STATE OF FLORIDA AGENCY COMMENTS
GOVERNORS' DRAFT REPORT OF THE U.S. COMMISSION ON OCEAN POLICY
June 4, 2004

INTRODUCTION

The breadth and depth of the report and the recommendations of the US Commission on Ocean Policy is impressive. A revised governmental framework to improve federal leadership and coordination would clarify policies, reduce redundancies, and expedite planning and decision-making. Strengthened science and modern information systems would improve decision-making at all levels. Improved science education would have a lasting impact on the capabilities of the next generation of professionals and the sensitivities of the general public.

The report appropriately stresses the need for additional coordination, particularly at the federal level and particularly on research and monitoring issues. However, the same need for improved coordination applies in the area of regulatory development, compliance, and enforcement. A strong and coordinated federal effort is essential to improving ocean policy, water quality, and habitat protection. The objectives of such coordination should be to improve knowledge and understanding, increase efficiency and eliminate duplication, increase accountability, and provide guidance, but not dictation, to help the states implement ocean policies that meet local as well as national needs.

The USCOP report proposes the development of regional ecosystem-based management plans that set clear, measurable goals and objectives and the development of regional ocean information programs to coordinate the preparation of regional ecosystem assessments. Regional plans and information programs would be beneficial and could serve to guide sub-regional programs and decisions. However, it would be important to develop voluntary and collaborative management options that do not impose regional requirements on states and local governments beyond their legal reach. States must retain individual authority and legal rights over matters for which they are responsible and that affect their interests.

In a recent letter to the Governors of the other Gulf states, Governor Bush encouraged a stronger regional effort to develop restoration goals and research priorities for the Gulf of Mexico and to plan for the Gulf components of the Integrated Ocean Observing System. Florida supports voluntary regional initiatives to provide improved ocean and coastal resource protection and management. However, it is not necessary to establish formal regional councils to achieve better interstate and regional collaboration. Also, the report contemplates that the councils might "facilitate" required governmental approvals or permitting processes that involve state, federal and local agencies. This must not devolve into imposing federal or regional requirements on state and local jurisdictions or pre-empting state and local requirements.

The report proposes a coordinated, ecosystem-based offshore management regime that sets forth guiding principles for the balanced coordination of all offshore uses and designates lead federal agencies for all current and foreseeable federal activities that

might take place in federal offshore waters. The current federal regulatory and management structure in federal offshore waters is very fragmented and riddled with gaps. Often, the state must bridge the gaps using the CZMA federal consistency process. Creating an integrated management and decision making scheme for federal waters would be an improvement over the *status quo* and has the potential to strengthen the state's consistency authorities. Beneficial aspects of the proposed offshore management regime include providing for a fair return on the use of ocean space or resources in the form of rents or royalties and the use of Marine Protected Areas as a key tool of ecosystem-based management. However, the report does not emphasize the need for the offshore management regime to be based on scientifically sound resource assessments and management strategies that give full consideration to state concerns.

Also, the report recognizes the need for "single-purpose ocean governance structures" to be integrated into the regime, but does not explain how to avoid defaulting to management via isolated, issue-specific decisions, such as occurs now. A management regime for federal offshore waters should include a decision process that addresses the impacts of a specific activity within the purview of a single-purpose agency decision, but also considers broader proprietary, public interest and cumulative factors, regardless of the specific activity. Regional management strategies should also take advantage of existing multi-state consortiums and other multi-agency cooperatives.

DETAILED AGENCY COMMENTS ON SPECIFIC CHAPTERS AND RECOMMENDATIONS

Chapter 5 - Advancing a Regional Approach

The report understates the need for an enhanced mapping effort, which will allow the development of more data visualization tools. Comprehensive, scientifically sound decision making will depend on more spatial information products that integrate multiple data sources.

Chapter 6 - Coordinating Management in Federal Waters

The need for a nationwide marine cadastre should be clearly stated. There currently is no way to visualize marine space from a property rights perspective.

Recommendation 6-3: Florida supports the concept of developing a uniform process for the effective design and implementation of marine protected areas, especially since the process ensures that a proposed area must be pre-evaluated to ensure it is appropriate for its intended purpose.

Chapter 9 – Managing Coasts and their Watersheds

Paragraph 3 on page 108 reads, as follows (emphasis added):

> *Polluted waters limit fishing, swimming, and other water-related recreational and economic activities. One of the most serious impacts on ocean and coastal areas is the increasing amount of polluted runoff from urban, suburban, and agricultural areas, which is exacerbated by increases in impervious surfaces, such as roads, parking lots, sidewalks,*

and rooftops. ***Evidence indicates that ecosystem health is seriously impaired when the impervious area in a watershed reaches 10 percent.*** *If current coastal growth trends continue, many healthy watersheds will cross the 10 percent threshold over the next twenty-five years.*

There certainly are studies showing a decline in biological health at different levels of impervious surface but this conclusion certainly oversimplifies the issue. In one of the most comprehensive studies of the relationships between human factors, biological integrity, and urban stormwater best management practices, the conclusion is that factors such as the prevalence of 100-foot-wide riparian buffers along streams, the percentage of wetlands within a watershed, and the percentage of forest cover all factor into the biological integrity of the associated aquatic ecosystems. (WMI, 2004, Final Report to EPA, Office of Water.) Oversimplification threatens the credibility of the report and, in turn, may confound our ability to implement the many valuable recommendations therein.

Recommendation 9-1: Florida strongly endorses reauthorization and strengthening of the CZMA. Funding disincentives for failure to perform are troubling, however, in light of the states' experiences with the CZMA section 6217 coastal non-point source pollution program. This program placed unrealistic demands on states and ultimately penalized the very work that the program intended to accomplish. The objective of incentives should be to foster a close federal-state partnership with maximum flexibility for state implementation of shared goals.

Recommendation 9-3: Florida supports changing federal funding and infrastructure programs to discourage inappropriate growth in fragile, hazard-prone coastal areas.

Recommendation 9-4: The report should recognize that the upland watershed and its near-shore discharge zone are also impacted by groundwater discharge, both as seepage into streams and into the marine zone. The surface water / groundwater interaction should also be considered in environmental assessments – both in water budgets (quantity) and in chemistry (quality).

Chapter 10 - Guarding People and Property Against Natural Hazards

There is no disagreement with the recommendation to reduce incentives for development in high hazard areas, per se, but it is a gross oversimplification to state that, "Property owners within 500 feet of the shoreline face as large a risk from erosion as from flooding," as is stated in the text of this chapter. The coastal engineering community has expressed significant disagreement with the conclusions of the H. John Heinz III Center for Science, Economics and the Environment's "Evaluation of Erosion Hazards," cited as partial justification for Recommendation 10-3. Florida has monitored coastal erosion on the Atlantic and Gulf coasts for years and our regulatory and planning policies are based upon predicted erosion rates. The erosion issue is extremely complicated and warrants being addressed as such.

Chapter 11 - Conserving and Restoring Coastal Habitat

Recommendation 11-4: Florida certainly supports the principle of a "comprehensive wetlands protection program." Florida has one of the most comprehensive wetlands protection programs in the country, which is linked to the coastal management program through the Environmental Resource Permitting Program. Recommendation 11-4 should focus on developing enhancements to the 404 program to make it more amenable to state differences and ensure that it does not confound state wetland protection efforts.

Chapter 12 - Managing Sediments and Shorelines

The chapter has a fair discussion of sediments in rivers and estuaries but could reflect a more in-depth understanding of open ocean coastal processes. We recommend the Commission review the National Research Council's publication, "Beach Nourishment and Protection," National Academy Press, 1995. The box on page 141 should be rewritten based upon this document rather than drawing on text from a report addressing contaminated sediments in ports. The science of determining acceptable material for placement and the design of longer lasting, more protective beach restoration and nourishment projects has improved vastly since the NRC's 1995 report was issued; however, many of the same institutional recommendations are valid and would greatly improve the Commission's report.

Shoreline erosion on the open coast is often directly attributable to the impact of improved navigational inlets, where sand has been removed from the coastal system. Management options (e.g., sand bypassing around channels and installation or modification of jetties) are rarely incorporated, resulting in an accreting shoreline updrift of the inlet and recession of the downdrift shoreline. The U.S. Army Corps of Engineers' attempt at regional sediment management has inherent limitations as each inlet's Congressional authorization and the annual appropriations process do not provide sufficient flexibility for the USACE to make management adjustments or plan long term strategies to replace (or bypass) sand. Florida has implemented a long-term open coast erosion strategy, where sediment budgets are calculated and inlet management plans developed to maintain the volumes of sand necessary to offset the erosion caused by each "improved inlet." A long-term strategy for restoring and maintaining beaches already deprived of sand, including a financing plan, helps keep the public and decision-makers informed of the causes, solutions and costs of trying to replace and subsequently maintain, a natural beach.

Recommendation 12-2: The states, ports authority and other stakeholders have long taken issue with the USACE's implementation of the "Federal Standard." The standard calls for use of the "least-cost" option that is "environmentally acceptable" for dredged material placement. The state strongly supports revisions to the Federal Standard to ensure that environmental costs are given appropriate consideration. For example, when regional sediment management can be enhanced by a more costly alternative, the Federal Standard should be waived. Ultimately, the focus should be on assuring that the selected project alternative is "environmentally beneficial," rather than merely acceptable. It is unlikely that Recommendation 12-2 will result in any improvement as written.

The effect of the Federal Standard is most clearly evident in determining where coastal dredged material will be disposed. Few alternatives can compete on a cost basis with hauling dredged material to the ocean. The Ocean Policy report barely alludes to the issue of ocean disposal, which discards tens of millions of cubic yards of terrestrial and estuarine sediments to over seventy sites in U.S. and territorial oceans each year. Despite budget constraints, EPA's site designation and management program is well-managed. However, the practice of ocean disposal is predicated on the assumption that coastal sediments are waste and that the infinite diluting capacity of the ocean can absorb it. Ocean disposal requires large areas of the marine seabed to be set aside for dumping, effectively eliminating them as viable natural habitats. The federal legal and budget structure should be modified so that ocean disposal of dredged material is a last resort, not the first choice, by ensuring that coastal sediments are conserved instead of making it easier and more cost-effective to discard them offshore.

In addition to the problem with the Federal Standard, there are important issues related to ocean disposal that should be addressed in the report, including: the need to develop markets for use of dredged material and re-use of material previously disposed in confined upland sites; the need to subsidize any additional transport or handling costs to enable beneficial use of dredged material; the role of ports in providing alternative disposal options; and adequate modeling and surveys of dredged material disposal sites to assess environmental impacts.

Recommendation 12-4: Florida strongly supports this recommendation. Local sponsors of beach restoration projects now must bear this monitoring and assessment responsibility, which is essential to improving the design life of projects, as well as improving their habitat value and minimizing adverse effects. A more comprehensive monitoring scheme is needed.

Chapter 13 - Supporting Marine Commerce and Transportation

The economic value of ports and navigable waterways is substantial. However, port and waterway expansion and maintenance often result in acute and chronic adverse environmental impacts. Florida provides a centralized permitting process for Florida's deep-water ports and works closely with the USACE on federal navigational improvements. Efforts to reduce the impacts of navigational improvements through improved planning (10-year port plans) and operational practices (long-term planning for upland dredged material disposal areas) have met with limited success. USACE projects face a cumbersome and slow design review process, they lack management flexibility to incorporate environmental components, have many constraints on how they are contracted, and have unreliable funding, resulting in inefficient and unreliable water depths, additional costs to both navigational and shore protection projects, and controversy.

The proposed governance changes in Chapter 13 do not seem to recognize the need for more environmentally conscious management of the marine transportation system. For example, the composition of the proposed Nonfederal Marine Transportation System

National Advisory Council has only one out of 30 member organizations that would be expected to represent environmental concerns. Additional recommendations should be included to emphasize the need for integration of navigation components into an ecosystem management context.

Chapter 14 - Addressing Coastal Water Pollution

Emergency closures of shellfish areas must be imposed when there are direct discharges of untreated or poorly treated human wastes. The Preliminary Report states: "EPA estimates that a least 40,000 sewers overflow every year, discharging wastewater directly into rivers, estuaries, and oceans. In addition to causing human health problems and closures of beaches and shellfish areas, human sewage may be a contributing factor in the decline of coral reefs." Therefore, the following recommendation be added under the subheading 'Sewer System Overflows'.

* Recommendation 14.x. The U.S. Environmental Protection Agency (EPA), U.S. Department of Agriculture (USDA) and states should reduce the estimated annual 40,000 sewer system overflows which discharge wastewater directly into rivers, estuaries, and oceans which cause closures of beaches and shellfishing areas.

The reduction in pollution from the State of Florida's Total Maximum Daily Load Program has the potential to reclaim areas historically used to harvest shellfish. States may be applying inconsistent criteria to determine if a shellfish harvesting area should be identified as an impaired water. Therefore, the following recommendation should be considered under the subheading 'The Total Maximum Daily Load Program'

* Recommendation 14.x. The U.S. Environmental Protection Agency (EPA) and states should establish a consistent and flexible approach by which to identify shellfish harvesting areas as "impaired waters" under the Total Maximum Daily Load program.

The chapter overview should note that nutrient pollution is a primary factor in seagrass loss. Also, the importance of groundwater discharge to coastal waters needs to be recognized.

Recommendation 14-1: The recommendation could be strengthened by encouraging regional and local approaches for determining nutrient impairment. Also, it should recognize that it is often more cost effective to treat nutrient enrichment at the source using best management practices rather than at the wastewater treatment plant.

Implementation of this recommendation would have no effect in Florida. First, "advanced nutrient removal" is not defined and could mean nothing more than so-called advanced secondary treatment, which many Florida wastewater facilities already are required to employ based on our water quality considerations. Florida already requires advanced nutrient reduction (to 3 milligrams/liter of total nitrogen and 1 milligram/liter of total phosphorus) of facilities in nutrient-impaired waters or prohibits surface water discharges altogether.

In order for this recommendation to be meaningful, a minimum or at least recommended level of advanced treatment should be identified. Florida's requirements are:

- 5 mg/liter of biochemical oxygen demand ($CBOD_5$);
- 5 mg/liter of total suspended solids;
- 3 mg/liter of total nitrogen (as N);
- 1 mg/liter of total phosphorus (as P);
- High-level disinfection and de-chlorination, where applicable (important consideration for coastal waters where bacteria are a significant issue).

Furthermore, the report should go further by explicitly promoting the elimination of ocean outfalls over time through a commitment to, and financial support of, water conservation and reuse of reclaimed water. The uncertainties associated with the impact of ocean discharges of wastewater on water quality and habitat, perhaps far afield of the discharge point, are such that we should err on the side of caution, requiring the highest levels of treatment and phasing them out altogether. Unfortunately, at least at this point, Florida has little leverage to deal with the few remaining—but high-volume—ocean outfalls along the Southeast coast. This report could help shift that balance.

Recommendation 14–2: There are three to four million onsite sewage disposal systems in Florida, including thousands in even the most sensitive areas of the Florida Keys, and 30-40,000 new systems are permitted every year. Recommendation 14-2 is useful, but the focus needs to be on eliminating all offsite impacts of onsite systems and promoting operation and maintenance entities to assure that remaining onsite systems are properly operated and maintained over time. Expensive nutrient removal systems, composting systems, and other newer technologies are only as good as their operation and maintenance—and most homeowners simply do not adequately maintain their systems.

Recommendation 14–3: Although this recommendation notes that states may need more stringent regulatory controls on Concentrated Animal Feeding Operations, it is important to note that command and control regulations are not the only way to achieve implementation of agricultural best management practices. Given the difficulty in securing authority for regulatory controls over these sources, that fact is comforting. In addition, requiring such implementation through a permit renders the farmer ineligible for funding sources such as those provided through the Farm Bill. States should have flexibility in how they address water quality problems arising from agricultural operations that are exempt from federal NPDES regulations; at the same time, Congress and EPA should bolster state efforts to modify or strengthen non-NPDES regulatory programs where states determine it is appropriate.

It is interesting to note that the federal government has no regulatory program addressing ground water regulation of these activities, while Florida has at least the possibility of applying such controls to systems on a case-by-case basis. Still, more effort should be directed at bringing federal support to the development and implementation of basin-wide partnerships to combine regulatory and non-regulatory programs with funding initiatives,

nutrient management plans, implementation of best management practices, water quality monitoring, and performance objectives and measurement.

Recommendation 14–4:
Florida supports the SRF program, which is the only significant program available to most states, including Florida, to fund water infrastructure, and which has, for more than a decade, been funded substantially below the levels envisioned when the original Clean Water Act SRF was created. Florida's infrastructure needs over the next 20 years for wastewater, stormwater and drinking water facilities is conservatively estimated at $14.5 billion and, although Florida has one of the largest Clean Water Act SRF programs in the country, with the authority to borrow money to enhance its capacity, the state cannot approach the demand.

Of equal importance to full funding for Clean Water Act SRF is the need to recalibrate the funding formula by which states are allotted funds, which has not been updated for 30 years. Florida is radically under-funded based on any rational distribution, and is particularly penalized because its growth and development over the last three decades are not accounted for in the formula. Given the magnitude and significance of Florida's coastal systems, it is particularly important to maximize the ability of the SRF to address coastal water quality protection.

Florida is skeptical of developing a federally prioritized plan for funding aging and inadequate infrastructure. States differ in their environmental and financial circumstances; thus funding priorities need to be established at the state level, with appropriately minimal federal guidance, but strong federal support.

Recommendation 14–5: Florida's Watershed Restoration Act of 1999 (s. 403.067, F.S.) specifically contemplates a pollutant trading program, one not limited to nutrients and sediments. However, under state law, Florida cannot begin such a program (at least in the context of watershed management) until it has been approved by the legislature. Florida DEP is forming a Pollutant Trading Advisory Committee with the objective of having recommendations ready for the next legislative session. There are many difficult issues that must be addressed with respect to pollutant trading, including limitations on the scope of trading (keeping trades within a watershed, basin, or other narrow area); promoting or creating and "managing," as necessary, the trading market to produce adequate market forces and avoid unhealthy monopolies; mechanisms and institutions for trading; appropriate valuation of credits or other modes of exchange; tracking and accounting; contractual considerations; and measurements of success.

Recommendation 14–6: Florida has no objection to modernizing the NPDES information management system if it involves making the system flexible enough to accept the uploading of state information from the variety of systems the states employ. A one-size-fits-all approach rarely fits anyone.

The recommendation with respect to enforcement and monitoring is ideal in one sense, but also largely misses the mark. The focus should be on compliance, with enforcement

being one tool to achieve that end. Improved information systems help achieve these objectives, but they will not overcome inadequate resources and presence in the field.

Recommendation 14–7: Florida agrees that USDA should realign its conservation programs and funding with other programs aimed at reducing nonpoint source pollution. Unfortunately, the most recent Farm Bill eliminated the requirement that conservation funds be prioritized to address nonpoint source water quality problems in priority watersheds identified cooperatively by state water quality agencies and the USDA. This requirement should be reinstated to replace the current system that distributes funds on a geographical basis rather than based on water quality needs.

Recommendation 14–8: Establishing ecosystem based water quality standards is an excellent objective. However, the science is not adequately developed in this area. Much work remains to be done to link biological response at the population and community level to degraded water quality.

While Florida agrees with establishing a national goal of "significant reduction" of nonpoint source pollution, we do not agree that a federal entity should set the "specific measurable objectives" related to water quality standards or nonpoint source reduction goals. These objectives should be established at the local and state levels through ongoing programs, such as the TMDL program, with consultative assistance from EPA.

Recommendation 14–9: The Section 6217 Coastal NPS Control Program has been implemented using a top-down approach that does not recognize the differences among states. Including elements of the 6217 program, such as enforceable measures, in the Section 319 program is supportable only with greater flexibility to address variation among the states.

Recommendation 14–10: This recommendation could be supported only if there were consensus among the states on the equity of the disincentive system and its application. Such disincentives have rarely worked fairly, if at all. Furthermore, penalties only mean that the affected states can do less to address the problems their programs are intended to address. This fact makes a fair and equitable system, agreed upon by federal agencies and the states, a *sine qua non*.

Recommendation 14–11: The knowledge base and tools to advise states and local governments on land use decisions does not reside, or certainly has not resided, at the federal level. If EPA or any other agency can tap the expertise of states and local governments across the country and collate it into a meaningful information exchange, it would help arm local governments for the incredibly difficult battles associated with growth management.

Recommendation 14–12: Perhaps this recommendation will overcome the historical failure to implement section 402(p)(6) of the Clean Water Act, which required the development of federal guidance on minimum requirements for state stormwater management programs. The objective of the recommendation should be to provide

useful, comprehensive information while at the same time giving states the flexibility, within their existing legal and institutional frameworks, to implement effective stormwater management programs that rely primarily on nonstructural and structural best management practices.

Chapter 15 - Creating a National Water Quality Monitoring Network
There are enormous gaps in coastal water quality monitoring. For that reason, certainly, Florida agrees with the sentiments and most of the objectives expressed in the recommendations. However, we have some reservations.

Florida DEP and the Florida Marine Research Institute implement an estuarine monitoring network, which, while statistically sound, is not as robust as it should be for lack of resources. Bathing beach water quality monitoring, based exclusively on public health parameters, is conducted under state law by the Florida Department of Health. Various federal programs, identified in Chapter 15, carry out other monitoring activities in the Marine Sanctuaries, National Estuaries, and other federal enclaves. All of this information is valuable, but it is not comprehensive and it is largely cobbled together.

Additional monitoring requirements will require vastly more money for the monitoring stations, the sampling, and the analyses. Doing trend and status monitoring in coastal areas is notoriously difficult. "National monitoring network" has an appealing ring but it really means stitching together existing federal, state, and local coastal water quality monitoring efforts and filling in the gaps.

Beyond bringing together existing efforts and promoting coordination and efficiency, the bottom line is money: money to develop the programs and stations, money to do the sampling, money to pay for the sample analyses, money to pay for the data systems and data integration, money to implement quality assurance procedures, money to analyze the data to determine trends that can lead to better decisions—money. The states and their coastal communities clearly have an obligation to step up in this effort. But, once more, the nature of the nation's coastal waters creates an obligation at the federal level to support the states, fill in the gaps, and balance the inequitable distribution of resources that pollution in our coastal waters refuses to accommodate.

Recommendations 15-1 & 15-2: A monitoring network should incorporate ambient aquifer (groundwater) geochemistry and rock lithology data to effectively tie-in the solid earth that water runs over and through. This should be coordinated with the USGS and State Geological Surveys.

Recommendation 15-2: Florida supports a robust Integrated Ocean Observing System both from the data generation and data repository standpoint. A strong geospatial component should be built in to this program to facilitate the use of the data by managers.

Recommendation 15-3: All core variables should be included in a long term monitoring program with appropriate scales and metadata standardized.

Chapter 16 – Limiting Vessel Pollution and Improving Vessel Safety
There are some inconsistencies in the dollar value of various commercial and recreational activities between the first paragraph of Chapter 16 and the second paragraph of the Executive Summary ($12B as opposed to $11B for annual cruise ship spending and $30B as opposed to $20B for recreational boating value).

Overall, the recommendations in Chapter 16 are good but focus largely on improving existing voluntary programs and funding the Coast Guard to inspect the vessels. To improve the existing program, which largely does not work, the following specific recommendations should be considered:

- Maritime ships that spend more than quarter of their port days in the U.S. should be registered here and should be required to adhere to local environmental requirements. Obviously, this is a diplomatic issue that suggests some sort of dual registration program and *quid pro quo*. The objective, however, needs to involve changing the current, largely free, environmental pass given to vessels now.
- For such ships, EPA should take the regulatory lead in issuing a national NPDES permit, not state-by-state permitting.
- EPA, with state assistance, should develop clear guidelines to enable compliance and assist inspectors (EPA or the Coast Guard).
- An economic assessment should be conducted of the costs associated with regulatory duties so that an appropriate regulatory fee system can be developed to support program implementation.
- EPA should establish a comprehensive, multi-media regulatory program for vessels above a certain tonnage. It should be administered jointly by the Coast Guard and EPA at the national level because vessels typically are not restricted geographically to one state.

Chapter 17 - Preventing the Spread of Invasive Species
The State of Florida, as a point-of-entry state, fully supports increased efforts to prevent, monitor and respond to introductions of invasive species. We spend millions of dollars every year to control or eradicate these very species that have been brought into this country through our state. Recommendations 17-1,2,3,5& 7 all suggest involving the National Ocean Council in invasive species. These recommendations advocate the National Ocean Council as a coordinator of federal agencies in efforts to control and prevent the spread of marine aquatic invasive organisms. Currently, the National Invasive Species Council provides this function for the Executive Office, coordinating invasive species activities of federal agencies through the Aquatic Nuisance Species Task Force. The proposed activities of the National Ocean Council duplicate those of the ANS Task Force. Expanding the capacity of the ANS Task force to address marine invasives would constitute an efficient use of existing resources. It would also avoid problems associated with coordinating agency activities related to those organisms existing in freshwater, brackish, and saltwater environments.

This chapter does not address Harmful Algal Bloom organisms that may be associated with ballast water discharges.

The report does a thorough job of describing the ballast problem but does not go far enough in its recommendations. The following should be considered:

- Support Coast Guard attempts to require ballast control practices for certain sized vessels.
- Require EPA to develop and implement an NPDES regulatory program for ballast, centrally permitted and enforced in conjunction with the Coast Guard.
- Examine the open ocean ballast exchange program as a practical alternative to treatment/disinfection. Examine the possible downside of disinfection in causing secondary toxic materials, i.e., chlorinated organics.

Chapter 18 - Reducing Marine Debris

Recommendation 18-3: Derelict fishing gear removal on a regional oceanic scale would enhance inshore gear removal efforts as well as potentially lessen incidental mortality to target and non-targeted species.

Chapter 19 - Achieving Sustainable Fisheries

Recommendations 19-1 thru 19-3: These recommendations address the functions of Regional Fisheries Management Councils' Scientific and Statistical Committees (SSCs). Florida advocates the strongest possible science for decision-making. Retooling the SSCs as a strong quantitative science arm would be an asset to the regional fisheries management process.

Recommendation 19-4: Standardizing the process of technical review will be an important aspect of stronger science based decision making. This process is largely in use through the Center for Independent Experts and the Southeast Data Assessment and Review Process.

Recommendation 19-8: Florida requires a marine recreational license with a few exemptions, most notably for shore-based fishing. It should be emphasized that licensure does not just generate revenue, but also enables the collection of critical catch and effort data for the recreational fishery.

Recommendation 19-9: Florida supports the proposed expansion of research partnerships between stakeholders and scientists to encourage collaborative management solutions.

Recommendation 19-10: Better integration of statutory authority for the Interstate Fisheries Commissions and requiring them to adhere to the FMC national standards and develop enforceable management plans would be a positive step.

Recommendation 19-11: Florida agrees that when a fish stock crosses administrative boundaries, one agency should be assigned fishery management jurisdiction and authority. Florida believes that several of its unique fisheries (stone crab, spiny lobster, yellowtail snapper, etc) could benefit from a unified state plan rather than split between councils and commissions.

Recommendation 19-15: Dedicated access privileges represent novel approaches to resolving some critical fishery issues involving effort and harvest allocation conflicts. Individual fishery quotas are one approach the FWC intends to continue exploring in the future. Florida currently has a similar effort management program for stone crab and lobster. Fish managers should also explore making individual fishery quotas transferable and not time-limited in order to create the appropriate stewardship incentives.

Recommendations 19-19 & 20: Vessel Monitoring Systems: Florida endorses the use of VMS technologies to improve knowledge of fishing effort for stock assessments as well as enforcement of fishery management plans.

Recommendation 19-21: Moving essential fish habitat from single species to multi-species and eventually to an ecosystem-based approach has substantial science implications. Florida supports the concept; however, the science is not adequately developed to accomplish this goal. An extensive research and development program to refine existing analytical methods is the only viable way to achieve ecosystem-based fishery management in the long run.

Chapter 20 - Protecting Marine Mammals and Endangered Species

Recommendation 20-2: Florida conceptually supports giving NOAA MMPA authority over all marine mammals with the understanding that authority under the Endangered Species Act for marine mammals would reside under NOAA as well. This is not a simple issue and the Florida manatee would be a good endangered marine mammal to consider in determining whether this approach would be successful.

Recommendation 20-4: Florida supports the clarification of definitions and listing of activities for which permits are required, not required, or that are prohibited. The lack of definitions currently delays permitting for scientific activities.

Recommendation 20-5: Florida supports clarification of activities that constitute "harassment" with an emphasis on activities that have the potential to significantly affect the survival and reproduction of marine mammals. In addition, we believe it is important to categorize and define both acute and chronic forms of harassment.

Recommendation 20-6: It would be desirable to develop a programmatic permitting system.

Recommendation 20-7: Florida stresses that salvage, stranding and rescue networks should be singled out in an expanded research technology and engineering program because of the extremely valuable data generated.

Recommendation 20-8: This recommendation should be expanded to other marine organisms as well. Noise is an ecosystem concern.

Chapter 21 - Preserving Coral Reefs and Other Coral Communities

Recommendation 21-1: Florida strongly the need for coral reef mapping in deeper water and research on impacts of coastal water quality degradation to reef systems.

Recommendation 21-4: Florida strongly supports regional ecosystem-based research plans designed to understand, protect and, as appropriate, restore coral reef systems. We are engaged in this type of program under the auspices of the Coral Reef Task Force in Southeast Florida.

Chapter 22 - Setting A Course For Sustainable Marine Aquaculture

The Report cites U.S. seafood consumption rates, the values of seafood harvests, and the $7 billion annual seafood trade deficit as the basis of its support for expanding marine aquaculture and revising the regulatory framework for aquaculture in offshore areas. The State of Florida commends the Commission on acknowledging the growing significance of U. S. aquaculture. The nation's demand for seafood is linked to economic development and the total trade deficit. A coordinated and consistent aquaculture policy and regulatory and management framework is critically needed.

The following changes to the text of the section titled 'ACKNOWLEDGING THE GROWING SIGNIFICANCE OF MARINE AQUACULTURE' are recommended:

> Along with fish farmers themselves, the aquaculture industry supports an economic engine that consists of an infrastructure of feed mills, processing plants, and equipment manufacturers and a technical innovation engine that consists of public and private research institutions, undergraduate and graduate degree programs at public and private universities, and national and global consulting companies. There is great potential for marine aquaculture to become an even more important component of the U.S. industrial base. Farm-raised species could become a critical source of seafood for the U.S. market and a way to help reduce the nation's seafood trade deficit of $7 billion a year (Figure 22.1)." In many parts of the country, commercial fishers are reconsidering their opposition to marine aquaculture and applying their unique skills, knowledge and abilities to become successful aquaculturists that are injecting new money into rural, coastal communities that were suffering from fishery management decisions that reduced or eliminated opportunities to fish. Publicly funded research to yield technical and management innovations to profitably culture seafood and attain environmental sustainability has yielded the knowledge and equipment that has been shared globally to improve environmental conservation and protection.

MARINE AQUACULTURE IN OFFSHORE AREAS

The marine aquaculture industry is looking increasingly toward opportunities in federal and state offshore waters.

The report acknowledges the numerous environmental impacts associated with aquaculture and presents cases to illustrate adverse impacts, but makes no recommendations regarding impact avoidance, minimization and mitigation. The identified impacts associated with marine aquaculture should be thoroughly addressed through research, information sharing and adaptive management before endorsing a significant expansion of offshore aquaculture.

On pages 270-272, the current regulatory framework is characterized as an impediment to marine aquaculture operations in state and federal waters. "The jumble of authorities makes it difficult for those involved in aquaculture activities to know what permits are needed..." Florida agrees that the legal framework for offshore aquaculture projects needs to be improved. The report does not address how compliance with the National Environmental Policy Act or the Coastal Zone Management Act would be incorporated into the framework. To ensure appropriate review of marine aquaculture operations in federal waters, review of activities under both NEPA and the CZMA should be required in any proposed revisions to the regulatory framework for aquaculture projects.

The NOAA assertion that offshore marine aquaculture is a fishery rather than farming activity may also prevent farmer access to insurance, animal health, noninsured crop loss payments, technical assistance, loan guarantees and other traditional agricultural programs and services that are available to land-based aquaculture through the U.S. Department of Agriculture.

Recommendation 22-1: It is not clear that a new government office is the answer to assuring an economically viable, environmentally sustainable aquaculture industry. Like any activity in the marine environment, aquaculture can have an environmental impact if not managed properly. Therefore, marine aquaculture policy must be developed cooperatively by the appropriate federal and state agencies charged with managing and protecting ocean and coastal resources.

Recommendation 22-2: Florida agrees that consolidating all regulations for marine aquaculture is critical to not only protecting the environment, but to encouraging an economically viable industry. A reliable and consistent regulatory framework allows entrepreneurs to know what is expected of them and encourages sustainable development of the aquaculture industry.

Recommendation 22-3: Florida agrees with the recommendation, as it is essential to supporting a viable aquaculture industry in the United States.

Recommendation 22-4: Florida agrees with the recommendation. The Code is an appropriate guidance document for developing nations, but provides little information to guide intensive aquacultural operations in industrialized nations. Guidance appropriate to highly technical, intensive production must be developed.

Chapter 23 - Connecting the Oceans and Human Health

Recommendation 23-2: Research in marine microbiology and virology should be expanded to include harmful algal bloom species.

Recommendation 23-3: This recommendation should be expanded to include enhanced monitoring and modeling to better understand mercury behavior and food chain magnification and to develop possible strategies for consumption advisories.

Chapter 24 – Managing Offshore Energy and Other Mineral Resources

Recommendation 24-1: Florida strongly supports investing a portion of unallocated OCS oil and gas revenues in the conservation and sustainable development of renewable ocean and coastal resources.

Recommendation 24-2: Florida strongly supports the MMS Environmental Studies Program. The ESP should be strengthened to address not only activities moving into deeper waters, but also future renewable energy activities. This recommendation calls for MMS to systematically identify the nation's offshore non-energy mineral resources and conduct environmental studies to ensure the best uses of those resources. Study costs could be reduced by coordinating with other studies performed for oil and gas leasing and development activities.

Recommendation 24-5: Florida supports enactment of legislation providing for the comprehensive management of offshore renewable energy development that considers state priorities and incorporates NEPA and CZMA section 307 requirements. The Minerals Management Service has an organized study program and leasing and rental system that could be adapted to renewable energy projects.

Chapter 25 - Creating a National Strategy for Increasing Scientific Knowledge
The state strongly supports the need for a national strategy but cautions against "reinventing the wheel" in our attempts to create optimal systems. A national strategy should take advantage of existing multi-state cooperative initiatives and develop more state partnerships to ensure a sufficient level of local knowledge.

Recommendation 25-5: Accurate charts and maps, especially of marine benthic features and dynamic shorelines are a critical research and management need that should be addressed in this recommendation..

Chapter 26 - Achieving a Sustained Integrated Ocean Observing System

This is possibly the most important element of the Commission's report. The state strongly supports the development and expansion of the Integrated Ocean Observing

System to ensure that all decision makers have the best available and most timely information on ocean and coastal conditions and trends. Florida is working cooperatively with both the Gulf and Southeast Coastal and Ocean Observing System network and acknowledges the efficiencies to be gained by integrating physical, chemical and biological ocean observations across multiple platforms.

An Integrated Ocean Observing System should incorporate or use the recommendations of the NRC Ocean Studies Board Report titled: "*Enabling Ocean Research in the 21st Century: Implementation of a Network of Ocean Observatories*". However, a sustained IOOS system should meet the need for timely scientific information in coastal and estuarine areas, not just the open ocean. States need to be full partners in the development of IOOS to define regional and local needs and to provide expertise and match funds.

Recommendation 26-1: The number of observation buoys should be sufficient to enhance the implementation of ecosystem-based management as well as offshore geological, biological, and oceanographic investigations

Recommendation 26-2: The US Navy should be a key partner in developing a sophisticated real-time environmental monitoring system.

Recommendation 26-5: The need for a standardized set of core variables collected by all IOOS components is critical for long-term system utility. As many of these variables are already in place, it is important to thoroughly examine the current system before determining what additional components are needed.

Chapter 27 - Enhancing Ocean Infrastructure and Technology Development

Recommendation 27-1: The availability of NASA, ONR, and NSF airborne platforms for offshore investigations needs to be increased.

Chapter 28 - Modernizing Ocean Data and Information Systems
The establishment of a new lead information systems agency (OCEAN.IT) should proceed carefully and cooperatively and examine the myriad approaches currently in use in order to assure a willing and smooth transition to a shared data and information system.

Additional Observations

Sea Turtles
There is a lack of treatment of sea turtles in the Commission's despite ample science to justify a thorough description of their conservation needs. The State of Florida plays a key role in the recovery of four Endangered and one Threatened species of sea turtles, and hosts one of only two large nesting populations of loggerhead turtles in the world. With funding received through ESA Section 6 Agreements with USFWS and NMFS, the state conducts a broad scope of research and management activities concerning sea

turtles, including monitoring of population trends (reproduction and mortality), research on the effects of artificial lights and coastal armoring on sea turtle reproductive efforts, and review of permits involving potentially disruptive activities (e.g., construction, renourishment, dredging, lighting, etc.) on the nesting beach and in nearshore waters. These research and management efforts are essential to address the many threats that sea turtles face. Specific threats to sea turtles in Florida that we would like to see addressed in the report include the following:

- Mortality from fisheries
- Mortality from artificial lighting
- Habitat loss from coastal armoring and beach nourishment
- Mortality from disease, including fibropapillomatosis

In recent years, Florida has documented increasing sea turtle mortality, increasing degradation of nesting habitat from development and artificial lighting, and a worrisome decrease in loggerhead nesting. Many of the issues impacting Florida's sea turtle populations have been identified but have not been adequately addressed at the federal level. An annotated table is currently being assembled by the USFWS and NMFS Loggerhead Recovery Team. (See summary table below.) The table is an excellent description of the magnitude of threats to the loggerhead turtle, the sea turtle species for which Florida is a primary steward, and it illustrates many overlapping problems facing other sea turtle species. An electronic version of the full series of tables will be provided. We believe the Commission's report should address the major issues identified therein.

LIFE STAGE	ECOSYSTEM	Mortality Adjusted by Reproductive Equivalents							
Nesting female	Terrestrial Zone		303	3		3			>0
Egg	Terrestrial Zone		40	144	3716	>0	1265	336	14004
Hatchling stage	Terrestrial Zone		>0	12		1380	12	>0	>0
Swim frenzy, transitional stage	Neritic Zone	1		>0		252	2000		>0
Juvenile stage	Oceanic Zone	3859	2		>0	>0	11615		>0
Adult stage	Oceanic Zone	>0			>0	>0	>0		
Juvenile stage	Neritic Zone	14487	1023	8	>0	161	>0		8
Adult stage	Neritic Zone	3756	342	3	>0	55	>0		>0
Total		22103	1710	170	3716	1851	14892	336	14012
		Fisheries Bycatch	Resource Use	Construction	Ecosystem Alterations	Pollution	Species Interactions	Exotic Species	Other Factors
		Categories of Threats							

Artificial Reefs

The National Fishing Enhancement Act (P.L. 98-623) and artificial reef management are not discussed in the report. Artificial reefs are an accepted and traditional fishery and habitat management tool in the nation's marine ecosystems. The U.S. Navy and the Maritime Administration are considering disposing large numbers of ships (reported to be as many as 358 ships in Hess et al. 2001[1]) by donation to states as artificial reef material. Federal coordination and guidance are needed to ensure that environmental problems do not result from these well-intentioned efforts. Potential problems with using ships as artificial reef material include: contamination of water and sediment by such chemicals as polychlorinated biphenols, hydrocarbons and heavy metals; damage to natural marine habitats by inappropriate placement of artificial reef materials; movement of ships and other materials during extreme weather events resulting in damage to nearby natural marine habitats; and the potential for the vessels to obstruct safe navigation.

[1]Hess, Ronald W., Denis Rushworth, Michael Hynes, and John Peters. 2001. Disposal Options for Ships. Prepared for the United States Navy under contract MR-1377 by the National Defense Research Institute, RAND. 148 pp.