

FOREWORD

This series of reports dealing with shorelands management is part of the University of Michigan Sea Grant Program's continuing effort in promoting more logical and effective use of our natural resources.

I hope that documents such as this will help stimulate public understanding and participation in the planning-decision process.

The issue of shorelands management is of special significance to residents of Michigan. We have over 3,000 miles of coastline on the Great Lakes, more than any state in the mainland U.S. Increasing use of this coastal resource will require innovative and imaginative management policies to ensure its continued use in the future.

John M. Armstrong

Director

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ACKNOWLEDGMENTS

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1



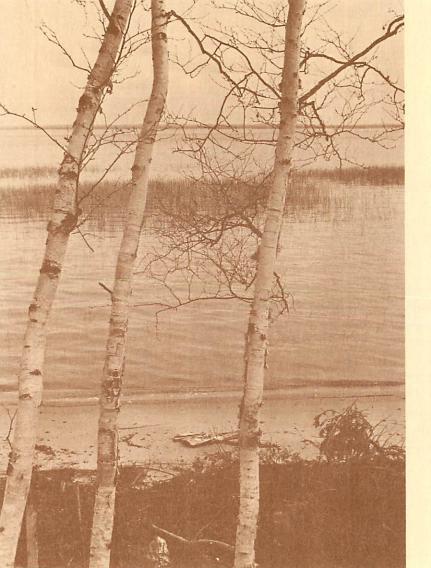
INTRODUCTION

With the passage of the Shorelands Protection and Management Act of 1970 (Act 245), the Michigan Water Resources Commission (WRC) was charged with the establishment of a shorelands management plan for Michigan's Great Lakes shorelands. In the process of formulating these management recommendations, the commission has been involved with the University of Michigan Sea Grant Program in a pilot shoreland study in Grand Traverse Bay.

Soon after commencing this project the WRC and Sea Grant established contact with a number of concerned citizens who have provided valuable information and suggestions. In

August of 1971 this group established itself as the Traverse Bay Shorelands Coordinating Committee, with the hope of gaining membership from all bay-area political, planning, and citizen groups.

In response to requests by members of the Shorelands Coordinating Committee, Sea Grant is preparing a series of background papers which identify some bay shorelands and water problems and some initial recommendations. This general report is the first in a series which will be presented to interested citizens through the Shorelands Coordinating Committee. These conceptual reports will be supplemented by a continuing series of technical Sea Grant reports.



PART ONE

Need for Planning

Our general findings indicate the need for some basic decisions by bay citizens. Planning is often used to facilitate such decisions, and Grand Traverse Bay and its shorelands form a natural unit for such planning. Understandably some local citizens will object to planning or zoning, seeing them only as infringements upon their individual freedoms. Certainly this is a serious problem, and it emphasizes the need to ensure real and substantial public benefits from any restrictions. But considering the growing number of problems, both national and local, it is difficult to see how bay citizens can continue to enjoy profitable and satisfying lives in the bay area unless they recognize their common interest in retaining a quality environment and the need for cooperative planning. This problem will be dealt with in greater detail in future publications. In this report we wish to explain just a few of the reasons why we feel bay-wide cooperative planning by local citizens is both necessary and desirable.

Act 245

The Shorelands Protection and Planning Act of 1970 gives each local shoreland governmental unit the power to "zone" erosion and wildlife habitat areas. But it also states that if local units fail to "zone" within three years, the state can initiate such regulations as it feels are necessary. In compliance with the provisions of Act 245, the state will notify each governmental unit of any such areas within its jurisdiction, and provide recommendations for zoning.

Sea Grant wishes to stress that there are pressures for higher levels of government to establish more regulations of this type; reserving the right to implement its own regulations if the local units of government either fail to act or do not meet state standards. Unless there is good

local planning, it would seem almost certain that federal and state regulations will affect an increasing number of activities within the air, water, and land areas of the bay.

Potential Future Problems

There are many possible future developments, some of which are listed in the next section, which could prove to be either a problem or a benefit to the bay. Without planning, there is no assurance that even simple precautions will be taken, or that the public interest in a quality bay and shorelands will be considered.

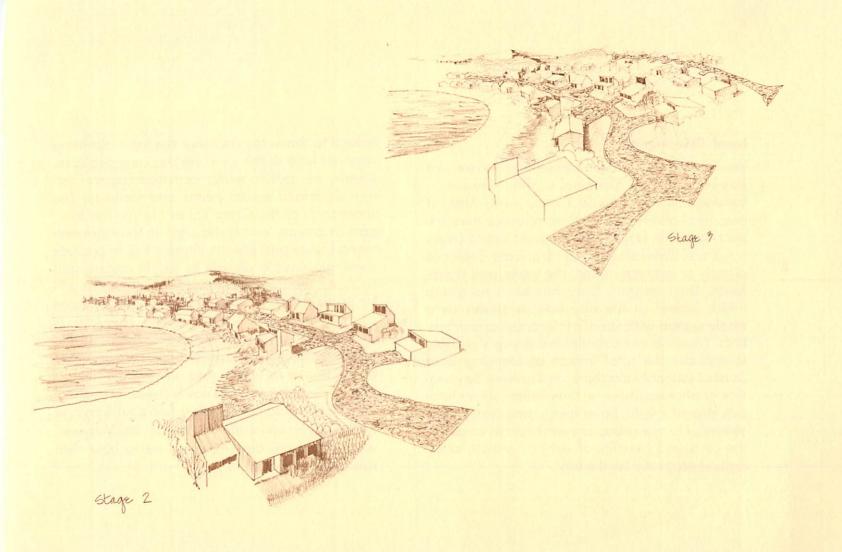


Throughout Michigan and around the world there is a typical pattern of shoreland development. In this typical sequence a row of shoreland structures is followed by a second and a third, until the shorelands, and even inland areas with a view of the water are fully "developed." The natural attributes of the shorelands, which initially attracted new occupancy, vanish and the shorelands soon take on the look of an inland suburban development.

The typical development sequence raises many problems for the citizens of Traverse Bay. There are some citizens who feel that there should be no more development, while others feel that it is absolutely necessary or at least inevitable. There are no simple solutions to such conflicts, but it would seem clear that there can be little "benefit" in any activity which is allowed to destroy the unique values of the waters and the shorelands of Traverse Bay.



6



Local Determination

We feel that the most compelling reason for bay-wide citizen planning is that without it, considerable changes will occur with little, if any, local ability to control or influence their impact upon the bay. At the present time numerous state, federal, local, and private decisions directly or indirectly affect the water and shorelands. Until recently there has been no group which looked at the bay and its shores as a single system with specific tolerances and potentials. Thus, no one coordinated group was able to consider the total impact of Sleeping Bear Dunes National Lakeshore on Traverse Bay waters or shorelands at a time when substantial adjustment might have been realistically considered. No one group presently exists to assess the costs and benefits of various growth alternatives proposed for the bay.

Added to this is the fact that the local planning may not tend to the view the bay as a public resource, yet public water activities require certain shoreland access points and facilities. The shorelands of the Great Lakes are for the most part in private ownership, but if local governmental units and private citizens fail to provide some reasonable degree of public access and facilities, the state and federal governments will be pressured to provide them, usually at some cost to local areas. And unless the bay is planned for on a comprehensive basis, small, incremental, independently considered decisions could destroy its value. And unless local citizens become involved and knowledgeable in planning, they could conceivably find that Traverse Bay is a recreational satellite of the Midwest, with little local determination as to how that role was arrived at

PART TWO

Potential Problems

The following list of possible bay-area activities is not meant to be a prediction, but rather represents some potential developments, some undoubtedly more probable than others, which have either occurred in similar shoreland areas or which we feel could happen. In all cases, these, or similar, developments could generate considerable problems unless implemented with great care. Considering the unique value of these resources, and the increasing potential for disruption of man's activities, bay citizens may want to develop a more active role in planning.

Highways

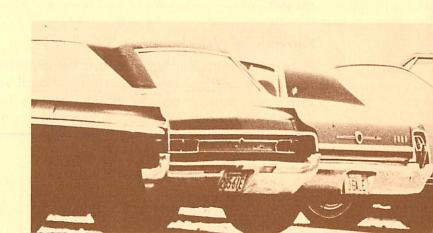
As the popularity of northern Michigan continues to increase, even more highways may be proposed. Since these transportation corridors influence residential patterns, affect the envir-

onment, and bring in considerable amounts of traffic, demand for public recreational facilities, and summer homes; their location, size, and actual necessity should be carefully considered by local citizens.

Mass Transit Systems

As the population of northern Michigan continues to grow, and as interest in alternative methods of transportation increases, it is possible that one or more forms of mass transit might bring major influxes of urban residents to the Traverse Bay area.

9



State/Federal Parks

It can be expected that as urban areas become more crowded and as the popularity of recreation continues to grow (currently about twice as fast as population), more state and federal parks, such as the National Lakeshore, may be suggested for the Traverse Bay region.

New Towns

There is considerable federal government interest in the concept of establishing whole new "towns" or "cities." The Traverse Bay area might be considered as an attractive site for such a project.

Recreational Vehicles

If current trends continue, it can be expected that small land, air, and water recreational vehicles will appear on the market and in the Traverse Bay area in increasing types and numbers. The controversies over the snowmobile should supply ample indication of the potential environmental disruptions of such vehicles.

Port Facilities

Numerous reports have declared that rather than constructing new ports, the trend on the Great Lakes will be to phase out many of the existing ones. But it may be that as new markets and new technologies develop, the Traverse Bay region could become an attractive site for either an on-shore or offshore port facility.

Offshore Facilities

As the interest in offshore oil drilling has continued, so has the ability to construct various types of offshore structures. In various parts of the country there have been proposals for artificial islands supporting every conceivable type of activity. If such facilities are to be constructed, it will require careful planning to avoid major adverse impact. Further, Traverse Bay citizens

will have to become involved in the planning of state, regional, and federal groups that control the use of the bay and Lake Michigan if they wish to have any control over such developments.

State/Federal Fisheries

The state has a strong commitment to continuing the development of the sport fishery in Lake Michigan. But in pursuing this program, there is a possibility that supporters of such programs may ignore the consequences to other activities. If there is to be a strong recreational fishery, it implies increased public access, marinas, boat ramps, parks, beaches, and maintained high quality of water. These factors should be considered at the same time and, related to a state-sponsored public fishery, should in large part be funded with state monies. Planning and political unity on a bay-wide basis could ensure responsive state planning and a stronger local

voice in its decisions. This applies equally well to all state, regional, or federal programs which affect the waters or the shorelands of the bay.

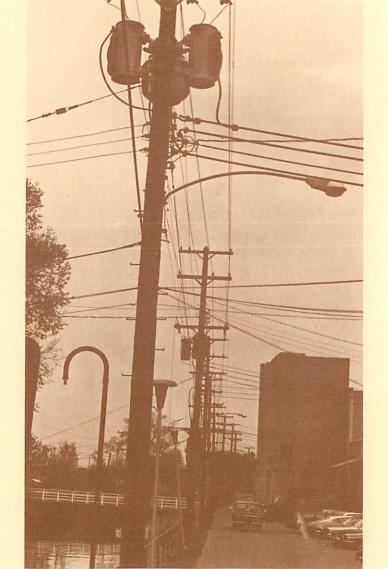
Public Utilities

There are several problems, typical of all modern communities, which the Traverse Bay region will have to face. These are not necessarily associated with shorelands, but add further evidence to the need for planning. Examples are the problems of power plants, sewage treatment facilities, and solid-waste disposal. Traverse City could be selected in the future as a site for a major regional sewage or solid-waste disposal system or for a regional power plant.

Summary

Planning in and of itself can provide few solutions, and at best, local interests can only become partially influential in regional, state, and federal decisions. Yet, without some local effort to establish how the water and shores of the bay can best meet local needs, and without the formulation of questions as to how a proposed activity may or may not meet those goals, outside interests will continue to "use" these resources, resulting in an increasingly heavy local burden. With planning, local citizens can often establish a cooperative relationship with state, regional, and federal agencies, which at present tend to distrust local abilities and interest in planning.

The urbanizing area of the Grand Traverse Bay region has a good start at land-use planning, as reflected in the 1972 report of the Traverse Bay Regional Planning Commission report. Mission Peninsula and some other areas have also made a good start in this direction. But these efforts are neither sufficiently coordinated nor directly focused upon regional and shoreland problems.



PART THREE

Zoning as a Method of Directing Shoreland Development

Zoning. Zoning is one of the few planning tools which the state has given to local units of government, and is the most typical form of landuse planning. That does not mean that it is the best method, and in a future Sea Grant publication some time will be spent in discussing its use, its problems, and its limitations. Since the state has identified zoning as a major tool to be used by local citizens in meeting the requirements of Act 245 (1970), some mention will be made at this point of three important zoning problems.

1. Public Benefits versus Public Welfare. Often a local zoning ordinance will be dismissed in the courts as an undue taking and/or without adequate compensation. As a rule, government has the right to protect the health, safety, and welfare of its citizens through any reasonable means. But obtaining a public benefit at private expense, without proper repayment, is not held to be reasonable.

Thus a serious problem which Sea Grant feels the state has not yet sufficiently considered is just how local units of government are going to "zone" shoreland wildlife habitat areas that are in private ownership. Hopefully, this question will be resolved, but for the time being Sea Grant suggests that before enacting any ordinance of this type, the ordinance be carefully inspected by a good legal advisor.

2. Criteria for Selecting Zones. Often when people start to designate usage zones, they

have no clear idea as to how various zones should be selected. Often zones reflect the status quo or how the land is currently being used. This works well, until someone decides to build a house on former farmland, or construct a marina in a wildlife habitat area. As soon as this happens, the zoning usually is changed to accommodate the new pattern, thus having no effect.

In many cases communities establish zoning regulations to exclude one or more activities or class of people. As long as zones are clearly to exclude, with no other justifications except that local citizens do not want it, the zoning will stand little chance in court.

Avoiding legal disputes, the ill feelings of citizens, conflicts between activities, and costly or irrevocable environmental damage require a considerable amount of groundwork before establishing zones. Zoning criteria should encom-

pass economic, social, legal, technical, political, and environmental values and goals. Such zoning is uncommon, but without this type of preparation, and without more support from the legislature and the courts, local communities might better spend their time and money on other planning activities.

3. Zoning Jurisdictions. It is hoped that the Shorelands Protection and Planning Act of 1970 will lead to the resolution of a problem which has received almost no attention, but which seriously affects Traverse Bay residents. The problem is that the state has principal jurisdiction over the submerged lands and water of the bay, as well as the air, at least in terms of quality. Overseeing state regulations and occasionally instituting their own are numerous federal agencies. The land is predominantly in private ownership, and within the state of Michigan, basically in local rather than state control.

Any shoreland activity can potentially affect the water, which in the case of Traverse Bay, is in public, state, and federal control. And any state or federal program involving water use, such as a fishery program or an attempt to increase the navigation season, can affect private shoreland activities. Therefore, a township attempt to protect a shoreland habitat area may come into conflict with a state marina or highway construction program. Unless the citizens of the bay area are well informed and politically strong, the federal or state project will take precedence over local desires, even if the state or federal projects are no better or perhaps worse than the local activity. To assume that local zoning by itself can assure locally desirable land- or water-use patterns in as sensitive and valuable an area as the shorelands of Traverse Bay is somewhat unrealistic.



PART FOUR

Land and Water

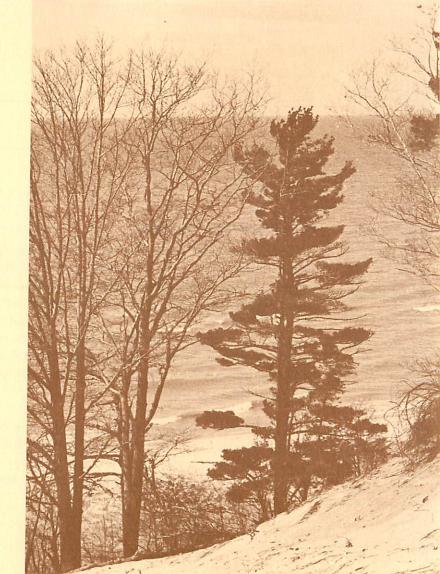
As implied in the last section, it is difficult to know how to zone shoreland areas without considering the adjacent water areas. Thus shoreland zoning, to really solve problems and avoid them, will have to be preceded by detailed study and planning. And when dealing with Great Lakes shorelands, a set of decisions will have to be made as to when water activities shall predetermine shore use, and vice versa. Minnesota has established a set of water zones for its lakes, and each water type is associated with specific land-use restrictions, such as minimum set-back distance. Michigan has also established various water zones, yet has failed to connect them with shore uses.

Because there is a direct connection between land use and water use, and since the water is in public ownership, it can be expected that state and federal pressures will move towards less private and local regulation of shoreland areas. To emphasize this potential, there is now a bill before Congress to greatly increase the amount of public control of all shoreland areas, including the construction of new highways and access points. Traverse Bay citizens would do well to keep informed on the progress of this legislation through their representatives, and to ensure that if such legislation passes, and some version probably will, that the general public interest as conceived by some set of federal and state agencies is not totally different from local interests.

Obviously, if local citizens are to have any degree of control over the bay and its shorelands, they will have to obtain political, economic, and technical assistance from state, regional, and federal groups which have either jurisdiction or influence over the public waters of the Great Lakes.

Summary

In reality, private shoreland owners will not be able to totally escape some degree of public governmental regulation if they are adjacent to public waters. One of the best means of ensuring reasonable protection of private interests is to support reasonable public facilities, and to become involved in the planning which is presently occurring. If local citizens become an effective and active part of the governmental decision process, then they can affect the decisions. Without such involvement, it is probable that shorelands will increasingly be used to accommodate urban-oriented water activities.



PART FIVE

Planning Recommendations

- 1. Each local unit of government should establish at least some set of general goals for the future use of its shoreland areas. This will be increasingly necessary in order to comply with Act 245 (1970). But without a bay-area planning group which can act as a meeting ground for all of the conflicting local interests, state or regional groups will be placed in the position of imposing reconciliation.
- 2. Traditionally, planning and zoning have involved strictly land questions and land values. Any consideration of air or water quality or regulation has been left to experts at the state

or federal level. As state and federal regulations will increasingly affect the use of shoreland areas, local planning should in the future encompass these additional resource zones. If land-use decisions are made with a consideration of their effect upon the land, air, and the water, many environmental problems could be avoided, and the need for overriding state or federal regulation would be greatly diminished.

3. It is clear that if the waters and shorelands of Traverse Bay were allowed to accommodate all groups that would like to use these resources, they would collapse. Yet to deny any set of uses is politically difficult. Thus if local citizens wish to ensure any degree of water or shoreland quality, then they will have to consider not only what is politically, socially, or economically desirable; they will also have to consider what is ecologically possible, and at some point develop criteria for excluding certain activities, if they desire a quality shore.

18

4. Many people mistakingly feel that there is some totally scientific, rational method of planning. It is true that there are several tools and procedures which can facilitate the implementation of various plans. But the basic decisions as to what should and should not be done are social, political decisions which depend in part upon the personal values of those who make the decisions. Thus Sea Grant does not intend to provide a "plan" for the bay, as some citizens have requested. To do so would be to promote our own personal values.

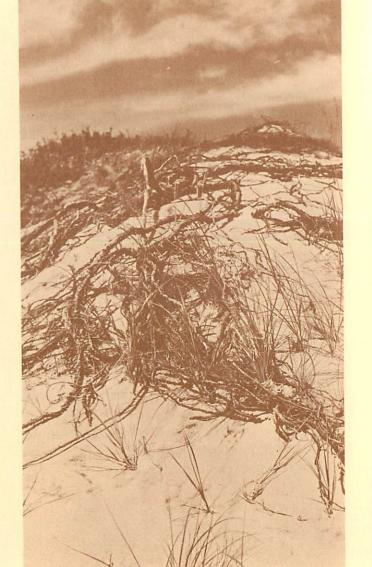
If citizens wish to retain some degree of local and/or private control, and if they desire good performance from professional planners, they will have to take the often considerable amounts of time and effort to make some basic decisions about the future of the bay, and support these decisions in cooperative discussions with all public agencies that can affect the bay.

Summary

Given the increasing urban population with an interest in recreation, it is perhaps unrealistic to expect that local citizens can enjoy in the future the degree of self-determination that they have enjoyed in the past. But the situation is now such that to retain any control, local citizens will have to become involved in a formalized political and planning process that they never considered before. Typical zoning for land areas will not solve many of the complex shoreland problems that involve obscure interactions of land, water, and air; private versus public interests; and local versus state, regional, or federal government.

Planning is a political process, and always occurs within a political context. The danger always exists that to facilitate efficient administration and rationality, the public will be excluded from decisions which require basic value judgments rather than "scientific" infor-

mation. Since the shorelands and waters of the bay will increasingly be seen as public resources, local citizens will have to become involved in the public decision-making process to ensure that their interests are considered. And perhaps most important of all, everyone who makes shoreland and water decisions, either public or private, state or local, must place more emphasis upon the natural tolerances and capacities of these resource areas, if they are to remain usable entities.



PART SIX

Tools of Planning

The following is a brief description of several tools which are or could be used for bay planning. But citizens would do well, before investing money and/or time in any of these or other tools, to ask just what information or help they may provide. All too often planning groups develop an "inventory" and collect maps, aerial photographs, and perhaps a series of questionnaires, only to find that it has cost a lot of money and now they do not know what to do with them.

Maps

There are many kinds of maps, all of which can be useful in displaying information. As with all tools, local citizens should consider how maps might present information in some new way; to present a problem or opportunity that was not previously obvious; or to present a known problem in such a way as to suggest a workable solution. Maps and data such as aerial photographs, which increasingly are used to prepare maps, are one type of device which often can serve the function of clarification.

Environmental Capability Inventories

One of the more difficult but more valuable types of planning tools is some form of environmental capability inventory for the bay. By combining such factors as soil type, slope, vegetation, climate, wildlife, hydrologic patterns; a basic picture of what each part of the bay can tolerate soon develops. When such information supports a specific social, economic,

or political goal, such a goal will be more readily achieved, and more often upheld in court. When such information indicates that a political or economic goal is beyond the natural tolerance of the area, it could help to provide a clear picture of what the true costs of that proposal are, and what precautionary measures should be taken before the project is approved.

Conflict Matrix

One tool which is becoming increasingly popular in coastal zone management is a checklist of possible conflicts or problems associated with specific activities. One of the benefits of this type of information is that it can be done for the most part by local citizens who, in the process of preparing it, gain a valuable appreciation of the scope of existent and potential problems. Each time a new activity is proposed, such a checklist could be prepared, giving all concerned a better idea of the conflicts and potential benefits involved.

Summary

These and other tools could aid in bay-wide planning. Many federal and state agency personnel can provide considerable help in preparing or using such tools, and Sea Grant is also willing to help. But we strongly feel that to provide bay citizens with a collection of such tools without any appreciation on the local level for their utility or function would just be a waste of everyone's time. Also, many of the best tools can only be properly prepared by local citizens who know the area well.

But it should always be remembered that planning tools in and of themselves are of limited value. They can be of tremendous help, but cannot replace the need for basic social, political, and economic value judgments. Often such

judgments are made, justified by the information provided by such "rational" tools, in the hopes that these subjective judgments will not be disputed. Local citizens should be aware of this tactic as used by others and also attempt to avoid it themselves.

PART SEVEN

What to Do Now Identify Problems and Needs

While Sea Grant has identified numerous problems and needs of the bay area, there does not appear to be any consensus on the part of bayarea citizens as to the number, type, and seriousness of problems or needs. Without some basic discussion and agreement as to what is good and bad within the shorelands of the bay, no effective action can be taken.

Find Out Intentions of Others

Bay citizens might go to the Great Lakes Basin Commission, the Northwest Economic Development Region, the Corps of Engineers, the Department of Natural Resources, the Water Resources Commission, the Waterways Commission, the Office of the Governor, the Soil Conservation Service, and other public or private agencies to determine what plans they have which might affect the bay and to establish communications. Basic value conflicts are not going to be totally resolved by "planning" or cooperative discussion, but they certainly will never be resolved without such activities. With such efforts many problems can be avoided before they leave the drawing board, rather than after they have caused a major impact upon the water or shore of the bay.

Establish Goals

Until bay residents have some clear idea of what it is they want and have communicated

these goals to outside groups, they should not be surprised if activities counter to their interests are established in the area.

Shorelands Coordinating Committee

This organization, established by local citizens, is designed to facilitate local citizen discussion. Through this or similar organizations, many of the tools mentioned earlier could be designed and used. Basic value conflicts could be identified, and perhaps resolved. And in the process local citizens could aid each other in meeting the requirements of Act 245.

PART EIGHT

Conclusion

Sea Grant feels that if bay residents do not begin planning on a cooperative bay-wide basis, serious conflicts and resource degradation will occur. Furthermore, it is abundantly clear that

the state and the federal government will continue to influence the use of bay resources. Therefore, local interests will be upheld only if local values are considered in state and federal decisions. This can happen only if informed, baywide opinion is forcefully presented to these outside groups and if local citizens actively participate in such planning efforts. Some bay organization such as the Shorelands Coordinating Committee could facilitate such cooperative efforts. If bay citizens do not make deliberate decisions as to what they want, they will have to live with the results of decisions made by others. And if they do not go beyond traditional political or economic interests, and start considering the environmental potentials and limitations of the bay ecosystem, they may inalterably damage an increasingly unique and valuable bay.



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