuance of such benefits to future generations. The conservation of wildlife must always be treated as an inseparable part of the broad, unified conservation of soil, moisture, forests, and other vegetation, and must insure a proper relation between agriculture, stock raising, and wildlife values. The responsibility and authority for coordination and integration of management programs pertaining to Indian resources and Indian off-reservation treaty fishing rights rests at all times with the Bureau of Indian Affairs.

The Fish and Wildlife Service is recognized as the fact-finding arm and scientific authority within the Department of the Interior on sport fishery and wildlife matters. This Service advises the Bureau of Indian Affairs on such matters and prepares fish and wildlife management plans data as requested, after appropriate field investigations. The primary responsibility for execution of fish and wildlife management programs in the field rests with the local field offices of the Bureau of Indian Affairs and the tribes, with such aid and assistance by the Fish and Wildlife Service as may be necessary.

.3 Fish and Wildlife Resource Management. All Indian lands administered by the BIA, which contain fish and wildlife values suitable for management and development shall have, with the consent and participation of the tribes, an active, progressive program for management and conservation of fish and wildlife consistent with other land uses.

B. Cooperative Activities in the Field. The Fish and Wildlife Service will assist the Bureau of Indian Affairs in dealing with problems and devising management plans in its special fields of operations when so requested by the BIA. In the field, personnel from the Fish and Wildlife Service, in addition to conducting fish and wildlife surveys and research, will assist the various BIA offices in fish and game matters, including fishery management, wildlife census procedures, necessary protective measures, and law enforcement, and will collaborate with the BIA in such educational work with the Indians as is necessary to give them a better appreciation of the need for wildlife conservation and management.

The adoption of fish and wildlife management plans on Indian lands and waters as are mutually agreed upon shall be furthered. The Bureau of Indian Affairs will collaborate with the Fish and Wildlife Service on general programs of fish and

wildlife conservation of national signifcance.

The Fish and Wildlife Service will endeavor to provide suitable species of fish for stocking the waters on Indian reservations in accordance with approved fishery management plans or where the need for stocking has been determined by fishery biologists and where adequate protection is afforded.

Accordingly, the Fish and Wildlife Service is providing technical fisheries assistance to the treaty tribes and the Bureau of Indian Affairs to help the tribes fulfill their requirements in the implementation of the decision. The tribes have requested our technical assistance only until such time as individual tribes gain self-management capabilities. Some treaty tribes have reached this position and others are slowly equipping themselves with professional and technical expertise.

The Fish and Wildlife Service, also as mandated, has a responsibility to try to coordinate management activities between the Indian tribes and the State Game and Fisheries departments. It is obvious that cooperation between Indian and State factions is the only way the fishery resources can be perpetuated and enhanced.

Our assistance to the treaty tribes through the Bureau of Indian Affairs has consisted of providing technical guidance in:

1. establishment of salmon and steelhead escapement requirements through population surveys;

2. review of State annual predictions on run sizes and provide advice to the tribe in their preparation of regulations;

3. conduct terminal area population studies to determine run sizes to individual drainage;

4. keep Indian catch records during fishing season to submit to State total through their computer system and to provide analysis for basic Indian management decisions;

5. evaluate contribution of artificially produced stock of salmon and steelhead through marking and tagging programs in conjunction with State operations;

6. assist tribes with technical aspects in drafting their seasonal fishing regulations;

7. assist the tribes to develop and improve potential management measures on and off reservations;

8. assist the tribes in stream habitat evaluation to improve terminal spawning grounds;

9. provide Federal hatchery fish stocks to help enhance the fishery through management objectives for sport and commercial fishing opportunities;

10. provide technical advice to the tribes on aquacultural and other related fishery development programs;

11. provide technical advice to the Justice Department and Regional Solicitor for court litigation;

12. develop on-the-job training opportunities for the Indians to carry out their fishery management activities;

13. carry on spawning surveys and population analysis to make recommendation to the tribes regarding the management and harvest of herring stocks - such studies are made in cooperation with State investigations;

14. contractual studies have been made with the University of Washington in conjunction with State investigations to develop a run prediction model for steelhead and salmon within the Puget Sound area;

15. water quality surveys have been initiated to help determine the effects of pollution upon the anadromous fishery of the case area. Such surveys are being developed and formulated with other State and Federal agencies.

The Fish and Wildlife Service as steward of the Nation's fish and wildlife resources has its greatest responsibility to coordinate and assist resource agencies for the protection and improvement of our natural environment. The Service must coordinate its activities with the State resource agencies.

An agreement was reached by the Indians and Washington Game and Fisheries Departments to develop a unified case area management plan for submission to Congress for 1976 fiscal funds to support needed action to implement the Boldt decision. The plan provides for monies, 4.1 million dollars, to be used by individual Indian tribes, the Northwest Indian Fisheries Commission, Small Tribes of Western Washington and the State Game and Fisheries Departments. Management studies and action falling into nine major categories will be performed cooperatively by this group with assistance by the Fish and Wildlife Service and the Bureau of Indian Affairs.

These major action categories needed to implement the decision and provide an avenue of enhancement to the resources and users groups alike are:

1. Development of Salmon and Steelhead Population Indices. There is a requirement to change past management principles from ocean and Sound catch oriented investigations to terminal ecosystems management where the majority of the Indian fishery is located.

2. Determine Artificial Propagation Needs. No assessment of the total hatchery production into the case area has been made. Hatchery salmon and steelhead production needs to be evaluated to determine what effect they have on wild stocks, capabilities of salt and fresh water habitats to respond and the relationship such production may have on terminal spawning capacities.

3. Catch Monitoring. All agencies and organizations are involved with the

monitoring of catch information. Creel census as well as census of commercial Indian and non-Indian fishermen is included in this function.

4. Computer Data System. Both Indian and State catch and prediction information is being fed into the Washington Fisheries Department computer system for quick and accurate information.

5. Law Enforcement. This activity has greatly increased and all factions must be equipped to enforce the laws and a joint working effort must be initiated for the protection of the resource.

6. Regulations and Indian Right Protection. Under the decision the tribe must become equipped to be self-regulating. This will require a great effort by the Indian community.

7. Indian Training. This category is one of the most important to the treaty tribes. They must become capable of doing the many activities required under the decision.

8. Coordination. All the members of the unified group are involved in this category. The plan requires close working relationships in the cooperation endeavor.

9. Herring and Other Non-anadromous Management. At present, the court has included herring in the decision. Much work needs to be done on this fish and shellfish that are being considered by the court.

The unified fishery management plan submitted to Senator Magnuson's office and presented to the House by Congressman Lloyd Meeds represents the first concrete attempt to work up a cooperative plan by those involved in the decision. Since the budget plan was hurriedly assembled to meet the hearings, recent refinement has taken place. Each representative unit has revised its part of the plan to make it more responsive to their respective needs. No change was made in the basic concept. The group has continued to meet to discuss these changes cooperatively and now call themselves the Unified Case Area Management Planning Group or "Unified-Camp." This year, because of the lateness of the appropriation bill, much of the work must be delayed until this summer and fall.

Our Appreciation Should Go Out to the Indians and the Court!

If we would all stop and think we would realize that the case area fishery would have never received the awareness and attention it is getting now if it were not for the Boldt decision. The runs have declined over the years because of our overharvest of the fishery itself, as well as our deterioration of its fresh and salt water habitat. Resource agencies in the past have never been successfully able to fully alert the public to these facts to a point of adequately supporting measures to bring salmon and steelhead back to a proper conservation level. The public and user groups are now seeking steps, required under the court decision, that will initiate action aimed at perpetuating and enhancing the fishery resource. The implementation of the decision can be the catalyst needed to restore our fishery if energy now directed toward fighting the decision could be directed toward the betterment of the resource itself.

Resource agencies must come up with technical and scientific answers. We can no longer rest on past management measures.

As resource agencies we must obtain the FISH'S EYE VIEW of its problems. We must understand the fish's needs, his life style, and his relationship to his environment, which includes man. Recent joint studies and investigations will help find some of these answers, others will follow. Your support and understanding is needed.

Of course, the fishery can never be restored to its ancient ancestral level. Natural habitats have changed due to man's encroachment but many can be brought back to a productive state. Weather and other universal phenomena have changed water flows, ocean currents, water temperatures, etc. There are physical changes which at present we cannot control. But with man's highly advanced and sophisticated technological mind new mass production methods can supplement where natural environments are limited or have been lost forever. This kind of effort cannot be borne by any single group but will require mass cooperation. Only the public can demand such action.

Sport fishermen, Indian and non-Indian gillnetters, trawlers, seiners, packers, charter boat operators, the Game Department, Fisheries Department, Northwest Indian Fisheries Commission, Indian treaty tribes, National Marine Fisheries Service, Fish and Wildlife Service, and other State, Federal, and Indian organizations must learn to communicate with each other, must learn to coordinate our activities and must learn to work together if we are to save and enhance a declining salmon and steelhead fishery. Let us stop blaming each other and get the job done. If we do not we will surely lose our precious fish and in turn we will all lose.

MANAGEMENT IMPLICATIONS OF THE BOLDT DECISION

- the National Marine Fisheries Service Aspect

Dr. Richard B. Thompson
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INTRODUCTION

Let there be no doubt that the National Marine Fisheries Service has accepted the Judge Boldt decision as the law of the land. The National Marine Fisheries Service will execute its responsibilities in accord with this law, as we presume other public agencies managing fisheries must also do.

There is also no doubt that the changes required by this decision will indeed occur in the management and harvesting of anadromous fisheries in the case area. When such a change occurs somebody is hurt -- either directly or indirectly. However, these required changes also offer opportunities for improvement. Implementation of the Boldt decision will continue to attract more attention to the basic resource problem: anadromous fishery resources in the case area are, in general, getting fewer and fewer. Effective management and resource enhancement actions to improve these fisheries are possible and necessary. Controversy does indeed attract attention; perhaps this attention can be focused on the basic resource problem and ultimately help with its resolution.

The National Marine Fisheries Service has not been directly involved previously in the U.S. vs. Washington case. At the present time, MAFAC (Marine Fisheries Advisory Committee), a citizen's group appointed by the Secretary of Commerce to advise the National Marine Fisheries Service, is conducting hearings and developing recommendations on the National Marine Fisheries Service's role in implementing the Boldt decision and improving the status and management of anadromous fishery resources in the case area.

ROLE AND RESPONSIBILITIES

The National Oceanic and Atmospheric Administration has the national responsibility for living marine and anadromous resources, sharing some responsibilities on the latter with the U.S. Fish & Wildlife Service. These anadromous species are migratory, moving not only between fresh and marine waters, but also out of state waters into areas where the federal government has resource management responsibilities. They frequently move into international waters and even into the territorial waters of other nations, particularly Canada. Effective management of such migratory resources cannot be done without some federal involvement.

However, neither NOAA nor NMFS has the desire, the intent, or the authority to "take over" the management of salmon and steelhead resources in state waters, or indeed, to usurp any state authorities. However, the NMFS has a responsibility, along with other agencies of the United States, to ensure that the United States Indian Treaties are implemented according to established decisions, and that the conservation of these resources is accomplished effectively.

The National Marine Fisheries Service also has an assigned responsibility for a key role in advising the Department of State on international fishery negotiations, including the conduct of research, monitoring the fisheries and their effects on the biological stock, and making management recommendations to the State Department and to the international commission or organization involved. We feel a responsibility, too, to aid and support, by our research work on these and other fishery resources, proper management of fishery resources that are under state management. Such research has been done, for example, on the Columbia River and in offshore areas of the North Pacific Ocean where salmon and steelhead spend a large proportion of their lives.

Some of the resource enhancement functions have involved such research, the production of fish, grant-in-aid programs to states, and international resource management support. Much of the work has been done on the Columbia River and, although this is not in the case area, the results do have some bearing on the management and support of anadromous fisheries. On the Columbia River, much of our research has been on fish passage, that is, the movement upstream of the adult fish and downstream of the juveniles. The National Marine Fisheries Service detected the nitrogen problem in the waters of the Columbia River and its effects and recommended remedies, including their evaluation. Data on the timing and the abundance of adult salmon moving into the Columbia River are provided to state management agencies. Research on the distribution of salmon on the high seas has determined their range and their exposure and vulnerability to foreign fishing fleets; however, this information is at present inadequate for harvest allocation of returning salmon in the case area. Much work has been done on the dynamics of the fish populations, including their numbers, survival and reproduction rates, the optimum escapement to various spawning and nursery areas, and the optimum yield from these populations. Also, the National Marine Fisheries Service has conducted much research on the technology of aquaculture of juvenile salmon in floating pens in saltwater. The Columbia Fisheries Program Office supports the operation of some 21 federal and state salmon and steelhead hatcheries in the Columbia River basin. These efforts support hatchery construction, operation and maintenance, and research on hatchery technology. The aquaculture program at Manchester in Puget Sound has also produced fish on an experimental basis; they have released over 200,000 advanced juvenile salmon since 1970 and, in the last two years in joint operations with the Washington Department of Fisheries, have released about 400,000 juvenile salmon.

The Grant-in-Aid programs authorized by Public Law 88-309, the Commercial Fishery Research and Development Act of 1964, and Public Law 89-304, the Anadromous Fish Act of 1965, have also been instrumental in improving fisheries in the case area. These Acts and the funding provided have established cooperative agreements with states and other non-federal entities for the conservation, development and enhancement of anadromous fishery resources throughout the nation, and a good portion of these monies has been allocated to the Pacific Northwest. All projects that are funded under these programs must be approved by the state fishery agency. Approximately $20 million per year has been appropriated and allocated for fishery projects. Recently, three new salmon hatcheries have been constructed and 19 hatcheries have been improved under these programs. Overall, benefits have ranged from $3 to $10 returned for each dollar invested.

As mentioned before, the National Marine Fisheries Service is responsible for certain international resource management activities. All of these are in cooperation with the Department of State, which must carry out the international negotia-

tions. Fishery research and management expertise for these negotiations is provided mostly by the National Marine Fisheries Service and, in certain fisheries and negotiations, state fishery agency managers and biologists and university advisors have been and will continue to be involved.

The International Pacific Salmon Fisheries Commission, which is concerned with the sockeye and pink salmon resources of the Fraser River, is a joint agency of the United States and Canada that has an outstanding record of fishery conservation and management. The Commission is formed of three Commissioners from each country; the U.S. Commissioners are appointed by the President. The extensive work done to manage the fisheries, to facilitate the migrations of adult salmon to the spawning grounds and to protect freshwater spawning and nursery areas from adverse environmental changes has been instrumental in increasing these resources during the 40 years of Commission involvement. The highly developed management of the complex fisheries has treated spawning races as individual units and has resulted in adequate escapement for each portion of the total run. In recent years the Commission has been equally successful with development of artificial spawning areas. All are producing fish effectively; some are outstanding. There has not been any significant change in the nature and manner of harvesting salmon in the Convention Area involving Salmon Commission regulations, but the Boldt decision has had appreciable impact on the functioning of this United States-Canada body. The Boldt decision is now clearly United States law; that fact, along with other influences bearing on the responsibilities of the Commission, must be included in the considerations of the United States Commissioners to the Commission. In 1975, special efforts by the United States Government to permit Treaty Indians additional fishing time more than doubled the catch by Indian fishermen to a level of about 4% of the total U.S. harvest of Fraser River fishes in United States Convention waters. The two governments are discussing further the implications of United States laws as they relate to the authorities of the Commission. I am sure that officials in both governments, as well as those who are affected by the management success of the Commission, are hopeful that the problem of adjusting to the legally required allocation of fish to Indian fishermen can be accomplished with a minimum of disruption in the functioning of the international commission and the conservation of the valuable salmon resources of the Fraser River.

Another international arrangement in this particular area is that of the International North Pacific Fisheries Commission involving Japan, Canada and the United States, and covers many species of fish in the Pacific Ocean. The number of species is not specified by the Commission, but current emphases are on salmon, herring, halibut, Pacific Ocean perch and other flatfishes. United States activities involving research findings for this Commission are mainly conducted by the National Marine Fisheries Service. One of the more important findings in salmon research by the National Marine Fisheries Service for the International Pacific Fisheries Commission has been the oceanic distribution of North American salmonids, which include Puget Sound stocks. During the marine feeding part of their lives, which can last sometimes for five years, these stocks are exposed to foreign fishing fleets, but are managed under the existing treaty. If extended jurisdiction legislation is passed, U.S.-raised anadromous fishes will be under the management of the country-of-origin throughout their range.

I might discuss briefly the effect of extended jurisdiction, either HB 200 or S.961 or the conference bill now being discussed by a joint committee of the United States Congress. The major elements of this proposed legislation will

establish Regional Fishery Management Councils, which will be composed of Presidentially appointed members, 3 from each state, each of whom must be involved directly in resource harvesting or resource management, plus a federal government employee representing the Secretary of Commerce.

These management councils will have authority to develop management plans for each fishery or "management unit," to develop regulations, to monitor fishing activities and landings, and to conduct hearings on plans, regulations and amendments. Also included in the extended jurisdiction legislation is the fact that no authority will extend to fisheries that are principally located in waters within the boundary of a single state.

I might summarize these developments on the Treaty-area anadromous fisheries --

1. The migratory habits of these fishes forces management considerations into international arenas, involving national and international fishery management entities.

2. The resolution of allocation problems on the harvest among U.S. groups, such as commercial fishermen, Indians and recreational fishermen, must mesh with the international agreements covering these same fisheries.

3. The pending Congressional legislation, if passed, will bring all resource managers and all user-groups into "Regional Fishery Management Councils," for optimum management of the stocks by cooperative federal/state/Indian resource management and the control of anadromous fishes throughout their range by the "country-of-origin."

FUTURE POSSIBILITIES

Obviously, any of these developments will require additional funding. The appropriation of additional funds by the federal government for resource enhancement will be a matter for consideration by the United States Congress and the various states involved. Social programs which might be developed to compensate for economic and employment losses to the non-Indian fisheries are largely state programs that may, depending upon the views and wishes of the state, include such programs as limited entry, the buy-back of fishing boats and gear as now underway within the State of Washington, re-training of commercial fishermen, and other programs designed to ease disruption caused by the losses of significant parts of the harvest. Some federal funds have already been made available for these types of programs through both the Departments of Commerce and Interior.

There are also possibilities of resource enhancement that can produce more fish and improve the management of the harvests, taking into account both biological and legal requirements. Because of the migratory habits and the "public property" aspect of anadromous resources, the different life histories of the various species and the different state, federal and international jurisdictions through which they move, a single "system" approach to salmon and steelhead resource management and resource enhancement must be developed and adopted for maximum effectiveness. Fractured programs with local or short-term objectives cannot provide optimum resource management. The resource must be managed as a unit throughout its range for optimum benefit to the nation and to its citizens.

Another important aspect of resource enhancement is the restoration and maintenance of natural spawning and nursery areas to maximize spawning success and the growth and survival of young salmon and steelhead produced. The Boldt decision may help to force various land management agencies to recognize that fish indeed have environmental and aquatic rights.

Another activity that may produce more fish is, of course, artificial propogation. Hatcheries should be improved, should be enlarged, and additional hatcheries should be constructed. The benefit/cost ratio of these production programs has been proven to be substantially positive. Spawning channels should be developed where possible and their operation can be improved. In addition, the rearing of salmon in saltwater pens should be improved and increased. For all three of these possibilities - hatcheries, channels and saltwater rearing - additional developments and improvements in technology of producing large numbers of good, healthy salmonids must be supported. These studies will involve disease control, genetics, nutrition, behavior - such as the best time and place of release and control of the marine migrations of salmonids, and many other technological and biological factors.

In summary, the federal government is involved in the management of salmonids that move through the case area into federal or international waters, and is obligated to assist the states in planning, in managing and enhancing salmonid resources on a resource-wide basis. The government must see that prescribed and approved management actions outside state waters are effectively executed.

The critical biological and social changes that have been created by the Judge Boldt decision may hopefully, in the long run, serve to improve national concern for these fishery stocks and stimulate increased national effort to conserve, to improve the production and to improve the management of these fisheries. Thus, the benefits available to all U.S. citizens from these extremely valuable and renewable fishery resources will be increased.

SHORELINE AND COASTAL ZONE MANAGEMENT

SHORELINE'S MANAGEMENT AND MARINE RECREATION INDUSTRY

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INTRODUCTION

I am assuming that most of you attending this workshop for Marine Recreation Industries are affected by environmental legislation, passed into law since 1970: 1972 Amendments to the Federal Water Pollution Control Act; the National Environmental Policy Act, 1970 (NEPA), Washington State Environmental Policy Act (SEPA) of 1971, and of importance today, the Washington State Shoreline's Management Act of 1971. Before proceeding further, I will state the assumptions upon which further discussion will be based:

1. An unrestrained free market system is an inadequate mechanism for allocating some of the scarce resources, which, together with labor, capital, and organization form the bundle of productive factors necessary for your industries to deliver goods and services to the consuming public.

2. The intent of environmental legislation is to correct imperfections in the free market system and equitably allocate costs and benefits among producers and consumers.

3. Environmental legislation, though working imperfectly, is going to remain with us for the foreseeable future.

4. We have entered an era of retrenchment during which existing environmental statutes are under fire, and the administrative procedures for carrying out the intent of the legislation are being carefully scrutinized.

It is to the first of these assumptions--the inadequacies of the free market system--I wish to address further remarks.

In a free market economy, when a consumer and producer agree on a transaction, the price paid for the good or service being consumed is a reflection of the costs incurred by the producer in creating or manufacturing that good or service and the satisfaction the consumer expects to gain from its ownership; but, does this price reflect all the costs incurred in its production? And does the consumer impose costs on others in the act of consumption?

If the producer is using the atmosphere, or a water body as a "sink" for untreated wastes, other parties, uninvolved in the transaction, incur a cost for which no market exists. Since neither the producer nor the impacted third party owns clear title to the medium through which the effluent travels--the air or the water--this third party, perhaps a household, cannot charge the producer for the costs, inconveniences, or health hazards associated with that effluent.

Similarly, the consumer in the act of consumption imposes costs on others for which no fee can be levied: The cost imposed by a noisy motorcycle, a cigarette smoker or an afficianado of loud rock music. Little different in this respect are an unnamed smelter, a careless oil tanker operation, or any other enterprise which pollutes. In all these cases the free market system has failed to include those costs which are external to the transaction. Lest I be accused of bias, let me hasten to correct the impression that only costs external to the corporation are transferred to some other portion of society. Benefits too, created by a producer can be conferred on the unsuspecting public in the absence of a mechanism for payment! Does the operator of a golf course, or a cemetary capture the value of the benefits enjoyed by an appreciative community, some of whose members intend neither to play golf, nor cease consuming to take up permanent residence in the memorial garden whose amenity they enjoy at no cost while they live! Similar kinds of arguments can be made for many other social "goods" and "bads" which daily assail or delight us: billboards, drunkenness, our neighbor's azaelias, or a view-blocking grain terminal.

One remedy for this state of affairs would be to create a market through which the value of all the social "goods" and "bads" could be determined and all affected consumers and producers allocated their share of costs and benefits, but however appealing this notion appears to be, the costs of creating such a market (transaction costs) would be prohibitive. Further, since we have imperfect knowledge about the physical and biological consequences of many of the social "bads" associated with effluent from both producers and households, the eventual true costs of these externalities is indeterminate. For example, the potentially lethal, genetic damage to marine organisms induced by polychlorinated-biphenyls (PCB's) is only now becoming understood, and the ultimate costs of long-term release of this pollutant is a matter of conjecture. Similar problems of capturing the value of public benefits created by a private enterprise preclude the establishment of an effective market. "Who? Me pay for the scenic value of a golf course? I never look at it!"

Problems of a different nature arise when consumers of a public good threaten the extinction, or destruction of a resource producing that public good: an unregulated park, fishery, or nature preserve. In the absence of admission charges or similar rationing schemes, the very amenity, or existence of the resource is threatened. Such is the "Tragedy of the Commons."

Where the market mechanism has failed, the following remedies are available to us:

1. Do nothing.

2. Require the state to regulate

a. By assessing a charge against the individual generating the public "bad."

b. By compensating the individual generating a public "good."

c. By issuing licenses and enforcing minimum standards.

d. Prohibiting the activity.

3. The state can acquire ownership of the resource and charge users a fee.

In the shorelines--which in the case of the State of Washington include certain rivers and lakes as well as the marine shoreline--all these remedies have been used at different times, under different circumstances, with varying effectiveness.

For years we did nothing. Inaction seemed appropriate when little was known of the conflicts among users of coastal resources, or when obvious harmful effects were felt by an insignificant number of people living in a sparsely populated coastal environment. There were fish aplenty, land galore and more than enough beaches in a wilderness state to satisfy the recreational needs of the small coastal population. Indeed, the major thrust of legislative policy in the early part of this century is revealed through a constitutional amendment setting aside specific harbor areas for commerce and development; and the legacy of this provision haunts us today as we struggle with shorelines master programs in urban areas where some tidelands are privately owned, yet appear inappropriate for anything but the lighest development.

The state has regulated the exploitation of particular resources which are common property: the one of interest to you here today is the state's fisheries. Through the regulation of gear type, length of fishing season, and more recently the number of vessels in the fleet, the state achieves what the industry cannot for itself: namely, guaranteeing that sufficient escapement occurs to replenish the stocks for future seasons, in the case of salmon, or regulating the size of the fish taken to insure continued recruitment in other fisheries. Regardless of how the catch is allocated among competing gear groups, it is difficult to conceive of equitable arrangements for preserving future fisheries without such state intervention.

In the case of land use in the coastal zone, traditional zoning mechanisms have been used historically to minimize the conflicts among different uses; that is, segregating uses that are incompatible and, in some cases, creating buffer zones between them. Unfortunately, zoning, at best, has established only minimum standards by which to control the quality and impact of developments and, at worst, has encouraged the deterioration of the shoreline - that narrow and fragile band of resources which are neither land nor water yet are part of both.

Few areas on the earth's surface are subject to more conflicting development pressures than our shorelines. Their uses are manifold: the meeting point of land- and water-borne commerce and the logical location for ports and manufacturing associated with ports and the urban development resulting from those

activities; nearly all the great cities of the world have prospered as a result of their preeminent position on the coasts - London, New York, Rio de Janero, San Francisco, and literally hundreds of similar great metropolises. The United States' population, in particular, has flocked to the coastal regions in response to a shift away from agriculture and manufacturing activities towards the more loosely located service industries which attract their labor force by the amenity of the firm's location; over 50% of the U. S. population now resides in the marine and Great Lakes shorelines of the U. S. And it is from these urban regions that the demand for recreational uses of the shorelines emanates.

In spite of existing land use controls progressively greater proportions of the shorelines proximate to urban areas have been preempted by both permanent and recreational housing, an accelerating trend which reduces rather than enhances public use of the shorelines by restricting access, precluding public acquisition of undeveloped beaches, significantly altering the erosion and accretion patterns of the shoreline and thereby threatening, in some cases, the very resource sought by the party originally investing in shoreline property. Beach feed material has been cut off by bulkheads; drift patterns altered by breakwaters and groins; salt marshes and estuaries indiscriminately filled and thereby destroying the most productive environment on our continent. It was to redress the consequences of such inappropriate activities in the shorelines that our legislature declared

> ". . . that the shorelines of the state are among the most valuable and fragile of its natural resources and that there is great concern through the state relating to their utilization, protection, restoration, and preservation. In addition it finds that ever-increasing pressures of additional uses are being placed on the shorelines necessitating increased coordination in the management and development of the shorelines of the state. The legislature further finds that much of the shorelines of the state and the uplands adjacent thereto are in private ownership; that unrestricted construction on the privately owned or publicly owned shorelines of the state is not in the best public interest; and therefore, coordinated planning is necessary in order to protect the public interest associated with the shorelines of the state while, at the same time, reocognizing and protecting private property rights consistent with the public interest. There is, therefore, a clear and urgent demand for a planned, rational and concerted effort, jointly performed by federal, state, and local governments, to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines."
>
> (R.C.W. 90.58.020)

These are the legislative findings which preface the Shorelines Management Act of 1971.

Coastal zone management in Washington State is a joint venture between federal, state and local agencies. Under the Coastal Zone Management Act of 1972[1], the federal government provides funding to the states on a 2 to 1 matching basis, for the states to first plan and then implement, a coastal zone management program. Guidelines, established by federal statute, set out the procedures to be followed

[1] PL 92-583

by states and include the following major points:

1. Delineation of critical areas.

2. Establishment of coastal zone boundaries.

3. Definition of permitted uses.

4. Consultation with all affected federal agencies.

5. Involvement of the public in formulating the state's coastal zone plan.

6. Consideration of key facilities: ports, thermal and nuclear power plants, etc.

The guidelines are broad and flexible enough to accomodate the diverse nature of the various state's coasts, yet are inclusive enough to require that the states consider all the critical resources of the coastal zone - natural, economic, cultural and social - while respecting the uniqueness of each state's coastline and their needs, aspirations and goals. Upon completion of the planning stage, a state which successfully satisfies the federal guidelines, becomes eligible for administrative grants for implementing and administering its coastal plan. Washington will probably become the first state eligible for this Section 306 funding, a new kind of relationship between themselves and federal government: the federal consistency provision. Under this provision all federal agencies conducting programs or activities in the state's coastal zone must, to the extent practicable, act in a manner consistent with the state's coastal zone management program. Subject of course to the national interest.

One reason for the anticipated early approval of Washington State's program, is the prior existence of the Shorelines Management Act. The state and federal statutes are quite similar in their provisions for coastal zone management and, since the state act predates the federal act by one year, Washington got an early start in managing its coastal resources. Just as the federal act established guidelines under which the states must operate, the Shorelines Management Act together with its guidelines places responsibility for planning at the local government level.

Local governments were required to inventory their shoreline resources, create a mechanism for public involvement, develop a master program following the state guidelines and establish a permitting procedure for all developments in the shorelines of the state, with exception granted for single family homes, bulkheads and docks associated with them and certain agricultural structures. Each county's master program classifies its shorelines into various "environments." These generally range from Natural, where man's intrusion has been minimal; Conservancy, where the existing character of the shorelines is to be conserved; Rural, areas of agricultural activities and second homes; and finally to Urban, the most developed shorelines in urbanized areas. Citizens' advisory committees, assisted by professional planners, established categories of permitted use in each of the environmental designations and prescribed performance standards within which permitted uses must operate.

As of the end of last year of the 227 jurisdictions with shorelines in the state, 184 have submitted their master programs to the Department of Ecology and of these 160 have been approved. In some cases the master programs were scrutinized by elected political officials in local government; in others, they received state approval without local executive action.

Superimposed upon the "Shorelines of the State" are "Shorelines of Statewide Significance." While local governments are empowered to develop master programs in these critical areas, the state has a broader responsibility for their management.

Shorelines of statewide significance are of particular concern to the marina industry since all of Puget Sound below extreme low tide falls into this category; and, therefore, the siting and design of these facilities requires stringent review by both local government and the state Department of Ecology:

> "The legislature declares that the interest of all of the people shall be paramount in the management of shorelines of state-wide significance. The department, in adopting guidelines for shorelines of state-wide significance, and local government, in developing master programs for shorelines of state-wide significance, shall give preference to uses in the following order of preference which:
>
> (1) Recognize and protect the state-wide interest over local interest;
>
> (2) Preserve the natural character of the shoreline;
>
> (3) Result in long term over short term benefit;
>
> (4) Protect the resources and ecology of the shorelines;
>
> (5) Increase public access to publicly owned areas of the shorelines;
>
> (6) Increase recreational opportunities for the public in the shoreline;
>
> (7) Provide for any other element as defined in RCW 90.58.100 as deemed appropriate or necessary.
>
> "In the implementation of this policy the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally. To this end uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment or are unique to or dependent upon use of the state's shoreline. Alterations of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for single family residences, ports, shoreline recreational uses including but not limited to parks, marinas, piers, and other improvements facilitating public access

to shorelines of the state, industrial and commercial developments which are particularly dependent on their location on or use of the shorelines of the state and other development that will provide an opportunity for substantial numbers of people to enjoy the shorelines of the state. (Emphasis added)

> "Permitted uses in the shorelines of the state shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water."
> RCW90.58.020.

We can deduce from these sections of the act that your industry, since it provides public access to recreational opportunities, is given a favored status among shoreline uses, but that status carries with it the obligation to minimize disruptions of natural processes. Critical issues to be addressed in the siting and design of marinas are defined in the "Guidelines for Development of Master Programs":

(a) In locating marinas, special plans should be made to protect the fish and shellfish resources that may be harmed by construction and operation of the facility.

(b) Marinas should be designed in a manner that will reduce damage to fish and shellfish resources and be aesthetically compatible with adjacent areas.

(c) Master programs should identify locations that are near high-use or potentially high-use areas for proposed marina sites. Local as well as regional "need" data should be considered as input in location selection.

(d) Special attention should be given to the design and development of operational procedures for fuel handling and storage in order to minimize accidental spillage and provide satisfactory means for handling those spills that do occur.

(e) Shallow-water embayments with poor flushing action should not be considered for overnight and long-term moorage facilities.

(f) The Washington state department of fisheries has prepared guidelines concerning the construction of marinas. These guidelines should be consulted in planning for marinas.

(g) State and local health agencies have standards and guidelines for the development of marinas which shall be consulted by local agencies.

(WAC 173-16-060(5))

Subsequent speakers will address in some detail the physical, biological and chemical aspects of marina operations and measures necessary to mitigate adverse impacts on water quality.

Effects on Marina Operations

So much for the legislation. What are its effects upon your industry? There are probably two classes of consequences for the marina industry; 1) The effects of regulation on siting, planning and permitting - the costs of meeting the statutory requirements of the act and its guidelines and, 2) The broad market consequences of more stringent regulation.

The Permit Process

The results of some preliminary investigation of the time taken to process a shorelines management substantial development permit indicate that, for projects not requiring an environmental impact statement, approximately 100 days - a little over three months - is required from submission of application to local government to expiration of the Department of Ecology's review period. Some projects, in some jurisdictions, take considerably longer than this. Marinas, on the other hand, are projects having a significant impact on both the aquatic and land environments and therefore fall under the jurisdiction of the State Environmental Policy Act (SEPA). Preparation of an environmental impact statement along with the shorelines management substantial development permit application is usually necessary.

Permit Appeals

Since 1971 there have been approximately 130 applications submitted to local governments for new or expanded marina facilities. Of these only a handful - 4 - have been denied. Others have been appealed to the Shorelines Hearings Board, a quasi-judicial review body established by the legislature to hear appeals of local permit decisions. In all 9 cases the appellant was the Department of Ecology, joined by private parties in three of the appeals. In no case was a denied permit appealed; rather, the state sought to overrule the local decisions on grounds that they violated the intent or substance of the Act. In only one case was a local permit overturned by the Shorelines Hearing Board (SHB) and that case involved a municipal marina designed to cover 350' of public tidelands.

In the remaining eight cases three were upheld and five were upheld with stipulations, some of which are summarized below:

- dredge and fill for parking lot eliminated (SHB # 113)
- improve sanitation and drainage (SHB # 4)
- provide a legal public easement to beach
- provide 2 acres of clam beds to substitute for those covered by marina, or provide access to existing public clam beds owned by the state
- no dredge spoils to be deposited within 200' of shoreline
- post bond to guarantee beach will not be polluted and pay $50.00 per chain per year if pollution occurs (SHB # 16)

- provide continued public moorage for pleasure and commercial craft in conjunction with private moorage for condominium owners

- provide 30' easement for public beach access (SHB # 114)

In summary, then, the permit and appeals process provides for balancing your industry's private goals against the potential loss of or harm to public rights of navigation, access and harvesting living resources in the shorelines of the state.

A recent, unpublished study by Richardson[1] revealed that in New Jersey the cost of meeting the requirements of coastal zone permitting amounted to $136 dollars for single family residences and $125 dollars per unit for multiple family residences. I have found no comparable data for other kinds of construction. The true costs of lost opportunity during the period of permit application are: the discounted earnings foregone during the permit-processing time, before the project can produce revenue, plus the direct costs of meeting the permit requirements which include additional legal fees, professional consulting services, and capital debt-financing, where capital is tied up in land and other real property. Increasingly, lending institutions are reluctant to finance land-aquisition until all permits have been secured for the proposed development. Option to purchase, rather than aquiring title, is the mechanism being used more frequently by developers in response to environmental legislation, resulting in minimum interim capital financing costs.

Market Effects of Environmental Legislation

I want to pose a question which I cannot answer: have fewer units of either wet or dry moorage been constructed following passage of the Shorelines Management Act than would otherwise have been the case without such environmental legislation? If the answer were yes, the result would be a short-fall in supply over the demand for recreational boating moorage, which, in turn, would have two effects: first, an upward shift in prices as more customers sought a restricted supply of moorages. Second, with fewer moorages available, total income for the entire industry might be lower than would be the case in an unconstrained market.

Marina services are only one component in the bundle of costs which make up the recreational boating budget. Finance charges, taxes, insurance, depreciation, time, land travel costs and accessories are some of these. If, for the sake of argument, moorage fees account for 10% of the total costs of boating, then doubling these fees would only increase total boating costs by 10%. And the demand for recreational boating would be unlikely to fall much more than proportionally. Such a small price elasticity of demand would increase revenues as prices rose. This should yield a higher rate of return on investment in the industry, even though the size of the industry had been restricted by environmental legislation. Some evidence in this direction can be found in a study of the marina industry

1 Richardson, Dan K., "The Coast of Environmental Protection: Regulating Housing in the Coastal Zone." Center for Urban Affairs, Rutgers University Unpubl. Ms. 1976.

in Rhode Island.[1] The authors identified price increases ranging from 86% to 150%, depending upon the services rendered, during the same period that general consumer prices rose 38%. And while noting that the industry's costs had risen substantially ".....all the above (price) changes are consistent with, and some are partially explained by, the increasing pressure of demand on available supply of marina services. People want to own boats badly enough that they're willing to pay the increased prices." It should be noted that the study referred to is three years old and the region surveyed is proximate to a much larger urban population than is the case in the Pacific Northwest; but it does suggest that passing on increased costs to the recreational boating public is unlikely to have an adverse effect on revenues for the marina industry.

"(In Texas).....the possibility of a restricted supply (of wet moorage slips) was not enthusiastically welcomed by many of the marina operators....(stemming) from the belief that the profitable part of their business lies in the services offered rather than in slip rentals."[2]

Thus, if a shortage of moorages restricts the sale of new boats, then marina operators who sell accessories, fuel and repair services would suffer from any stagnation in the recreational boating industry. But the evidence for, or against this argument is far from conclusive.

If the answer to the question posed is No - the number of new units of boat moorage has not been influenced by the Shorelines Management Act - then the only real impact on the industry will be a "front load" cost incurred in securing the permits required under the Act.

It would be an almost impossible task to "prove" that shorelines management has, or has not, adversely affected the supply of moorage spaces, and I am unaware of any studies which have attempted to do so. Marinas are only one use of the shorelines in our state which are under pressure from many competing and conflicting uses. For the industry to internalize thae costs of more stringent environmental controls and, in turn, to pass these costs on to the consumer, seems to be both economically efficient and socially equitable. This is known as "internalizing the externalities" which satisfies the argument I made at the beginning of my paper concerning the intent of environmental legislation: that is, to correct imperfections in the free market system and equitably allocate costs and benefits among producers and consumers.

Current Developments and the Future of Shorelines Management

Since shorelines management in Washington is achieved at the local level with the state acting primarily in a review capacity, inconsistencies among master programs, that is between local governments, are bound to occur. Neighboring counties may not designate their shorelines in the same fashion, even though they abut the same body of water. By way of illustration Mason County has designated the bulk of its shorelines on the Hood Canal "Urban", while neighboring

1 Kelly, Robert and Niels Rorholm, "An Analysis of the Rhode Island Marine Industry", University of Rhode Island Marine, Technical Report 29. Page 10.

2 Crompton, John L. and Robert B. Ditton, A Feasibility, Management and Economic Study of Marina on the Texas Gulf Coast, Texas A & M University 1975. Page 5.

Jefferson County uses predominantly the Rural and Conservancy environments. Similarly, the range of permitted uses within each environment will differ from county to county, as will the performance standards for a given activity. The following table illustrates some of these inconsistencies.

ENVIRONMENT	COUNTY / CITY					
	Clallam	Edmonds	Grays Harbor	Jeff'n	Kitsap	Pierce
Natural	X	X	X	X	X	X
Conservancy	X	X	C	C	A	X
Rural	A[1]	-	A	-	A	C
Urban	A	A	A	A(p)	A	A
Suburban	-	-	-	A(s)	-	-
Semi-Rural	-	-	-	-	A	A[2]

LEGEND

A - Allowed A(p) - Primary Use A(s) - Secondary Use

X - Prohibited

C - Conditional Use

1 - Limited to sites near high use or potential high use

2 - Rural/Residential Environment (Pierce Co. only)

Table 1. Comparison of permitted use by environmental designation in six local jurisdictions.

Source: Official master programs

Shorelines management is still in a state of flux. As the remaining marine counties complete their master programs much more of the present uncertainty will be removed enabling the marina developer to predict more certainly the outcome of any development proposal he submits to his local jurisdiction. Each jurisdiction - county or municipality - will be able to assess any application submitted to them against a consistent master program specifying environments, permitted uses and performance standards for those uses, rather than the present system of judging each applicant against the broad requirements of the act and its administrative guidelines. Review by the Department of Ecology will similarly be made easier by reference to each local master program.

Conclusions

In closing it seems worth re-stating the obvious, but frequently overlooked fact that your industry is providing a service to people seeking a recreational experience. The quality of that experience depends upon clean water, accessible beaches and a continuing stock of aquatic organisms to sustain a recreational fishery. Environmental legislation in general and the Shorelines Management Act in particular seek to enhance, maintain and restore these essential conditions for a healthy recreational industry. While there are costs incurred in meeting the more rigorous standards, developing impact statements and involving the public through hearings and appeals, the potential long-term benefits appear consistent with your industry's goals and, indeed, its very survival in the long-run.

WATER QUALITY CONSIDERATIONS RELATED TO MARINA DEVELOPMENT AND MANAGEMENT

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RESPONSIBILITY OF STATE AGENCIES

This paper will discuss the primary responsibility for water quality of three state regulatory agencies in the State of Washington as they relate to marina development and marina management. In addition, there are several other state agencies that do have interests in marina development, but not primarily with regard to water quality.

Water quality will be considered from the standpoint of these three agencies; what their specific interests are in the marina and its water quality, how these agencies carry out their responsibilities with regard to the marina activities, and the issuance of permits or approvals that may be necessary for the marina. In addition, there will be an attempt to address the problem of water quality as it is impacted by marinas and their operations, and hopefully, to provide recommendations for solutions to these problems.

The Washington Department of Fisheries has responsibility for maintaining a desirable commercial fishery through propagation and cultivation of commercial fish species within state waters and adjacent coastal waters. This would include shellfish production of clams, oysters, crabs as well as free swimming fish species. The Department of Fisheries interests are in preserving fish habitat of the area where fish are living, the continued and improved production of fish as related to their spawning areas and nursery areas, and in the fishes' migration from their spawning areas to their habitat or in their search for food.

The second state agency with concern regarding water quality in marinas is the Washington Department of Social and Health Services. Their primary interest in water quality is for the protection of public health. The agency is charged with approving a safe water supply and ascertaining that adequate sewage disposal methods are used. They are concerned that solid waste material generated from activities located in a marina area are properly handled and that there is no harborage provided for rats and other disease-carrying animals or organisms where they could possibly contact the public and transmit disease.

The third state agency with broad, primary responsibilities with regard to water quality is the Washington State Department of Ecology. These responsibilities were inherited from a predecessor organization, the Washington Water Pollution Control Commission. The Department of Ecology is charged with maintaining water quality through adoption of water quality standards for all waters of the State. These water quality standards are established to provide

for beneficial uses of the water, which may include fish production, fish rearing, water contact recreation, such as swimming and water skiing, boating, aesthetics and water supply considerations with regard to freshwaters.

WATER QUALITY STANDARDS

The Water Quality Standards are a State regulation developed and adopted by the Washington State Department of Ecology in 1967 and are a part of the Water Pollution Control Laws of the State. They have been refined and amended over a period of years; the most recent revision being in 1973. The Water Quality Standards as a regulation contain three major parts. The first part specifies characteristic uses for each class of water established in the State of Washington. The characteristic uses might include stock-watering, irrigation, domestic water supply, fish and wildlife habitat, fishing, recreational uses, including boating, water-skiing and swimming, and general aesthetic benefits. These characteristic uses also includes industrial water supply, commerce and navigation, which relate to other industrial activities and harborage. The use characteristics generally decrease in value as the class of water is dropped into a lower classification.

The five criteria classes of water in the State of Washington are listed as Class AA, A, B, C, and Lake Class, which correspond to extraordinary, excellent, good, fair, and lake bodies of water. The specific class types are distinguished from one another by various, specific water quality criteria. These criteria are chemical and physical parameters, or properties of the water, that are associated with each one of those particular class types. A narrow range of values would characterize a particular class of waters.

The third part of the water quality standards is a listing of the specific classification of individual water segments within the State of Washington. These water segments may be one entire river or one segment of the river in the mountainous area or the lowland stretch of the river through a farming or industrial valley. As they apply to saltwater, a segment may be an entire reach of the Sound, or just one bay, or several minor embayments extending from the Sound itself. The class criteria apply to marine, or saltwaters, and freshwaters of both rivers and lakes throughout the state.

There are eight chemical and physical parameters which make up the criteria for establishing the water quality class. The limits of the criteria vary somewhat from freshwater to marine water for the same class, as there are some significant differences in these two water quality regimes. The following are the water quality criteria.

Total Coliform Organisms, which may range from 50 to 1,000 organisms per 100 ml of water. The coliform organism is a bacterial organism present in the intestines of warm-blooded animals and its presence in the water quality sample indicates contamination by animal or human waste and may indicate the presence of possible disease-causing organisms.

Dissolved Oxygen with a range of 9.5 mg/l to 4.0 mg/l. Dissolved oxygen is the amount of oxygen gas dissolved in the given body of water which is available to organisms, such as fish and other aquatic life, to use for respiration or breathing in that water media. The higher the amount of dissolved oxygen, the more readily available it is for those creatures. The amount of dissolved oxygen increases as water temperature decreases. This oxygen is not part of the chemical

makeup of the water, well known as H_2O, but is instead a minute amount of gaseous oxygen dispersed as dissolved oxygen throughout in that water.

Total Dissolved Gas, with the range of less than 110% of the saturation value for that gas in the particular water under natural conditions. The total dissolved gas is a new criteria that has been recently introduced into the Water Quality Standards. It relates primarily to super-saturation of the water with gases as a result of release of water from impoundments like the dams on the Columbia River. The entrapment and compression of gases in the falling water, as it spills over dams and into the flowing river below, causes high fish mortality, thus reducing fish populations.

Temperature, with ranges from 55° to 75° F. This criteria also specifies incremental increases over existing conditions.

pH, with a range of 6.5 to 9.0. pH is a measure of the acidity or alkanility of the water. A pH of 7 is considered neutral and is common to most tap waters.

Turbidity, with the range of 5 to 10 Jackson Turbidity Units (JTU) over the natural conditions existing in a particular segment of water. Turbidity is the turbidness, or cloudiness, of water, reducing its ability to transmit light. Turbidity is caused by the suspension of finely divided particles in the water and may have an impact on the aquatic organisms present, interfering with their ability to respirate and reproduce. Due to high turbidity, aesthetic qualities of the water are reduced for other uses, such as water supply or recreation.

Toxic, Radioactive or Deleterious Material Concentration. There is no specific range set for these materials, but they are limited to those levels which do not affect the beneficial uses of the water, or acutely or chronically affect the aquatic biota present in those waters.

Aesthetic Values. The limits on these criteria are very qualitative and specify no impairment of waters due to materials or their effects, which may be offensive to the human senses.

If these criteria are lowered or reduced due to impaired water quality within a particular water segment, the classification of that segment is reduced to a lower value. However, the change in classification must be accomplished by a formal revision of the Water Quality Standards.

WATER QUALITY CERTIFICATIONS

Water Quality Standards are used directly by the Department of Ecology in granting approvals, such as the Water Quality Certificiation, which is necessary prior to the installation and operation of a new marina. These Water Quality Certifications are prepared by the Department of Ecology and are required by Section 401 of Public (Federal) Law 92-500, commonly referred to as the Water Pollution Control Act Amendments of 1972. In the law, it states that.....

> for all federally permitted or licensed activity (marinas do require a U.S. Army Corp of Engineers construction permit prior to construction work in navigable waterways) the state must provide a water quality certification to the appropriate federal agency, certifying that the project will comply with applicable Water Quality Standards, effluent limitations, national standards of performance, toxic and pretreatment

effluent standards, and applicable state water quality and water pollution control requirements.....

This comprehensive certification, provided to the federal government by the state agency responsible for water quality and water pollution control in that state, relates to the following marina effects on water quality: the design impact of the marina, the construction impact as the marina is actually built in the waterway, and finally, the operational impact of the marina as a result of its day-to-day activities.

WATER QUALITY IMPACTS AND SOLUTIONS

These impacts of a marina on water quality must be examined to provide solution or mitigation of these effects as they relate to impairment of degradation of water quality. It would be in very unusual circumstances that marina impacts would provide an improvement in water quality.

1. Design Impacts

Design impacts are primarily related to marina configuration. These would include the flushing of the marina, or the exchange of the water within the marina with outside waters, the circulation of the water within the marina itself, and, possibly, the stagnation of water in certain portions of the marina. All of these water movements and exchanges would be affected by the shape of the marina, the depth and the entrance configuration, and entrance location with respect to the body of the marina. These concerns of marina configuration are generally addressed by the Washington Department of Fisheries through their Hydraulics Approval (permit), which if issued upon analysis that these conditions are satisfactory for water quality maintenance with regard to fish and shellfish.

The secondary design impacts would be described as location of boater services. These would include the proximity of moorage floats to shoreside toilet facilities, solid waste containers and sewage holding tank pumpout facilities. These impacts would be reviewed by the Department of Social and Health Services for approval of sewage plans for the marina, or by the County Health Department for sewage disposal.

The location of boat repair areas and drydocking facilities, relative to the marina waters, and the location of fueling dock facilities and their control would be examined. The Department of Ecology would also review any plans for bilge water collection, treatment, and disposal.

2. Construction Impacts

The second type of impacts addressed would be those occurring during the construction phase of the marina project. These impacts may be dredging of bottom sediments and beach material to accommodate the drafts of boats moored in the area. This dredging might result in fishery or shellfish habitat removal and in the disposal of the dredged material on portions of the near-shore area. Another impact might be the placement of fill material for the construction of the marina bulkheads and breakwaters. Construction traffic access to the fill placement area might run across beach and tideland areas, impacting organisms either directly by crushing them or by disturbing sediments, which would sift over and cover them up. The placement of launching ramps could be a water quality fishery related impact.

Another construction impact in the building of the marina may be the careless application of paint or preservative materials used to protect the dock, floats, and pilings driven in to secure the moorages and other walkways placed within the marina or adjacent to the marina. These generally toxic materials can definitely exert detrimental effects on the receiving waters.

3. Boating Activity Impacts

The third type of impact to be addressed with regard to a water quality certification would be the boating activity impacts. These are a part of the day-to-day operation of the marina. These boating impacts may be directly related to the boat, or may be related to the boaters and the public visitors enjoying the marina facilities.

Oil Spill Control. From the standpoint of the Department of Ecology, the most common boating activity impact would probably be the presence of petroleum products within the marina waters. These impacts would be termed oil spills and oil spill control. The oil problem may be broken into several different groups depending on their source.

Gasoline and Gasoline-Related Impacts. These usually occur at the marine service station pumps. Gasoline is commonly spilled overboard as the result of over-fueling or air belching excess gasoline out of the tank filler. Because gasoline is very volatile, it is almost impossible to contain and remove gasoline from the water's surface. Due to the severe explosion hazard and consequent personal safety considerations, attempts to contain and remove gasoline are almost futile. The Department of Ecology relies on the expertise of local fire departments and others experienced with handling such volatile fuels to use whatever methods and precautions necessary to protect the public safety.

Generally, such spills are of a minor nature and can be diluted and spread out with flushing water from nearby water hose connections. In instances of major spillage, a fire-suppressant foam is used to reduce the explosion potential. Only in very limited instances is it possible to contain gasoline on the vessel in sufficient quantity that it can be easily pumped off and collected in a suitable containment vessel rapidly to eliminate the explosion potential and prevent its entry to the waterway.

Diesel fuel and related pumps do present significant problems with regard to water quality degradation. Drip pans should be provided below the hose filler nozzle so that when the nozzles are returned to the pump, any drainage or drippage from the filler line will be drained into a covered drip pan. This can be properly disposed of or emptied back into the supply tank at an appropriate time.

Large diesel fuel spillages to the water often occur due to the inattention of persons filling a vessel's diesel tanks. Nozzle grips should be of a non-locking type so the individual filling the tank must stay and maintain a constant watch at the diesel tank filler. There have been many instances where the attendant filling the tank has left for a moment, only to have the fuel unexpectedly fill the tank and run overboard into the waterway, spilling considerable quantities of diesel fuel.

Any diesel spills are significant in that they cover the water surface with an impermeable layer of oil reducing or eliminating oxygen transfer through that surface film and they can coat with diesel any aquatic organisms coming in contact with the surface layer. These spillages contaminate the other boats

moored in the marina causing aesthetic and cleanup problems and may adversely affect beach and intertidal organisms, as the rise and fall of the tide deposits a layer of diesel fuel on and into the intertidal zone.

Diesel spills can be contained through rapid plugging of scuppers on board the vessel immediately after the oil has begun to run out of the filler, by placement of buckets or other materials where diesel oil is draining off of the vessel and into the water, by use of absorbant material on the vessel and in the waterway and by booming the diesel spill as quickly as possible against the vessel or shore where the spill occurred. In some cases, the water spray from a hose can be used to direct or push oil floating on the surface of the water into a boom where it can be picked up with absorbant material or by a suction device.

Bilge waters and bilge wastes present severe impacts on the water quality. These are similar to the oil impacts from diesel fuel as well as being very aesthetically displeasing due to the heavier oil and degraded condition of the oily bilge waters. There is no justifiable reason for this type of waste to be discharged untreated in the marina or the waterway. The bilge pump apparatus for a vessel should be provided with a connection for pump-out to a holding and separation tank on shore. This separation unit will allow the oily bilge waters to stand quiescently to separate the oily fraction and waste material from the generally clear waters of the bilge, which can then (after proper examination) be released to the waterway with very little harm. If oily bilge waters should be inadvertently pumped overboard, they should be removed with the same boom and oil spill control techniques as the diesel spill mentioned above.

Lubricating oils for engines and gear boxes present an oil control problem. It is imperative that these oils be kept in proper storage areas and not left in containers on the dockside, except when they are actually being used to fill or remove oil from the marine equipment. They should be stored well away from the water areas under cover with an adequate curbing around the storage area to intercept any spillages of lube oil materials.

Dispersant Agents or chemicals have been used in the past as one method to remove oil spills. It has been documented through research conducted several years ago by the Department, that the use of such chemical agents was more detrimental to marine organisms in the water than the oil spilled in the water. As a result, the State of Washington now prohibits the use of dispersant material and such sinking agents, unless there is specific prior approval given to their use in some selected instances by the Director of the Department.

Boat Repair and Cleaning. Another type of boating activity impact on water quality is the structural repair of boats, and the painting and detergent washdown of the boat hulls. These types of repair activities should generally be based on land in areas removed from the waterway. They should be located and constructed such that runoff of the paint, cleaners or detergent washdown is not directed into the marina or the waterway, but instead, into a controlled land area where it can dissipate or be collected and be cleaned up. These boat repair and painting areas should be located to prevent unsightly debris, toxic paints, preservatives and detergents from fouling the waterway, impacting marine organisms living there and reducing the aesthetic qualities of the waters and its recreational uses.

Litter. Litter as a water quality impact of boating activities is receiving wide attention today. The marina should provide convenient location of litter and solid waste disposal containers for the use of boaters and marina visitors

and should place these containers where they are also convenient for removal and disposal by the marina operator. It does little or no good to have such containers when they are completely full and overflowing and, consequently, they do not provide a service for which they were intended. Measures should be taken to prevent the blowing out or leaking of the refuse contents of these containers. They should be marked to specify when particular materials, such as waste oil and other special wastes, must be handled separately and not placed in the general solid waste container.

Sanitary Sewage. Sanitary sewage discharge from boats transiting or moored in the marina is a long-standing problem receiving renewed attention today.

The immediate need in remedying this problem is to provide adequate shoreside facilities for handling the sanitary waste generated by the boaters while they are moored in the marina and those of visitors at the marina. There are probably four solutions available for most marinas today and they are listed as follows in decreasing preferential order.

The first would be connection to a municipal sewage system. This connection of shoreside facilities to a municipal system would allow no limitations on the use of showers, laundry or toilet facilities at such a location. The second one would be an approved septic tank and drainfield disposal system at the marina. This system would be limited in the number of showers that could be provided to patrons, laundry facilities would have to be severely restricted, if provided at all, and boat holding tank pumpout would not be very likely, unless there were a very large and well-operating drainfield. A third, less-desirable shoreside facility might be a recirculating toilet system. This would provide for disposal of human waste, but would not permit any showers, laundry facilities, or pump-out of holding tanks on the boat. The fourth type of disposal for onshore facilities could be sealed vault privies. These would be allowable only at remote locations, which have severe water supply restrictions and waste disposal problems. These would be considered on a case-by-case basis by the County Health Department.

The actual source of the water quality impact and degradation due to sanitary sewage in the marina is not usually from the shoreside facility, but rather from the direct discharges of human waste from the boats in the marina. The aesthetic problems of human waste materials floating in the water within and adjacent to the boat moorage areas are very real and constitute an extreme degradation of the water quality. There is much concern about the potential public health hazard from direct contact with such contaminated waters resulting from direct discharge of untreated sanitary wastes. The question of what type of marine sanitation device is to be installed and used on boats to adequately maintain water quality and safeguard the public's health is a subject of much controversy.

There are at least four principle approaches available today. These include re-circulating toilets, which contain a liquid medium, generally, a mineral oil, which flushes only toilet wastes through a filtering system to remove solid materials, deodorize the waste and recycle the clarified liquid for reflushing the device. Several gallons of waste from these units must be emptied into a municipal sewer system after several dozen uses. The second type of unit is the sewage holding tank, which is a tank that holds the liquid waste generated onboard the boat for later pumpout to a shoreside facility with adequate disposal mechanisms. Third is an incinerator toilet which uses auxiliary fuel or electricity to burn the toilet wastes at a high temperature with very little odor. The waste is reduced to an ash residue of a low volume, which must be disposed of at a shoreside facility. The fourth type of device is the macerator-chlorinator device, a

grinder-type pump which breaks up the solid waste materials and doses them with a disinfecting agent such as chlorine. It provides a short holding period for contact of the wastes with a disinfecting agent before discharging directly into the receiving waters wherever the boat may be.

FEDERAL REGULATIONS FOR MARINE SANITATION DEVICES

Public Law 92-500, Section 312, refers to marine sanitation devices and requires the Environmental Protection Agency to develop standards for the performance of such devices. In addition, the United States Coast Guard is to develop regulations which will cover the design, construction, installation, and operation of such devices which meet the EPA standards.

As of January 27, 1976, EPA issued final regulations on marine sanitation device standards (Federal Register, volume 40, no. 198). The regulations provided for a compromise situation of no discharge in some waters and limited discharge meeting certain effluent limits in other marine, coastal, or interstate transportation waters. They allow a time period for installation of devices in new vessels and a longer period of time for the installation of devices in existing vessels.

Final Regulations. The final regulations specify:

1. no discharge of any wastes, treated or untreated, in landlocked, fresh water lakes, reservoirs and impoundments and those rivers not subject to interstate navigation, with the exception that vessels currently equipped with marine sanitation devices meeting a standard of discharge of not greater than 1,000 fecal coliform organisms per 100 ml, and no visible floating solids, may discharge for the operable life of that device.

2. a discharge is allowed from vessels in all other navigable waters, if the device meets the standards of not greater than 1,000 organisms per 100 ml. This requirement for a device discharging to meet this standard becomes effective January 30, 1977, for new vessels and January 30, 1980, for existing vessels.

3. after January 31, 1980, marine sanitation devices installed on vessels operating on waters not subject to the prohibition of discharge of sewage, must meet the criteria of not greater than 200 fecal coliform organisms per 100 ml, and less than 150 mg/l of suspended solids, except that any existing vessel equipped before January 30, 1978 with an initially approved device (not greater than 1000 organisms per 100 ml) can discharge in non-prohibited discharge waters for the operable life of the device and, except any new vessel on which construction began before January 31, 1980, which is equipped with an initially approved device (not greater than 1000 organisms per 100 ml) can discharge in non-prohibited discharge waters for the operable life of that device.

The reason for the overlapping time period for the installation of the less-stringent marine sanitation device is to encourage the more rapid installation of devices that at least achieve some reasonable degree of treatment.

Included in the regulations are provisions which allow the state to make application to the federal government to completely prohibit the discharge from any vessel in certain waters of the state. It must be shown by the state to the satisfaction of the administrator of EPA that such areas need additional

environmental protection, and there are adequate facilities available for the removal and treatment of wastes pumped off such vessels. These facilities must be shown to be readily available and to conform with all applicable federal laws.

In addition, the state may make written application to the administrator of EPA for complete prohibition of discharge from any vessel in waters of the United States located within that particular state due to the particular need for protecting those waters for water supply, aquatic life or intensive recreational activities, which require very high quality waters.

These federal regulations have effectively pre-empted any state regulations governing vessel discharges of sanitary wastes. It is anticipated that the state will monitor the effectiveness of these regulations as they apply and are implemented in this state and may recommend certain waters for the discharge prohibition due to environmental protection needs and as sanitary pump-out facilities are installed.

PHYSICAL AND CHEMICAL OCEANOGRAPHY:

IMPLICATION FOR MARINA SITING AND OPERATION

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Today I will speak on two aspects of physical and chemical oceanography as related to marinas. First I will talk about the circulation patterns inside and outside the marina and second I will briefly look at some of the effects of a discharge upon the water properties.

The circulation of the water inside and near a marina is determined to a considerable extent by the configuration of the marina and the shore near by. If the marina is completely enclosed except for the entrance, the circulation will be governed by the geometry of the basin. But if the marina is enclosed only by open type breakwaters, the internal circulation will be determined by the natural currents existing in the vicinity of the marina. The currents outside the entrance will determine if any of the water leaving the marina on an ebb tide will be returned on the following flood tide.

Two parameters are useful in designing a marina. First is the excursion distance a given particle of water may move during a given tide and the other is the flushing time. Because there is usually no significant amount of fresh water entering a marina, the flushing time (F) in tidal cycles of an enclosed marina may be estimated from the volume relationships such that

$$F = V_t / V_i$$

where V_t is the total volume of the marina at high tide and V is the volume of water contained between high and low water at the given time. This method assumes that none of the intertidal water is returned to the system and that the new incoming water completely mixes with the water remaining in the marina. Because these assumptions are only partially true, the resulting value is only a minimum time. Such calculations do not tell where a particle of water will move as the water level changes. The determination of the excursion distance will give a better estimate of the fate of any given particle of water in the marina.

It is quite easy to calculate the excursion distance of a water particle inside a completely enclosed marina. But for a marina with open breakwaters, such as Shilshole Bay Marina, it is very difficult. In the latter case, it is better to determine the movement of the waters by use of drift objects (drogues), or dye releases. This method requires considerable time and must be repeated over several types of tides.

To compute the excursion distance within an enclosed marina, it is necessary to have accurate, large-scale charts of the bottom configuration. These charts are then contoured at various depths and the area confined between any given contour is measured. From the areas and depth intervals, the volume of water contained within each increment is calculated as

volume = area times depth.

Such measurements are made using slices of the marina and then summing the accumulated volumes from the head to the entrance of the marina. A plot of the accumulated volumes versus distance from the head is made as shown in Figure 1. To determine the excursion distance on a given tide, it is only necessary to know the point of origin and the tide heights under consideration. For example, if a particle is released from point C on a 10 foot tide and the water drops to 5 feet, the particle will move distance d. Then if the next tide is a -2 foot, the particle will be removed from the system. Now if the currents at the mouth of the marina move the particle away from the entrance, there will be no return of this water on the next tide. With this method, it is possible to predict what may happen to the water movement at various points within an enclosed marina. Such an analysis will aid in the placement of floats and facilities requiring drainage into the marina.

Now I shall turn to the chemical aspects for a few moments. The major emphasis of the state's water quality standards is on oxygen depletion, bacteria count, and added heat. From a knowledge of the circulation and flushing characteristics of a marina, it is possible to estimate the probable effect of a discharge into the marina. In an enclosed marina with limited exchange of water from the outside, it is possible that natural biochemical processes may reduce the dissolved oxygen content of the resident water mass. The magnitude of this effect is dependent upon flushing time and depth at which replacement water enters. Usually the flushing time of a marina is only a few tidal cycles so oxygen depletion is not a serious problem except very close to the bottom where solids may be deposited. Bacterial content of the water may build up if a large number of boats discharge their wastes into the water over a long period of time. But this may be reduced by the use of holding tanks or by direct connection to a proper sewer line. If the marina provides facilities for dumping holding tanks, then adequate shore facilities must be provided for disposal of wastes. Added heat to the water from engines is not a serious problem, but on a hot summer day it is possible to have the upper few inches of the water become quite warm because of limited circulation.

With regards to nutrients added to the water, this is of little consequence, because the waters of Puget Sound are normally nutrient-rich and the amount of nutrients added by the marina are very small compared to what nature may introduce.

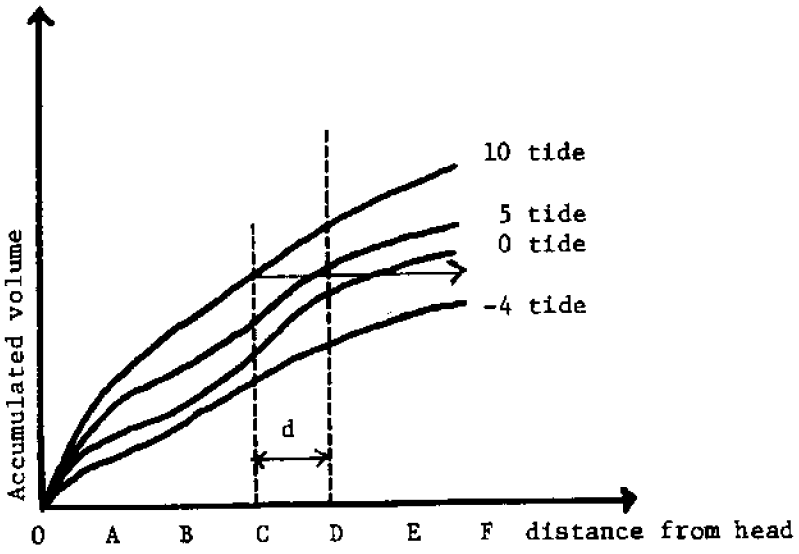

Figure 1.a.
Accumulated volume vs. distance from head of enclosed marina under varying tide conditions.

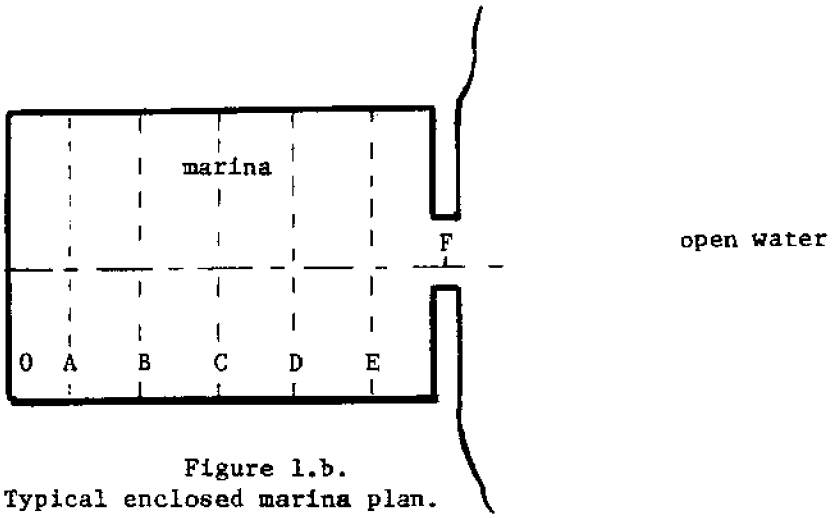

Figure 1.b.
Typical enclosed marina plan.

THE QUARTERMASTER HARBOR STUDY:

AN INTERDISCIPLINARY SYSTEMS APPROACH

TO A RECREATION LAND USE CONFLICT

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Due to a decreasing supply of uncommited shoreline and an increasing public concern over the present and potential values of this resource, land use conflicts have reached an increased level of complexity. What was once a simple matter of developing the land and water for a given use has become an awesome task. Often required are a variety of permits, research or special studies, and environmental impact statements, all of which define the multitude of public and private interests and help to insure the protection of vital social and environmental values.

For these complex and interrelated issues, an interdisciplinary systems approach offers a valuable framework for problem solving. A systems approach views components of the environment as they relate to other components. Through the analysis of these interactions, the problem or issue may be seen in a more comprehensive picture. Based on this interactive picture, solutions are more likely to resolve the problem without generating a variety of new problems.

This paper is an attempt to describe the Quartermaster Harbor Study and its use of an interdisciplinary systems approach to a recreation land-use conflict. The conflict developed between county officials (representing county-wide recreationists) and local residents over a proposed redevelopment of an existing county park located on Quartermaster Harbor, Vashon Island, Washington. Major emphasis of the study process was directed towards: 1) defining the concerns involved in the conflict, 2) the accurate gathering and analysis of data, 3) involvement of the public in the study process, 4) development of recommendations to resolve the conflict based on the above factors, and 5) a final assessment of the environmental impacts of the study's recommendations.

THE CONFLICT

Setting

The conflict in resource allocation surfaced at Dockton Park, on Quartermaster Harbor in central Puget Sound. Dockton Park is a marine-oriented park operated by King County Division of Parks and Recreation. Quartermaster Harbor is one of the largest of several natural harbors located in central Puget Sound. At the turn of the century, the harbor was the scene of a great deal of industrial development with possibly a larger population than presently exists. Today, the harbor is no longer an industrial area, as most of the resources upon which the economy was based have been depleted. Present use of the harbor involves shoreline recreation homes, several county parks, a commercial barge storage area,

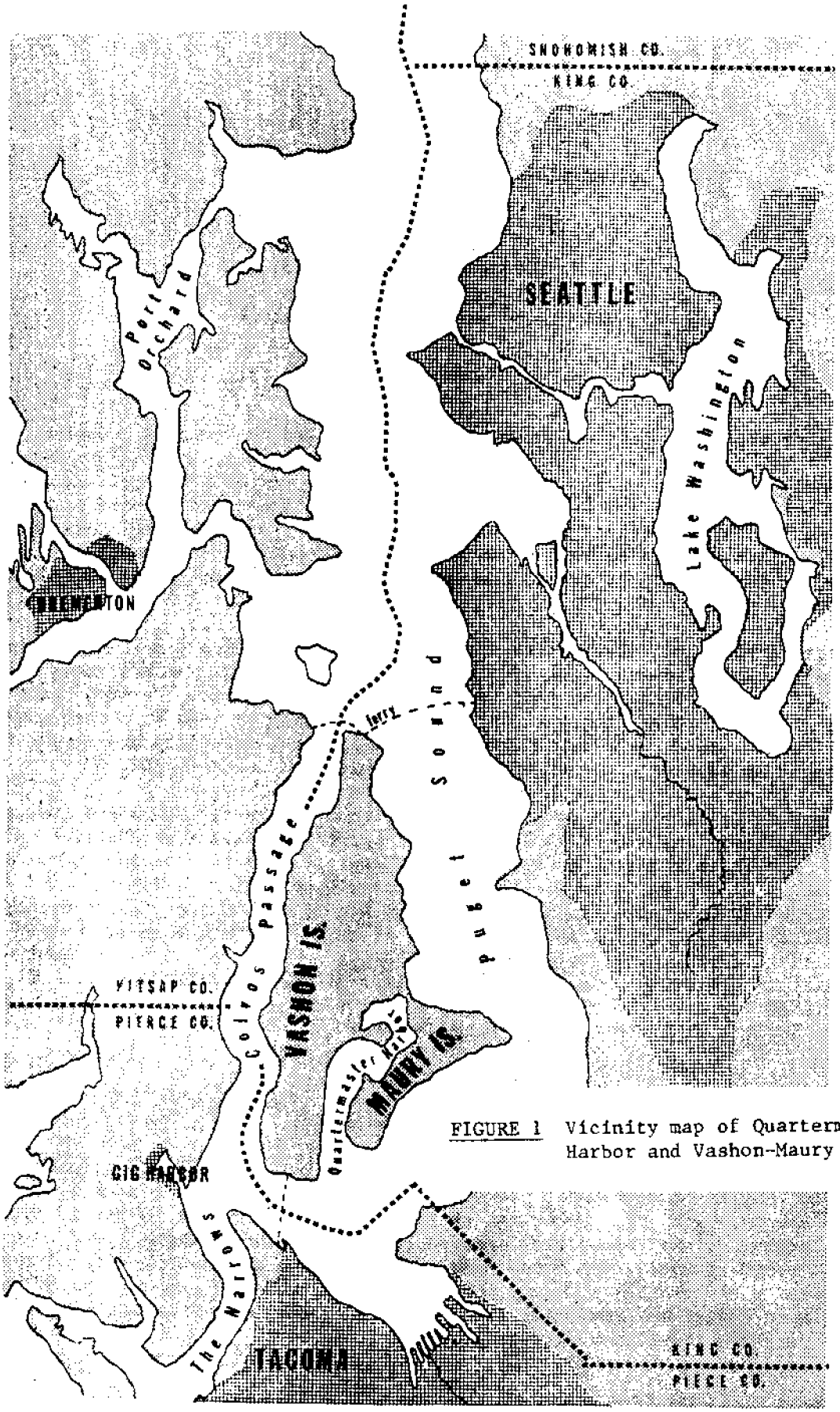

FIGURE 1 Vicinity map of Quartermaster Harbor and Vashon-Maury Island

and fishing and recreation boat moorage.

Covering over 3,000 surface acres of water, the harbor almost separates the islands of Vashon and Maury. A land bridge or isthmus at the north end connects the two, forming Vashon-Maury Island. The island, connected by ferry with Seattle to the northeast and Tacoma to the south, has a population of some 6,500 year-around residents. A majority of its residents commute each day to work at these urban centers. Yet only portions of the island's interior and approximately half of its shoreline exhibit the characteristics of suburban growth.

The major reason cited by island residents for residing there is the island's rural atmosphere, and its close proximity to Seattle and Tacoma, providing access to urban amenities (Public Workshop, 1974). The physical separation from urban centers has helped island residents think of themselves as disassociated physically, culturally, and politically from King County; sustantiating their unincorporated status. As on other Puget Sound islands there is a great deal of concern expressed over the possible deterioration of the quality of life which traditionally has accompanied increasing population and development.

Established in 1935, Dockton Park has been slowly developed for a variety of water-oriented recreation activities. Most noteable among these are swimming and boating. These activities are inherently incompatable when judged from a variety of standards, be it water pollution, safety, or facility requirements. However, at low use levels they have coexisted. It was at some time in the 1960's when these two uses of the park grew to the point where conflict began to develop among the participants. The majority of swimmers were thought to be island residents and most of the boaters were outsiders arriving at the park from other areas in King or Pierce Counties. The use of the park by boaters caused the local residents to feel pushed out of the park due to this regional use.

Surfacing of a conflict

King County announced plans in 1972 to redevelop Dockton Park for swimming and increased overnight boat moorage. Funding and the need for this development were provided for in the 1968 Forward Thrust bond issue. Island residents agreed with the need to improve swimming and other facilities used by islanders. However, they expressed strong opposition to the expansion of overnight moorage facilities. Their concerns included:

1. water pollution of the swimming area (and harbor) through sewage discharges from boats,
2. deterioration of the island's rural quality through the development of a regional boating facility,
3. island residents being displaced from their traditional use of the park, by off-island boaters,
4. the introduction of new recreationists to an island they felt already approaching overdevelopment.

The county, on the other hand, was attempting to provide additional facilities at a frequently overcrowded moorage, for the steadily growing number of Puget

Sound boaters. The need to provide for this demand has been previously identified by most federal, state, and local recreation demand estimates as well as development plans. As Quartermaster Harbor offered the only naturally protected overnight saltwater moorage in the county (excluding Elliott Bay which is the port for the city of Seattle), King County had few alternative areas for the growing demand at Dockton Park.

Conflict over the expansion of the Dockton Park moorage facility continued through 1974 when, by the mutual agreement of both the county and island residents, a third party assessment was sought. King County contracted for the study with the College of Forest Resources at the University of Washington.

METHODOLOGY

To help develop an understanding of the natural and social systems involved in the conflict over Dockton Park, the environment was segregated into the following systems. The natural supra-system was composed of the marine, shoreline, terrestrial, riparian, and atmospheric systems. The social supra-system was composed of land use, recreation, and the general community systems. Each system was further subdivided into subsystems and their components. A systems interaction matrix, which will be discussed later, was developed using these system designations and a listing of important environmental components. The purpose of this matrix was to identify and keep track of interactions identified by the disciplinary research work.

Definition of the areas of concern involved in the conflict were developed through meetings and discussions with both island residents and county officials. Also involved in this process was a review of newspaper articles, surveys, and consultation with the academic community.

Once the concerns had been identified, research objectives for each discipline involved in the study were developed. The specific objectives attempted to address questions posed by the areas of concern.

Since most of the questions raised involved the efforts of several disciplines every effort was made by the study coordinators to insure adequate interaction between disciplines. The disciplines involved in the study were history, marine biology, sanitation, marine hydraulics, wildlife, vegetation ecology, sociology, economics, law, and recreation planning.

Involvement of the public in the study process allowed them to make informed suggestions and comments based on information generated by the developing substudies. The areas of concern provide the foundation for the development of study recommendations. These recommendations were reviewed with both parties to the conflict. After this review process, final recommendations were developed and assessed for their social, economic, and natural environmental impacts. Since potential impacts of shoreline recreation had previously been identified by the implication of each of the substudies, this step served as a final check on the minimization of impacts of the recommendations. Emphasis was placed on recommendation impacts as they related to the areas of concern.

The Study Process

The flow chart illustrated by figure 2 was used to coordinate, direct and evaluate the progress of the study. As shown, six distinct phases occurred throughout the study. These phases included the establishment of a study objective, the direct gathering of data or inventory phase, and the analysis of the inventory data as it applied to the objectives. A synthesis phase was utilized to assess the implications of the data for the areas of concern and develop alternative courses of action for the resolution of the conflict. A recommendation phase served to finalize and test specific recommended courses of action. Finally, an assessment phase was used to analyze the social, legal, economic, and environmental impacts of the recommendations.

The study process was dynamic in that feedback loops to either the objectives or prior phases occurred throughout the study process. In other words, the possibility of making a wrong turn was reduced through the checking of study decisions against the implications of the substudies and through public and professional review.

Objectives and Areas of Concern

The initial objective of the Quartermaster Harbor Study was to:

> Identify the nature and sources of conflict over the proposed expansion of Dockton Park to accommodate greater recreational boating use, and to determine the actions necessary to solve the present conflict over this issue while avoiding future conflicts of this type on Vashon-Maury Island.

This objective is two-phased. First, why is there a conflict over the Dockton development and what can be done about it? And, secondly, is this conflict symptomatic of underlying issues surrounding the acquisition and development of shoreline parks on the island in general?

Study goals were developed to begin to direct research efforts towards the objectives. These goals were to:

1. Identify the existing uses and conflicts of uses in Quartermaster Harbor.

2. Measure the desires and needs of residents and non-residents using Quartermaster Harbor.

3. Determine the objectives of King County Division of Parks and Recreation and its obligation to the users of Quartermaster Harbor.

4. Determine solutions and alternatives to the recreation conflicts as revealed by the study of Quartermaster Harbor.

While the study objective was necessarily broad, the study goals were direct enough to orient specific disciplinary research efforts.

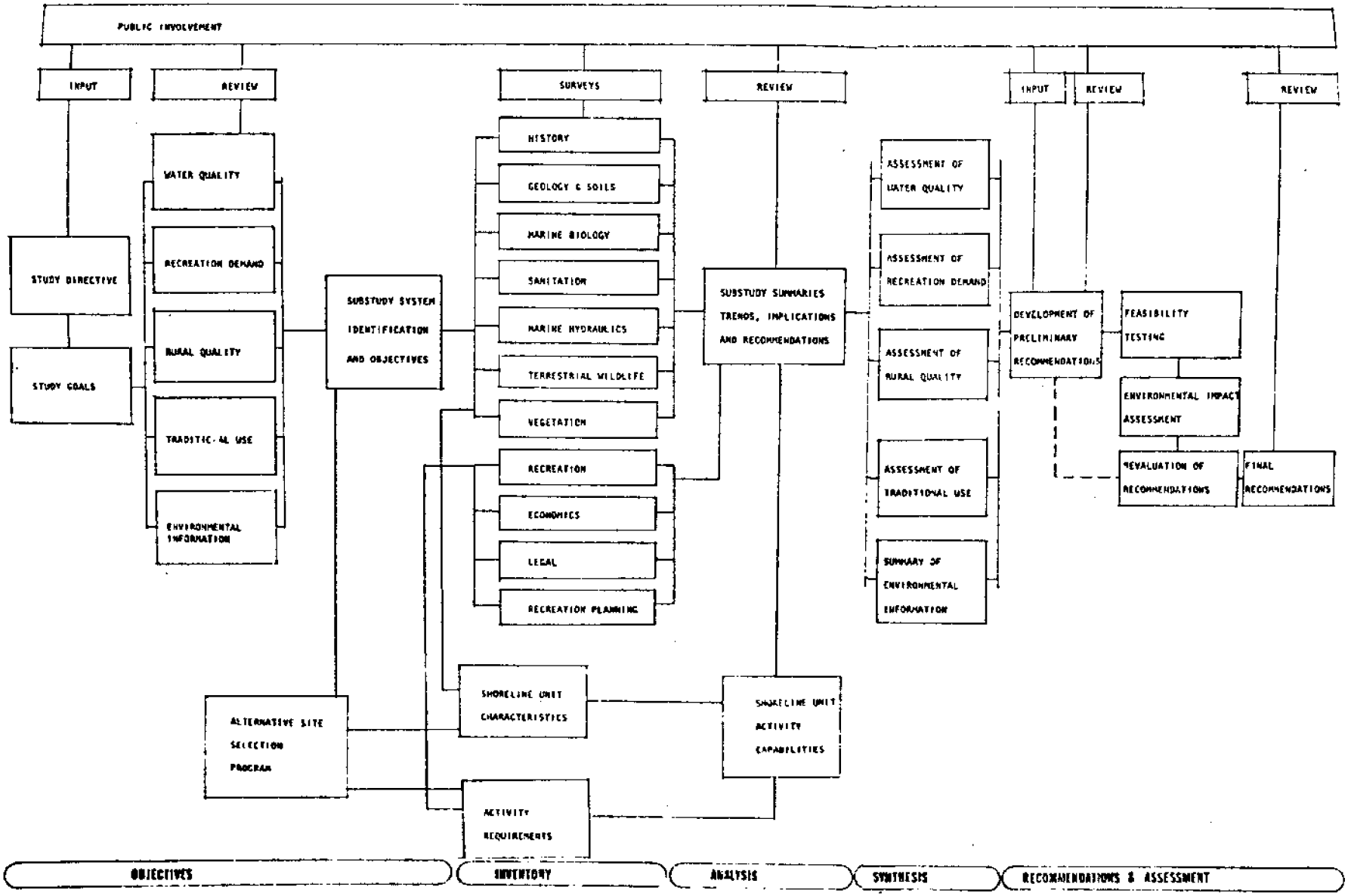

FIGURE 2 The Study Process

However, the process of identifying the actual conflicts or issues over the Dockton Project was a little more difficult to deal with, requiring a great deal of time and effort. Discussions with county officials, island residents, and recreationists yielded a variety of issues which were believed responsible for the conflict. Among these was the question of the effects of boat usage on the harbor's water quality. Other issues to surface were, 1) a desire on the part of many island residents (at least the more vocal ones) to promote only developments which would be used by local residents; 2) a fear of any development leading to a chain reaction of subsequent development; 3) a desire to maintain the traditional usage of Dockton Park; 4) and the social impact of encouraging outsiders to visit Vashon-Maury Island.

From the other side of the issue, Dockton Park was receiving heavy use by boaters which overtaxed the existing facilities. Secondly since Vashon-Maury Island contained approximately half of the saltwater shoreline in King County, it was believed that its marine parks should support a fair share of the county's boating oriented saltwater recreation demand. Another issue was that since King County Parks were supported by all county residents and also by some state and federal funding, island parks should also be developed for other recreationists besides those residing on the island.

In order to more easily deal with this array of issues, five areas-of-concern were developed to, hopefully, encompass the full range of issues. These formally defined areas-of-concern were:

1. Deterioration of the harbor's water quality
2. Deterioration of the island's rural quality
3. Recreation demand
4. Displacement of traditional uses by new outside use of the island's shoreline
5. The need to gather environmental baseline information on the Vashon-Maury Island environment.

A single paragraph statement was prepared for each of the concerns. These statements were reviewed with island residents at public meetings and with county officials to insure their accuracy and completeness.

Although some research efforts such as sanitation, hydraulics, marine biology, and history were initiated prior to the preparation of these statements, alterations in research goals were made to redirect the research to address the areas-of-concern.

The statements were later assessed as to their validity on the basis of research findings. Possible measures to address their resolution, were detailed in the phase of the study entitled Assessment of the areas-of-concern. These assessments of the areas-of-concern served as the baseline for the development of study recommendations.

Orienting Substudy Objectives Towards the Areas-of-Concern

Specific research objectives were established for each of the eleven substudies. In the development of the substudy objectives, it was necessary to consider the capabilities of both the researchers and their disciplines to accomplish the given objectives. For example, a sanitarian is highly trained

to deal with water pollution as it relates directly to human health. However, the training does not generally include the analysis of water pollution which may be toxic to marine organisms or which impairs the water's aesthetic quality. Thus information on nonhuman health-hazard substances had to be obtained by the project coordinators to complete the water quality picture. For example, research of current water quality literature identified specific types of water pollutants which could be correlated with land use. Thus, although actual field data had not been obtained for nonfecal contaminants, possible sources and levels of discharge could be hypothesized.

Since water quality is not dependent solely on types and amounts of discharge, the marine hydrologist studied harbor circulation and current patterns to 1) aid the sanitarian in correlating water samples with current to locate sources of discharge and 2) develop an approximation of the flushing characteristics of various portions of the harbor.

An objective of the marine biology substudy was to assess floral and faunal characteristics to determine if degraded water quality was indicated by species composition and densities. However, due to the lack of a previous inventory of marine organisms, changes in marine communities were not assessable. Thus, this research objective was not obtained.

When a particular section of the harbor was identified as being polluted with human wastes, information from the geology substudy revealed the existence of highly permeable soils and geologic strata along the shoreline nearby, showing the drainfields of shoreline houses to be a probable cause.

Although not all of the interdisciplinary efforts to assess the areas-of-concern were as successful as this one, a systems approach offers a more complete picture of the environment and its interactions.

Regarding the relationship of boat use and water quality at Dockton Park, the sanitation substudy showed a relationship between the number of boats at the park and the level of pathogenic bacteria. However, the level of pathogens was well below health standards and thus posed no immediate health hazards to swimmers. Thus, it might easily have been concluded that the overnight moorage could be expanded without concern. However, a review of the recent Environmental Protection Agency literature conducted by the legal substudy, showed the aesthetic quality of swimming waters to be at least as important as health characteristics. Therefore, due to the intermittent discharge of oil and gas by boaters, it was decided by the study team to separate the boats a considerable distance from the swimming area, not on the basis of health but on the basis of aesthetic standards.

Public Education Role of the Research

Land-use conflicts tend to generate statements based on guesses, fears, and unfounded information. Once people begin fighting they are likely to say almost anything. A clearly important task of research, whether an interdisciplinary systems approach or not, is the education of interested parties.

At the initiation of the Quartermaster Harbor Study comments such as "the harbor is a sewer!", "there is three feet of garbage from boaters under the Dockton Park dock!", or "island residents are selfish!" abounded. Through the course of the twenty month research effort, public meetings and workshops sought to inform

interested persons as to the result of various research efforts as they related to many such statements. Not only were many fears alleviated, but real problems were brought to light so that meaningful solutions to the Dockton Park issue could be obtained.

In addition to the meetings which were held in somewhat of a lecturing format, copies of substudy research documents were made available at county offices, the island's public library, and the University. Also reviews of each document by the local paper helped to disseminate the information.

Alternative Site Selection Process

The alternative-site selection process was initiated early in the study on the assumption that additional sites to accommodate either swimming or boating use may be necessary for the resolution of the Dockton conflict. Moreover, since swimming and boating were not the only uses of Dockton Park and Quartermaster Harbor, which may need to be located at suitable sites to avoid future conflicts, the assessment of alternative sites for these additional activities was also included in this process. The essential goal of this process is to locate sites along the Vashon-Maury Island shoreline capable of supporting each of the specific water-oriented activities.

Activities considered in this process included beachcombing, boating, camping, clam digging, fishing, observing nature, picnicking, scuba or skin diving, and swimming. For each of these activities a list of activity-requirements was developed. Requirements were separated into three categories. The first being locational requirements, which are those requirements of an activity defined by fundamental characteristics of the site and necessary to support the activity. For example, the activity of beach swimming may require warm water temperatures, mild currents, and sand substrate rather than rock or gravel. Operational requirements of an activity were defined by the set of facilitites needed to support the activity, as is case of boat launching which will require adequate parking area in the upland. The third type of activity requirements are preferential requirements, defined as those requirements which are unnecessary but which may greatly enhance the recreationist's experience at the site. Requirements such as fire pits, shelter, or pleasant off-site views are considered preferential.

To initially locate basic site-alternatives, locational and operational requirements are used exclusively. However, for making judgments as to the relative merits between these basic alternatives, preferential desires are then taken into consideration.

Activity Compatibilities

The assessment of activity compatibilities can assist in conflict avoidance by identifying those activities which should not occur on the same site at the same time. When considering a mixture of activities at one specific site, conflicts such as that which occurred at Dockton between swimming and boating may be avoided through proper attention to activity compatibilities. Figure 3 shows the compatibilities of the previously mentioned activities.

Shoreline Unit Characteristics

Having defined the activities to be considered and their various requirements, the second phase of this process is an inventorying of the physical character-

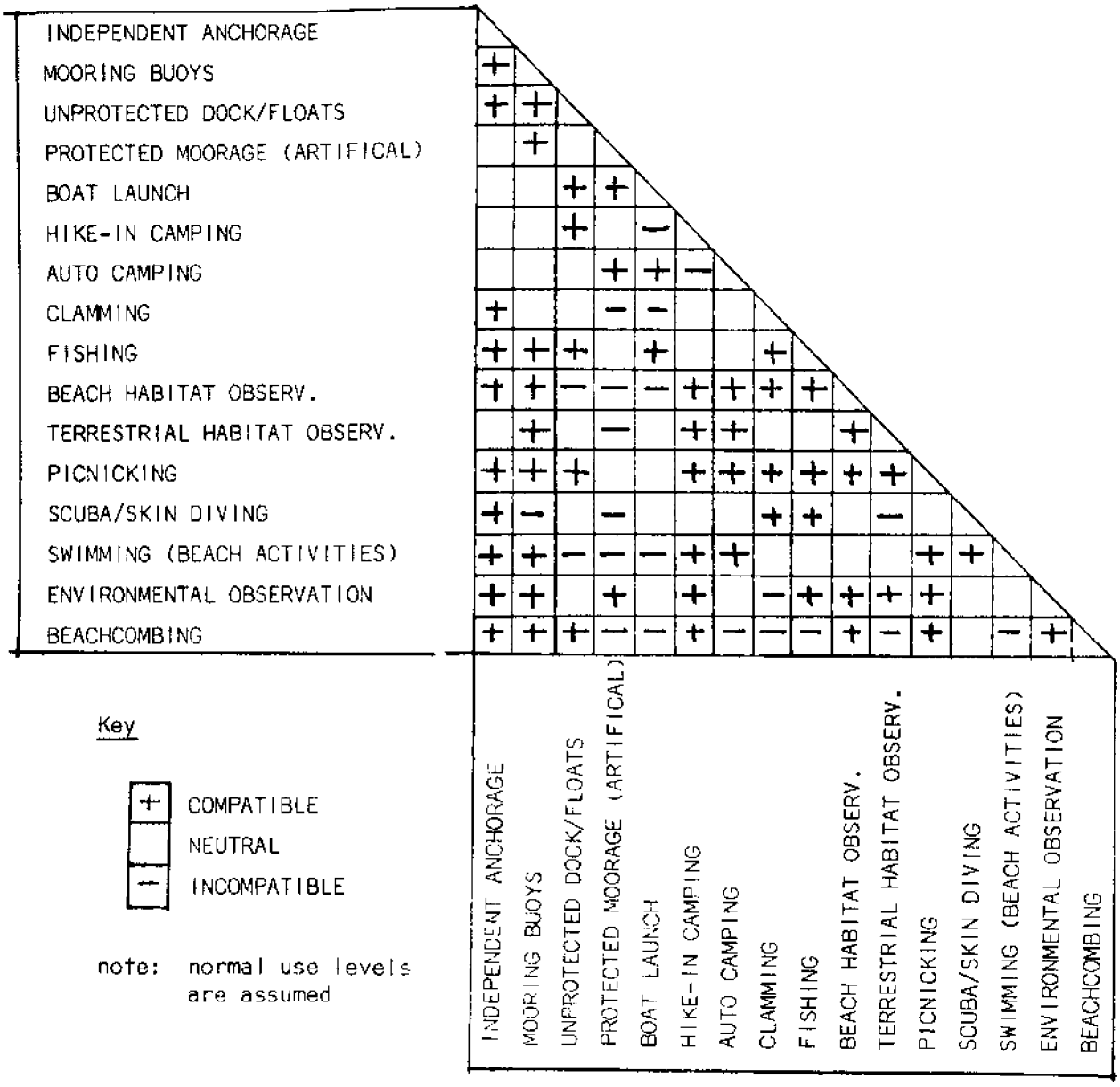

FIGURE 3 Matrix of activity compatibilities

istics of the island's shoreline. To facilitate this inventory, the 49 miles of island shoreline were divided into 1/10 mile-wide cells, each extending landward to the upper plateau of the island and seaward to a variable dimension, depending upon the characteristic under consideration. For example, beach texture was considered to the line of low tide while seaward visual quality extended the cell as far as the horizon.

Shoreline Unit Capabilities

A computer program was utilized to overlay the individual sets of activity requirements, on each of the 491 cells containing 61 cell characteristics. To develop a range of shoreline cell capabilities for a given activity, four levels of capabilities were considered. The first level, optimal, indicated the highest capability, while the second, acceptable, meant the cell was well-suited to the activity but only perhaps at a lower use-intensity or with some impact to the site from that activity. The minimal capability designation meant that the site was capable of supporting the use but only at a low level, with possible severe impacts to the user-experience or to the site. And finally, the unacceptable rating meant that the site was not capable of supporting the activity, according to the activity requirements. The output of this process was a complete listing of all 491 cells and their capabilities for each of the 15 activities. It should be noted, however, that the capability ratings were not the final stage in the development of the site suitabilities. Additional factors such as geographic location of the site, legal considerations imposed by the Shoreline Management Act, development costs, and the compatibility of various activities were over laid upon the computer output to make the final determination of site suitability.

Once the shoreline cell suitabilities had been determined, this information was held, as shown in the study flow chart, Figure 2, until the need for alternative sites had been made, after the assessments of the areas-of-concern .

ANALYSIS OF CONCERNS IN VIEW OF STUDY RESULTS

After completion of the eleven substudies, the study team reviewed the initial areas-of-concern to assess their validity, determine measures to meet these concerns, and to prepare statements of review. Preliminary recommendations, for resolution of the conflicts at Dockton and for the avoidance of future recreation-use conflicts on the island, were developed from the assessment of the areas-of-concern and presented to the public for review.

Public review of these recommendations entailed a meeting on Vashon Island and the distribution of a pamphlet discussing the substudy results, the areas-of-concern, and preliminary recommendations. To facilitate public response, mail-back comment sheets were attached to these pamphlets. In addition, an article in the Vashon-Maury Island paper discussed the various recommendations and invited comments from interested persons. After review of the preliminary recommendations with the island residents and county officials, and a re-evaluation by the study team, finalized recommendations were developed and submitted to both parties.

Environmental Assessment of Recommendations

As previously mentioned, a systems interaction matrix was utilized to 1) keep track of important environmental interactions identified by the substudies and 2) to assess the environmental impacts of potential recommendations. The matrix displays 140 environmental components on each axis, thus it would be difficult to display it in this paper. However, Figure 4 illustrates the use of this matrix using selected environmental components.

The vertical axis is a listing of components which through recreational use or development action may be expected to be changed. The effects of changing one of these components on other environmental components are noted along the horizontal axis (this axis is an exact duplicate of the vertical axis). For example, an alteration in marine nutrients levels (shown as a horizontal bar) may be expected to affect bottom organisms, plankton populations, fish, sessile organisms, dissolved oxygen and so forth.

Viewing this matrix from the horizontal axis, dependencies of a particular component are noted with a black dot along the vertical axis. For example marine nutrient levels are dependent on the biological and physical components noted in the marine system, while social system factors such as the presence of residential housing, a marina, active recreation facilities, and the presence or absence of sewer utilities, may all influence levels of nutrients in the marine systems.

Since this matrix serves primarily as a checklist for planning and impact assessment, no attempt is made at quantifying the nature of these interactions between environmental components.

The final stage of the study, environmental impact assessment, utilized this matrix to help identify potential impacts of the study recommendations.

RESULTS

Implications for Resolution of the Conflict

It will take some time to measure whether the information and recommendations, developed by this study for the Dockton Park conflict, will promote compromise or are, in and of themselves, a valid compromise. It is unlikely, however, that the island residents will give up their protective posture towards outside use of the island. Moreover, a relinquishing of interest in the development of the shoreline recreation resources available on Vashon-Maury Island is unlikely on the part of King County. In retrospect, both positions are quite valid and any solution to the conflict should reflect a balancing of these positions.

The study recommendation for Dockton Park was to acquire additional shoreline adjoining the park and construct a new overnight moorage dock. Not only does this action locate boats and their discharges in an area with a greater ability to assimilate pollutants, it will also allow traditional island use of the park to be re-established, at the present park site. Thus, it is believed that this recommendation will provide for both uses of the park, and interactivity conflicts will be reduced through physical separation.

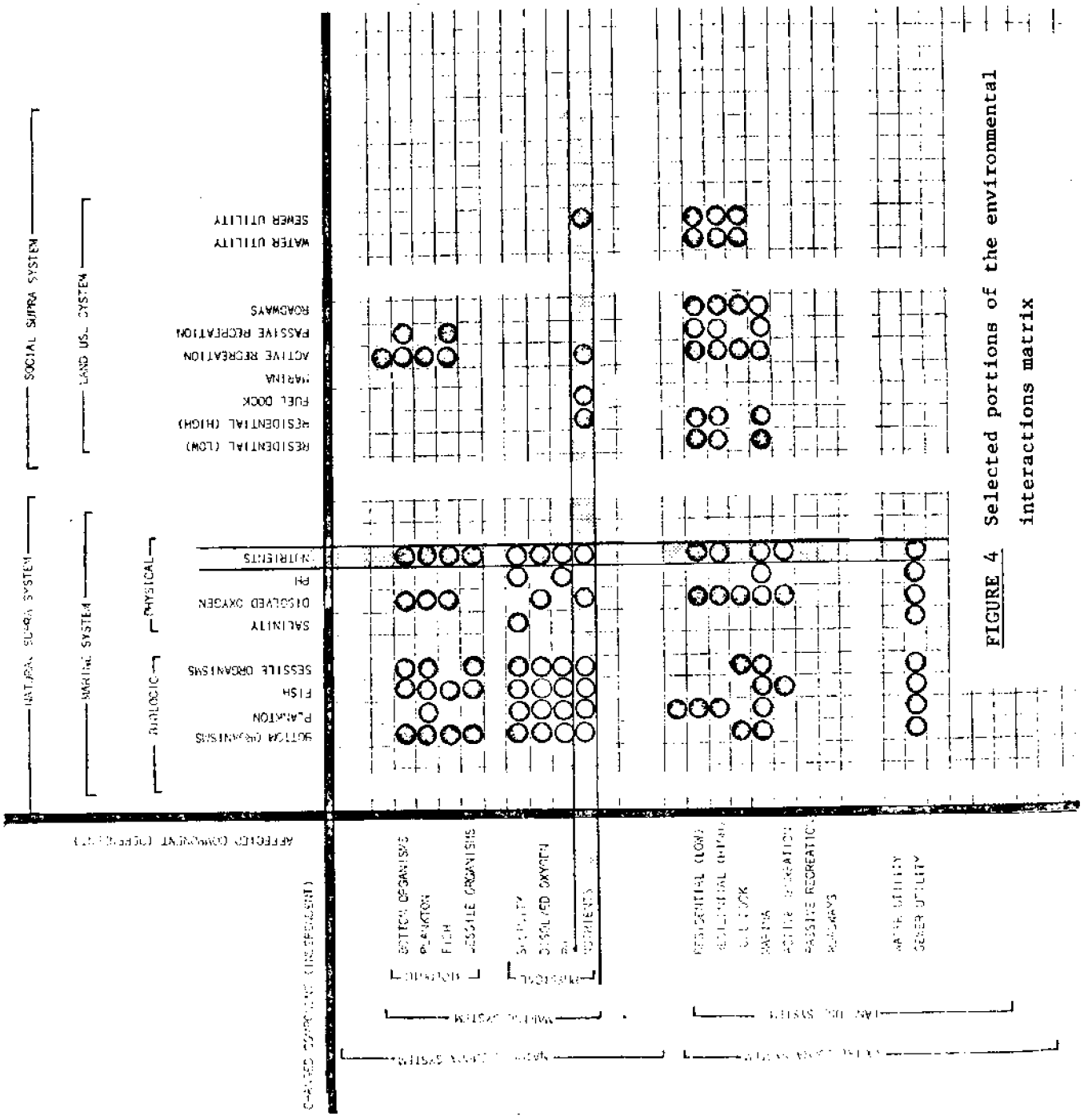

FIGURE 4 Selected portions of the environmental interactions matrix

In order to provide for other shoreline recreation activities, consistent with the areas-of-concern, a number of potential park sites were located elsewhere on the Vashon-Maury Island shoreline. Because of the concern for the island's rural quality and desire of both resident and non-resident recreationists to engage in rural type of activities (beachcombing, nature observation, picnicking, fishing), recommended park sites have attempted to disperse users to shorelines suitable for their respective activities.

Public review, by county and island residents, of both the preliminary and final study recommendations led to some alterations in the activity considered at each site and the addition of several new sites to the recommended list. Specific criticisms of the recommendations have generally been expressed by residents bordering a proposed site. Trespass, vandalism, fires, noise, and auto traffic have been their major concerns.

Measures to mitigate some of these impacts have been addressed in the environmental impact phase of the study. Also included in this section is a listing of all identifiable and significant natural and social systems impact.

Study Evaluation

The following criteria may be useful in evaluating the study's effectiveness:

1. Definition of issues: do the areas-of-concern adequately emcompass all significant issues in the conflict?

2. Equity of solution: are the concerns of both parties balanced in the study's recommendations?

3. Regional and long range interests: have these concerns also been adequately addressed by the study and its recommendations, or has the study overemphasized local and short term interests?

4. Environmental impacts: have the recommendations minimized adverse natural and social system impacts?

5. Public involvement: has the public involvement effort served to inform and include in the study process both county officials and the island residents,or has it been a control or co-optive strategy?

Implications for Other Land Use Conflicts

As previously stated, the complexity of land-use conflicts and decisions require a comprehensive approach. An interdisciplinary systems approach offers a methodological orientation for the understanding and resolution of these issues. Since applied research efforts are often necessary due to a lack of adequate environmental information, systematized coordination efforts are essential to the development of a comprehensive research data base.

Public involvement in the study process is essential in a democratic society especially when publicly-owned or valued resources are involved.

Interdisciplinary and systematic research is time-consuming and costly. However, the alternative of reaching no decision or leaving land-use decisions to the courts may be far more costly to all parties, in the long run.

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MARINE RECREATION TRENDS IN CALIFORNIA

Susan H. Anderson
USC Sea Grant Institutional Program

There are 1,072 miles of California coastline, ranging from the coastal redwood forests of the sparsely populated north to the palm trees of the densely populated southland. California geologically represents a rising coastline. Nearly flat surfaces, formed by the erosive action of waves and surf, have risen, forming marine terraces that invite coastal development and provide numerous opportunities for viewing the coast and the oceans beyond. The California coastline offers a full variety of cliffs, rocky headlands, tidepools, and sandy beaches. There are even a few remaining natural estuaries and wetlands areas, although many of the riverbeds have been channeled in concrete, and wetlands have been dredged and filled for development. Some of those wetlands not tampered with by development have seen a gradual natural demise. Still, the California coast offers a full variety of opportunities.

Coastal development opportunities have been widely exploited. For many, the coast is the compelling force that keeps them in California. Choice private homes have been built on the coastal terraces and bluffs, despite the geological instability of these areas. Cities cluster around natural bays and harbors. Because the very thing that attracted people to the area -- the California coastline -- is gradually being changed by development, the people of California placed an initiative on the 1972 ballot by petition. That initiative, passed as Proposition 20, established the framework for the California Coastal Zone Conservation Commission, whose completed plan[1] is now before the California Legislature for approval.

In the plan, preservation of the environment and provision of recreational opportunities are two of the major concerns addressed. For Californians, recreation is recognized as a significant part of the quality of life. The coast is a major provider of recreational opportunities, so important to that quality. We all have our own ideas about what is important in recreation, where the needs are and how some of those needs might be met. Many of you are in the business of providing the needed services to the public and private sectors for enhancing recreation. Some years ago, an innovative recreation developer could buy an area of what was then called swamp, fill it and dredge channels to make a new marina, or even a whole resort built around a marina. Parcels of coastal dry land were considered excellent speculative property, ideal for hotels, luxury apartments, private housing developments, as well as industrial parks.

With increasing emphasis on coastal development, the wide open spaces associated with much of the land-sea interface were diminished. Gradually, we were encroaching on what we have now come to realize is a finite resource. And by this encroachment we were limiting the numbers of people who might enjoy the resource for recreation to those who had been fortunate enough to buy coastal land early, who could afford the soaring taxes on that coastal land, or who could afford the increasingly expensive coastal resorts. Boaters represent a cross section of

middle and upper income people, but today even buying a boat may not be the answer if you have no place to keep the boat in the water or no ramp access for it. The question of access -- who is going to be able to use the resource and how are they going to get there -- is a critical component of the provision of recreational opportunities along our coastlines today.

I think what may be of importance to you at this conference is an understanding of the various concepts meant by access -- why it plays such an important part in the California Coastal Plan and what are its implications for recreation management.

Access is a critical issue that is being addressed in coastal areas around the nation. At the recent National Conference on Marine Recreation, held in Newport Beach, California, in October,[2] attendees had the opportunity to learn about the major effort being waged by Congressman Eckhardt first in Texas and now at the national level to open the coastal beaches to public use. Public right to use the beaches in Texas was first documented in a judicial decision in 1859! But as development pressures mounted a century later, the public rights had to be redefined and specific legislation had to be passed to reassert the rights of the public to use the Texas beaches up to the line of vegetation.

The issue of access addressed by this legislation is limited to what we call "lateral" access, -- that is the right to use the shoreline immediately adjacent to the waters edge, along the length of the coastline.

At the same conference, the Oregon and Washington State situations were also discussed. In Oregon, not only have the people fought for lateral access up to the line of vegetation, but they have also created a network of perpendicular accessways -- that is access lanes from the nearest public road to the beach. In asserting the public's rights to the beaches and other tidelands, the public of Oregon has taken a "private ownership be damned" attitude.

The California Constitution guarantees the right of public access to all coastal tidelands. This right has been expanded in scope by various statutes and court decisions. Many coastal areas, while in private ownership, have historically been used by the public, thereby establishing tradition for application in legally asserting public access to those areas. However, despite legal guarantees and historical public use of the California coastline, much access to the shoreline has been lost by the erection of fences, buildings, and other structures.

Of the nearly 1,100 miles of coastal resource only 508 miles are in public ownership of which 75.3 miles of shoreline are along military lands generally not available for public recreation. And in southern California, where the population is greatest, the ratio of public ownership to privately held coastline is only 1 to 3. Here where the need is greatest the opportunities for access are most limited by private development -- homes, condominiums, and high cost tourist facilities restricting coastal access by low and moderate income persons.

The California Coastal Plan provides several approaches to alleviating the problems of access. The basic policy relating to access states that a major long-term goal of coastal conservation and development is the provision of maximum amounts of ocean front area for public use and enjoyment. While being responsive

to the need to protect coastal areas from destructive overuse and to protect both public rights and the rights of property owners, the policy directs action to provide areas large enough to permit significant opportunities for public use and enjoyment of the land-sea interface. In urban areas an active program of public acquisition has been recommended by the plan to preserve remaining open oceanfront areas for public use, especially where development precludes effective access. Acquisition has also been outlined for remaining fragile coastal areas away from urban centers, with funding for all acquisition being recommended by a bond issue to come before the public of California early in the summer of 1976.

For California, the question of access is really a major focus of the coastal plan. Access to each user group means a different thing. To the SCUBA diver access means some way to make your way down the side of that precipitous cliff with all your gear to those fantastic kelp beds below! To the surfer, it's finding a pathway to that special point where the waves curl with the perfect shape. To the sports fishermen it is being able to reach the surf where they think they'll find the best fishing. To those seeking solitude, its a way to reach some part of the ocean-land interface where few others will intrude on the special sounds of the surf breaking against the shoreline. Photographers and artists may seek similar areas of solitude to capture undisturbed wildlife in their pictures. For boaters, access means someplace to either put a boat in the water or to board a boat so that they may voyage out into the more open spaces of the ocean. Access by the boater requires a greater degree of development than several of the other forms of access discussed. A boat ramp must be provided for most boats that are trailerable, and larger boats will require marina development or certainly hoist facilities and dry land storage.

For many beach goers it is not a secluded spot that they look for, nor even an opportunity to observe natural species in their habitat. Rather, access is finding a place to park near the beach -- any beach nearby just to get wet and sunburned and play volleyball in the sand. Or better yet, to have a picnic without having to walk 2 miles from the car before finding a corner of sand to settle on!

For still another group of individuals access means getting to the beach. Especially for those in the inner city areas, many of whom may be without cars, transportation may be a major obstacle to reaching any beach at all. In an area such as Los Angeles (if there is any other area in the world such as Los Angeles!) public transportation has been particularly difficult to develop because of the incredible sprawl of communities within the city. Too little of the city is focused to facilitate major transportation arteries. People in Los Angeles are almost entirely dependent on their cars and the matrix of freeways.

New York on the other hand is a city in which most residents only use their cars on weekends to get out of the city. Thus the public transportation system is well developed although very crowded. The National Parks Service has recently designated eleven different areas along the nearby Long Island south shore, on islands in New York Harbor, and on the Jersey shore at Sandy Hook as the Gateway Recreation Area. These areas are to provide extensive and varied recreational opportunities to the residents of New York City. Particular emphasis has been placed on access to these park areas, for they are supposed to provide opportu-

nities for those of all income levels. An extensive study has been made of the existing transportation network as it serves these areas and even here the public transportation has been deemed inadequate.

There are then three distinct issues in considering access:

> The openness of the land-water interface and upland areas for public use;
>
> The ability to get from the nearest public road to the public coastal areas; and
>
> The availability of diverse transportation modes to ensure that everyone can get to the open coastal facilities.

As I mentioned before, the condition of openness is a constitutional right in the state of California. Proposition 20 set out to ensure that that right was guaranteed -- that the California coast would be available for the enjoyment of the public and that those fragile areas that serve the public in providing aesthetic quality to the coast and in enhancing the biological productivity of our coast would be preserved for passive enjoyment and interpretive observation.

Unfortunately the difference between the legal right of the public and their opportunities to take advantage of that right is considerable. Certainly in California the private land holdings between the nearest public road and the public tidelands effectively prohibit access in many areas. And as long as the decision concerning who will use the tidelands remains in the economic marketplace, those who can afford the coastal property or afford to vacation in the luxury coastal resorts will have the greater opportunity to enjoy the full variety of coastal opportunities.

Likewise those who live near enough the beach to walk to it or who have cars and time to drive whatever distance necessary to find the kind of publically accessible locale that they desire to enjoy will have better access to these public tidelands than those of lower incomes dependent on public transportation. Those who already own boats and have a designated berthing space or have trailerable boats and necessary dry storage space for them will have better opportunities for use of the ocean than those without the means to buy a boat or without facilities -- either dry or wet storage -- for a desired boat.

Do we who can make use of the recreational opportunities in the coastal environment have the right to prevent, simply by non-action, those who are less fortunate from having their opportunity to enjoy the coast? The prepared California Coastal Plan says we don't have that right and that opportunities must be made more accessible so that EVERYONE has a chance to enjoy the coastline.

So how do you go about planning for recreational facilities in a manner that will encourage use by people of a variety of income levels and those who are handicapped or in some way less able to make use of many facilities?

Facility design should encourage diverse recreational opportunities. Instead of designing a marina that is simply a dockage area for those with boats, we should utilize the upland area to include a total marine park with areas for pier fishing and picnicing so that those who have no boat can still relax in that

special environment of the marina with halyards clinking on aluminum masts and boats moving in and out of the berths headed for sea.

The California Coastal Plan recommends maximizing use of boats and boating facilities. Indicating that there are few opportunities along the California coast (particularly near the urban population centers) for developing new marina areas, the plan suggests emphasis on developing dry storage areas and stacking devices with nearby public launching in new and existing harbors, increasing the number of public launching ramps and hoists, providing additional berthing space in existing harbors, and limiting nearby non-water dependent land uses that congest access corridors and overtax boating support facilities.

A very controversial part of this recommendation is the suggestion that the use of each boat be maximized by encouraging the multiple ownership of boats. To do this local administration should give priority for slip rental in existing small-craft harbors to boats available for rent to experienced boaters and give priority for the use of public funds for the expansion or development of small craft harbors to facilities that have devised acceptable systems for encouraging more rental and multiple ownership of boats.

Understandably, those who already own boats are not receptive to the idea of being made to go into partnership on their boat. Many boat owners have come a long way to be able to own their pride and joy. But there are several possibilities for multiple ownership to be considered, some of which exist now on a small scale but are not recognized widely. The "occasional" yacht club may own a fleet of a dozen sailboats ranging in size from 16 footers to a couple of 32 foot cruisers that can sleep 6 or 8. Members are required to either show their competence as a sailor as a provision of membership or agree to enroll in the club sailing program until they have the necessary competence to handle the boats as skipper. This kind of club directs itself especially to young people almost as a social club, providing the opportunity to make frequent use of the clubs boat without the burdens (financial and maintenance) of owning a boat. When a person discovers that occasional sailing really is not sufficient then the idea of owning a boat can be explored. But for many sailors these clubs provide ample sailing opportunity.

Charter boat programs are particularly good for those who want to go on a cruise for a week or more. Instead of owning a boat that you use once each year, you might own a trailerable sailboat or powerboat to use most of the year and charter a boat (with or without crew) for that special trip.

Because of the congestion in marina areas, the day-rental programs that have been most successful have included mandatory instruction as a condition of rental, unless a boating proficiency certificate is available. There are free boating and navigation courses available from the U.S.Coast Guard, the Power Squadron, and the American Red Cross so that learning is not a costly endeavor.

Non-boating access may be enhanced in connection with non-recreational coastal development. Certain public works construction requires proximity to the ocean environment or is in fact specifically to provide sheltered harbor areas for use of that environment. With little extra planning these public works can also provide access to inexpensive public use, such as fishing and painting or drawing

from breakwaters, and picnic areas adjacent to coastal facilities. (An inland precedent for this kind of cooperation is being set with the development of recreational lakes in conjunction with dams for power and flood control.)

In part the sense of availability of sufficient coastal resources is related to the experience of crowding. If we go to a beach and after driving around the parking lot we return to the street before we finally find parking, and that parking is a good half mile from the nearest piece of sand, we are likely to be somewhat distressed at the "fact" that there is simply not enough beach to go around. In reality, there may be other nearby facilities that are not as popular where we could park with the nearest sand drifting under our car tires. Or there may be an excellent beach that has no public parking lot but instead is serviced by a shuttle bus from a market parking lot a mile inland. Even when we have lived in an area for years we may find surprises like these that would make our day at the beach much more satisfying.

If we teach people about alternative sites for our coastal recreational activities we will have some effect in dispersing the usage of the resource and providing a more enjoyable opportunity for all involved. We can regulate use of public areas for particular users at particular times, setting aside unique areas suited for specific recreational activities. This helps alleviate the conflicts of uses in each recreational area.

I know to many of you campground facilities are of particular interest. These areas can provide very important opportunities to those who wish to vacation in the coastal area in close contact with the environment they have come to enjoy. And whether those campers come in recreational vehicles or prepared to pitch a tent, the vacation is geared to be economical. The campground is one area that provides low cost vacation opportunities.

You and I both know there are many different kinds of campers. Some expect all the amenities of home to be provided by the campground management -- from full flush toilets and hot showers to community lounge. Others really want nothing more than a pretty spot to pitch their tent and get away from the noise and crowds of the city. Because of the numbers of people who are likely to utilize a coastal campground, sanitation facilities conveniently located throughout the campground is a must. However, we might take some lessons from some of the problems encountered by the National Park Service in major national parks around the nation.

In a recent article in Science Magazine, Allan K. Fitzsimmons discussed the dilemma of development in the national parks.[3] Initially, the support facilities were clustered around the major attractions. As the extent of support facilities has increased to meet the growing numbers of park visitors, the development complex begins to deprecate the beauty of the key attraction. Excessive scenic deprecation at these sites is attributed primarily to the presence of too many people and facilities that are not directly involved in the appreciation of the attraction. Some of the people will be involved in preparing breakfast and feeding the kids or breaking camp if the support facility is of that type. In any case the development centers tend to be areas in which people congregate to visit, maybe eat or stock up on food. And for many of these people those activities are separate from the actual enjoyment and appreciation of the special attraction of the place.

The trend for new developments in national parks is to move them away from the major attraction to the gate of the park or the peripheral areas of the park. Living quarters are carefully designed to take advantage of the total environment of the park but the special areas are set apart to maintain their uniqueness.

In coastal campgrounds, we should consider using upland areas for the most heavily developed portion of the campground, providing paths (pssibly even intepretative nature walks) between the campgrounds and the direct access to the water-land interface. If feasible, areas for more primitive camping should be separated from the most developed area, but still somewhat back from the waters edge. In a comparable camping situation in the High Sierras where there are no facilities but those with which nature has provided us, the rules of the forest request that all tents and fires be at least 100 feet away from the nearest body of water, to prevent extensive erosion at the water's edge and to discourage careless pollution of the waters.

For the more primitive camp areas, you might consider providing parking at the entrance with the expectation that those using the more primitive areas will be prepared to hike back into their sites. The only roads to those sites would be used for maintenance and foot traffic.

The area of the campground directly on the waterfront could be set aside for day use only, allowing the opportunity to all in the campground to enjoy that most scenic part of the facility.

The California Coastal Plan, if passed, will provide for a coastal trails system for hikers, bicyclists, and equestrians. Campgrounds and a hostel system would be developed at appropriate intervals along the coastal trails with camping restricted to these areas. The plan is not specific in assigning the method of implementation to each plan policy. But it seems certain that the development and management of campgrounds and a hostel system will require some level of cooperation between government and the private sector.

Acquisition of properties for the coastal trails system and support campgrounds and hostels might be part of the bond issue. The properties may then be leased to private developers on a fifty year lease (as in Marina del Rey) for private management. If on the other hand an existing owner wishes to utilize his or her property for a campground facility consistent with the plan, a property tax incentive for maintaining the land in low intensity use may be granted by the state. The concept of tax incentives to encourage and help existing land owners to maintain the open space quality of the land was also strongly recommended by a number of participants at the National Conference on Marine Recreation mentioned earlier. Today tax incentive does exist for land easements, but has not been directed at coastal lands or maintenance of private property as open space.

The English park system sets a precedent[4] under which almost all the parkland is privately owned. The entire system has been developed through combining regulations with tax incentives and limited selected acquisition. The government has worked out a modified tort liability with private land owners so that access can be provided on private land with limited liability to the owner.

Private ownership and management of coastal (or inland) parks relies heavily on the economic marketplace for determination of needed support facilities and services. But there are many kinds of recreation for which we do not expect to pay. If a survey were taken to determine how much we were willing to pay for certain recreational opportunities, many of us would place very low values on those opportunities. On the other hand, if we were asked how much money a developer would have to pay us in order to buy from us the opportunity to pursue those same recreations the value is likely to be very high. And so we have a dilemma.

In order for a private developer to supply recreational opportunities such as a campground or coastal park, the developer must believe that there is a market for those opportunities -- people who are willing to pay for the access to this coastal open space.

It is natural for a private developer to become involved in the supply of support facilities and services for recreational opportunities. There are many people willing to pay for accomodations, food and other services. But it is another matter to ask that developer to leave much of his land as open space with minimal development for hiking, bicycling, and horseback riding to enjoy the coastal scenic environment.

The fact that the entrance of governmental regulation has been found necessary in our coastal states is partly a result of the limitation of the private marketplace in providing facilities and services for recreational opportunities. Inherently, this means that if private entrepreneurs are expected to undertake the development and management of support facilities that there must be some tax break or other incentive to make the venture viable.

In summary, the provision of access, the enhancement of recreational opportunities in our coastal areas, must be a cooperative effort between government and the private sector. Appropriate coastal lands from the land-water interface back into the upland areas, must first be opened for public use, through acquisition or incentives to the private land owners. If public use does not extend to the nearest public road, then pathways to the open coastal areas would need to be developed through easements, acquisition, or other equitable arrangements with the private land owners.

The development of campgrounds, hostels, marine parks, and coastal trails will require additional cooperation between both local and state governments and the private entrepreneur. Transportation systems within these recreational areas would be a part of the development concept. Transportation to coastal facilities will necessarily be addressed as a separate issue between government and other private interests.

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Recreation in Washington, the Shape of the Industry for '76

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Last year the future for commercial outdoor recreation businesses looked bleak. The country had just experienced a fuel "crisis" and was going through the throes of what some people called "stagflation"; a stagnant economy with two-digit inflation. The prognosis was that the recreation industry would be hard-hit, businesses would suffer, and some people (particularly those with marginal operations) would be forced out of business.

The industry, however, experienced one of its best years. During the summer of 1975, receipts for almost all major recreation facilities increased. KOA experienced a 14% increase in the number of people using their facilities and a 36% increase in revenues for the third quarter of 1974 (Kampgrounds of America, 1976). Similarly, other campground owners around the state reported like results. Trends during the last half of the third quarter of 1974 indicated that people were willing to travel; for example, while receipts were off during the first half, due to the uncertainty of the nation's economy, receipts during the second half more than doubled the previous year. Hence, most resorts ended the year with approximately the same revenue as the year before.

One of the things that became obvious during this time was the willingness and ability of the recreation public to shift their travel plans. Previously the traveling public made and in some cases confirmed their plans early during January, February, and March. With the fuel shortage and tight money, travel plans were either curtailed or the decisions postponed until a later date. As the economy of the country improved, travel plans were again renewed with the final result that we all saw during the second half of the summer.

Another obvious change noted around the country was that the traveling public pursued their recreation activities closer to home. Not only were resorts and campgrounds closer to home used more, but local facilities, such as city and county parks and playgrounds, were used more as well. This has had a very healthy effect on the economy. First it has helped slow the consumption of imported oil, thus retaining more dollars within the country that can be used for other purposes. Second, it has helped increase campground and resort revenues as noted above. By traveling shorter distances to their vacation destinations, more time is spent at the destination. If that destination happens to be a privately owned facility, as are 54% in this state, then these facilities should realize a greater income. In most cases they have.

For the state of Washington, 1976 does not show signs of being much different than 1975. Participation at county and city parks and recreation programs does not appear to be diminishing. More people are planning vacations closer to home. A prime example is the Inland Passage Alaska Tour. Most cruises right now are booked. Three years ago only two cruise ships plied the waters along the coast. Last summer there were six. This summer one of the ship companies is moving one of its vessels from the Caribbean to the Alaska waters. The U.S. News and World Report (1976), notes that vacation spots around the country are experiencing their best years ever and project that the trend will continue as long as the economy remains strong. They also note that because some vacation spots are becoming overcrowded that demand for lesser populated resorts is increasing.

The Bicentennial will have an effect on the traveling public but what it will be is difficult to ascertain. A recent report published by the U.S. Travel Data Center for the American Revolution Bicentennial Administration (ARBA) indicates that 32% of the U.S. adult population believe it is likely they will visit a Bicentennial site or celebration on their 1976 vacation. The survey also indicates that the automobile or camper will be the predominate means of transportation for the more than 46 million people planning their trips (U.S. Travel Data Center, 1976). As it appears now, most of the intense travel will occur along the east coast where the majority of Bicentennial celebrations and events have been scheduled. Most of this travel will occur along the "Colonial Corridor" between Boston and Williamsburg, Virginia. Focal cities will be Washington D.C., Williamsburg, Boston, and Philadelphia. Moderate migration eastward from the Central Plain states will probably occur. Light migration to the east, mainly by air, for those in the upper income brackets, will probably occur out of the west. Because of the perceived or expected overcrowded conditions at the tourist destinations along the east coast, some easterners will probably spend their vacation time in Europe. But the average middle income wage earner will probably remain close to home, visit those celebrations that are readily accessible, and view the remainder on television.

The implications for Washington State are that one should expect to see more people on the road and in the resorts because the emphasis this year has been placed on travel. These people will be staying closer to home, staying longer, and spending more. In relation to past years, very few out-of-state travelers will be encountered. Those who will be vacationing here probably are doing so in conjunction with other activities, such as business.

Another encouraging factor is that some people are entering or contemplating entering the camping market. According to a 1973 survey (LaPage, 1976), 9% of all U.S. households were potential campers. Potential campers are those that express explicit plans to start camping within the next two years. In general, these are people in their late teens or early twenties and young families. Twenty-one percent of those surveyed indicated that they were active campers, while 20% indicated they had left the camping market, either temporarily or permanently. The remaining 50% had not

camped before, nor did they contemplate entering the camping market in the near future. This means that out of approximately four million people in the state of Washington, two million can be eliminated from the camping market because they have no desire to do so. Another 800,000 have dropped out of the market. 840,000 are active participants and 360,000 are potential participants. If all of the people were to be in the camping market at one time, over 1,160,000 Washingtonians would be seeking places to camp. These figures, however, must be tempered with the fact that many of the "potential" campers will never enter the market, while some of the "active" campers will leave the market. If, as KOA's surveys indicate, 21 days per year are spent camping by each family, approximately 16,800,000 camping days will be spent by Washington residents. If too, approximately 10% of these days will be spent at private camps, as KOA's survey indicates, 1,680,000 camper nights or 525,000 family nights from Washington alone could be spent at private camps. If $4 per family were to be paid for the overnight accommodations, approximately $2,100,000 would be generated during the year. If these figures were to be scattered over the approximately 500 private campgrounds in the state, only $4,200 would be realized for each owner. Hardly enough to sustain an operation.

Yet, somehow the industry is surviving and growing. More people will camp than ever before, but they will travel fewer miles and stay longer. To you this means money in your pocket. Plan ahead now. The industry cannot and will not sustain an indefinite period of growth. Now is the time to build, expand, and, most importantly, develop those managerial skills that attract and hold customers that build a firm financial footing. If you do not, the nation's down trend in the economy may find you standing in a bread line. Therefore, to increase your margin of profit, you (the recreation owner) must develop ways in which to attract and hold that customer for longer periods of time. Assuming that an operation caters to 525 people during their season, and these people stay an average of two nights per year, by encouraging these people to stay an extra day, $2,100 in additional revenue could be generated for each business. By raising or restructuring fee schedules in order to collect an additional $1.00 per family unit, an additional $1,050 can be realized. This, in combination with the revenues generated by encouraging people to stay one extra day, can increase income by $3,150 per year for a gross income of $7,350 or a 57% increase. In some cases, this additional revenue could make the difference between a profitable and nonprofitable operation.

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: CONFERENCE PARTICIPANTS

APPENDIX

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