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Florida's Ocean Strategies

**Final Report
to the Governor**

Florida Governor's Ocean Committee

EXECUTIVE SUMMARY

A healthy, productive ocean is of utmost importance to Florida. Surrounded by three bodies of water, the Atlantic Ocean, Florida Bay, and the Gulf of Mexico, many of Florida's most important industries, including shipping, tourism, and fishing, rely upon the ocean. Increasing user populations, user conflicts, and a greater technological ability to recover both living and non-living ocean resources is placing incredible stresses on these fragile and finite assets. To deal with the many critical management issues that have accompanied this growing pressure on Florida's ocean resources, the late Governor Lawton Chiles created the Florida Governor's Ocean Committee (FGOC) by Executive Order in January of 1998.

Membership and committee process

Comprised of 24 members representing government, conservation, education, science, recreation, and business interests, as well as six *ex officio* federal members, the FGOC was charged with the following:

- Identifying instances where current management responses to ocean issues are inadequate or conflicting;
- Developing strategies to address those inadequacies or conflicts;
- Improving coordination of management efforts by local, state, and federal governments; and,
- Promoting public awareness of the importance of the ocean to all Floridians.

The FGOC met eight times over the course of the past 18 months. During initial meetings the Committee examined issues associated with four broad topic areas:

- Protection of living marine resources;
- Protection of the marine environment;
- Promotion of marine economic activity; and,
- Enhancement of public outreach and education.

After reviewing current ocean issues, the FGOC identified four "ocean management challenges" for which it recommended strategies and specific action steps. These are discussed on the following pages.

The FGOC produced an interim report, *Florida's Ocean Challenges*, in November of 1998. This report presented the diverse uses and benefits of Florida's ocean resources and discussed management challenges. By January of 1999, the Committee had completed its *Draft Final Report*, a consensus document containing recommendations on a wide range of ocean issues. During March and April the Committee solicited public input by hosting a series of focus groups and public forums around the state. Public comments and suggestions were then incorporated into the Committee's recommendations, and a *Final Report* was adopted in June of 1999.

Challenge 1: How can we improve our information on and understanding of ocean resources?

Strategies and actions within this challenge area focus on enhancing scientific understanding of ocean processes and ecosystems. The Committee recommends that state agencies and private interests work together to:

- Expand and coordinate coastal and marine research;
- Identify research priorities;
- Implement long-term monitoring and assessment programs; and,
- Enhance data exchange and integration.

Challenge 2: How can we create an improved ocean management framework that is more coordinated and comprehensive?

Recommendations in Challenge 2 address the disparate nature of current ocean resource management tools. Strategies in this section suggest ways to carry out Florida's regulatory and stewardship responsibilities through encouraging greater cooperation among agencies and stakeholders. The Committee recommends that Florida:

- Create intergovernmental and public/private partnerships;
- Use management tools which minimize user conflicts; and,
- Develop policies that address international issues such as tourism, trans-shipment, and pollution.

Challenge 3: How can we achieve and sustain diverse marine ecosystems that are capable of supporting multiple uses?

Strategies within Challenge 3 seek to balance and support the diverse uses of Florida's marine environment. State agencies and their partners should:

- Address the adequacy of water quality standards;
- Explore the use of various fisheries management tools;
- Encourage innovative techniques for habitat protection and restoration;
- Promote greater protection of highly migratory pelagic species, marine mammals, sea turtles and sea birds;
- Continue implementation of best management practices for aquaculture; and
- Enhance marine law enforcement.

Challenge 4: How can we raise awareness, promote education, and foster stewardship of the ocean?

The FGOC recommends a suite of educational programs and initiatives that involve public, private, and nonprofit entities, and that reach out to diverse audiences. The Committee believes Florida should:

- Develop an ocean outreach program to educate tourists, residents, decision makers, students, educators, and the media on the importance of ocean resources;
- Provide more support for volunteer research and conservation programs involving students and the general public; and,
- Partner with private industry to conduct ocean resource related classes, field trips, and other educational opportunities for students, and the general public, as well as marine industry employees.

Continuing the work of the FGOC

The variety of issues addressed by the strategies in this report reflect the nature of the ocean itself: its resources are extremely diverse and interconnected, and subject to a multitude of activities, interests, and jurisdictions. In order to ensure successful implementation of its suggestions, the FGOC recommends that the state establish short and long term priorities that focus on research, education, conservation, and the responsible use of Florida's ocean assets. This should be done under the guidance of the Executive Office of the Governor and the State University System's Office of the Chancellor.

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INTRODUCTION

What is the problem ?

Florida has a large number of policies, laws, and rules aimed at managing individual ocean resources. Currently, however, there is no comprehensive management framework that recognizes the diversity and interconnectedness of ocean resources, and that balances protection with reasonable and responsible use.

The state has stewardship obligations for ocean resources management that are quite different from its responsibility for regulating activities on land. As “owner” of the seabed and its resources within state boundaries, it is not limited by the scope of its regulatory power or principles of private property rights when regulating ocean uses. While this responsibility does not require “preservation” of the seas and its resources, it does specifically require that public uses and interests be preserved over private appropriation.

The development of a comprehensive ocean resources management strategy allows the state to execute its stewardship, protection, and development responsibilities in a thoughtful manner, and prepares it to speak proactively. Such a position is much preferable to the alternative of reacting to events that have affected ocean resources without carefully evaluating all issues.

A comprehensive ocean resources management strategy also allows the state to address conflicts between legitimate ocean activities and uses, recognizing the connectedness of natural systems and our dependence on their continued health and vitality .Inherent in creating a comprehensive ocean resources management strategy is the understanding that the ocean and all of its resources are inextricably linked.

What is this document?

This is the Florida Governor’s Ocean Committee’s Final Report to the Governor. The Florida Governor’s Ocean Committee (FGOC) was appointed by the late Governor Chiles in January 1998. Its purpose is to guide the state’s efforts to develop and implement a comprehensive state ocean resources management strategy that includes improved coordination among local, state, and federal agencies on ocean issues.

The breadth of issues addressed in this report reflects the nature of the ocean itself: its resources are extremely diverse and interconnected, and subject to a multitude of interests and activities. It is important to note that this report represents the first time, on a statewide level, that representatives from government, conservation, education, science, recreation, and business interests have worked together to reach consensus on a wide variety of recommendations for improving ocean resources management.

Groundwork for the Florida Governor’s Ocean Committee was laid by its predecessor group, the Florida Ocean Policy Roundtable, which was convened by the Florida Coastal Management Program and the Executive Office of the Governor in 1997. The Roundtable investigated the need for comprehensive, coordinated management of the state’s ocean resources. In particular, it

identified current and potential problems and conflicts that result from the existing management regime, and targeted priority issues that need to be addressed by the state as it develops a comprehensive state ocean resources management strategy.

Using the Ocean Policy Roundtable's findings as a basis, the FGOC spent the past 18 months studying and discussing what it identified as the most pressing ocean issues facing Florida, and formulating recommendations for addressing them. The Committee addressed issues related to environmental protection, living marine resources, economic development, and public outreach and education. Accordingly, it developed a variety of recommended strategies. For example, one strategy calls for the state to coordinate with military installations and identify Department of Defense operational and training needs over coastal and offshore areas. Another strategy recommends that the state address the impacts of upland development on the marine environment by offering technical information exchange, incentives, and financial assistance to implement agricultural, suburban, and urban Best Management Practices. Yet another strategy suggests that the state establish a consolidated set of marine research priorities.

How does this report address the problem?

This report responds to the need to create a comprehensive ocean resources management strategy by articulating four *Ocean Management Challenges*. Each challenge focuses on one particular aspect of that need: (1) improving information and understanding of marine resources; (2) creating a coordinated and comprehensive management framework; (3) achieving and sustaining diverse marine ecosystems; and, (4) promoting public awareness and stewardship.

For each challenge, the Committee developed a number of *Ocean Management Strategies* that serve as its recommendations about actions the state can take to address the challenge and better manage ocean resources in a way that balances protection with reasonable and responsible use. Further, for each strategy, the Committee identified a number of Specific Actions, which are aimed at implementing the recommended strategies.

How is this report organized?

This report is organized into several sections, each of which delineate an aspect of the Committee's investigation and consensus building regarding ocean management issues.

- Florida's Ocean Assets: describes some of the values of Florida's ocean resources and activities, including living marine resources, recreation and tourism, ports, marine research and education, and national defense operations.
- Desired Outcomes: sets forth the Committee's consensus on desired outcomes for ocean resources management as related to environmental protection, living marine resources, economic development, and public outreach and education.
- Ocean Management Challenges, Strategies, and Actions: includes each ocean management challenge with recommended strategies and specific actions for addressing them.

A number of appendices are also included. The Executive Order establishing the Committee appears as Appendix A, and a list of Committee members can be seen in Appendix B. Appendix C outlines the phases and objectives of the Committee's work plan, and Appendix D provides summaries of each FGOC meeting. Appendix E presents the Committee's consensus procedures. Finally, Appendix F documents the results of the Committee's ranking of what it considers the highest priority strategies.

Public Input

As part of the Committee's process for developing this report, the FGOC hosted four focus group meetings and four public input forums to gather input on its proposed strategies. The strategies and actions that appear in this document reflect the Committee's incorporation of suggestions made by the public. The introductory sections for each challenge summarize the nature of public comments for that particular challenge. In addition, the public participation process is described in further detail in the companion to this document, entitled *Public Input Report*.

A note on "Implementing Agencies"

For each strategy and action listed, the Committee offers suggestions for state agencies that should play a lead or implementing role in executing the strategies and actions. These suggestions are not meant to be an exclusive or all-inclusive list. Rather, the Committee envisions that, where appropriate, suggested lead and implementing agencies would work in full cooperation and partnership with other state and federal agencies, as well as with entities such as universities and colleges, the Florida Sea Grant program, the Florida Institute of Oceanography, nonprofit organizations, marine labs, and museums.

FLORIDA'S OCEAN ASSETS

The ocean is of tremendous value to all Floridians. Its living resources provide us with food for our plates, raw materials for industry, and ingredients for new drugs and pharmaceuticals. It offers incredible recreational activities that include fishing, diving, boating, and beachcombing. Millions of passengers and cargo tons pass through the state's ports, generating billions of dollars

in revenue. The ocean is a source of energy and minerals. It is also important as the location for a number of military activities. Finally, millions visit Florida each year, making tourism one of the state's largest industries. The following describes some of the values of ocean resources. For more detail on the value of Florida's ocean resources, see the Florida Governor's Ocean Committee's Interim Report to the Governor, entitled *Florida's Ocean Challenges*.

Living Marine Resources

Florida's ocean is home to a vast array of living marine resources: fish, shellfish, marine mammals, sea turtles, coral reefs, seagrasses, and mangroves are just some of the sea life that add to the state's rich biological diversity. Florida's living resources provide the state with significant economic, environmental, aesthetic, and cultural benefits.

The most obvious benefits of living marine resources are the **direct use values**, which provide both primary and secondary impacts. For example, not only does a fisherman receive value for his landings, but the bait shop owner, the boat retailer, and the gas station owner all profit. In addition, the state receives revenues in the form of sales taxes and license fees. When one considers recreational fishing by tourists, the economic values also include money spent on hotels, restaurants, and transportation.

Florida's living marine resources also provide significant **indirect use values**, which are those values provided by the natural functioning of an ecosystem. For example, marine ecosystems regulate the Earth's weather, provide oxygen, cycle nutrients, and treat waste. Coral reefs and mangroves protect coastal areas from storms and provide important habitat.

Living marine resources also possess **option values** in that organisms may have undiscovered uses. With advances in technology and scientific understanding, the list of benefits from living marine resources will continue to grow. Finally, there are **non-use values** which capture the spiritual, cultural, and aesthetic qualities of the ocean. While aesthetic values may be unquantifiable, generations of writers, poets, and artists have documented the inspiration provided by the ocean and its resources.

As one example of living marine resource use, fishing brings substantial economic benefits to Florida. Studies show that both commercial and recreational fishing generate significant dollars and jobs. Harvested resources provide seafood, fertilizers and livestock feed, raw materials for industry, and ingredients for medicines.

In 1997, the commercial fishing industry in Florida landed 121 million pounds of fisheries products, valued at \$211 million dockside. Approximately 17,000 commercial fishers are employed in the harvest sector of the industry. In addition, Florida has more seafood processing and wholesaling facilities than any other state except California. Approximately 6,300 people are employed at these facilities. Additional people are employed by seafood distribution firms, retail operations, brokerages, food service businesses, grocery markets, and restaurants. Estimates indicate that the annual economic impact (including direct, indirect, and induced effects) associated with the value-added component of Florida seafood is \$900 million. Annual wages and salaries associated with commercial seafood related jobs amount to \$600 million.

According to a 1993 study, almost three million tourists participated in saltwater recreational fishing in 1991. These anglers spent approximately \$1.3 billion in goods and services. This spending was estimated to support 23,518 retail and service jobs and to generate \$235 million in wages and \$62 million in taxes. Recent data show that angler expenditures are rising. In 1996, expenditures in Florida were approximately \$2.2 billion, and the overall economic impact of recreational fishing to the state was estimated at over \$4 billion.

Recreation and Tourism

Florida's coastal and ocean areas are a favorite location for leisure and recreational activities for residents and visitors alike. The state's beaches hold worldwide appeal as a destination for sun-bathing, swimming, and relaxing. Coral reefs and historic shipwrecks offer adventure to snorkelers and divers. Recreational boaters ply Florida waters, and anglers relish in the bounty of the state's waters. The number of people who partake in these various activities continues to grow. When one considers the infrastructure that accompanies these activities, such as hotels, restaurants, retail shops, marinas, bait shops, dive shops, and fishing piers, the magnitude of the impact of recreation and tourism on Florida's economy becomes apparent.

Tourism

Tourism is a major contributor to the Florida economy. In 1998, the state hosted an estimated 48.7 million visitors, 3.7 percent more than the previous year. Travel-related jobs in just four categories of employment - hotels, eating and drinking establishments, air transportation, and amusements - provided 818,700 jobs in 1998. In a state with no personal income tax, sales taxes collected on \$43 billion worth of tourism and recreation spending in 1998 contributed significantly to governmental revenues. Moreover, 47 of Florida's 67 counties currently levy a tourist development tax. Revenue generated from this tax in 1998 was \$2.6 billion.

Beach-going

In January 1998, the Florida Shore and Beach Preservation Association reported that Florida's beaches host approximately 22.9 million tourists annually. These beach-goers spend \$9.7 billion directly, and the ripple effect on the overall economy is estimated at \$18.9 billion, with 442,124 jobs created, and \$580 million in state sales tax generated.

Recreational diving

Not only is Florida the number one dive destination in the United States, it is one of the five most popular dive destinations in the world. Divers are attracted by clear waters, coral reefs, historic shipwrecks, and nearly three hundred freshwater springs. There are many dive shops and boats that provide goods and services to divers. A survey conducted by the Professional Association of Diving Instructors found that for the last twelve years Florida has led the nation in numbers of diving students who are certified, with 22,486 students certified in 1997.

Recreational boating

Recreational boating, including sailing, power boats, and personal watercraft, is enormously popular in Florida. According to the Florida Department of Environmental Protection's Office of Waterway Management, approximately 809,000 motor craft were registered in Florida in 1998. The Marine Industry Association of Florida estimates that boating contributes over \$10.2 billion per year to the state's economy.

Wildlife watching

Coastal and marine ecosystems draw millions of tourists to watch wildlife, generating significant dollars for Florida. Experts estimate that total expenditures by residents and visitors participating in what has been termed "watchable wildlife recreation" was \$1.7 billion in 1996. As many as 1.8 million people participated in watchable wildlife recreation, taking 8.8 million recreational trips. When indirect and secondary economic impacts are considered, the total expenditures generated by watchable wildlife recreation in 1996 are estimated at \$3.5 billion.

Ports

Florida has fourteen publicly owned deepwater seaports that offer easy access to the state's major waterways, highways, rail lines, and airports. The ports are economically important to the state and local entities that operate them, and are essential to manufacturers who depend on waterborne transportation. In 1998, the custom's value of international trade in goods through Florida reached a record \$69.3 billion, two-thirds of which (\$44.4 billion) was waterborne. During the same period, 52 percent of the 111 million tons of cargo moving through Florida ports was domestic cargo shipped between two states or between Florida and Puerto Rico. According to a recent forecast based on historical trade patterns, the value of international trade in Florida will reach \$146 billion by 2008.

Florida's ports are also of great importance to the cruise industry, which increasingly depends on Florida locations as homeports. The Florida Seaport Transportation and Economic Development Council reports that the Port of Miami, Port Everglades, and Port Canaveral are the world's three busiest cruise ports, with Florida serving almost eighty percent of all North American homeport passenger movements. In 1997, more than 8.3 million cruise ship passengers embarked or disembarked at Florida cruise ports.

National Defense Operations

Twenty-three active military bases and installations are located in the state of Florida, mostly in coastal areas. These installations contribute an annual economic impact of \$20 billion to Florida. In addition, they generate another \$6 billion annually in Defense Department contracts awarded the state. Their presence in the state translates into steady, year-round employment for 80,000 military and 35,000 civilian personnel and produces large indirect and secondary economic impacts for the counties in which they are situated. For example, it is estimated that 150,000 additional jobs result from base installation activity .

The military value of Florida-based installations relates directly to ready access of their aircraft and ships to the air and sea space of Florida's oceans. The Eglin Gulf Test Range, largest test and training area in the continental United States, illustrates the heavy dependence of Florida-based Gulf Coast installations upon the eastern Gulf of Mexico.

The special features of the eastern Gulf of Mexico have long made it a critical military resource. Its immense size, relative freedom from surface shipping activity , and small volume of non-military air traffic produce a unique environment not easily found in other areas of the United States. Each day, Air Force and Navy organizations use this space for training and for testing and evaluating weapons systems for our military forces. Approximately 45,000 missions are conducted annually.

Marine Education and Research Capacity

Not only does Florida have one of the nation's longest coastlines, it also has a large number of marine educational institutions, aquariums, and research facilities. Several public agencies are also dedicated to understanding, protecting, and developing ocean resources. Together these public and private institutions provide an impressive capacity for marine education and research.

Environmental education programs are offered by schools, private organizations, and state agencies. Florida's public and private universities and colleges offer courses on marine topics, and many offer marine-related academic programs and degrees. These institutions support research on topics such as marine biology, coastal geology, coastal and oceanographic engineering, fisheries economics, and maritime history. These research facilities include Florida State University's Marine Laboratory, the University of Florida's Whitney and Marine Laboratories, the University of South Florida's Department of Marine Science, Florida Institute of Oceanography, the University of Miami's Rosenstiel School of Marine and Atmospheric Sciences, Eckerd College's Galbraith Marine Science Laboratory, and Nova Southeastern University's Oceanographic Center. Many of these facilities have labs on the water and operate their own research vessels.

Florida is also home to a number of independent marine laboratories. Mote Marine Laboratory, the Harbor Branch Oceanographic Institution, and the Dolphin Research Center are just a few of the facilities conducting research. These labs are also involved in educational efforts. In addition, entities such as the International Oceanographic Foundation, the Newfound Harbor Marine Institute, and the Panacea Marine Specimen Laboratory offer marine educational programs.

State agencies such as the Florida Department of Environmental Protection and the Fish and Wildlife Conservation Commission and federal agencies such as the National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the U.S. Environmental Protection Agency have offices in various locations throughout Florida. These agencies are engaged in short term and long term research and information transfer that enables them to constantly improve management. In addition, four Florida estuaries are part of the National Estuary Program, and three have been included in the National Estuarine Research Reserve System. These estuaries serve as living laboratories for gathering and studying data on natural coastal systems and human impacts, and provide hands-on educational experiences. Finally, the Florida Keys National Marine Sanctuary protects critical ecological, historical, and aesthetic resources while providing unique educational and research opportunities.

The Florida Sea Grant Program makes a valuable contribution to marine education and research in Florida. Part of the National Sea Grant College Program, the Florida Sea Grant Program administers marine-related grants and educational programs. It also works to foster awareness of the importance of marine resources through activities such as funding research, supporting graduate student work, and holding workshops and seminars.

The Florida Coastal Management Program (FCMP) is the lead agency that coordinates state government activities related to protecting, preserving, and managing Florida's coastal resources. In its role as coordinator, one of its most important activities is to develop and execute programs that raise public awareness about marine issues and foster a sense of stewardship toward those resources.

Together, these public and private institutions provide an impressive capacity for marine education and research in Florida. It is essential that our state continue to support the efforts of these exceptional facilities.

Challenges to Maintaining and Sustaining Florida's Ocean Assets

Florida is blessed with a rich abundance of ocean resources, but there are a number of challenges that make it difficult to maintain and sustain these valuable resources. For example, there is a need for greater scientific understanding and information about marine resources and how they are affected by human activities. There is also a need for better understanding about the symbiotic relationship between the health of our economy and the health of our ocean resources. Finally, citizens must be educated about the importance of Florida's ocean to develop a sense of stewardship toward our coastal and ocean areas.

Florida needs an ocean resource management framework that is coordinated, comprehensive, and sensitive to the state's important relationships with neighboring states and nations. The state also must determine how to achieve and sustain diverse marine ecosystems. Otherwise, many of the living marine resources we value will continue to decline in health and numbers. Finally, significant financial resources are needed to improve our understanding, protection, use, and management of ocean resources. Paramount to the state's ability to address marine resource issues is the fact that existing mechanisms for managing and protecting these resources are often conflicting, contradictory, or inadequate.

DESIRED OUTCOMES

As the FGOC began its work, one of the first decisions it faced was how to organize its consideration of Florida's many ocean issues. Considerable effort was put into developing a structure for the Committee's discussions, and a process was designed for formulating a package of recommendations to the Governor. The discussion of ocean issues was organized into four broad topics: environmental protection, living marine resources, economic development, and public outreach and education.

Before focusing on the issues related to the four topics, the Committee formulated its "Desired Outcomes," which represent its vision for the ideal results of improved ocean resources management. These Desired Outcomes are listed below.

Environmental Protection

- Achieve and sustain a quality in Florida's waters and habitats that safeguards the health of the living resources in our bays, rivers, and oceans, and that ensures that those assets are safe for human use.
- Provide the fiscal investments needed to improve our environmental knowledge and management programs in order to more effectively diagnose, anticipate, and manage the ocean resources that are within the state's jurisdiction or relevant to the state's interests.
- Provide leadership in achieving a coordinated, integrated, and seamless operation of government programs at all levels.

Living Marine Resources

- Achieve diverse, sustainable marine ecosystems capable of supporting multiple uses.
- Review current and potential funds collected from private interests utilizing or impacting ocean resources, and use such funds to support Florida's effort at ocean management.
- Achieve consistent and compatible fishery regulations.
- Develop a coordinated strategy for research and data integration and create a data clearinghouse for easy access for managers and policy makers.

Economic Development

- Balance protection of the ocean's resources, enhancement of the economic well-being of Florida and its citizens, and recreational enjoyment of both residents and visitors.
- Achieve and maintain a sustainable balance of nature and commerce and reverse the decline of our ocean resources.
- Increase the awareness and understanding of recreational practices and technologies that both enhance Florida tourism opportunities and protect ocean resources.
- Define the roles, responsibilities, and authorities of government entities and stakeholders in ocean development to protect ocean resources.

Public Outreach and Education

- Use various communication tools to educate the public about ocean resources and create a sense of stewardship amongst residents and visitors.
- Engage in an effective public outreach campaign to close the gap between popular perceptions of ocean problems and the reality of complex ocean issues.
- Introduce ocean issues and employment opportunities tied to ocean resources as a module in the curriculum for all levels of students in Florida's public school system.
- Create a "virtual" information facility for ocean issues.

OCEAN MANAGEMENT CHALLENGES, STRATEGIES, AND ACTIONS

OVERARCHING RECOMMENDATION

Overview

Florida is blessed with a rich abundance of ocean resources, as well as a wealth of ocean dependent educational and business enterprises. There are, however, a number of challenges that make it difficult to maintain and sustain these ecological and economic assets. For example, there is a need for greater scientific understanding and information about marine resources and how they are affected by human activity. There is also a need to determine how to achieve and sustain the state's diverse marine ecosystems. Better intergovernmental coordination would help support and protect the symbiotic relationship between the health of our economy and the health of our ocean resources. Finally, there is a need to educate citizens about the importance of Florida's ocean to develop a sense of stewardship toward our coastal and ocean areas.

The FGOC has spent 18 months reviewing the many issues the state faces as it attempts to improve the manner in which it currently manages its valuable ocean resources. Therefore, in addition to the strategies and actions outlined in this report, the FGOC makes the following overarching recommendation:

The Florida Governor's Ocean Committee recommends that the state establish short and long term priorities that focus on research, education, conservation, and the responsible use of Florida's ocean assets. *Implementing agencies: Executive Office of the Governor and State University System, Office of the Chancellor.*

CHALLENGE 1: HOW CAN WE IMPROVE OUR INFORMATION ON AND UNDERSTANDING OF OCEAN RESOURCES?

Overview

Scientists and researchers have learned much about Florida's marine resources. However, there remains a great need for both natural and social science data, particularly in deep water and on a systems level. Significant gaps exist in our understanding of the quantity, quality, and value of Florida's ocean resources. Furthermore, although there is widespread recognition that many of the threats facing marine areas are the result of human encroachment upon the resources, there is still a need for significant improvement of our awareness of the impacts of human actions and influences upon the ocean.

There is also a need to enhance the development and sharing of information on economic development and employment opportunities for industries using marine resources, not only across the state, but across the region. Florida is connected physically, chemically, biologically, economically, and socially to the Caribbean; however, there is no baseline of information on existing ocean conditions, and no clearinghouse for ocean resource data integration across the Caribbean area.

Finally, while Florida's capacity for conducting marine research is impressive, there is no comprehensive repository or guide to coastal and marine research data, and no consistent forum for scientists to integrate their knowledge. The FGOC recommends the following strategies and key actions to improve, understand, and share information on our valuable ocean resources.

Public Input

For Challenge 1, one comment heard repeatedly was that proposed strategies and actions should leverage existing capabilities and seek to avoid duplication of effort. Because there are many entities involved in oceanographic and coastal research in Florida, both public and private, the point was made that ocean management efforts should emphasize the connectivity of these entities' missions and work to facilitate the performance of those missions. Members of the public reminded the Committee that political and popular support will be critical to successful implementation of Challenge 1 strategies; a sophisticated education component can help garner that support. Other participants voiced concern regarding the broad scope of issues being addressed, remarking that the extreme diversity of issues will make manageable, cross-referenced

monitoring and data gathering programs difficult to implement. While such monitoring may be difficult to implement, there were members of the public who felt that a broad based organization with comprehensive interests could help to achieve success in this area.

Public comment also brought new ideas to the Committee's attention. To encourage data exchange and integration, participants suggested creating a mechanism for distributing data and information to libraries and other repositories. The public also identified a lack of strategies encouraging the use of new technologies to expand and disseminate research, such as remote sensing and the use of submersibles.

Strategy 1.1: Implement a long-term, comprehensive inventory, monitoring, and assessment program. *Lead agency: Department of Environmental Protection.*

Specific Actions

- a) Develop and seek funding to implement a long-term, comprehensive, monitoring, assessment, and inventory program of ocean resources adjacent to Florida. For example, develop comprehensive water quality monitoring programs. *Implementing agencies: Department of Environmental Protection, Department of Community Affairs, and Fish and Wildlife Conservation Commission.*
- b) Expand the Florida Coastal Management Program's Florida Assessment of Coastal Trends (FACT) and the Florida State of the Coast Report to include information generated on the near shore and marine environmental indicators. *Implementing agency: Department of Community Affairs.*
- c) Expand the Florida Marine Research Institute's Coastal and Marine Resource Assessment Program (CAMRA) and the Marine Resources Geographic Information System (MRGIS) to include offshore ocean information. *Implementing agency: Fish and Wildlife Conservation Commission.*
- d) Expand research and build inventories defining the comprehensive habitat needs for important marine organisms as a function of life history stage and habitat availability. Identify critical bottlenecks and trophic linkages so essential habitats may be preserved. Include habitat mapping as part of this effort. *Implementing agency: Fish and Wildlife Conservation Commission.*
- e) Evaluate the adequacy of current water quality standards in beach waters. *Implementing agencies: Department of Environmental Protection (research) and Department of Health (standards).*
- f) Develop and provide incentives to use Best Management Practices (BMPs) for currently unregulated sources of nonpoint source pollution. *Implementing agencies: Department of Environmental Protection, Water Management Districts, and Department of Agriculture and Consumer Services.*
- g) Support volunteer participation of commercial and recreational marine resource users in research efforts. Identify funding sources for implementing sustained volunteer water quality monitoring. *Implementing agencies: Department of Environmental Protection, Department of Health, and Fish and Wildlife Conservation Commission.*
- h) Improve real-time monitoring of population growth and mortality rates in order to generate more accurate stock assessments. *Implementing agency: Fish and Wildlife Conservation Commission.*

i) Develop and integrate multi-state and international research efforts examining topics such as recruitment and oceanographic patterns and processes. Advocate beneficial technology transfers at national and international levels. *Implementing agencies: Fish and Wildlife Conservation Commission, Department of Environmental Protection, and Florida Institute of Oceanography.*

j) Identify information gaps and support research on aquaculture technology and impacts (exotics, pathogens, habitat loss) on coastal and ocean systems. *Implementing agencies: Department of Agriculture and Consumer Services and Department of Environmental Protection.*

k) Encourage partnerships for the development of shared use facilities (e.g., new coastal oceanographic ship and renovated marine laboratories) and new technologies (e.g., satellite data, geographic information systems, submersibles, aircraft sensors, and mobile or stationary buoy systems) that allow the cost-effective collection of biological information over large areas. Take advantage of the significant scientific and technical resources that the NASA/Kennedy Space Center and the U.S. Department of Defense has to offer. *Implementing agency: Department of Environmental Protection and Florida Institute of Oceanography.*

l) Utilize existing data compiled by the Fisheries Management Councils, and conduct further data gathering and analysis needed to evaluate potential protected area management regimes. Work jointly with the Councils, nonprofit organizations, and commercial and recreational interests on further research and implementation efforts. *Implementing agency: Fish and Wildlife Conservation Commission.*

Strategy 1.2: Identify research and management needs for marine ecosystem management.

Lead agency: Department of Environmental Protection.

Specific Actions

a) Work with the proposed Florida Ocean Council to identify key issues and develop coordinated and consensus-based recommendations on research priorities, monitoring, and information needs. *Implementing agency: Department of Community Affairs.*

b) Support further research on the present day and historical effects of human land-based activities, including ecosystem restoration, on ocean health. *Implementing agency: Department of Environmental Protection.*

c) Support the development and submission to the Florida Legislature of a comprehensive list of coastal and marine research priorities, such as the effort under development by the Florida Marine Lab Directors of the Southern Association of Marine Labs. *Implementing agency: Department of Community Affairs.*

d) Use innovative modeling techniques that allow researchers and managers to assess living marine resource population changes and interactions at an ecosystem scale. *Implementing agencies: Fish and Wildlife Conservation Committee, Department of Environmental Protection, and State University System.*

e) Identify potential environmental, social, and economic impacts and benefits of proposed policies and management actions. *Implementing agencies: Fish and Wildlife Conservation Committee, Department of Environmental Protection, and Department of Community Affairs.*

f) Support research on the impacts of artificial reefs on living marine resources, including research to identify stock and habitat enhancement values. *Implementing agency: Department of Environmental Protection and Fish and Wildlife Conservation Commission.*

g) Develop policies to preserve both the consumptive and non-consumptive economic values of marine resources. *Implementing agency: Fish and Wildlife Conservation Commission.*

h) *Develop a funding mechanism for priority scientific, management, and educational activities to understand and restore marine biological diversity. *Implementing agency: Executive Office of the Governor.*

Strategy 1.3: Develop a plan for data management that encourages integration and exchange. *Lead agency: Department of Environmental Protection.*

Specific Actions

a) Establish an easily accessible data clearinghouse for sharing natural and social science data related to marine resources. The clearinghouse should incorporate a distribution mechanism that reaches libraries and other repositories. Encourage adherence to Federal Geographic Data Committee (FGDC) standards. *Implementing agencies: Department of Environmental Protection and State University System.*

b) Develop incentives to encourage data sharing by both public and private entities. *Implementing agencies: Department of Environmental Protection, Fish and Wildlife Conservation Commission, and State University System.*

**legislative action needed.*

c) Convene cross-disciplinary forums for information exchange and future problem-solving regarding ocean resources. *Implementing agencies: Department of Environmental Protection, Florida Institute of Oceanography, and Florida Sea Grant.*

d) Conduct economic research to define the quantitative and qualitative benefits of Florida's ocean resources. Use the State University System as a resource. Integrate economic data into decision-making. *Implementing agency: Department of Community Affairs.*

e) Share economic development and environmental protection information with partners in federal agencies, neighboring states, Mexico, the Caribbean and the Americas. *Implementing agencies: Department of Environmental Protection and Office of Tourism, Trade, and Economic Development.*

CHALLENGE 2: HOW CAN WE CREATE AN IMPROVED OCEAN MANAGEMENT FRAMEWORK THAT IS MORE COORDINATED AND COMPREHENSIVE?

Overview

Florida's appealing climate and abundant natural resources have always attracted newcomers, but fifty years ago growth became astronomical as trains, cars, and airplanes made the state more accessible, and as air conditioning made it more hospitable. Today, Florida is populated by approximately 15 million people, with 78 percent of them living in coastal counties. Growth is expected to escalate, with projections showing a population of 17 million people by 2010. In addition, tourism is a cornerstone of the state's economy, with more visitors arriving each year. As population figures climb, the impacts of both tourism and increased land development threaten the very qualities that attract people to the state.

Decisions regarding the uses of the state's land and fresh water resources directly affect the health of the near shore and ocean environments. Therefore, it is imperative that the management of natural resources and human uses be integrated across terrestrial, freshwater, estuarine, and marine environments. In addition, there is a great need for the state to develop and coordinate a comprehensive policy regarding ocean based activities, such as oil and gas exploration and production, mineral extraction, and recreational opportunities. Other economic development activities, such as those involving navigation, boating, beach use and development, aquaculture, artificial reef development, recreational and commercial fishing, tourism, mineral development, military activities, and the space industry all have the potential to profoundly affect marine resources.

For all of these activities, coordination among local, state, and federal agencies, as well as with other states and nations in the region, is needed to ensure that Florida's future economic development is maintained while minimizing the impact of development on ocean and coastal natural systems.

Finally, fisheries management is challenged by jurisdictional conflicts and issues that impede the effective management of living marine resources. To effectively address the many conflicts facing Florida fisheries management, the state must continue to work to ensure that representation on policy-making boards at the state and federal level is well-balanced.

Public Input

Individuals who attended the focus groups and public input forums urged the Committee to augment ideas presented in Challenge 2. Comments reflected that partnerships are important, and the point was made several times that partnerships must include government at all levels, and also the private sector, including industry and universities, to be effective. In particular, collaboration was called for to address issues surrounding non-indigenous species introduction, large vessel anchorages, dredging, offshore sand resources, and protection of submerged cultural resources. Citizens also expressed concern about Florida's representation on the federal fisheries management councils.

In addition, a number of comments suggested that the FGOC's position regarding Florida's energy policy should be clarified, and that an important part of the policy discussion should be to evaluate the relative safety of different modes of energy transportation. There was also concern about issues related to wastewater and stormwater treatment and management, including questions about addressing runoff issues and nonpoint source pollution.

Several individuals stressed that Florida needs to balance its desire to pursue and support commerce and international trade with environmental protection concerns. Finally, workshop participants said the state should look for international strategies for commerce and trade issues that go beyond developing a plan specifically aimed at the Caribbean.

Strategy 2.1: Forge partnerships within and between the public and private sectors for effective decision-making regarding ocean management. *Lead agency: Executive Office of the Governor.*

Specific Actions

- a) Provide technical and financial assistance to ensure full participation by local government in marine resource planning. Include local government representation on bodies such as the Boating Advisory Council. *Implementing agencies: Department of Environmental Protection, Executive Office of the Governor and Department of Community Affairs.*
- b) Provide increased support, financial and otherwise, to place-based or community oriented marine and estuarine education, research, and management programs (e.g., Florida's National Estuary Programs and the Florida Keys National Marine Sanctuary). *Implementing agencies: Department of Community Affairs and Department of Environmental Protection.*
- c) Develop interstate and international management partnerships on pollution control, marine reserves, and ocean dumping regulations, contacting international groups such as the Caribbean Regional Response Team and the Caribbean Fisheries Management Council. Support international trade and/or shipping protocols which prevent pollution and non-indigenous species introduction. *Implementing agency: Executive Office of the Governor.*
- d) Establish a coordination process with military installations, and identify Department of Defense historical, current, and projected operational requirements and training needs over coastal and offshore areas. *Implementing agency: Department of Community Affairs.*
- e) Collaborate with appropriate federal and international governmental entities and industry to establish a plan for managing large vessel anchorages through joint governmental/industry collaboration. *Implementing agencies: Department of Environmental Protection, Department of Community Affairs, and Department of Business and Professional Regulation.*

f) Coordinate with the federal government and industry to balance issues and interests regarding energy policy and needs, and the state's role and interest in protecting its coastal and ocean, resources. *Implementing agencies: Department of Community Affairs and Executive Office of the Governor.*

g) Coordinate on port and shipping issues with the Florida Seaport and Transportation Economic Development Council and the U.S. Army Corps of Engineers; *Implementing agencies: Office of Tourism, Trade, and Economic Development, Department of Community Affairs, Department of Environmental Protection, Department of Transportation, and Department of Business and Professional Regulation.*

h) Improve state and federal agency coordination by expanding the intergovernmental clearinghouse process and procedures. *Implementing agency: Department of Community Affairs.*

i) Improve coordination between state and federal agencies through dissemination of the annual Florida Aquaculture Plan. *Implementing agency: Department of Agriculture and Consumer Affairs.*

j) Protect submerged cultural and archeological resources through partnerships within or between agencies, local communities, and nonprofit organizations. *Implementing agency: Department of State.*

Strategy 2.2: Coordinate multi-jurisdictional decision-making and help local governments implement resource management programs such as land use planning and pollution control. *Lead agency: Department of Community Affairs.*

Specific Actions

a) Coordinate sewage treatment and discharge policies, guidelines, and incentives to minimize impacts to coastal and marine waters (with special attention to shellfish waters, bathing beaches, and coral reefs). *Implementing agencies: Department of Environmental Protection and Department of Health.*

b) Support efforts to address the impacts of upland development on the marine environment through technical information exchange, incentives, and financial assistance to implement agricultural, suburban, and urban BMPs and to direct growth away from water recharge areas and sensitive natural systems. *Implementing agencies: Department of Community Affairs, Department of Environmental Protection, Department of Agriculture and Consumer Services, and Water Management Districts.*

c) * Support local government efforts to upgrade older sewage treatment systems, including on-site systems, and encourage intermediate to advanced wastewater treatment by creating a loan pool to assist homeowners and businesses in replacing ineffective systems. Encourage the use of best-available-technology systems and water re-use. *Implementing agencies: Department of Environmental Protection, Department of Community Affairs, and Department of Health.*

d) Ensure that improvements in wastewater and storm water treatment systems are included in long term redevelopment plans for high hazard areas. *Implementing agency: Department of Community Affairs.*

e) Develop incentives for encouraging redevelopment patterns in coastal areas that restore and protect essential habitats that were adversely affected by previous development. *Implementing agency: Department of Community Affairs.*

f) *Develop new financial incentives and assistance programs to address inadequate wastewater and storm water treatment. Allow all communities in Florida to take advantage of these programs. *Implementing agencies: Department of Environmental Protection and Water Management Districts.*

g) Improve targeting of land acquisition efforts to protect critical or essential habitat and sensitive environmental lands, ensuring that environmental benefits accrue at the watershed and ecosystem level. *Implementing agencies: Department of Community Affairs and Department of Environmental Protection.*

h) Encourage local governments to identify new revenue sources that may be used to enhance protection of marine resources. *Implementing agencies: Department of Community Affairs, Department of Environmental Protection, and Fish and Wildlife Conservation Commission.*

Strategy 2.3: Manage ocean resources based on the best scientific understanding of ecosystem functioning and dynamics. *Lead agency: Department of Environmental Protection.*

Specific Actions

a) Evaluate existing ecosystem management strategies leading to recommended ecosystem-based management of Florida's coastal and ocean resources. *Implementing agency: Department of Community Affairs, Department of Environmental Protection, and Fish and Wildlife Conservation Commission, Florida Marine Research Institute.*

b) Support the marine ecosystem characterization and management approach being developed by FWCC's Florida Marine Research Institute, which incorporates social, ecological, and economic characteristics in its analysis. *Implementing agency: Department of Community Affairs.*

*Legislative action needed.

c) Adopt a long term ecosystem management approach that considers environmental, economic, and social impacts and goals. Management should take a precautionary, risk-averse approach. *Implementing agency: Department of Environmental Protection.*

d) Minimize and mitigate current and potential use conflicts in the marine environment through the use of integrated planning, conflict resolution, designated-use areas, and other tools. *Implementing agency: Department of Community Affairs.*

e) Encourage the preservation of natural processes and incorporate storm protection and water quality monitoring concerns in the state beach management plan. *Implementing agencies: Department of Environmental Protection and Department of Health.*

f) *Evaluate the need for additional regulatory authority , and if appropriate, develop enforceable policies for the Department of Environmental Protection and the Water Management Districts for non point source pollution to ensure compliance in the event Best Management Practices fail or are inadequate in reducing or eliminating polluted runoff. *Implementing agencies: Department of Community Affairs, Department of Environmental Protection, Department of Agriculture and Consumer Services, and Water Management Districts.*

g) By Executive Order, direct all state agencies to: 1) identify their actions that may affect coral reef ecosystems; 2) utilize their programs and authorities to protect and enhance the conditions of such ecosystems; and 3) ensure, to the extent permitted by law, that any actions they authorize, fund, or carry out will not degrade the conditions of such ecosystems. *Implementing agency: Executive Office of the Governor.*

h) Promote responsible stock enhancement as a viable technology for restoring natural fisheries stocks where appropriate. *Implementing agency: Fish and Wildlife Conservation Commission.*

i) Develop a program/initiative to improve water quality in existing residential and commercial canal systems to include monitoring, and upgrading local onsite wastewater and stormwater treatment strategies. *Implementing agencies: Department of Environmental Protection, Department of Transportation, and the Water Management Districts.*

Strategy 2.4: Seek more equitable representation on the federal fishery management councils. *Lead agency: Executive Office of the Governor.*

Specific Actions

a) Seek additional Florida obligatory seats on the South Atlantic and Gulf of Mexico Fisheries Management Councils to ensure that Florida's representation on these councils is proportional to the state's population and geographic area within the regions. *Implementing agency: Executive Office of the Governor.*

* *Legislative action needed.*

b) Utilize the authority of the Fish and Wildlife Conservation Commission to develop consistent regulations within the Florida Keys National Marine Sanctuary (e.g., implement the “Fishery Protocol”). *Implementing agency: Fish and Wildlife Conservation Commission.*

c) Explore Congressional delegation of fisheries management authority in the adjacent Exclusive Economic Zone (EEZ) to the state. *Implementing agency: Executive Office of the Governor.*

Strategy 2.5: Support efforts that enhance commerce and international trade while sustaining coastal and marine resources. *Lead agency: Office of Tourism, Trade, and Economic Development.*

Specific Actions

a) Support expansion of or improvements to the state’s fourteen deepwater seaports while protecting and conserving coastal and marine resources. *Implementing agencies: Office of Tourism, Trade, and Economic Development, Department of Transportation, and Department of Environmental Protection and Florida Seaport and Transportation Economic Development Council.*

b) Seek and secure adequate funding from a variety of sources for maintaining state and local navigation channels as a key public safety and economic development strategy. The National Dredge Management Plan may provide guidance. *Implementing agencies: Department of Transportation, Florida Seaport and Transportation Economic Development Council, and Department of Environmental Protection.*

c) Pursue a program through which Department of Defense technologies with potential for commercial applications are transferred to industries in the state involved in both economic development and marine resource protection. *Implementing agency: Office of Tourism, Trade, and Economic Development.*

d) Identify sustainable use levels and cumulative impacts for particular coastal and ocean economic development activities (e.g., boater access, port dredging, beach maintenance, diving, desalination, and new development in coastal areas). *Implementing agency: Department of Environmental Protection.*

e) Work with state and federal entities to initiate a pilot program to monitor and document the biological content of ship ballast releases into Florida waters. *Implementing agency: Department of Environmental Protection.*

f) Develop international ocean management programs that recognize the interdependency between Florida and its international neighbors on economic issues such as tourism, trade, pollution, and ocean resources. *Implementing agencies: Office of Tourism, Trade, and Economic Development and Department of State.*

g) Support marine-related industries such as tourism, boating, and fishing while protecting and conserving coastal and marine resources. *Implementing agencies: Office of Tourism, Trade, and Economic Development, Department of Environmental Protection, and Fish and Wildlife Conservation Commission.*

CHALLENGE 3: HOW CAN WE ACHIEVE AND SUSTAIN DIVERSE MARINE ECOSYSTEMS THAT ARE CAPABLE OF SUPPORTING MULTIPLE USES ?

Overview

To ensure the continued health and vitality of Florida's wealth of ocean resources, the state must work to achieve and sustain diverse marine ecosystems that are capable of supporting multiple uses. Currently, the pressures of growing development continue to cause loss and degradation of important habitat such as wetlands, estuaries, and mangrove forests. In addition, the balance of some delicate and complicated marine ecosystems is threatened by overfishing and bycatch. Marine mammals, sea turtles, and seabirds are threatened by increased pollution and disruption of the ecosystems that provide their habitat. The FGOC recommends that the state work to improve existing tools to address these threats to living marine resources and the marine ecosystem.

Public Input

People who attended the public input forums and focus groups pointed out some important issues they felt should be covered in Challenge 3. Individuals asked the Committee to add ideas about addressing beach erosion, controlling exotic species' introductions, and promoting public safety on the water. Citizens also suggested augmenting or altering strategies to increase their impact and effectiveness. For example, although there were draft strategies about improving water quality standards, public input suggested the need for sediment and bio-criteria in addition to or in place of numeric standards. Citizens also raised the issues of freshwater inflows and desalination impacts. And while the draft strategies spoke of better enforcement for marine laws, public forum participants pointed out the need for improved enforcement of land-based laws that control upland pollution and habitat destruction. Finally, the public expressed concern that enforcement might weaken under the new Fish and Wildlife Conservation Commission; citizens urged the Committee to advocate a strong marine patrol force that can respond anywhere and anytime.

As would be expected, citizens expressed opposing opinions about several issues. For example, while some felt the recommendations surrounding marine protected areas should call for immediate implementation of protected area regimes, others would like to see more study before use is restricted in any area. Similarly, there were differing views on how to raise money for law enforcement and on how aquaculture ought to be regulated. These differences among Florida's citizens highlight the need for further discussion. The Committee sought the common ground on these issues as it completed this report, but more communication with the public will be essential as strategies are implemented.

Strategy 3.1: Determine the adequacy of and, if appropriate, develop refinements to current water quality standards. Numeric standards, bio-criteria, and sediment criteria should be considered when developing water quality standards. *Lead agency: Department of Environmental Protection.*

Specific Actions

- a) Evaluate the adequacy of current water quality standards for all Florida estuaries and marine waters. *Implementing agencies: Department of Environmental Protection and Water Management Districts.*
- b) Evaluate the adequacy of, and if appropriate, refine water quality standards for the coral reef ecosystem as required by the Florida Keys National Marine Sanctuary and Protection Act. *Implementing agency: Department of Environmental Protection.*
- c) Develop appropriate salinity criteria and water quality standards for nutrients, particularly phosphorus and nitrogen, in all estuarine and marine waters. *Implementing agency: Department of Environmental Protection.*
- d) Identify impacts from salinity changes that are not adequately addressed under an existing discharge permit system. *Implementing agency: Department of Environmental Protection and Water Management Districts.*
- e) Evaluate the need for treating coastal and ocean outfalls and deep injection wells (2500 ft.) to advanced wastewater treatment standards. *Implementing agency: Department of Environmental Protection.*
- f) *Require secondary to advanced wastewater treatment** for discharges to watersheds with excessive nutrients and for all new development adjacent to coastal waters. *Implementing agencies: Department of Health and Department of Environmental Protection.*
- g) Evaluate adequacy of water quality standards and their implementation in canals that connect to estuarine and marine waters. *Implementing agency: Department of Environmental Protection*

* * “Advanced wastewater treatment” is defined by EPA as any treatment of sewage that goes beyond the secondary or biological water treatment stage and includes the removal of nutrients such as phosphorus and nitrogen, as well as a high percentage of suspended solids.

“Secondary wastewater treatment” is the second step in most publicly owned waste treatment systems, in which bacteria consume the organic parts of waste. The treatment removes floating and settleable solids and about 90 percent of the oxygen-demanding substances and suspended solids.

**Legislative action needed.*

Strategy 3.2: Explore the impacts and benefits of marine protected area management regimes such as limited-use areas, seasonal harvests, and no-take/no-fishing marine reserves on ocean resources and resource users. *Lead agency: Fish and Wildlife Conservation Commission.*

Specific Actions

a) Compare the environmental, economic, and social impacts and benefits of limited-use, seasonal harvest, and no-take regimes. *Implementing agencies: Fish and Wildlife Conservation Commission and Department of Environmental Protection.*

b) Experiment with various protective management strategies. Spawning seasons and aggregations should be considered when designing protected sites. *Implementing agencies: Department of Environmental Protection and Fish and Wildlife Conservation Commission.*

c) Based on research, develop criteria for marine protected areas. Following the precautionary principle, the state should not wait for perfect information before implementing protected area management techniques. It is essential that stakeholder groups be included in the research, development, and implementation of protected management techniques. *Implementing agencies: Department of Environmental Protection and Fish and Wildlife Conservation Commission.*

Strategy 3.3: Encourage and apply innovative techniques for habitat protection, restoration, and enhancement. *Lead agency: Department of Environmental Protection.*

Specific Actions

a) Evaluate the effectiveness of current and proposed habitat restoration and enhancement techniques and support those techniques found to be effective. *Implementing agencies: Department of Environmental Protection and Water Management Districts.*

b) Preserve beach habitats for biological, recreational, and hazard mitigation benefits. Review current beach management standards for consistency statewide. *Implementing agencies: Department of Environmental Protection and Department of Community Affairs.*

c) Examine and refine state policies regarding dredging and the use of offshore sand sources in nourishment projects. Study the environmental impacts to benthic habitats and beach habitats. *Implementing agency: Department of Environmental Protection.*

d) Support efforts to protect critical habitats such as wetlands, seagrass, and sargassum. *Implementing agencies: Department of Environmental Protection and Fish and Wildlife Conservation Commission.*

e) Preserve nursery habitat by developing additional management tools, including land acquisition. *Implementing agencies: Department of Environmental Protection and Department of Community Affairs.*

f) Develop policies to prevent the introduction of non-indigenous species to Florida's marine environments, including controlling introductions from ballast water. Develop a state emergency action plan to address non-indigenous introductions; this plan should be consistent with federal efforts. *Implementing agencies: Department of Environmental Protection and Fish and Wildlife Conservation Commission.*

g) Explore science-based implementation and management of artificial reefs for the enhancement of habitat, fisheries, and recreational diving. *Implementing agencies: Fish and Wildlife Conservation Commission and Department of Environmental Protection.*

h) Improve planning and coordination among federal, state, local governments, and private individuals on artificial reef development, management, and monitoring. *Implementing agencies: Department of Community Affairs, Fish and Wildlife Conservation Commission, and Department of Environmental Protection.*

i) Identify goals and objectives for reef placement. *Implementing agency: Fish and Wildlife Conservation Commission.*

j) Develop a statewide policy regarding personal watercraft (PWCs) and other vessel use in environmentally sensitive areas and areas with high vessel accident rates. *Implementing agencies: Fish and Wildlife Conservation Commission and Department of Environmental Protection.*

k) Support federal legislation that provides new funding for improved management and permanent protection of sensitive marine and coastal areas. *Implementing agency: Executive Office of the Governor.*

Strategy 3.4: Work for more effective management of highly migratory pelagic species, marine mammals, sea turtles, and seabirds. *Lead agency: Fish and Wildlife Conservation Commission.*

Specific Actions

a) Expand state influence in the federal and international management institutions which manage offshore fisheries, marine mammals, sea turtles, and seabirds. *Implementing agency: Fish and Wildlife Conservation Commission.*

b) Protect critical habitat for these species. *Implementing agency: Fish and Wildlife Conservation Commission.*

c) Promote greater protection of highly migratory pelagic species and seabirds. *Implementing agency: Fish and Wildlife Conservation Commission.*

Strategy 3.5: Support aquaculture by implementing Best Management Practices (BMPs) while protecting the environment. *Lead agency: Department of Agriculture and Consumer Services.*

Specific Actions

a) Encourage a consistent policy for aquaculture beyond Florida waters by coordinating with other Southeastern states and the federal government. *Implementing agencies: Department of Agriculture and Consumer Services, Department of Environmental Protection, and Department of Community Affairs.*

b) Coordinate with the National Marine Fisheries Service and the United States Fish and Wildlife Service to produce a consistent policy regarding the aquaculture of protected species. *Implementing agencies: Department of Agriculture and Consumer Services and Department of Community Affairs.*

c) Promote research into and development of high value marine finfish, marine ornamentals, and sturgeon aquaculture. *Implementing agency: Department of Agriculture and Consumer Services and Florida Sea Grant.*

Strategy 3.6: Enhance marine law education and enforcement. *Lead agency: Fish and Wildlife Conservation Commission.*

Specific Actions

a) Increase coordination among federal, state, and local enforcement entities. *Implementing agency: Fish and Wildlife Conservation Commission.*

b) Develop innovative enforcement and prevention tools. *Implementing agency: Fish and Wildlife Conservation Commission.*

c) *Seek federal and state funding for additional marine enforcement capacity. Use funding to hire and train more enforcement officers, to increase educational initiatives, and to enhance administrative support where needed. *Implementing agency: Fish and Wildlife Conservation Commission.*

**Legislative action needed.*

d) Enhance education of marine resource users, local law enforcement officers, and members of the bar and bench about marine regulations, boating safety , and ecosystem functionings in order to reduce and prevent violations. *Implementing agencies: Fish and Wildlife Conservation Commission and Department of Community Affairs.*

e) Enhance enforcement of land-based laws that impact marine resources. Educate homeowners, developers, and others about pollution and development regulations and about the impacts of land-based activities upon the marine environment. *Implementing agencies: Department of Environmental Protection and Department of Community Affairs.*

f) Explore the potential use and enhancement of volunteer education and enforcement programs. *Implementing agency: Fish and Wildlife Conservation Commission.*

g) Ensure funding for adequate enforcement of boater safety laws and marine rescue operations through license or user fees. *Implementing agency: Fish and Wildlife Conservation Commission.*

h) *Allocate revenues derived from environmental violations, including behaviors such as littering and dune destruction, to coastal and marine education and restoration. *Implementing agencies: Fish and Wildlife Conservation Commission and Department of Environmental Protection.*

** Legislative action needed.*

CHALLENGE 4: HOW CAN WE RAISE AWARENESS, PROMOTE EDUCATION, AND FOSTER STEWARDSHIP OF THE OCEAN?

Overview

Education regarding the importance of Florida's ocean resources is essential to effectively manage and sustain those resources, and to prevent careless disregard for their conservation. Coastal and marine resources are important to the future health of Florida's citizens, to the quality of life that the state offers, and to the continued economic vitality of the state and the region. Therefore, in addition to improving our understanding and information about ocean resources, the state must also take care to effectively disseminate knowledge and information about ocean resources to the public and to principal decision makers throughout the public and private sectors.

Although the situation is improving, there are still broad gaps between the public's perceptions of key environmental issues and the scientific or professional judgement as to the significance of particular issues. Reaching the public with accurate information about the importance of ocean resources and the issues they face is the key to creating a stewardship ethic that can help preserve Florida's valuable marine resources. The FGOC recommends that the state pursue the following strategies to enhance understanding and stewardship of Florida's valuable ocean resources.

Public Input

There was a general consensus among those who commented on Challenge 4 that it contains strategies and actions that are the easiest and the least expensive to implement. These participants stressed ideas about linking to established resources. These linkages include: (1) partnerships with schools, businesses, service groups, agencies, and non profits to accomplish the strategies in the plan, (2) partnerships with lobbying entities to help carry an ocean message to the legislature, (3) partnerships with marine employers to create work placement assistance, and (4) partnerships with the media to get the ocean message to the public.

Members of the public were particularly concerned about education. Commentors suggested providing opportunities not only for students, but also for teachers. Other participants emphasized hands-on experiences like Seacamp, a private, nonprofit organization dedicated to marine science education, to enhance the students understanding of ocean issues. Individuals also suggested showcasing programs like the Broward County Marine Magnet Program, which provides elementary and high school aged students with an educational curriculum that emphasizes an understanding and appreciation of the environment, the conservation of our coastal waterways, ecosystems, and habitats, and their importance to Florida. Finally, support was offered for educating teachers using all expense paid summer programs.

Many individuals supported using the marine industry to implement this plan, and suggested the industry would welcome the opportunity to get involved. The opinion was expressed that the marine industry has finances to help with marketing the ocean as a resource that needs protecting. Further, it was believed that the industry is uniquely positioned to assist with the education of their customers and peers.

Commentors believed that educating Floridians and visitors about the relationship of the ocean to their daily lives is key to increasing public support for our oceans. Members of the public expressed particular concern about educating homeowners. Individuals also shared comments regarding the need to recognize cultural aspects in the planned outreach and education efforts, specifically recommending that any actions implemented under the plan must be presented in a culturally sensitive manner.

Strategy 4.1: Coordinate efforts to communicate the economic, environmental, and cultural importance of Florida’s ocean resources. *Lead agency: Department of Community Affairs.*

Specific actions

- a) Develop an ocean outreach program that addresses various issues and reaches various audiences, including education and outreach providers. Start with a pilot program to communicate the economic, environmental, and cultural importance of Florida’s ocean resources. *Implementing agencies: Department of Community Affairs and Florida Sea Grant.*
- b) Develop a comprehensive ocean outreach effort that offers features that both public and private groups can use (e.g., common logo, calendar of ocean-related events.) Evaluate existing efforts and solicit input from target audiences. *Implementing agencies: Department of Community Affairs and Florida Sea Grant.*
- c) Cooperate with private, nonprofit, nonpartisan associations of various ocean related interests to promote awareness and understanding of the oceans as a resource and also to attract private capital to promote public outreach on ocean issues. *Implementing agencies: Department of Community Affairs, Department of Agriculture and Consumer Services, and Florida Sea Grant.*
- d) Develop regional campaigns to help citizens understand their geographic area and its relation to larger ocean issues, include raising awareness of land-based and ocean-based pollution impacts. *Implementing agencies: Department of Community Affairs and Florida Sea Grant.*
- e) Educate state and local decision makers and the media on important ocean issues, emphasizing resource status, state management efforts, and Florida’s economic reliance on the ocean. *Implementing agencies: Department of Community Affairs, Department of Agriculture and Consumer Services, and Florida Sea Grant.*
- f) Ensure that the state’s tourism industry encourages citizen stewardship. Work with VISIT Florida to distribute ocean related information about marine systems and anthropogenic impacts to tour companies and operators, lodging establishments, etc. *Implementing agencies : Department of Community Affairs and Office of Tourism, Trade, and Economic Development.*

g) Develop activity-specific education tools for residents and tourists who engage in coastal or ocean recreation and distribute them through organizations, agencies, and industries that support those activities. *Implementing agencies: Department of Community Affairs and Office of Tourism, Trade, and Economic Development.*

h) Encourage the Department of Defense to educate state and local decision makers regarding national defense activities and their reliance upon and impacts on ocean resources. *Implementing agency: Executive Office of the Governor.*

i) Develop and implement program evaluation techniques for ocean-related outreach and education efforts. *Implementing agencies: Department of Environmental Protection and Department of Agriculture and Consumer Services.*

j) Establish an education advisory committee to include educators, outreach organizations, as well as school administrative personnel. *Implementing agencies: Department of Community Affairs and Department of Education, And Department of Agriculture and Consumer Services.*

k) Utilize the Internet and a dedicated web site to coordinate information on ocean resource issues. *Implementing agencies: Department of Community Affairs and Department of Education.*

l) Develop a plan to work with federal agencies and national nonprofit organizations that promote ocean issues to ensure that Florida is included in outreach planning and financing. *Implementing agency: Department of Community Affairs.*

Strategy 4.2: Support student and general public participation in the protection and conservation of ocean resources. *Lead agency: Department of Environmental Protection.*

Specific actions

a) Support volunteer programs that involve students and the general public in ocean research and conservation activities. Simplify the volunteer process within public agencies so that it is easy for individuals to participate, and so that agencies can take advantage of volunteers without worrying about complicated liability issues. *Implementing agencies: Department of Environmental Protection and Fish and Wildlife Conservation Commission.*

b) Support planned rehabilitation of Florida's waterfronts (e.g., the Waterfronts Florida Program) to reconnect the citizenry with coastal areas and to enhance the public's understanding of coastal issues. *Implementing agency: Department of Community Affairs.*

c) Encourage partnerships among private and public sector businesses, agencies, nonprofit organizations, marine labs, and aquariums to develop classes, field trips, and retreats on ocean issues. *Implementing agencies: Department of Environmental Protection and Fish and Wildlife Conservation Commission.*

d) Help marine industries, environmental protection groups, and professional organizations develop traveling exhibits for schools, businesses, agencies, and groups. *Implementing agencies: Department of Environmental Protection and Fish and Wildlife Conservation Commission.*

e) Encourage participation in the National Ocean Science Bowl, sponsored by the Consortium for Oceanographic Research and Education and the National Marine Educators Association. Educational activities should be implemented which will involve a large cross-section of students. *Implementing agency: Department of Education.*

f) Explore working with scouting organizations to introduce an ocean badge to their civic work requirements. Also consider working with 4-H and other youth service organizations. *Implementing agency: Department of Community Affairs*

g) Enhance public safety and ocean survival education for residents and visitors. *Implementing agency: Fish and Wildlife Conservation Commission.*

h) *Provide grant funding for environmental education and stewardship projects, similar to the former Florida Advisory Council on Environmental Education (FACEE) program. *Implementing agencies: Department of Education, Department of Environmental Protection, and Fish and Wildlife Conservation Commission.*

Strategy 4.3: Increase educator training on coastal and marine science and on current ocean issues, and encourage instructors to introduce ocean themes in diverse curricula. *Lead agency: Department of Education.*

Specific actions

a) Improve notification of marine science training opportunities and increase support for educator participation. *Implementing agency: Department of Education.*

b) Develop ocean related components of existing curricula for elementary, middle, and high school levels. *Implementing agency: Department of Education.*

c) Develop and introduce ocean-related modules within existing courses, including classes outside the natural sciences (e.g., studying Moby Dick in a literature class), and encourage cross-disciplinary ocean units. Also, support programs that provide students with hands-on experiences in ocean habitats. *Implementing agency: Department of Education.*

* *legislative action needed*

d) Encourage greater student participation in programs offered by Florida's marine laboratories, aquariums, and organizations such as Florida Sea Grant, and increase agency access by using in service learning opportunities. *Implementing agency: Department of Education and Florida Sea Grant.*

e) Encourage educators to use resources offered by professional environmental education organizations such as the League of Environmental Educators in Florida, the National Marine Educators Association, and the National Marine Science Education Association, as a resource. *Implementing agencies: Department of Education.*

Strategy 4.4: Support and coordinate distance learning efforts to enhance curriculum related to current coastal and marine science issues. *Lead agency: Department of Education.*

Specific actions

a) Provide all schools with the ability to access distance learning options. *Implementing agencies: Department of Education and the State University System.*

b) Include marine science and ocean issues in the curricula of current and future distance learning efforts in Florida. *Implementing agencies: Department of Education and the State University System.*

c) Link into existing distance learning and ocean education networks outside Florida (e.g., Globe Project.) *Implementing agency: Department of Education.*

Strategy 4.5: Encourage marine industry involvement in educating students and employees. *Lead agency: Office of Tourism, Trade, and Economic Development.*

Specific actions

a) Work with marine industries to find opportunities to educate students and job seekers about ocean-related careers, including internships. *Implementing agency: Office of Tourism, Trade, and Economic Development.*

b) Educate marine industry employees about industry reliance upon and impacts on ocean resources. *Implementing agencies: Office of Tourism, Trade, and Economic Development and Department of Community Affairs.*

c) Develop a mentoring program that uses marine professionals as role models for secondary and college students. *Implementing agency: Department of Education.*

d) Facilitate partnerships between schools and marine industries/businesses. *Implementing agency: Department of Education.*

e) Encourage the marine industry to supply incentives for ocean based science projects for public and private schools, and home educators. *Implementing agency: Department of Education.*

Strategy 4.6: Achieve a change in the public's understanding of land- and ocean-based pollution impacts on coastal and ocean resources. *Lead agency: Department of Environmental Protection.*

Specific Actions

a) Expand programs such as the Florida Yards and Neighborhoods Program to heighten the awareness of homeowner impacts on water resources. *Implementing agencies: University of Florida Cooperative Extension Service, Department of Environmental Protection, Water Management Districts, and National Estuary Programs.*

b) Establish statewide volunteer-based monitoring programs for Florida's coastal waters (e.g., public beaches and residential canals). *Implementing agency: Department of Community Affairs.*

c) Develop a coastal environment program modeled after the Institute for Food and Agricultural Science (IF AS) Master Gardeners Program to increase stewardship toward ocean and coastal resources, as well as to increase homeowner awareness of the impact their actions have on the ocean. *Implementing agency: Department of Education.*

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APPENDIX A: EXECUTIVE ORDER 98-13

State of Florida

**OFFICE OF THE GOVERNOR
EXECUTIVE ORDER NUMBER 98-13**

WHEREAS, Florida is the only state in the contiguous United States that is bordered on three sides by the sea, with 8,426 miles of continuous tidal shoreline; and

WHEREAS, the United Nations has declared 1998 as the International Year of the Ocean; and

WHEREAS, the United States Senate has called for the development of a coordinated, comprehensive and long-range national policy with respect to ocean and coastal activities by passing the Oceans Act of 1997; and

WHEREAS, coastal and ocean resources are vital to Florida's quality of life and economic vitality; and

WHEREAS, pursuant to Article II, Section 7 of the Florida Constitution, it shall be the policy of the State to conserve and protect its natural resources and scenic beauty; and

WHEREAS, the Department of Community Affairs, the Department of Environmental Protection, the Department of Agriculture and Consumer Services, the Executive Office of the Governor, and the Marine Fisheries Commission have management responsibilities related to ocean resources; and

WHEREAS, several federal agencies including the National Oceanic and Atmospheric Administration, the Department of Defense, the Army Corps of Engineers, the Department of the Interior, the Environmental Protection Agency, and the U.S. Coast Guard have management responsibilities related to Florida's ocean resources; and

WHEREAS, numerous local communities, citizen organizations, and the private sector have commenced activities directed at the use and protection of Florida's numerous ocean resources; and

WHEREAS, there is a need to bring together the diverse interests into a coordinated approach for the protection, enhancement, and management of our State's ocean resources;

NOW, THEREFORE, I, LAWTON CHILES, as Governor of the State of Florida, by virtue of the authority vested in me by the Constitution and laws of the State of Florida, do hereby promulgate the following Executive Order effective immediately:

Section 1.

In recognition of the importance of Florida's ocean resources, 1998 is hereby proclaimed the "Year of the Ocean" for the State of Florida.

Section 2.

There is hereby created the Florida Governor's Ocean Committee, hereinafter referred to as the Committee.

Section 3.

The Committee shall be composed of twenty-four members to be appointed by and serve at the pleasure of the Governor. The members shall each be appointed for an eighteen-month term at the Governor's pleasure. The Committee shall include representatives of the Florida Departments of Community Affairs, Environmental Protection, State, and Agriculture and Consumer Services; the Executive Office of the Governor; the Marine Fisheries Commission; and local government. Membership shall also include no less than two citizens' representatives as well as representatives from conservation, education, science, law, recreation and business interests. Finally, six ex officio members shall represent the U.S. Department of Defense, the U.S. Army Corps of Engineers, the U.S. Department of the Interior, the National Oceanic and Atmospheric Administration, the U.S. Environmental Protection Agency, and the U.S. Coast Guard. The chairperson and vice chair shall be designated by the Governor, and the Committee shall meet upon the call of the chairperson.

Section 4.

The Committee shall establish goals and recommend ocean policies and strategies for the public benefit and promote their efficient implementation. Such policies and strategies shall include but not be limited to: identifying ocean resource management opportunities and conflicts; developing policies and strategies that address these identified conflicts in a comprehensive and coordinated manner; providing for increased public awareness of ocean issues; and improving coordination and eliminating duplication among governments, agencies, task forces and organizations that implement ocean policy.

Section 5.

The Committee shall prepare an interim report and a final report for the Governor that recommends and promotes efficient implementation of an ocean policy in Florida that will ensure the continued enjoyment of these resources in the decades ahead. The interim report shall be prepared and submitted by September 30, 1998 and the final report shall be submitted by June 30, 1999. The Committee shall consider the findings of the 1997 Ocean Policy round table in carrying out its responsibilities.

Section 6.

The Committee may provide for the creation of subcommittees or ancillary committees and may periodically request the participation of specific state and federal agencies whose expertise is deemed important to the responsibilities and objectives of the Committee.

Section 7.

The Committee shall be administered in the Department of Community Affairs in cooperation with the Executive Office of the Governor.

Section 8.

Non-governmental Committee members may be reimbursed as provided by section 112.061, Florida Statutes.

Section 9.

All state agencies are directed to provide professional and technical support to the Committee. Appropriate federal agencies and all regional and local governmental units in Florida are requested to cooperate fully with the Committee.

Section 10.

This executive order shall expire, and the existence of the Committee shall terminate on June 30, 1999, unless otherwise extended by Amendment or legislative action.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Florida to be affixed, at Tallahassee, the Capitol, this 9th day of January, 1998.

LAWTON CHILES

APPENDIX B: COMMITTEE MEMBERS

Betty Castor, Chair
University of South Florida

Steven M. Seibert, Vice Chair
James F. Murley, Vice Chair (1/98-1/99)
Department of Community Affairs

David Struhs
Virginia Wetherell (1/98-1/99)
Department of Environmental Protection

J. Antonio Villamil
Dennis Harmon (1/98-1/99)
*Office of Tourism, Trade, and Economic
Development*

Russell Nelson
Florida Marine Fisheries Commission

J. Allison DeFoor
Estus Whitfield (1/98-1/99)
Office of the Governor

Katherine Harris
Sandra Mortham (1/98-1/99)
Florida Department of State

Jerry Sansom
Organized Fishermen of Florida

Bob Jones
Southeastern Fisheries Association

Ted Forsgren
Coastal Conservation Association

Alex Brylske
Dive Training Magazine

Debbie Flack
*Florida Shore and Beach Preservation
Association*

Kumar Mahadevan
Mote Marine Laboratory

David Holtz
Center for Marine Conservation

Keith Douglass
Monroe County

John LaCapra
Florida Ports Council

H.M. Watson
Division of Law Enforcement

Donna Christie
Florida State University

Ernest Boger
Bethune Cookman College

John Ogden
Florida Institute of Oceanography

Richard Budell
*Department of Agriculture and
Consumer Services*

Nancy J. Wheatley
Royal Caribbean Cruises Ltd.

Doug Shelby (1/98-6/98)
Oil and Gas Industry

Kenneth Beard
City of Destin

James D. Giattina
Gulf of Mexico Program, US. EPA

LCMDR Steven Andersen
US. Coast Guard

Colonel Joe Miller
U.S. Army Corps of Engineers

Hammond Eve
Minerals Management Service

Robert J. Arnold
Eglin Air Force Base

Nancy Foster
National Ocean Service, NOAA

APPENDIX C: MEETING PHASES/OBJECTIVES

Overall Goal: Reach a consensus with the Committee on an interim and final report and recommendations to the Governor.

I. Organizational Phase (January - February, 1998)

Objective: Identify key issues, work plan, schedule, roles and structure.

- Committee member issues survey.
- February 2-3, Tallahassee: Committee meeting to establish mission and work plan.

II. Education and Initial Development of Recommended Strategies (March - July, 1998)

Objective: Review full scope of issues on work plan. Generate initial strategies of the Committee on each major issue area of work plan and begin to build recommendations through an interactive plenary and small group review and refinement process.

- Work groups appointed and charged by the Chair.
- March 16-17, Tallahassee: Committee reviews environmental protection issues.
- May 11-12, St. Petersburg: Committee reviews living marine resource issues and discusses initial environmental protection recommendations.
- July 9-10, Marathon: Committee review economic development issues and discusses initial living marine resources recommendations. Committee review revised environmental protection recommendations and initial public education and outreach recommendations.

III. Interim Recommendations, Consensus Building Phase (October, 1998 - January, 1999)

Objective: Develop and review a single text of recommendations. Finalize and adopt a consensus draft report.

- December 18: Revised amendatory text mailed with amendment forms.
- January 6: Deadline for submission of formal amendments.
- January 13: List of all proposed amendments mailed to committee.
- January 19, Tallahassee: Committee meeting follows formal amendment process and concludes with adoption of single text document (Draft Final Report).

IV. Public Input Phase (February - April, 1999)

Objective: Solicit public comment on the *Draft Final Report*. Convene focus groups to discuss subject areas, and hold public forums around the state.

- March 30, Dania Beach: Public education and outreach focus group, public forum.
- March 31, Tampa: Living marine resources focus group, public forum.
- April 7, Destin: Environmental protection focus group, public forum.
- April 14, Jacksonville Beach: Economic development focus group, public forum.

V. Report Finalization and Submittal (May - June, 1999)

Objective: Review and incorporate public comments. Finalize the Committee's report for submission to the Governor .

- May 4 and 17: Work group chairs meet to review public comments and incorporate changes into the report.
- June 14, Tallahassee: Committee meeting to review proposed changes and adopt a *Final Report*.
- June 30: *Final Report* submitted to Governor Bush

APPENDIX D- MEETING SUMMARIES

February 2-3, 1998 -Tallahassee

Objective: Establish the Committee's mission and work plan.

The Committee began with a review of its Executive Order (appendix A) and was briefed on ocean resource management activities at the state, federal, and international levels. The Committee reviewed the issues framework that had emerged from the Ocean Policy Roundtable meetings, held in 1997. The Committee agreed to use the Roundtable framework in identifying issues for the information gathering phase of the work plan. The Committee began drafting consensus procedures and a mission statement, and members agreed that the work plan should address the following issue areas:

- marine environmental protection;
- living marine resources;
- marine economic development;
- public education and outreach; and
- intergovernmental coordination.

March 17-18, 1998, Tallahassee

Objective: Identify opportunities, conflicts, and strategies for environmental protection issues.

Bob Bailey, Oregon Ocean Program Administrator, presented information on the history of Oregon's Ocean Resources Management Program. The Committee also heard presentations from a number of Florida Department of Environmental Protection representatives on ocean and land-based sources of pollution, the ties between public health and environmental protection, and public outreach.. The Committee identified opportunities and challenges within the issue area, and began work on developing strategies to address them. The chair announced the appointment of a drafting group to continue working on the environmental protection draft strategies.

Members appointed to the Environmental Protection drafting group were Doug Shelby (chair), Bob Crawford (Rich Budell), Jim Giattina, and David Holtz. The chair appointed a second drafting group to begin formulating strategies on public outreach and education. Members appointed to the Public Outreach and Education drafting group were Kumar Mahadevan (chair), John LaCapra, Ken Beard, Donna Christie, and John Ogden. Finally, the Committee adopted a statement on consensus procedures and reviewed the provisions of Florida's Sunshine Laws.

May 11-12, 1998, St. Petersburg

Objective: Identify opportunities, conflicts, and strategies for living marine resource issues

The Committee heard a presentation from Peter Shelley of the Conservation Law Foundation, who discussed fisheries management efforts in New England. The Committee also heard presentations on the status of a number of critical marine issues in Florida, such as marine mammals, fisheries, aquatic vegetation and habitat, and coral reefs. The Committee identified opportunities and challenges within the issue area, and began work on developing strategies to address them. The chair announced the appointment of members to a living marine resources drafting group, to continue developing draft strategies on behalf of the full Committee. Members appointed to the Living Marine Resource drafting group were: Russ Nelson (chair), Jerry Sansom, Ted Forsgren, Virginia Wetherell (Ed Conklin), Nancy Foster (Jeff Benoit), and Col.

Joe Miller (Lt. Col. Michael Moore). The Environmental Protection and Public Outreach and Education drafting groups reported to the full Committee on their progress to date. The Committee discussed several activities occurring across the state and country in conjunction with the Year of the Ocean declaration.

July 9-10, 1998, Marathon

Objective: Identify opportunities conflicts and strategies for marine economic development issues.

This meeting marked the last meeting of the Committee's information gathering phase. The Committee approved and formally adopted a mission statement:

The Florida Governor's Ocean Committee, composed of diverse public and private interests, will engage in mutual education on ocean management issues based on science. The Committee will build upon the considerable work of the Ocean Policy Roundtable and other related efforts and studies to identify ocean management opportunities and conflicts, and develop consensus recommendations on goals and strategies to promote the efficient implementation of sustainable ocean polices to manage, conserve and enhance ocean resources for the public's benefit now and in the future.

The Committee received updates from each of the drafting groups. David Tarnas, State Representative from Hawaii, made a presentation on the development and implementation of the Hawaii Ocean Resources Management Plan. Other presentations were made on sustainable practices in private enterprise, artificial reefs, marine tourism and ecotourism, ports, and aquaculture. Two other presentations focused on public outreach strategies employed by SeaWeb, a project of the Pew Charitable Trust, and the Florida Keys National Marine Sanctuary. The Committee identified opportunities and challenges within the issue area, and began work on developing strategies. The Chair announced the appointment of the Economic Development drafting group to continue developing strategies on behalf of the full Committee. Members appointed to the Economic Development drafting group were: Bob Jones (chair), Estus Whitfield, Paul Mitchell, Nancy Wheatley, Dennis Harmon, Bob Arnold, Steve Andersen.

October 5-6, 1998, Tallahassee

Objective: Examine draft strategies from the environmental protection, living marine resources, economic development and public outreach drafting groups. and review and approve the committee's interim report.

This meeting began a period of more intensive work on the Committee's emerging strategies. The Committee heard brief presentations from officials representing Eglin Air Force Base and Florida Sea Grant. The majority of this meeting involved the review of draft strategies from the four drafting groups: environmental protection, living marine resources, economic development, and public outreach and education. The Committee reviewed and ranked strategies proposed by each drafting group. The Committee also discussed the concept of an Ocean Alliance, a proposed private sector, non-profit group whose goal would be to promote responsible use of ocean resources. Other actions by the Committee included a review of potential models which would provide a continuing mechanism for comprehensive ocean management, the review and adoption of the Committee's interim progress report, *Florida's Ocean Challenges*, and the agreement by the Committee to combine all four draft group reports into a single text document.

Proposed strategies would be organized under 5 basic challenges:

- How can we improve our information on and understanding of ocean resources?
- How can we create an improved ocean management framework that is more coordinated and comprehensive?
- How can we achieve and sustain diverse marine ecosystems that are capable of supporting multiple uses?
- How can we raise awareness, promote education, and foster stewardship of the ocean?
- How can we facilitate greater financial support for ocean research, education, and management?

November 16-17, 1998, Tallahassee

Objective: Revise draft strategies from the drafting groups and to continue development of the draft final report.

The printed version of the interim progress report, *Florida 's Ocean Challenges*, was presented to the Committee. Chris Friel, of the Department of Environmental Protection's Florida Marine Resources Institute made a presentation on a framework for coastal and marine resource characterization and management. The Committee discussed incorporating this concept and others into a continuing mechanism for comprehensive ocean management. The majority of this meeting involved review and editing of the single text strategy document. Challenges and strategies were addressed individually. The Committee also received an update on the status of the proposed Ocean Alliance.

January 19, 1999, Tallahassee

Objective: Consider Proposed amendments and written public comments via a formal amendment Process. Adopt a single text document.

The Committee reviewed and voted on all proposed amendments. Public comments were also reviewed. After all amendments had been considered, a motion to adopt the draft document was raised and seconded, and the text was adopted unanimously under the title *Draft Final Report*. The Committee discussed the upcoming public input phase, and it was agreed that the Chair and Vice-chair would meet with Governor Bush to deliver the *Draft Final Report*.

June 14, 1999, Tallahassee

Objective: Review comments and suggestions received during the public input phase. Finalize the report for submission to Governor Bush.

The Committee reviewed the results of the public input phase. Drafting group chairs had proposed revisions to the draft report to incorporate suggestions from the public, and the Committee discussed these final changes and additions. The Committee performed a ranking exercise to prioritize strategies within the document (see Appendix F). A number of final edits were proposed, including rewriting the Overarching Recommendation and incorporating items from Challenge 5 into the other four challenges. The report was adopted unanimously, and staff were tasked with making final changes to the document and delivering it to Governor Bush.

APPENDIX E: CONSENSUS PROCEDURES

Consensus procedures adopted unanimously in March, 1998

“Consensus is a participatory process whereby on matters of substance, the members of the Ocean Committee jointly distinguish and educate each other on their concerns, jointly develop alternatives and strive for agreements which all of the members will accept and support or at least can live with. In instances where, after vigorously exploring possible ways to enhance the members’ support for the final decision on the package of Committee recommendations, and 100% acceptance or support is not achievable, final Committee decisions will require at least an 80% favorable vote of all members present and voting.”

Consensus draft development

1. The Chair, as appropriate will appoint members to recommendation drafting groups. Drafting groups will meet between meetings to develop recommendations.
2. Committee members will individually rank each initial draft recommendation from a drafting group using a three-point consensus testing scale. Plenary review and discussion of the ranked recommendations will follow.
3. Drafting groups will be asked to address concerns and suggestions in their redrafting of the recommendations.
4. Redrafted recommendations will ultimately be compiled into a single text for the Committee’s review and refinements.

Amendatory review process for interim and final report

1. The Chair will present a single text for members to review and propose amendments. The Chair will establish a deadline for written amendments and will only deal with final written amendments received by the amendment deadline.
2. The Chair will organize amendments as editorial and substantive and will move adoption of editorial amendments as a consent packet. As necessary break out, the Committee will review and vote on any amendment if believed to be substantive by any member.
3. Members in room express consensus or vote on amendments, sections and the overall report (no abstentions)
4. Consensus or 80% or more of those members present and voting will be required for inclusion of amendments, for sections as amended and for the overall report.
5. Amendment sponsor(s) may accept “friendly” language to their amendments. Amendment sponsors, at chair’s discretion, may be recognized for brief clarifying comments on meaning/intent of amendment.
6. No amendments will be accepted by members from the floor. Chair may offer amendatory language to seek consensus.

APPENDIX F: STRATEGY PRIORITIZATION

FGOC members were asked to rank the strategies in the Final Review Draft prior to the final Committee meeting on June 14, 1999. The ranking was done with a survey tool, and eighteen members completed a fax-back survey. The results were compiled and discussed at the June 14 meeting. The Committee agreed that a careful prioritization of all the strategies and actions in the report was needed, but recognized that such an analysis could not be completed in the time remaining. The results of the Committee's preliminary prioritization work are presented below.

Highest Priority Strategies

The survey asked Committee members to rank each strategy on a scale of one to ten, with ten indicating the highest priority. Members were asked to consider the general criteria of importance, doability, and urgency and timeliness. Eighteen members completed surveys, and the following twelve items received the highest average scores:

1. Overarching Recommendation: Average score was 9.25 (Only six respondents chose to rank this item.)¹
2. Strategy 3.3: Encourage and apply innovative techniques for habitat protection, restoration, and enhancement. Average score was 8.47 (17 votes).
3. Strategy 5.1 : Develop a plan to secure new funding and maximize existing funds for long term dedication to ocean research, education, and management. Average score was 8.24 (17 votes).²
4. Strategy 4.1: Coordinate efforts to communicate the economic, environmental, and cultural importance of Florida's ocean resources. Average score 8.12 (17 votes).
5. Strategy 4.3: Increase educator training on coastal and marine science and on current ocean issues, and encourage instructors to introduce ocean themes in diverse curricula. Average score was 8.06 (17 votes).
6. Strategy 3.1 : Develop and refine standards needed to protect, restore, and enhance Florida's marine waters. Numeric standards, bio-criteria, and sediment criteria should be considered when developing water quality standards. Average score was 8.06 (16 votes).
7. Strategy 3.2: Explore the impacts and benefits of marine protected area management regimes such as limited-use areas, seasonal harvests, and no-take/no-fishing marine reserves on ocean resources and resource users. Average score was 7.88 (17 votes).
8. Strategy 4.2: Support student and general public participation in the protection and conservation of ocean resources. Average score was 7.71 (17 votes).

¹ The Overarching Recommendation ranked by members on the survey was removed from the draft report and replaced with the current language at the June 14, 1999 meeting. Members agreed to change the language based on the results of the Spring 1999 Legislative session.

² Strategy 5.1 and its associated specific actions were subsequently incorporated into Challenges 1-4.

9. Strategy 1.1: Implement a long-term, comprehensive monitoring, assessment, and

inventory program. Average score was 7.71 (17 votes).

10. Strategy 4.5: Encourage marine industry involvement in educating students and employees. Average score was 7.71 (17 votes).
11. Strategy 2.1: Forge partnerships within the public and private sectors for effective decision- making regarding ocean management. Average score was 7.67 (18 votes).
12. Strategy 4.4: Support and coordinate distance learning efforts to enhance curriculum related to current that include coastal and marine science and current ocean issues. Average score was 7.53 (17 votes).