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MEMORANDUM

February 5, 1987

To: Elected Officials, Planners and Resource Managers
From: Ernest D. Estevez, Ph.D., Senior Scientist
Subject: Sarasota Bay White Paper

This letter and accompanying material are the products of a workshop on the management of Sarasota Bay held September 22, 1986 at the Mote Marine Laboratory. The workshop was attended by approximately sixty local government officials and staff members interested in fulfilling coastal zone and natural resource planning requirements of the recent state growth management law.

The workshop ended with several agreements. A resolution was passed recognizing the value of the bay and desirability of improved bay management practices. Support was expressed for a public conference about the bay in which scientific and historic information would be reviewed.

The workshop participants also agreed that the meeting record be reduced to writing and that a white paper be drawn from the record for presentation to each local government for review. Finally, the group intended that the Commissioners of Manatee and Sarasota Counties be invited to meet together for the purpose of endorsing the resolution, bay conference, and white paper.

As host for the September workshop it has been a privilege for me to work closely with talented and motivated individuals from several departments and offices of local government, and to produce the enclosed white paper on the management of Sarasota Bay.



EXECUTIVE SUMMARY

A meeting was held on September 22, 1986 at the Mote Marine Laboratory to evaluate the relationship of comprehensive planning requirements to the management needs of Sarasota Bay, and to review management programs implemented for other coastal resources in Florida. The meeting was organized by the Laboratory at the request of the Sarasota County Department of Natural Resources Management. Elected officials, regional and local government staff, and scientists attended the meeting. The workshop consisted of presentations and discussion groups on recent state legislation requiring new levels of local government comprehensive planning and on the concept of bay management as an extension of existing planning requirements.

Sarasota Bay is a moderately regulated natural resource by virtue of state and local laws and rules; the presence of Class II waters; and the bay's designation as Outstanding Florida Water. It could be regulated even more, for example, through aquatic preserve designation, but increased regulation does not necessarily provide any or more management for the bay. The bay is presently unmanaged rather than mismanaged. The local government planning process amended by recent state law approaches the goal of management for the bay in an oblique manner. Thus, two central issues requiring a policy-level determination by local government officials are:

- I. Should Sarasota Bay be managed as a unique and valuable natural resource, recognizing that management requires extra effort but results in extra benefits, compared to the present, unmanaged situation?
- II. Should this government participate in the Sarasota Bay management project to be organized as part of the National Estuary Program of the Clean Water Act of 1987?

The 1986 Workshop unanimously recognized the value of a local bay management program and encouraged local government officials to establish a policy with similar effect. Toward that end, a non-binding resolution was passed by the workshop participants endorsing a public conference, intergovernmental collaboration, and technical preparations for the National Estuary Program. Local government officials consequently are asked to decide on three action items to implement the policies cited above.

- A. Endorse and financially support an intergovernmental symposium on Sarasota Bay scheduled for April 1987;
- B. Direct planning departments and other affected offices to collaborate with neighboring local governments on comprehensive plan elements, where Sarasota Bay is concerned;
- C. Instruct staff to begin such other actions deemed necessary to understand the EPA National Estuary Program and facilitate its implementation for Sarasota Bay.

Adoption of policies and action items addressing the topics described above will make the local comprehensive planning process more efficient and effective. Now that the Clean Water Act and provisions for the estuary program have been authorized, preparations should be made to move toward full participation by local governments. Adoption of these policies will make possible the rapid implementation of a Section 317 Management Conference and guarantee that local government input is considered in the early stages of planning for the federal project.



SARASOTA BAY MANAGEMENT NEEDS AND OPPORTUNITIES

A White Paper

prepared on behalf of the Sarasota Bay Workshop by
Ernest D. Estevez, Ph.D., Senior Scientist
Mote Marine Laboratory

INTRODUCTION

A meeting was held on September 22, 1986 at the City Island facility of Mote Marine Laboratory to evaluate the relationship of state-mandated comprehensive planning requirements to the management needs of Sarasota Bay, and to review management programs implemented for other coastal resources in Florida.

The meeting was organized by the Laboratory at the request of the Sarasota County Department of Natural Resources Management. Elected officials attending the meeting included State Senator Bob Johnson, Manatee County Commissioner Pat Glass, Sarasota County Commissioner Bob Anderson, City of Sarasota Mayor Kerry Kirschner and Commissioner Bill Kline. Other participants are listed in Attachment 1.

The workshop consisted of morning presentations on recent state legislation requiring new levels of local government comprehensive planning and on the concept of bay management as an extension of existing planning requirements. Morning and afternoon discussion groups reviewed the benefits of bay management and the preliminary steps necessary to implement such a program.

A resolution was adopted by the workshop participants. The resolution was not considered binding on any office or person represented at the meeting and should be interpreted only as an expression of the group's opinion regarding Sarasota Bay management. The resolution (Exhibit 1) endorsed a public conference on the bay and supported local government involvement in a bay management plan. It also called for production of this white paper based upon the meeting record and for a joint meeting of local government officials to endorse the findings and recommendations of the workshop.

Exhibit 1
A RESOLUTION
concerning the value and management of Sarasota Bay, Florida

WHEREAS,
The inland, tidal waters of Manatee and Sarasota Counties south of Anna Maria Sound and north of Little Sarasota Bay have become known as "Sarasota Bay", and

WHEREAS,
This area is recognized as an important environmental, recreational, and economic asset of the region, as well as an "Outstanding Florida Water", and

WHEREAS,
This area is governed by five cities and two counties and falls within two regional planning councils, each with their own interest and ability to regulate and manage a part of the bay, and

WHEREAS,
Bay management programs elsewhere in the state and nation have benefited those resources and their value to users, and some aspects of a bay management program already are required by state growth management legislation, and

WHEREAS,
A group of local government officials, staff, and other persons have met to explore the potential benefits of a coordinated bay management program,

NOW THEREFORE, WE RESOLVE THAT

- (1) The record of this meeting be reduced to writing and produced in the form of an executive summary or white paper;
- (2) This document be circulated to the technical staff of all local governments around the bay for review and comment;
- (3) A revised document be transmitted to the boards of city and county commissioners with a suggestion that the county commissions meet together to discuss their roles in fostering bay management; and
- (4) A conference reviewing scientific and other information about Sarasota Bay be recognized as a timely and valuable project, and that it be held as early as possible.

Passed by unanimous vote this 22nd day of September 1986
by the participants of the Sarasota Bay Management Workshop,
Mote Marine Laboratory, City Island Park, Sarasota, Florida.

Acknowledgements

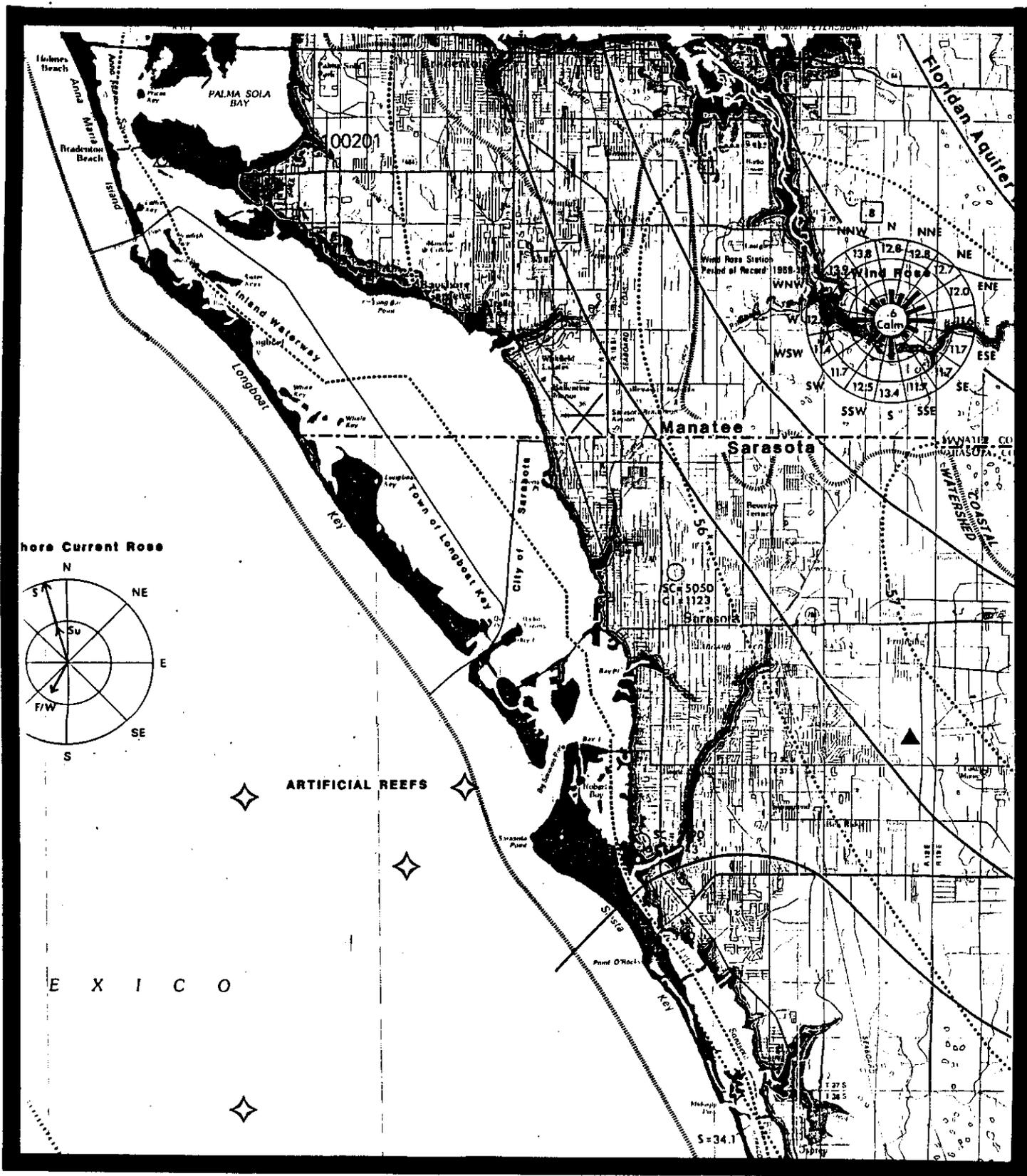
Jack Merriam developed the workshop concept. Ruth Folit made most of the arrangements. Senator Johnson welcomed the participants, and discussions were led by Karen Collins, Gary Comp, Richard Eckenrod, Ruth Folit, Jonathan Miller, Geoffrey Patton and Steve Sauers. Laurie Fraser processed all tapes and text. Robert Dixon produced meeting graphics, and William R. Mote provided lunch and refreshments.

SARASOTA BAY

Sarasota Bay generally includes the protected tidal waters of Manatee and Sarasota Counties on the west coast of Florida. On the north, Anna Maria Sound is regarded as part of Tampa Bay, but Palma Sola Bay is not. On the south, Sarasota Bay historically ended in shallows near Phillippi Creek, an area which today is called Roberts Bay (another Roberts Bay near Venice is entirely unrelated to Sarasota Bay). After construction of the Intracoastal Waterway, Sarasota Bay has been taken to include waters south to the location of a bridge at Stickney Point. Waters south of the bridge are called Little Sarasota Bay.

The bay is connected to the Gulf of Mexico by three tidal inlets: Longboat Pass, New Pass, and Big Pass. From north to south these inlets separate Anna Maria Island, Longboat Key, Lido Key, and Siesta Key, respectively. The largest tributary to the bay is Phillippi Creek. Other streams include Whitaker Bayou and Bowlees Creek. The bay is wide and shallow: its widest part is 3.5 miles across and about half of its 22,000 acre expanse is shallower than 6 ft. Seagrasses and mangroves still fringe undeveloped shorelines. Most bottom areas are made of unconsolidated quartz sands, but patches of oyster shell, limestone outcrops, or coquina rock (e.g., Point of Rocks on Siesta Key) may be found.

Water quality generally is good, but conditions worsen near shore, especially along the eastern side of the bay near tributary mouths. At present, treated wastewater enters the bay from Siesta Key via the Grand Canal and from the City of Sarasota via Whitaker Bayou.



GEOGRAPHY OF SARASOTA BAY

Salinity of the bay usually is high, like the adjoining gulf. Circulation in the bay is dominated by tides and wind. A line connecting Bowlees Creek to Bishop Point on Longboat Key is the null zone between tidal effects from Longboat Pass to the north and Big Pass to the south.

Together with Palma Sola Bay, Sarasota Bay is within and surrounded by five local governments (Bradenton, Holmes Beach, Bradenton Beach, Longboat Key, and Sarasota). The bay lies entirely within Manatee and Sarasota Counties; the county line crosses the bay west of the airport and University of South Florida campus. This line also represents the boundary between the Tampa Bay and Southwest Florida Regional Planning Councils. Consequently, the bay is subject to a wide range of management policies and practices, which, up to the present, have not been developed or executed in a coordinated manner.

In 1986 the Florida Department of Environmental Regulation recommended to the Environmental Regulation Commission that Sarasota Bay be designated an Outstanding Florida Water, because it is a "thriving estuarine system" and "many shellfish and finfish species rely upon the assets of these bay waters for survival.". Designation of the bay as outstanding water means that more stringent criteria will be used in issuing state and regional permits. The Commission adopted the recommendation but exempted an area of the bay 1,500 ft in radius from the mouths of Phillippi Creek and Whitaker Bayou.

CONCEPTS OF BAY MANAGEMENT

Natural resource management is most effective when the resource is viewed as a single ecological entity. By this view a management system for Sarasota Bay should be more effective than the simple sum of local laws or policies which independently govern the "waters" of Longboat Key, Bradenton, the two counties. Sarasota Bay is not managed as a system at the present time, however. Decisions are made on a case specific basis without benefit of experience from nearby cases or an overall strategy or goal for the bay. No system for bay management presently exists. Consequently, Sarasota Bay should be considered to be unmanaged rather than mismanaged.

Another strong argument for the bay as an unmanaged resource is the lack of its institutional advocacy. That is to say, there is no office or person at any level of government presently charged with planning for the whole bay and representing that view as local decisions are made. It is one thing to have a baywide outlook or plan; it is another to have a system in place that provides for the routine consideration of the plan and a speaker for the bay.

A third symptom of an unmanaged resource is that its condition generally is unknown, which is the case for Sarasota Bay. This is not to say that nothing is known about the bay; in fact, much is, but this knowledge has not been used to develop a comprehension of the bay as an ecosystem. Without information of this type, the corrective or restorative functions of a management system cannot operate.

Finally, goals must exist for a resource management system to operate. Such goals should be defined for and by the public and be practical, verifiable, and meaningful. Practical means achievable with existing technical skills, rather than political or legal feasibility. Verifiable means that improvements occur as a result of management which the lay public can perceive through everyday use of the bay. Meaningfulness is defined relative to improvement of the bay compared to its previous condition.

Goals for Sarasota Bay as a whole do not exist now, except insofar as regional plans contain general language applicable to all of the regions' bays. However, Sarasota Bay is unique by its division into two regional planning areas, so even the existing regional plans agree only by coincidence where the bay is concerned.

Local Government Comprehensive Planning

In 1985 the Florida Legislature passed the local Government Comprehensive Planning and Land Development Regulation Act, creating a new coastal management section in Ch. 163, F.S. In 1985-86 the legislature amended state laws requiring local governments to include specific plan elements; coordinate with neighboring governments; be consistent with regional plans; and respond to reviews by state

officials. All local governments around Sarasota Bay have until 1988-89 to produce new comprehensive plans which must address coastal zone management and conservation. Special effort must be made to ensure that "certain bays, estuaries and harbors that fall under the jurisdiction of more than one local government are managed in a consistent and coordinated manner". Plans also must include a future land use element (and maps) and elements on sanitary sewers, drainage, traffic, solid waste potable water, and recreation and open space.

All of these elements must deal with Sarasota Bay to some extent and, because of new consistency requirements, neighboring local governments already are supposed to coordinate their respective plan elements where the bay is concerned. These new requirements have set the stage for implementation of a bay management program, especially with regard to use of a common data base, but even the revised plans cannot be considered as a management program unless (1) the bay is viewed in its entirety by each plan; (2) the cooperative planning process results in the creation of an institutional advocate for the bay; and (3) each plan adopts precisely the same bay-related goals. These final measures are not required by state law and the extent to which planning efforts could be redirected to achieve them remains to be seen.

In summary, Sarasota Bay is a regulated but unmanaged natural resource. Recent changes to law requiring local plans will require better coordination between governments where the bay is involved, and more detail in each plan on particular topics. Even the improved plans taken together will not constitute a bay management program. Development of a bay management program would be facilitated greatly by the new planning process, but an additional commitment would be required of local governments in order to proceed. Some of the initial steps in a bay management planning process and the benefits of a baywide plan are presented below.

THE PROCESS OF BAY MANAGEMENT

The three phases of a bay management program generally are: 1) definition of problems and their solutions; 2) implementation of solutions; 3) realization of results and benefits. Decisions made in identifying problems and defining and implementing their solution tailor a management plan to a specific bay. It is not possible to discuss implementation strategies until particular problems and solutions have been identified.

Steps usually taken in the first phase of program development include: a) definition of the study area; b) review of facts about the bay; c) formulation of public goals for the bay; d) identification of bay management issues; e) finding short and long-term support; and f) choosing a strategy for implementing solutions to problems and proactive management practices.

A. Defining the Study Area

One of the most important steps in a bay management program is definition of the study area. It will undoubtedly include Sarasota Bay, but should it include Palma Sola Bay, or the shallow waters of the Gulf? How far inland (or upland) should the study area extend? Definition of an area also excludes other areas from consideration, such as Anna Maria Sound or the Myakka River. The significance of this action for local governments is that their comprehensive plans may apply for all waters including Sarasota Bay, but that agreements they may enter for just the bay probably will exceed their general plan provisions.

B. Review of Facts About the Bay

Local governments are required by state law to develop extensive data bases for new plans, and each will face the task of assembling and evaluating information about the bay. For this reason alone a conference on the bay was considered by the 1986 workshop participants to be an extremely valuable activity, and plans are underway for a Bay Symposium in April 1987. Such a project is a regular feature of bay management

programs, as well. (Additional information on the symposium is given in a subsequent section.)

C. Formulation of Public Goals

Goal statements specific to Sarasota Bay do not exist at present, which is remarkable in light of the fact that the bay is the largest and most conspicuous landform and natural resource in the region. General goals exist in all local plans for tidal water, but most fail to reflect special knowledge or concern for conditions in the bay. Statements of expectations by the public are needed for the bay. These statements should describe bay features that should exist after some period of management effort. Goals should be verifiable, practical and meaningful. Above all, the goals should be formulated in an atmosphere of openness and concern for the wants and rights of all people who have an interest in the bay.

D. Identification of Bay Management Issues

Bay management programs logically address the correction of existing problems and the prevention of new ones through planning. The former achievements have proven more difficult but more popular than the latter in management programs for other bays, because a solved problem is obvious, but a prevented problem never materializes. Identification of factual issues is a process that brings the bay community together, for virtually all parties are in some way or other responsible for problems facing the bay. Open discussion of these issues helps to bring support for their resolution from a larger group of citizens and from state or federal sources.

E. Short and Long-Term Support

The expenses of a bay management program vary according to the condition of the bay and the nature of goals set for it. Implementation of solutions is more costly than their definition, and it takes longer, too. There are many possible sources of revenue and external funding available for bay management programs. To the extent that a bay plan can be identified as a growth management effort, it should be possible to

attract support for bay-related projects from a wide range of public and private sources.

F. Selecting Implementation Strategies

The implementation phase of a bay management program can be entered through one of several arrangements, such as use of existing offices; informal advisory panels; coordination agreements; use of resource planning and management task forces; agencies on bay management; or new commissions with special authority. The small size of Sarasota Bay (relative to other managed bays) may speak against the most formal or elaborate options. The final implementation strategy chosen for Sarasota Bay will depend on the nature of issues to be addressed.

BENEFITS OF BAY MANAGEMENT

The experience of other bay management programs supports the view that the extra effort expended by governments to participate in a bay plan is offset by the extra benefits which result. These benefits accrue in excess of a local government's investment, due to subsidies from other governments and the private sector, and the cumulative response of the bay as a whole due to improvements by other participants. Descriptions of seven classes of benefits from an effective bay management program follow:

A. Input for Local Plans

The value of a common database on the bay has been described with respect to the new local government comprehensive plans required by state law. These plans will be updated periodically, so the value of a continuing bay management program would be even greater. Moreover, local governments develop a variety of plans as supplements to the comprehensive plan or to deal with new issues. In each case a bay program would facilitate the assembly, evaluation or application of information for local governments.

B. Grants

Other bay management programs in Florida have attracted a variety of grants to the area that would not have been received otherwise. Tampa Bay, for example, has received legislative appropriations, agency funding, and coastal zone management grants for numerous studies, reports, field projects, and educational programs. In 1987 Tampa Bay will be the target of a special funding campaign in the legislature. Also, the Agency on Bay Management has been a leader in the drive to establish a saltwater fishing license as a source of revenue for bay-related projects. Federal funds for Sarasota Bay management may become available in 1987 (see a subsequent section on the Clean Water Act Reauthorization).

C. Improved Monitoring

Considerable interest was expressed during the 1986 workshop for the establishment (or improvement, depending on one's view) of a baseline monitoring program for the bay. An integrated bay management program would provide for the routine measurement of water quality and environmental health. A monitoring program would allow immediate detection of spills or other accidents and would provide evidence for the improvement of conditions resulting from other bay projects.

D. Management Driven Research

There usually is little relationship between the information needs of local governments and the research conducted by colleges or other institutions, because funding and the investigator's interest usually govern the direction of research. In a bay management program funding would be made available for the study of particular resource management issues in the bay. A body of scientific information would develop over time and would be available for use by resource managers in allocating funds for restoration, education, and other uses. Closer ties between scientists and resource managers also could be expected in the areas of shared literature and data, perhaps by a computer network.

E. Elimination of Existing Problems

A major accomplishment of successful bay management is the elimination of existing problems. No bay area has completely done so, and, in fact, progress in this regard has been rather slow, albeit meaningful. Sewage effluents are being eliminated; mangroves are being planted; and stormwater interceptors are being retrofitted in existing urban areas. These actions protect the long-term economic value of the bay and increase its usefulness for body contact or harvest (fishing, shelling, etc.). Also, the successful elimination of one problem creates a climate conducive to continued and new funding by grants. Finally, solution of even a geographically isolated problem reinforces the cooperation of local governments on more stubborn issues.

F. Enhancement of Bay Productivity

Productivity may mean the biological output of fish or clams, or the social usefulness of the bay for boating or swimming. Restorative measures would recover some of the bay's biological productivity, and special projects could target certain species, such as trout or scallops. Better ramps and channels would make the bay more accessible. Improving the bay's productivity also enhances the nearby waters of the Gulf, Tampa Bay, and Little Sarasota Bay. Finally, it will be necessary to enhance the bay's productivity simply to maintain existing user/yield ratios in the face of a growing population. (That is to say, one needs more fish so more fishermen in the future can each catch the number of fish caught by fishermen now.)

G. Permit Guidance

"Water knows no boundaries", especially those of cities, counties or regional councils crossing the bay. At the least, a bay management program would provide guidance for decisions on permits of a local nature. In a more complex scenario, a bay agency could review, comment on, and possibly even issue permits. Another form of guidance results when baywide attention is brought upon a particular permit decision. Such attention may not be well received by the affected decision-makers,

but on the other hand, they may find in such attention the popular support for otherwise difficult decisions.

RECENT DEVELOPMENTS

Bay Symposium

Interest in a bay symposium was stated clearly by the 1986 Workshop Resolution that a conference reviewing scientific and other information about Sarasota Bay was a timely and valuable exercise, and that it should be held soon. A steering committee was assembled and has met several times in preparation for a bay symposium to be held in April 1987 at the New College, USF campus.

Representatives of Manatee and Sarasota Counties, the town of Longboat Key, and the cities of Bradenton Beach, Bradenton and Sarasota are included in the steering committee so far, along with representatives of the Florida Sea Grant Program, Mote Marine Laboratory, and New College. Participation by government staff has not represented a commitment on any government's part to a bay management program. Their involvement does reflect the interest among planners and resource managers for a bay symposium.

The symposium will last two days and coincide with field trips, special exhibits and other activities related to Sarasota Bay. A dozen lectures are planned for scientific topics ranging from geology of the bay to the biology of marine mammals. Another ten lectures are scheduled on the history, economics, and public use of the bay, and bay management. Time will be given for the public input on goals of bay management.

Proceedings of the symposium are planned, based upon manuscripts and recordings of the meetings. The lectures will be aimed at a general audience, whereas the written record will be designed as a reference document of use to planners, educators and scientists. Total estimated cost of the symposium is approximately \$23,000, and sponsors are being sought. Sponsorship by local governments will guarantee success of the symposium.

Clean Water Act Reauthorization

In 1986 the 99th Congress passed out a reauthorization of the Clean Water Act, which drew an executive veto after the session closed. In 1987 the 100th Congress overrode a second veto to authorize the Act as originally drafted. One element of the Act (Section 317. National Estuary Program) identified nationally significant estuaries threatened by pollution, development or overuse; promotes comprehensive planning for these estuaries; encourages the preparation of management plans; and enhances the coordination of estuarine research.

Governors may nominate estuaries of national significance to the Administrator of EPA and request a management conference to develop a comprehensive management plan for the estuary. Note that the federal process is called a management conference but involves much more than a conference per se. Special panels are convened as part of the process to set policy, interpret data, collect new information, and produce educational programs. The conference should not be confused with the Bay Symposium described in the preceding section.

The Act intends that the Administrator give priority consideration to several estuaries across the nation, including Sarasota Bay. The principal purposes of the management conference are to collect existing data and assess trends in water quality, natural resources, and uses of the ecosystem; develop relationships between point and nonpoint loadings of pollutants to water quality and natural resources; and develop, implement, and monitor a comprehensive plan that identifies priority corrective actions.

Participants in the management conference are specified and include federal and state governments, public and private educational institutions and the general public. The conference has up to 5-years to develop a plan which then can be implemented with state and federal grants. Grants may support research, surveys, modeling, or other technical work for up to 75% of the total project cost.

A sum of \$12,000,000 per fiscal year for each of 5 fiscal years beginning in 1987 will be appropriated for management conferences (and administrative costs, which may not exceed 10% of the total appropriation); grants for new studies; and monitoring of plan

implementation. Up to \$5,000,000 of each annual sum may be provided to NOAA for long-term trend assessment monitoring, baseline studies, predictive models, and related studies.

SUMMARY AND ACTION ITEMS

Sarasota Bay is a moderately regulated natural resource by virtue of state and local laws and rules; the presence of Class II waters; and the bay's designation as Outstanding Florida Water. It could be regulated even more, for example, through aquatic preserve designation, but increased regulation does not necessarily provide any or more management for the bay.

The bay is presently unmanaged rather than mismanaged. The local government planning process amended by recent state law approaches the goal of management for the bay in an oblique manner. Thus, two central issues requiring a policy-level determination by local government officials are:

- I. Should Sarasota Bay be managed as a unique and valuable natural resource, recognizing that management requires extra effort but results in extra benefits, compared to the present, unmanaged situation?
- II. Should this government participate in the Sarasota Bay management project to be organized as part of the National Estuary Program of the Clean Water Act of 1987?

The 1986 Workshop unanimously recognized the need and value of a local bay management program and encouraged local government officials to establish a policy with similar effect. The Workshop identified 3 action items for local governments to undertake, as an extension of the policies recommended above. The action items are:

- A. Endorse and financially support an intergovernmental symposium on Sarasota Bay scheduled for April 1987;
- B. Direct planning departments and other affected offices to collaborate with other local governments on comprehensive plan elements where Sarasota Bay is concerned;

C. Instruct staff to begin such other actions deemed necessary to understand the EPA National Estuary Program and facilitate its implementation for Sarasota Bay.

Adoption of policies and action items addressing the topics described above will make the local comprehensive planning process more efficient and effective. Now that the Clean Water Act and provisions for the estuary program have been authorized, preparations should be made to move toward full participation by local governments. Adoption of these policies will make possible the rapid implementation of a Section 317 Management Conference and guarantee that local government input is considered in the early stages of planning for the federal project.

Mote Marine Laboratory
Technical Report No. 104
February 1987

**ATTACHMENT 1
LIST OF PARTICIPANTS**

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