

**SARASOTA BAY, FLORIDA**

**National Estuary Program (NEP) Analysis:  
Identification of Resource Management  
Problems and Issues**

**- EXECUTIVE SUMMARY -**

**A  
GOVERNOR'S NOMINATION REPORT**

**Submitted  
to the  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

**by the  
FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION  
Tallahassee, Florida**

**in  
cooperation with**

**MOTE MARINE LABORATORY  
Sarasota, Florida**

**June, 1988**

## EXECUTIVE SUMMARY

Sarasota Bay was identified in Section 317 (National Estuary Program) of the Water Quality Act of 1987 for priority consideration as an estuary of national significance. The bay is the only Florida system so identified and the only subtropical one. It is a very small, relatively clean system which ranks highly in terms of preservation need and in terms of its vulnerability and is ranked poorly where estuarine area or number of major problems are considered. The bay is also distinguished by having more problems resulting from development and overuse than from pollution, especially the many forms of pollution which plague northern estuaries.

Sarasota Bay represents an excellent setting in which to develop and evaluate management tools focusing on development and overuse impacts. The small size of the bay is an added advantage in such a context. Overall, Sarasota Bay offers the opportunity to address nationally significant problems such as integrated beach/inlet/channel maintenance, nonpoint source control, habitat loss, and sea level rise.

Results from a Sarasota Bay study would also be transferable to similar lagoons, bar-built estuaries, and small embayments throughout the gulf and south Atlantic coastlines. Extensive tourism and seasonal residence of northern and midwestern visitors would extend the benefit of a local bay educational program to areas of the nation not involved with the National Estuary Program.

Sarasota Bay is a small, subtropical embayment on the Florida southwest coast. It is not industrialized but has been affected by development and overuse. It is divided into two counties and two regional planning councils and is affected by five local government comprehensive plans. The Southwest Florida Water Management District, state and federal agencies implement programs affecting Sarasota Bay. Part of the bay is also affected by management policies adopted for Charlotte Harbor. These policies and regulations are not presently coordinated, nor do they operate in a larger management framework.

The Department of Environmental Regulation (DER) has classified portions of the bay Class II, Shellfish Propagation or Harvesting; the rest of the bay is Class III, Recreation, Propagation and maintenance of a Healthy, Well-balanced Population of Fish and Wildlife. DER has designated the bay an Outstanding Florida Water.

Water quality is termed "good" in most of the bay, although nonpoint runoff has reduced nearshore salinity. Tributary basins are urbanized and receive septic tank and domestic wastewater treatment plant effluents; however, direct discharges to the bay are in the process of being diverted. There are no industrial activities or effluents affecting the bay. On the other hand, the bay's natural habitats have been affected adversely by dredging and filling, especially on beaches, inlets, residential shorelines, and the Intracoastal Waterway.

Native plant communities have declined, particularly seagrass beds, which have been impacted by turbidity and dredging. Grassbeds near sewage plant discharges have nearly disappeared. Since 1960, seagrass losses have been paralleled by the loss of scallop, hard clam, and oyster fisheries. Loss of these commercial fisheries is believed to be due to seagrass decline, closure of approved shellfish areas, and overharvesting (although the bay could probably support a renewed hard-clam fishery if closed waters were opened). Precipitous declines have occurred in landings of blue crabs, spotted sea trout, red drum and snook. Landings of stone crab (claws only) and mullet have increased dramatically. Sarasota Bay helps support approximately 1,000 nests of Atlantic loggerhead turtles each year and is a major breeding ground of the bottlenose dolphin. Manatees also occupy the bay and use it as a corridor for seasonal migrations.

Sarasota Bay's economic value is a result of its intense recreational use, as well as its indirect effect on waterfront property values. The bay supports about fifty water-dependent industries, institutions, and operations. Recreational uses take many forms, in particular, beach use and saltwater fishing (13 million user events in 1985 alone). The combined expenditures by visitors to the bay area was approximately \$1.5 billion in 1987 alone.

Rapid urbanization (mostly since World War II) has placed heavy pressure on the bay's resources, especially in terms of development impacts and overuse resulting from large numbers of people using a relatively small estuary. A preliminary effort to identify problems and management issues facing Sarasota Bay generated a list of 120 concerns -- 14 of a geological nature; 13 hydrological; 20 chemical; 31 biological; 21 cultural; 10 concerning regulation and management; and 20 having to do with education and research. It will be necessary to examine these concerns to determine the validity, data base, course of action, and probability of success for each.



The 120 concerns have been grouped into 14 condensed sets based upon six criteria, namely: 1) their overlap; 2) their role as a cause of other problems; 3) responsiveness to local needs; 4) recognition of MC strengths; 5) geographic specificity vs. national significance; and 6) the probable role of federal, state, and local government involvement.

Four problem sets were identified which would benefit from a significant level of federal participation in addition to state, regional, and local involvement: stormwater runoff; beach/inlet/channel management; habitat creation and restoration; and access. Another four problem sets-- monitoring; shellfish sanitation; fisheries assessment-management-restoration; and sea level rise -- are amenable to solution by state and local governments if addressed in a MC framework. Additionally, five other problem sets could be addressed at more local levels within an MC framework. Sarasota Bay's overall problems have nothing to do with toxicants and have only a small bearing on pathogen contamination but do have much in common with problems of eutrophication, habitat loss, changes in living resources, and overuse.

Several reasons have been identified for a Sarasota Bay Management Conference. Rapid urbanization of this vulnerable subtropical system, in which problems of national significance can be meaningfully addressed, represent the primary basis for the MC need. From a management perspective, the bay is moderately regulated but deteriorating because of incomplete management. Planning efforts that should be addressing bay needs have not begun (local government coordination requirements of state planning law) or are incomplete (water quality planning under federal and state law, especially Section 208). The bay is seriously threatened by development and overuse impacts --but not industrial impacts-- and constitutes an excellent microcosm for determining pollution cause-effect relationships and demonstrating success in bay and watershed management plans, with emphasis on those impacts affecting tourism and recreational uses. Finally, the bay falls clearly into the group of national systems for which protective measures outweigh restorative ones as management objectives.

Two aspects of Sarasota Bay's management needs were identified as unique relative to other systems under review by the NEP. One near-term initiative of national significance could be the coordination of federal, state, local and private projects to nourish beaches, maintain inlets, access channels, and the Intracoastal Waterway. These projects are planned and executed without regard for their interactive or cumulative effects on the bay. Over the long term, the bay area's low relief will be affected by drainage projects, hurricanes,

rising sea level, and related forces which together constitute serious management problems, but which could be turned to advantage with proper planning (as in the case of contingency plans for land acquisition after major hurricanes).

There is a high likelihood of a successful NEP Conference for Sarasota Bay because of previous and ongoing efforts, most of which emphasize a local resource management initiative necessary for successful implementation. A significant financial level of local matching by city and county governments will be available for the MC, and public support is likely to be significant. Regional and state funding programs are available. Adequate scientific research and technical expertise to address data shortfalls and conduct new studies is available through New College, Mote Marine Laboratory, local governments, and the private sector.

Seven preliminary goals have been established for the NEP study of Sarasota Bay:

- GOAL I: Improve water transparency in the Sarasota Bay Study Area to the maximum allowable by Gulf of Mexico and local weather conditions.
- GOAL II: Reduce the quantity and improve the quality of stormwater runoff to Sarasota Bay.
- GOAL III: Prevent further losses of seagrasses and shoreline habitats and restore lost habitats.
- GOAL IV: Coordinate beach/inlet/channel creation and maintenance activities to reduce dredging, eliminate conflicts, and enhance the bay.
- GOAL V: Provide increased levels of managed access to Sarasota Bay and its resources.
- GOAL VI: Establish a vertically integrated management system for Sarasota Bay.
- GOAL VII: Restore and sustain fish and other living resources in Sarasota Bay.

Objectives have been prepared for each goal, and information is provided on public participation, workshop conference structure, available research support, and political commitment to the management conference project.