A Report on the Third
Marine Recreation Conference

Planning for Shoreline and Water Uses

Bruce J. Cole, editor

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Introduction

The first two New England recreation conferences, Boating in New England, 1972, and Boating in New England, 1973, provided forums for those interested in boating and recreation to determine and discuss a range of environmental problems pertinent to them. And a session at last year's conference provided a theme which participants urged be examined at greater length — planning for shoreline and water uses.

Thus, more than 100 shoreline planners, marine recreation developers, marina and shipyard owners, educators, scientists, journalists and others met in Mystic, Connecticut, December 12 and 13 to discuss coastal zone management as it relates to recreation. A number of marina owners and other recreational developers noted that present coastal zone management legislation has cost them a good deal of time and profit due to drawn-out permit processes and what they believe are unreasonable environmental restrictions.

A Connecticut mayor in attendance said the issue of public-versus-private shoreline control should have been brought up long ago. "Private interests have already won out." Heavy residential, industrial and commercial development already occupies much of his state's shoreline, he noted, while less than two percent remains for public recreation.

A special session was added on the national "energy crisis" which was of deep concern to recreation interests, especially boating interests. Shortages of petroleum-based resins had forced some boat builders to close down and others to consider layoffs unless supplies were to increase. No one could predict how long the shortages would last, or how they would affect the industry and, particularly, boat sales. The National Association of Engine and Boat Manufacturers did announce plans to organize an information and lobbying campaign to insure that boating interests would get a "fair shake" during the shortage, but overall the session seemed to produce more questions than answers.

In this booklet are summaries of papers presented at the conference and brief reports of forums and other sessions. A special thanks to Malcolm Grant, resource analyst at the University of Rhode Island Coastal Resources Center, who covered various sessions at the conference.

Bruce J. Cole

Government and Coastal Management

Funds for Coastal Management

Twenty-eight of the nation's coastal states have applied for grants for coastal zone planning for which $7 million is available under a $12 million federal appropriation, Robert W. Knecht, director of the federal Office of Coastal Environment, said in the opening address. Another $4 million is to be used for matching grants to the states for acquiring coastal land for educational or research purposes, and $1 million, for administrative costs.

States with approved management programs can expect to receive not less than $70,000 and not more than $700,000, Mr. Knecht said. The grants will be made on a matching basis with the federal government providing two-thirds of the coastal management money and the states, one-third.

States must satisfy a number of criteria for their programs to be approved. Among these, they must define the coastal zone, including shorelands, beaches and marshes. They must also define areas of special environmental concern and make sure use of such zones is consistent with state standards. He added that states must incorporate a process in their coastal management schemes that takes national interests into consideration. For example, siting of power plants or deepwater ports cannot be solely a state issue; the national importance of such facilities must be given consideration in any state coastal management process.

The marine recreation community can ensure it has a voice in coastal zone planning by finding out what agency or group in each state is primarily responsible for coastal zone management and then by participating fully in public discussions and hearings. The marine recreation community should make certain its views are known and understood with respect to any pending coastal zone legislation, Mr. Knecht stated. And implementation of any coastal plan should be watched closely by the marine community so that no single group is short-changed in that critical final phase.

An effective coastal zone management program, Mr. Knecht said, must have objectives for recreation. The overall goal should be good general environmental quality with beaches by clean water. Public access to recreational lands must be considered in any land use or zoning policy, he added.

Two Coastal Management Approaches: Rhode Island and Maine

Coastal management problems are being attacked one at a time in Rhode Island. When all problems have been given due consideration, the state will have an "extremely capable management plan," said John Lyons, chairman of the State Coastal Resources Management Council.

Rhode Island's coastal council was established in 1971 by the state General Assembly. The council consists of 17 appointed citizens who are not paid for their duties. Mr. Lyons explained that the council relies heavily upon the assistance and expertise of the state Department of Natural Resources and the Coastal Resources Center at the University of Rhode Island.

The first problem the council chose to consider was barrier beach development. A rash of development on beaches where hurricanes periodically destroy nearly all man-made structures had brought those areas to the council's concern. After a com-

prehensive study of the barriers was completed by the Coastal Resources Center, the council promulgated regulations. Building is now prohibited on undeveloped barrier beaches, Mr. Lyons said. On the developed barriers, building is limited to selected areas which afford some natural protection from storms.

The council is now working on management regulations for the sand and gravel industry, which is expected to develop in state waters, and for oil transfer in coastal and bay waters.

Fees for use of Rhode Island waters (such as for marina construction) are also under consideration. At some future time, it may be necessary to condemn land through the use of eminent domain and purchase it for recreational use; a user fee might provide funds to buy the condemned land, Mr. Lyons explained.

The initial idea for a coastal management council was opposed by many people, but now the council is gaining acceptance at the local level and from state departments.

Maine is tackling the coastal management problem by formulating management plans on an area-by-area basis. Penobscot Bay was the first area chosen for formulation of a land capability plan, Philip Savage, director of the State Planning Office, said. Data were gathered and 14 resource maps of that area were combined into a single map to aid decision makers. The data gathered can be used to enforce the state's three land use laws, Mr. Savage said.

The Maine coastal planning effort began in 1969. With the Governor's support, a coastal advisory task force was established and charged with defining the coastal zone and undertaking studies to inventory coastal resources. The task force defined intragovernmental relations, described agency contributions with respect to coastal management, and began the first "test plot area," Penobscot Bay.

The three state land use laws that govern coastal zone policy direction include a state site selection law, which regulates developments or improvements on any area larger than 20 acres. A second law regulates shoreline zoning, and a third established a commission to formulate land use controls for areas with no local government — more than half of the state. Thus, the state can identify areas of particular concern and regulate them. Moreover, areas that cannot be supervised by local government become a state problem.

Mr. Savage said that one major problem is that the effort has been "lacking in response" at the local level. Of 139 local governments, only 32 have land use controls and most of the plans are bad, he said, because four-fifths of the local governmental units contain fewer than 5,000 people, and their resources are too limited to come to grips with land use problems.

Planning, Politics and the Public

Why Planning?

Malcolm J. Grant, *Resource Analyst, Coastal Resources Center, University of Rhode Island*

A hundred years ago a much smaller United States looked out on a seemingly infinite expanse of available shorefront with a seemingly limitless ability to absorb abuse. Today, in contrast, undeveloped shoreline is becoming a rarity in many areas, great expanses of marshland have disappeared before our eyes, and nature herself is rebelling against our misuse of these areas.

We, whether acting as individuals or institutions, steadfastly refuse to face up to the very obvious fact that we can no longer have the unlimited quantities of everything we need, fancy we need, or want. We're incredulous to find ourselves running out of hiding places for the industries and utilities whose products we demand but whose presence we can do without, and we are amazed to find ourselves in the middle of an energy crisis. Should we be? I think not.

It calls for no great exercise of the imagination to recognize that where a resource — be it petroleum, land, or shoreline — is finite and demand for it has no limits, sooner or later it's going to run out. We seem to be entering an age during which we may run out of more and more things. Need we, then, anticipate one crisis after another? I think yes so long as we refuse to examine the alternatives open to us, refuse to ask ourselves what we want for our society, and refuse to make the choices, modifications and decisions to achieve our goals — in short, refuse to plan.

Making no decisions, posing no choices, allowing developments to proceed under their own momentum — these all represent a characteristic response to perplexing problems. But problems simply won't go away because we choose to ignore them; they will get worse. Undirected development of coastal areas and unrestricted competition for shorefront represent just as firm long-term and short-term commitment of valuable real estate as does planned use. Land continues to be purchased and committed to some use. Undirected development, however, provides us with little, if any, control over shore use and no mechanism for influencing future development. It wastes both money and scarce resources, and it causes needless and sometimes irreparable damage to both man and his environment.

Under existing institutional arrangements, the use of our shoreline is largely determined by money and power. Perhaps this is as it should be. I would rather think there are activities and values which we as a society would like to see encouraged, but which cannot compete on an equal footing with the big money makers. These can only be protected if we ask ourselves what we want and what we are willing to sacrifice to get it. This really is what planning is all about.

There is very real potential, however, for planning to become an exercise of the elite. None of us finds particularly appealing the spectre of a small cadre of technicians telling us what we should want and what we can have. Unfortunately our repugnance at this perversion of the planning process often serves to spread it.

If those involved in marine recreation refuse to participate in the planning process by making their views known through trade associations and other representatives, they are in effect saying they do not care about

what is going on and they are willing to accept the analyses and recommendations of the planner. I doubt whether either of these is true.

If marine recreation people refuse to make themselves heard, they will get elitist planning. And it will most likely be as far removed from the realities of their world as they suppose all planning to be and will be little better than the present unplanned human activities that so needlessly overburden our coastal environment.

A Case for Public Control

Julius M. Wilensky, *Mayor, Stamford, Connecticut*

I submit that a consideration of public-versus-private interests in controlling our shoreline bears great similarity to locking the barn door after the horse has been stolen. Private interests have already won out for most areas of Long Island Sound.

For example, during the past 18 years, New York's Nassau and Suffolk counties on Long Island have lost more than one-quarter of their available marsh and wetland area. Connecticut has fared worse. Intensive residential, industrial and commercial development required to support a large growth in population has appropriated our shorelines. Less than two percent of Connecticut's shore is available to the public for recreation. This hasn't happened yet all over southern New England, but it's guaranteed, if laissez-faire advocates prevail in land development.

Long Island Sound — one of the prime recreational assets in the nation — does provide good examples of shoreline conflicts. One of our largest protected bodies of salt water, it is used to the hilt by fishermen, sailors, water skiers, swimmers, beachcombers, clamdiggers and cruising yachtsmen. It also provides a livelihood for oystermen, lobstermen and commercial fishermen. In addition, the marshes, coves, rivers and inlets bordering the Sound make it an ideal habitat and refuge for wild fowl and aquatic life.

During my lifetime, I have seen many changes along the Sound. Always a highway for commerce, the development of deep water ports has broadened this role. Forty million tons of commercial shipping pass through it every year. A phenomenal population increase has occurred along its western half and in Connecticut's great cities, including my own hometown of Stamford.

It is this great influx of people which poses a very real threat to the Sound's ecology and its continued use as a prime recreational asset. It is estimated that 11 million people live within 15 miles of its shoreline. The problem is to use our finite amount of precious shoreline so this population can have access to the Sound, to fish, swim, go boating, or just enjoy the view, while preserving the ecology of the Sound and providing room for shore-based support for this population.

We'll never achieve such an equitable distribution of our valuable shoreline resource by letting opposing forces fight it out. The people will be the losers. There have to be power plants and oil terminals, but there also has to be a place that is beautiful, a place that is serene, a place to enjoy. The remaining shoreline must be preserved for public conservation and recreation. Even Long Island still has stretches of uninhabitated beach and marsh, but Long Island's north

shore is particularly vulnerable to exploitation, with its miles of beach still ripe for real estate developers to chop up. The important thing is to preserve areas like this for public recreation and conservation, not to let what's left of the shore go to industry and housing developments.

We must not permit any more high rise apartments right on the shore; housing developments should be encouraged to locate inland. No industrial development should be permitted on the shore unless a real need exists for facilities such as oil terminals, scrapyards, sand and gravel operations, and power plants. Marshes and tidal estuaries should be preserved, and shorefront parks, beaches, and marinas should be developed for the people.

A recent land use problem in Stamford bears watching as it may relate to other fast growing regions with too little publicly-owned shorefront. With a population of 110,000, Stamford is the third largest city on Long Island Sound, and has become the boating capital of the Sound. The problem is the small rate of return on investment for the newer, larger marinas, and the relatively low or non-existent profits for the older shipyards and marinas. The meager return is causing owners of these establishments to look for more profitable uses of their valuable real estate. For example proposals have been made for a high rise complex with stores and a large motel, and for town house condominiums with boat slips for owners. One long-established yard already has converted its storage area to large indoor tennis courts. Zoning could preclude some of the proposed changes, but all this land is zoned industrial and could go to corporate headquarters or manufacturing plants.

We are in dire jeopardy of losing our prized boating facilities, simply because their private owners can make more money putting their valuable and scarce shoreline to other uses. If there is any hope for public controls, a policy of enlightened public control through coastal zone management must account for problems like this.

Shoreline Politics — Rhode Island

Walter Gray, *Town Council President, South Kingstown, Rhode Island*

For more than a year, the South Kingstown Town Council has been debating a proposed flood zone amendment which would prohibit virtually all development on our barrier beaches. The flood zone amendment has turned out to be one of the hottest shoreline issues the council has tackled in several years and it has acquainted me with some of the administrative and political facts of life in shoreline management. Some observations follow:

- The more restrictive the regulations, the more likely they are to affect larger groups of people. The first flood zone amendment the town council considered applied to only a couple of miles of barrier beach. The second, more comprehensive proposal encompassed houses and property owned by some of the original supporters of the barrier beach restrictions so that many of them became opponents.
- Despite the inconvenience, the heart-burn, the accusations and shouting, full discussion of all issues at open meetings is the best and only way to resolve differences and evolve a fair and equitable solution of the matter.

• Technical data are absolutely vital to the decision-making process. At the local level these data frequently are not available, and cities and towns don't generally hire consultants to dig them up. Lack of technical data can put you in a weak position, particularly when a group of citizens or businessmen has pooled funds to hire an articulate, thorough, and aggressive attorney. Once the council has finished expressing all the platitudes about coastal management, the public's right to access, and obligations to future generations to preserve these irreplaceable resources, then it must confront lawyers who want to talk about evidence and proof and specific things that usually confound a group of local officeholders.

• At the local level, shoreline management is important, but so are town-wide zoning issues, property tax rates, new schools, new roads, landfill programs and other matters. Shoreline management schemes must compete with these other issues for attention and for financial resources.

Over the past years, public officials at the local level have dealt with the subject of coastal management in an isolated way. Decisions have been made in terms of who wanted to do what with their coastal property, and larger implications have been ignored. Now the ball game is different. Multiple use of the coastline, irretrievable resources, and public access are elements of the new focus on the shoreline.

Even so, shoreline management seems to remain the concern of a rather small minority of people from the state and federal governments, from universities and from environmental groups. But local government agencies, such as planning boards, town councils, zoning boards and conservation commissions do seem to be more and more aware of the consequences of looking upon coastal property as just your usual piece of ground.

Always looming in the background, however, is the price tag these new approaches entail. Buying up coastal land for public uses and correcting past mistakes are multi-million dollar projects, and there are precious few cities and towns that can afford to make that kind of commitment.

Shoreline Politics — Connecticut

After futile attempts to produce a coastal zone management bill, the Connecticut legislature has given up on that effort, George Gunther, a state senator from the 21st district, said during a panel discussion.

Present efforts in coastal management are being directed by the Department of Environmental Protection and the State Planning Commission which are attempting to obtain federal funding.

Trying to produce a bill that some people believed gave the state the right to supercede local autonomy resulted in the demise of the coastal zone management bill before it could ever get out of committee.

The bill would have set up broad performance "standards" of coastal management and would have made state coastal zone expertise available to local communities. Senator Gunther said the bill also called for a moratorium, or "cooling off period," which would have allowed the state to halt any coastal development project for 120 days. Opponents claimed the moritorium power would, in effect, give the state the power to supercede local autonomy,

and it was this part of the bill that raised the most criticism.

The cooling off period the bill would have provided in no way superceded local authority, Senator Gunther said, because a development project could be resumed after the 120-day period. The object of the moritorium clause was to give the state a chance to reason with developers.

State Rights to Regulate Land Use

Francis X. Cameron, *Instructor of Law, Marine Affairs Program, University of Rhode Island*

". . . nor shall any State deprive any person of life, liberty, or property, without due process of law; . . . ." – 14th Amendment of the U.S. Constitution

Use of the state's police power to regulate land use is undoubtedly the most misunderstood of methods and has resulted in incredibly bitter controversies around the country. Whenever problems need to be solved by strict regulation, the "taking" issue surfaces; that is, the new regulations are often challenged by private property owners and developers as a taking of their property without compensation.

However, all land use regulations based on the police power have to meet the due process requirements of the 14th Amendment. If a particular regulation restricts too severely the use of private property, it may be considered as taking land without compensation, and therefore be deemed unconstitutional.

The taking issue reflects two commonly held ideas — that the Constitution gives every person the right to do whatever he wants with his land and that land use regulations are valid in general, but cannot be used to decrease the value of a person's property so severely that profit cannot be obtained from it.

The courts have never adopted either of these two points of view. Yet the myth that a person can use his land any way he pleases regardless of the effect on society survives independent of court decisions.

To understand just what the taking clause of the 14th Amendment does require of land use regulations, as well as to understand the myth, one must look at the history of the taking clause. The taking clause resulted from the fear of English noblemen that the King would seize their land for his own use. This same fear was reflected in the famous *Magna Carta* which did protect landholders from seizure of their property by the King.

But government compensation for the taking of a landowner's property for public use is an entirely different concept than that of the government regulating use of the land as long as the regulation is reasonably related to a public purpose. The separation of these two ideas was incorporated into our Constitution. American courts up to the beginning of the 20th century required compensation to landowners *only* if their property was taken for a public use, such as state construction of a dam that caused flooding of a person's land or using property for a park or a highway. In contrast to this, if a regulation prohibited certain uses of property as harmful to the community, it would not be considered taking even if it had a severe effect on the use of the property by the owner.

In the 20th century the Supreme Court expanded the meaning of taking beyond that of the original concept. The decision in *Pennsylvania Coal Company versus Mahon* meant that the constitutionality of land use regulations would be tested by balancing the public value of the regulation against the loss in value to the property owner. This was an illogical departure from the historical view of the taking clause which required an actual physical taking. Unfortunately, after this case the Supreme Court ceased hearing land use regulation cases, leaving their determination to the state courts. Thus, this one case — criticized as historically unsound, logically unnecessary, and environmentally disastrous — has controlled all decisions involving the taking clause and land use regulation.

However, the trend of judicial decisions is away from the balancing test. Courts are increasingly finding that particular land use regulations for the protection of environmental and ecological values are such an important exercise of the police power that they outweigh any loss of land values under the *Pennsylvania Coal* balancing test.

For example, in a 1970 California case, a private property owner was denied a permit to fill his submerged lands. The property owner alleged that the land had no value unless it could be used for filling. The California Supreme Court found that the need to control the filling of San Francisco Bay meant the regulation was not a taking, even if it did deprive the property owner of all value of his land. The legislation challenged here was the act that created the San Francisco Bay Conservation and Development Commission. The court relied heavily on the legislative purposes for which the commission was created, primarily the preservation of the bay as a valuable natural resource.

In a 1972 Wisconsin case, a property owner was denied permission to fill submerged portions of his land. The court, in upholding the Wisconsin Shoreland Zoning Act, discussed the conflict between the public interest in stopping the destruction of natural resources and an owner's right to use his property as he wishes. They stated that a person no longer can do what he likes with his land when it causes harm to society in general. Considering the decrease in value to the property owner, the court held that value based upon changing the character of the land at the expense of harm to public rights is not the controlling factor to be considered in taking cases. Rather, the important factor is the public purpose to be achieved by the regulation. The courts, reflecting the new environmental awareness and mood of the nation, are increasingly finding that regulations designed to promote and protect the best use of our land resources serve such an important public purpose that any decrease in monetary value to the landowner is outweighed by that purpose.

Thus, the myth of the taking clause — that the constitution protects the right of every person to buy and sell land for a profit — is not reflected in current court decisions. However, the strong public perception that the Constitution does protect this right cannot be lightly dismissed. But in an environment that is becoming increasingly crowded and polluted, we cannot afford to go on believing that a person has a right to unrestricted use of property regardless of the impact on society. However, many land use

regulations do have a negative economic impact on individuals, and solutions must be found to account for these.

There are various methods to compensate landowners for severe restrictions on the use of their property. For example, the state, through the power of eminent domain, can acquire property from the landowner. The landowner can be compensated for his expectations of future economic gain and the public can obtain the benefits of sound land use without causing harm to any individual. The problem with this approach is the lack of state funds to acquire all important land areas. Florida has identified almost a million acres of coastal wetlands now in private hands that should be preserved. The cost of acquiring these would be staggering. However, states, through bond issues, user fees, or federal government assistance, can raise funds to acquire the most critical pieces of property and solve some of the most difficult of the taking problems.

Other methods of land use control also exist to ease the financial problems involved with large-scale purchases. The acquisition of development rights or conservation easements is useful where restrictions do not require outright acquisition of the entire parcel of land. The state obtains the right to restrict the private owner to specified uses or activities in return for compensation for the resulting decrease in property value. The land still remains in private ownership but the land use regulation is achieved at a lower cost than condemnation of the entire parcel.

Unlike programs of land acquisition which require large amounts of "front" money, programs of compensable regulations postpone payment until the need for payment has been determined. For example, if a community wants to restrict development of wetland areas, but knows that severe development restriction might be held invalid as a taking of property without compensation, the community may pass an ordinance restricting the land to non-development uses, and provide an administrative procedure whereby claims may be filed alleging an unconstitutional taking. If a taking is proven the government is required either to raise the funds necessary to compensate the owner or to allow the proposed development to take place. This device strikes a middle ground between regulation under the police power and acquisition under eminent domain.

Instead of paying compensation in the form of money, systems of density transfer may be used which provide the owner with compensation in the form of rights to use other property that he owns more profitably. For example, the owner of severely regulated wetlands would be entitled to a variance to obtain greater density on other property he owns.

Taxation is another useful tool to encourage desired land uses. Exemptions or lower tax assessments are granted on rates to property owners who restrict certain activities on their land.

But the state must have a plan for the coastal area in order to determine which legal strategies to use. For the plan to reflect public desires and values and to wisely use coastal resources, it is extremely important that the people of the state support the coastal planning effort and make sure that their interests are provided for in any final plan.

Marine Recreation in NOAA

Philip M. Roedel, *Marine Recreation Programs Coordinator, National Oceanic and Atmospheric Administration*

Thanks largely to the great increase in leisure time, recreation is now one of the nation's largest businesses. The marine environment has received more than its share of the total impact from increasing recreational pursuits, but probably less than its share of attention from those in government who have responsibilities to the marine environment and to those who use it.

Dr. Robert M. White, administrator of the National Oceanic and Atmospheric Administration (NOAA), has been aware of this lack, and within the past six months, a NOAA-wide position concerned solely with recreational problems has been established. This is the post which I now fill.

The job has several facets. Its most important charge is to review, evaluate and make recommendations on existing NOAA programs that are of interest to or benefit marine recreationalists, and to recommend new programs designed to fill gaps. In carrying out this charge, an essential corollary step is to examine program needs as user groups see them. The post further provides a clearinghouse and a coordination service within NOAA, and a contact point in NOAA for outside recreation interests.

One of the first tasks I undertook was to inventory the NOAA programs either directly or indirectly related to marine recreation. Not unexpectedly, the programs conducted by the National Marine Fisheries Service for marine game fish research form the biggest part. And Sea Grant has a relatively small number of projects that directly concern marine recreation. Both the National Weather Service and the National Ocean Survey provide special services — weather forecasts and charts — that are of particular value to marine recreationalists, although not designed specifically for them.

Although it is far too soon to have any firm recommendations on NOAA's recreational program, there are certain things that I think we can and should do something about. For example, an annotated "state-of-the-art" bibliography on marine recreation would be extremely useful to many. And we should improve communications with a disseminating and feedback mechanism through the NOAA Sea Grant Marine Advisory Service. We are thinking of the desirability of developing an advisory board consisting of Sea Grant recreational planners.

A one-man office cannot possibly cover marine recreation nationwide with any degree of detail. Thus, I am also thinking about setting up two or three geographic target areas for program analysis. In these, we would look in detail at all aspects of marine recreation in order to analyze existing programs, which would form useful prototypes for a national endeavor.

Economic Impact of Marinas

Dr. William F. Henry, *director*, and George W. Shaw, *research associate, Resources Development Center, University of New Hampshire*

About a year ago the New England states and New York initiated a regional economic study of the marina industry. At that time we felt the best we could hope to do was find out some things about marinas in the region, assess their economic impact, and not be concerned with the total recreational boating picture.

Each of the states in the study is now deeply involved in an analysis of its own marina industries. So far only preliminary information is available from these studies, but these data, combined with material from the National Association of Engine and Boat Manufacturers (NAEBM), do describe part of the marina economic impact picture. For example, the NAEBM estimates there are 4,600 marinas in the United States. Our survey so far shows 659 marinas in New England and nearly the same number, 660, in New York. The New England count includes all marinas on the ocean, on rivers, and on inland lakes but not any so-called dry-land marinas or boat manufacturers. For New York, the count covers all marinas with ten or more slips in the New York City-Long Island area, the Great Lakes-St. Lawrence area, and the inland waters of New York. Assuming the figures are correct, this means the New England-New York region is one of the most important commercial marina locations in the country with 29 percent of the NAEBM total.

Our separate state studies also have estimated the number of pleasure boats registered in the states and with the Coast Guard. Not included in these numbers are sailboats without power, and the rowboat-canoe group. The 499,000 registered pleasure boats in New England plus the slightly more than 501,000 in New York represent more than 16 percent of the number of such boats estimated by NAEBM for the entire United States. The seven-state region has about 14 percent of the U.S. population, so it has a disproportionate percentage of both boat use and marinas, and a relatively large pleasure boating industry.

Overall, this study is attempting to find out what the marina industry is like, to measure its contributions to the economies of the several states and of the region, and to get some information from the boating public about their expenses and preferences. We have progressed fairly well only on the first of these objectives, and some information follows on the management and business survey in Connecticut, New Hampshire and Rhode Island.

New England-New York: boats and marinas.

	Registered Pleasure Boats	*Marinas*	
		No.	*Summer Employees*
New Hampshire	54,000	45	376
Massachusetts	124,000	200	1,520*
Maine	125,000	130	1,300
Vermont	23,000	45	140
Rhode Island	23,000	69	379
Connecticut	150,000	179	850*
New England Total	499,000	659	4,565*
New York	501,000	660	5,016*
TOTAL	1,000,000	1,319	9,581*

**Estimate*

Management and Operation: Three-State Summary

Business organization. Most firms are organized as corporations with ten or fewer stockholders, and are owner-operated.

Other types of business. In New Hampshire at least 60 percent of the marinas are engaged in other businesses while only 9 percent of Rhode Island's marinas and 16 percent of Connecticut's are. New Hampshire marinas also deal extensively in snowmobiles and other types of winter sports equipment. Such a combination of business enterprises seems natural there where winter snow abounds and has, from the standpoint of keeping mechanics employed, been a blessing. In our study's analysis of marina operations, however, expenses and receipts from such other business enterprises are not included.

Seasonality of operation. While two-thirds of Rhode Island's marinas are open year-round, about three-quarters of those in New Hampshire are open all year — a reflection of the winter business engaged in by the New Hampshire firms.

We also have some comparable data on marina income from two states. The 45 marinas in New Hampshire had total sales of boats, supplies, and services of $11.2 million or $250,000 each on the average. The figure includes the full value of all sales of boats and supplies as well as the full sale price of all boats for which the marina was broker. For Connecticut, the comparable figure is almost $32 million or about $190,000 for each of the 170 marinas.

With the work now going on in the seven states, we are developing a good static description of the marina industry. But the study group also wants to measure the full impact of the pleasure boat industry on the economies of the individual states and the region. We suggest that all money spent by the boating public on all boats exceeds the income of marinas several times over, but we don't know yet by how much. Therefore, we plan to conduct a survey of the boating public. We hope to determine the public's preferences for facilities and locations, who they are, and what boats they use. Another goal is to obtain some measure of the money they spend on their boats.

To meet the last objective, we agreed that a set of questions would be asked regarding spring, summer and winter expenditures relating to ownership and use of boats. With an adequate sample of boat users, we can get a reasonably accurate picture of their expenditures. Such information, along with the economic data from the network analysis for marinas, will provide a rather complete picture of economic activity associated with the ownership and use of boats.

In discussing this research design with the New Hampshire Marine Dealers Association, they suggested that as good as this information might be, it will still not be sufficient to measure the full impact of pleasure boating on a state's economy. After all, boaters and their families do spend money for living and having fun in the states where they stop on boating trips. Information of this type is fairly hard to obtain, but again we feel that if an adequate sample of boaters is drawn and if questions are properly composed, we should be able to produce a fairly complete picture.

Final results of our study should be of value to local planners, to the marina industry and to state legislators.

The Environment

Outboards and the Environment

Joe Swift, Executive Director, Environmental Affairs, Mercury Marine, Fond du Lac, Wisconsin

If you are looking for an issue floundering in a morass of confused and contradictory information and misinformation, you can find it in the internationally debated question: Are outboards compatible with aquatic environments?

It became apparent several years ago that industry needed a broad, thorough research program that would provide clear, irrefutable facts to answer that question, even at the risk that the truth be bitter. Thus, an organization of the major outboard manufacturers called the Marine Exhaust Research Council (MERC), was formed to get the research off the ground. Initially composed of Johnson, Evinrude, Chrysler, Mercury, and the Boating Industry Association of Chicago, this group approached the Environmental Protection Agency (EPA) and asked that specifications and money be given to a joint effort designed to establish facts in which all interests could place total confidence.

It required a year for the EPA to write the study specifications. Costs were estimated at $400,000. Four lakes in Michigan, and three in Florida were chosen for the research, and scientists from the University of Michigan, the University of Florida and the EPA made up the research team.

In both Michigan and Florida, the lakes stressed with exhaust were back-to-back with control lakes that had never been subjected to any use by outboards, or boats of any kind. Engines were operated on leaded and non-leaded fuels. Models used included older-type outboard motors that drained crankcase condensates into the water as well as newer engines that recycle these condensates. Also in the schedule was an elaborate fish tasting program conducted by the University of Florida.

A complicated schedule of lake bottom sediment dredging was established by the EPA to produce bottom samples totally representative of conditions in all stress and control lakes. The EPA fixed the stressing levels in excess of normal boating use in an attempt to establish a basis for boating standards (such as, X boats operating on X acre-feet of water will not harm the aquatic environment). Before such boating limits could be established, the level of boating use which begins to produce environmental damage had to be determined.

After 12 months of intense scientific exploration, no environmental problems were found in the ecosystems of either cold or warm climate lakes involved in the study.

To ascertain when damage would begin to occur, the EPA raised the stressing rate to equal nearly four times the boating activity normal to Lake Geneva, Wisconsin, on the weekend of July 4. (Lake Geneva boasts what is perhaps the densest boating population in America.) Next, the EPA tripled the number of water and sediment samples to be taken from all lakes and analyzed in the laboratories. The total project cost jumped to $575,000, and the term was extended from two to two and one-half years.

In the meantime, a definite pattern was established in the fish taste tests. This pattern indicated an unmistakable oily taste in the fish — from the control lakes upon which no outboards were ever operated. In the northern lakes, the fish exposed to high levels of exhaust tasted fine. The fish caught

from control lakes tasted muddy. The taste-test phase of the study was concluded shortly after the first year.

At the conclusion of the second year the interim reports were again filed by each group of scientists and studied by the EPA. Once again the results were the same. The aquatic organisms were examined and found to be completely oblivious to the EPA's determination to kill them. Water chemistry at the end of the second year appeared normal. Hydrocarbons had been biodegraded, and the biomass grew in luxuriant abundance. In other words, the EPA still had no proof that any long- or short-term damage had been perpetrated by outboard exhaust even though the stress rate had been four times maximum reality.

Once again, the EPA extended the study, and the cost soared to $627,000. The Florida-based research was concluded this past summer because everything there remained in a quite stable state throughout two and one-half years. There were no climate extremes involving a recovery period following a winter freeze, as in the North.

The conclusion of this program is now at hand. In the near future final reports will be delivered to the EPA for review and publication. We look forward to the formal documentation in 1974.

Boat Effluent Controls

Captain Keith B. Schumacher, chief of the Coast Guard's Ship Design Branch at Washington, D.C., outlined the proposed regulations dealing with boat effluent controls. (These have now been published in the *Federal Register*, Vol. 39, No. 42, Pt. II.)

He noted that the proposal:

— allows for independent "third party" testing as long as impartial evaluation is insured.

— calls for tests of all forms of marine sanitation devices. These tests include: vibration, shock, rolling, pressure and vacuum pulse, pressure alone, temperature range and chemical resistance.

— gives the Coast Guard the right to grant waivers. It reads: "The act allows the Coast Guard to waive the standards and regulations for certain vessels. These proposed regulations allow the certification of devices if previous tests for the device, though different from the Coast Guard certification test, are effective in showing the performance of a device. Owners of existing vessels with installed devices will have five years to have their device certified or waived from the standards or regulations."

Captain Schumacher said it is the Coast Guard's intention to disseminate information listing manufacturers and their devices as they are certified.

Marsh Classification

A more rational law for protecting and managing Rhode Island's salt marshes is the goal of the University of Rhode Island (URI) Coastal Resources Center. One of the center's resource analysts, Stephen B. Olsen, said that of the state's two laws governing marshes, one is largely unenforceable, and the other may not stand up under a court challenge.

The coastal center and two URI scientists intend to classify ten salt marshes and, in the process, develop a method to classify all other marshes in the state. Criteria to be used for the evaluation include the value of a

marsh as: (1) a storm buffer, (2) a recreational area, (3) a food source for marine life, (4) a wildlife habitat, (5) a nursery area for fish, and (6) a nutrient trap.

Mr. Olsen said salt marshes should be protected, but that perhaps some should be more than others. And certain developments or uses near or on some salt marshes may cause a minimum of harm.

The coastal center intends to initiate a legal study of how legislation might be drafted that would somehow include the marsh classification system. The center hopes to consult lawyers, scientists and enforcement people in framing the new law, and also hopes to formulate a series of salt marsh management recommendations.

Problems and Solutions

Resin, Fuel Shortage Hits Industry

At the time of the marine recreation conference, the boating industry's reaction to the fuel and resin shortages could be summed up in two words: fear and uncertainty.

George Rounds, secretary of the National Association of Engine and Boat Manufacturers (NAEBM), noted something of a mood of panic in the industry and the boating public. "Hopefully, the mood of the boating public will change when the facts come out." Mr. Rounds spoke at a special session concerning the fuel shortage and its possible impact on boating.

An NAEBM query of 250 boat manufacturers, Mr. Rounds said, showed that the scarcity of petroleum-derived resins had caused several plant shutdowns. Furthermore, other plants indicated they might also shut down if the supply were not to improve.

The story the boating industry had to get across, Mr. Rounds said, is that large numbers of people depend upon the industry for employment. A position paper, published jointly by the Boating Industry Associations and the NAEBM, states that recreational boating contributes more than $4 billion to the gross national product and employs nearly 500,000 people full- or part-time with an annual payroll of about $1 billion.

The paper states, "Boating requires less than one-half of one percent of the gasoline consumed in the U.S. annually. Hence, the amount of fuel that would be 'saved' by curtailing boating would be minimal, while the resulting impact on our economy would be truly significant, and on the industry itself, devastating."

University of Connecticut environmental economist Dr. Carlos D. Stern said there is really no way to be certain just how the energy shortage might affect the industry in the long run. "One day it is said to be a long-term problem; the next day, it's just a one-year problem." Dr. Stern said if the winter were to be severe or if the fuel allocation program were to fail, the nation might be forced to a system of priorities that would discriminate more heavily against use of pleasure craft. "There is no way of allocating the shortage that doesn't hit someone hard. There can't be totally equal cutbacks."

Dr. Stern said a critical question for New England would be how much oil would be moved up from the South to compensate for the Middle East oil this region is so dependent upon. "It doesn't make sense to go motor boating in Florida while New England homes go cold," he said.

Meanwhile, industry interests were closing ranks in an attempt to assure fair treatment in governmental regulations. Mr. Rounds said a Boating Information Council was being set up to deal with the crisis and a major publicity campaign would be mounted.

Coastal Zone Recreation

A number of problems face those who desire to improve or build recreational facilities in the coastal zone, conferees stated in a forum discussion.

One complaint was that single-use zoning laws can hamper building of new facilities and can even hamper the improvement of aging, dilapidated facilities.

In broader terms, marine recreationalists are often at the mercy of local governments which want recreational facilities sited nearby for the local people — but outside their areas of jurisdiction. Recreational developers also coordinate plans with regula-

tory agencies which may not have clear guidelines or standards to judge whether developers can begin a project. And developers are sometimes the victims of politicians who find it unwise to vote against environmentalists.

Some conferees felt that marine recreational interests should make their feelings known at the grass-roots level. There may be a suspicion by the public, one participant stated, that marine recreational developers are plotting together to achieve their desired goals. This kind of paranoia could be put to rest if developers would band together and make their views known, it was said.

Solutions

Conferees met in simultaneous sessions and drafted a number of recommendations, proposals and observations dealing with various topics.

In a session concerning improvement of *marina design*, participants proposed:

— that pumping of boat waste holding tanks might be accomplished most efficiently by tank trucks for a fee. Another solution might be for a group of marinas to finance a single waste treatment facility. Or if boat holding tanks become mandatory, municipalities should be required to provide sewer service to local marinas.

— that diesel and gas storage tanks in marina areas be made leak- and rust-proof. Fiberglass-coated tanks may be the solution, or fixed docks be grounded to prevent accidental electrocution.

— that marinas be built to last as long as possible, by using properly treated wood or aluminum and concrete.

— that the states install more launching ramps.

Participants in a session on *marina management with an environmental concern* proposed that developers not be required to provide a professional environmental impact statement for improvement or construction of most facilities. The conferees said a simple checklist for developers to complete should be used in most cases. And all governmental agencies should use a uniform environmental checklist, they added.

Views of a committee of the Rhode Island Coastal Resources Management Council were presented in a session concerning the possibility of instituting *water user fees* for marinas and other marine facilities. The committee has been considering a proposal to charge fees for any new use of Rhode Island's coastal waters below tidal level. A lease might be based on a 50-year life expectancy of a facility. Fixed or periodic fees are being considered with the amount based on the manner in which passage over the water is obstructed. For example a mooring would require a smaller fee than a dock. Some of the participants stated that if user fees are instituted, they should be earmarked for coastal zone management use. Breakwater construction could be one such use of the fees, a representative of marina interests said.

A speaker at the session on *public-versus-private interests* noted that Connecticut has 250 miles of coastline, of which 142 miles [illegible] would require a great deal of money and might actually degrade the resource from over-use and the kinds of development (roads, parking lots) needed to accommodate large numbers of people.

A marina operator at the session said speculators and real estate interests have a lot to do with determining shoreline uses. His marina location is assessed now at $50,000 an acre but converting its use to condominiums or office buildings might increase that amount to $100,000. Demands for shoreline property do induce some marina operators to contemplate the benefits of higher economic returns through other uses, he said.

Streamlining the permit process was the subject of another session. It was said that the quickest way to obtain a permit is to first satisfy as completely as possible all objections of local people or conservation groups who may object to any development or improvement of an existing coastal facility. Then applications can be made simultaneously for local, state and federal (Army Corps of Engineers) permits.

Increasing numbers of boats on already crowded inland lakes may make laws limiting or *regulating lake use* necessary, participants in another session decided. They said potential regulations include establishment of speed, horsepower, or boat size limits. Limits could also be imposed on the time a boat could be used or on the area in which it may be used. For example, water skiing could be limited to certain portions of a lake, boat races to another, and sailing to another.

In Florida, bridges sometimes limit [illegible] *trial areas* stand idle and remain an eyesore. These two problems were aired by boating conferees during a forum concerning views of the boatman and the marina owner.

David Beach, a representative of the Boating Industry Association, said the Florida access problem is being solved with new techniques for making boating access and auto traffic more compatible at draw bridges. Some have suggested using prefabricated tunnels sunk in trenches to replace some of the draw bridges.

Allan Berrian, representing the Connecticut Marine Trade Association, said we need to ask ourselves why so much of the coastline is recreational wasteland. Many of the abandoned industrial areas could be reactivated for boating purposes instead of spreading industry into previously undeveloped or fragile natural areas.

Problems were back in the picture in one session — some of the woeful problems of *making money in the marine business* were listed by Mr. Berrian and another marina manager, Richard Palmer. Labor problems, skyrocketing insurance rates, taxes and the fuel crisis make it difficult for the owner to make a profit, they said. Other problems are obtaining dredging permits and meeting new environmental restrictions, zoning and land use regulations and new industry legislation.

Boat owner Dorothy Osler told of the criteria she uses for *judging the merit of a marina*. A quality marina should have adequate protection from storms and proper depth, and should be secure from vandalism at both slips and moorings. She said there [illegible] dryers. Other considerations: mechanics, food supply, maintenance supply, winter storage, launching ramp, parking and facilities for emptying holding tanks.

Appendix: Program

Wednesday, Dec. 12

Keynote Address

A Framework for State Action
Robert W. Knecht, director, Office of Coastal Environment, NOAA, Department of Commerce, Washington, D.C.

Round Table Discussion

Marine Recreation Issues in Shoreline and Water Use
Moderator: Neil Ross, executive director, Rhode Island Marine Trade Association, Kingston, Rhode Island

Marine Recreation Forum

Environmental Considerations
Joseph Swift, corporate director of environmental affairs, Mercury Motors, Fond du Lac, Wisconsin

Marsh Classification
Stephen Olsen, Coastal Resources Center, University of Rhode Island, Narragansett, Rhode Island

Boat Effluent Controls
Captain Keith B. Schumacher, chief of Ship Design Branch, U.S. Coast Guard, Washington, D.C.

Marine Recreation Forum

Economic Impact of Marinas in New England and New York
Dr. William Henry, University of New Hampshire Resources Development Center, Durham, New Hampshire

The User View
Dorothy Osler, boatwoman and Connecticut state representative; Richard Palmer, marina manager, Palmer's (Connecticut) Marina; Allan Berrian, marina manager, Milford (Connecticut) Boatyard

Access Conference Report
David Beach, representative of Boating Industry Association, Chicago, Illinois

National Perspective on Marine Recreation
Richard Gross, New York Sea Grant Program, Cornell University, Ithaca, New York; Philip M. Roedel, coordinator, Marine Recreation Programs, NOAA

Shoreline and Water Management Forum

Administrative and Political Facts of Life
George Gunther, Connecticut state senator, 21st District, Stratford, Connecticut, and Walter Gray, president, South Kingstown (Rhode Island) Town Council

Program Coordination
Jack Cahill, Long Island State Park and Recreation Commission, Long Island, New York

Shoreline and Water Management

Planning and Management for Coastal Areas
Malcolm Grant, Coastal Resources Center, University of Rhode Island

State Rights to Regulate Land Use
Francis X. Cameron, Marine Affairs Program, University of Rhode Island

The Energy Emergency

George Rounds, secretary, National Association of Engine and Boat Manufacturers, Greenwich, Connecticut and Dr. Carlos D. Stern, environmental economist, University of Connecticut, Storrs, Connecticut

Thursday, Dec. 13

Two Approaches to State Coastal Management: Rhode Island and Maine

John Lyons, chairman, Rhode Island Coastal Resources Management Council, Providence, Rhode Island; Philip Savage, director, Maine State Planning Office, Augusta, Maine

Task Force Planning Sessions

Should Water User Fees Be Charged To Boats or Marinas?
Dr. William Miner, chairman of the subcommittee on fees, Rhode Island Coastal Resources Management Council, and Gerald Terhune, president, New England Marine Trade Association

How to Reduce the Permit Process Reducing Time and Legal Expense
Morgan Rees, chief of Permits Branch, U.S. Army Corps of Engineers, N.E. Division, Waltham, Massachusetts

Management with an Environmental Concern
William Walters, New York Sea Grant Advisory Service

Changes in Marina Design in Light of Recent Environmental Concerns
John Scott-Paine, marina consultant, Greenwich, Connecticut

Who Controls the Shoreline? Public Versus Private Interests
Julius Wilensky, mayor, Stamford, Connecticut, and H. Perry Garvin, Jr., Hawknest Beach, Old Lyme, Connecticut

Should the Number of Boats on Inland Waters and Lakes Be Limited
Richard Trexler, Moultoboro Marina Center, Harbor, New Hampshire

Task Force Reports

George Rounds

State Workshops/Problems and Recommended Plans

State Reports

Gloria Mintz, assistant secretary, National Association of Engine and Boat Manufacturers

Summary Statement

George Rounds