

U.S. COMMISSION ON OCEAN POLICY



Reports of Site Visits Associated with the Florida and Caribbean Regional Meeting Florida Marine Research Institute, St. Petersburg, Florida February 22, 2002

Background/Area of Site Visits

On February 21, 2002, the U.S. Commission on Ocean Policy held three simultaneous site visits in association with the Commission's Florida and Caribbean Regional Meeting held in St. Petersburg, Florida. Site visits were held in San Juan, Puerto Rico, Ft. Lauderdale, Florida, and Tampa-St. Petersburg.

San Juan, Puerto Rico

Ft. Lauderdale, Florida

Tampa-St. Petersburg, Florida

San Juan, Puerto Rico Site Visit

The San Juan site visit included stops at the Las Cabezas de San Juan Nature Reserve, the Isla Verde Coastal Development Project and the Capitol Building.

Commissioners Participating in the San Juan Site Visit:

Admiral James D. Watkins, USN, (Ret.), Chairman

Dr. Frank Muller-Karger

Vice Admiral Paul G. Gaffney II, USN

Mr. Edward Rasmuson

Commission Staff:

Dr. Ken Turgeon

Las Cabezas de San Juan Nature Reserve

- Multiple Presenters

On February 20, the Commissioners traveled to the Las Cabezas de San Juan Nature Reserve, which is about one hour east of San Juan, on a point at the extreme northeast end of Puerto Rico. It is one of about 20 reserves managed by The

Conservation Trust (Fideicomiso) of Puerto Rico. This 316-acre property includes upland forests, rocky intertidal areas, a sand beach, a mangrove forest and lagoon habitats. It is also the site of a historical light house which was built in the mid-1800s and is still functioning.

Mr. Francisco Blanco, the Reserve Director, was the host for the visit. The key point that Mr. Blanco made was that unbridled development and high population growth -- Puerto Rico has a population of 3.8 million people -- is taking its toll on Puerto Rico's ecosystems, from the high mountain rain forests all the way down to the ocean interface and into the surrounding ocean itself. For example, dense housing development in the uplands and mountains has resulted in heavy sedimentation in the nation's rivers. The sediment is then transported via the rivers to the oceans where it smothers the near-shore coral reefs.

With the increased development and population, non-point source pollution also is becoming a major issue for Puerto Rico. Even though Puerto Rico has strong environmental policies to safeguard its resources, municipal government officials often tend to ignore them when granting permits for development or variances because the development brings much needed jobs for the local populace.

Shoreline development -- much of it tourist and recreation oriented -- has taken away important nesting and breeding habitat for sea birds and for sea turtles and put humans and property in danger of severe coastal hazards, such as hurricanes. The Trust, which was chartered by the Puerto Rican government in 1986, is doing what it can to preserve the broad array of historical and natural resources found on the island. Mr. Blanco seeks collaborations to use the reserves as educational facilities. However, future funding for the Trust is not guaranteed.

U.S. Fish and Wildlife Service and National Marine Fisheries Service personnel on the island gave a brief presentation, including an overview of fishing pressures. According to the experts, recreational fishing -- not commercial fishing -- is a major problem for Puerto Rico. Commercial fishing is geared toward the local consumption market and is carried out much as it was 200 years ago with small wooden boats and low technology fishing gear. On the other hand, recreational fishers use highly sophisticated sport fishing gear and target the top-of-the-food-chain species such as tuna and billfish. Recreational fishing is a major activity in Puerto Rico, but there is no quantifiable data on what is being caught (species, size, sex, etc). However, the anecdotal data clearly indicate the recreational fishing industry is having a serious negative impact on the marine game-fish populations.

Mr. Blanco expressed a sentiment that the commission would hear from several people on the next day, namely that while Puerto Ricans appreciate their ocean and ocean resources, there is a lack of public understanding about the value of protecting and preserving those resource. The high poverty rate adds to this problem because the need to make a living and feed the family far overshadows the average Puerto Rican's concern for protecting ocean resources.

Isla Verde Coastal Development Project

- Multiple Presenters

On February 21, the first site visit took the Commissioners to the Isla Verde coastal development project in San Juan, where they received a presentation from Mr. Heriberto Martinez, the representative of a local environmental group, Defensores de

la Costa. The group is trying to force local developers to adhere to the existing zoning and building laws that regulate such factors as setback distance from the water, height of the buildings and annexation of public lands for private development. The issue is one of wealthy investors ignoring the laws to maximize profit on the project. The group took the case all the way to the Appellate Court where it won a ruling that has halted the project while the Judge reviews the evidence and will eventually make a final ruling. This could be a precedent-setting case if the group wins since it may well be the first time that a development project in Puerto Rico has been halted for not adhering to environmental protection policies and laws. This is only one of several situations in Puerto Rico where local environmental groups with minimal resources are taking on wealthy developers to protect the coastal environment.

Capitol Building

- Multiple Presenters

Next, the Commissioners traveled to the Capitol Building for round table discussions with local officials, students and the public. The initial round table session included the Honorable Salvador Salas-Quintana, Secretary of Natural and Environmental Resources, representatives from the Puerto Rico Department of Natural Resources, faculty from the University of Puerto Rico (including Dr. Manuel Valdes-Pizzini, the regional Sea Grant director), Sr. Abel Vale (Alianza Ambiental de Puerto Rico, a representative local conservationist NGO), and Mr. Dan Shelly, Administrator of the Marina Puerto del Rey.

The assembled panel stressed that urban sprawl is Puerto Rico's biggest problem, with the most significant impact on the coastal zone coming from the uncontrolled discharge of large volumes of sediment and silt that wash down rivers as a result of coastal and inland erosion. The increasing trend toward the channelization of rivers and nutrient pollution due to poor sewage treatment were also mentioned. For example, six of the island's largest waste treatment plants use only primary sewage treatment.

The roundtable also focused on the critical role education and public outreach play in protecting natural resources. However, panelists pointed out the difficulty of this effort due to the many socio-economic ills in Puerto Rico, including high unemployment.

Regarding fisheries issues, the need for accurate stock assessments is paramount to establishing scientifically valid fisheries management plans, said the panel. A major impediment here, as with environmental protection throughout Puerto Rico, is the lack of human and financial resources to do the job. The DNR representative stated that more resources, people and authorities are needed to protect the marine and coastal areas. When asked about enforcement policies, he explained that enforcement in terms of citations is the last step taken since judges are often reluctant to impose penalties. Their preferred approach to the problem is to explain to developers why they need to obey the laws to protect the environment. They also try and establish programs in the school system to educate the children about the importance of their coastal and marine resources, especially the coral reef communities.

Regarding Sea Grant, the panelists stressed that Sea Grant should continue to run as a NOAA program. The reasons included a lack of compatibility with the National

Science Foundation's mission. Puerto Rico Sea Grant Program receives \$900,000 a year, \$50,000 of which is transferred to the Virgin Islands Sea Grant office. Of the amount that remains in Puerto Rico, 45 percent is spent on education and public outreach with the remainder going to support an average of eight major research projects. These research funds also cover salaries of the researchers. Responding to questions, Dr. Valdes-Pizzini said the program could effectively use an additional \$1.2 to 2.1 million per year to conduct other needed research. He said they do try to leverage projects with additional funding from federal agencies other than NOAA.

In a separate discussion, Mr. Dan Shelly expressed his concern with the negative impact the *Jones Act* was having on the charter boat industry of Puerto Rico. Because of the Jones Act, foreign flagged charter boats are being forced to take their business to other Caribbean nations and this is hurting the Puerto Rico tourist economy.

The Commissioners also participated in a panel with students and faculty from the University of Puerto Rico. The students' chief concern was the lack of job opportunities for them in Puerto Rico.

The Commissioners also had a brief open dialog with other local participants, including Dr. Garcia-Moliner of the Caribbean Fishery Management Council.

Appendix I

Participants:

- Heriberto Martínez, Proyecto Princesa del Mar, Defensores Areas Costeras.
- Hon. Salvador Salas-Quintana, Secretary of Department of Natural and Environmental Resources
- Dr. Manuel Valdes-Pizzini, Director of Puerto Rico Sea Grant College Program, University of Puerto Rico at Mayagüez
- Dan Shelly, Administrator, Marina Puerto del Rey
- Abel Vale

Ft. Lauderdale Site Visit

On this site visit, the Commissioner visited Port Everglades, the South Florida Ocean Measurement Center's at Nova Southeastern University Oceanographic Center and at Florida Atlantic University. The visit concluded with a trip to the Diplomat Hotel in the City of Hollywood Beach.

Commissioners participating in the site visit:

Ms. Ann D'Amato
Dr. James Coleman
Prof. Marc Hershman
Mr. Paul Kelly
Dr. Paul Sandifer

Commission staff:

Dr. Tom Kitsos, Executive Director
Ms. Laura Cantral

Presentations:

Port Everglades

- Multiple Presenters

The Commissioners visited Port Everglades located on the southeastern coast of Florida within the cities of Hollywood, Ft. Lauderdale, and Dania Beach. Established as a deep water port in 1927, the 2,190 acre port is now a well-renowned hub of cruise and shipping activity. Phil Allen, Acting Director of Port Everglades, welcomed the Commissioners and provided a brief history of the port including how the port has become one of the strongest contributors to the economy of South Florida. The Commissioners were then briefed on port security by Broward County Sheriff Ken Jeane. Jim Walsh, Vice President of Carnival Cruise Lines, concluded the visit with a discussion of the cruise industry's participation in voluntary discharge agreements. These agreements aim to reduce the impacts of ship waste streams on the marine environment—an important management issue for all of the nation's ports.

South Florida Ocean Measurement Center

North Campus, Nova Southeastern University Oceanographic Center

- Multiple Presenters

Next, the Commissioners traveled to the campus of the South Florida Ocean Measurement Center (SFOMC) which houses the Nova Southeastern University Oceanographic Center, the Naval Surface Warfare Center's South Florida Testing Facility, and SeaTech, the complex where Florida Atlantic University's Department of Ocean Engineering is located. The centerpiece of the SFOMC is a fully instrumented ocean laboratory that aims to produce real-time data and provide a comprehensive overview of environmental conditions in and above the ocean. SFOMC Executive Director Garth Jensen explained to the Commissioners that the many partnerships between government and academia at the Center have made it a powerhouse of ocean research, development, and education in fields such as marine acoustics, AUV research and application, and ocean current energy.

The Commissioners first visited the Nova Southeastern University Oceanographic Center on the north campus of the SFOMC where a series of speakers gave presentations on the topics of ballast water, coral reefs, and marine protected areas. Major points of the presentations included:

- The need to offset the mounting damage caused by nuisance species and the need to regulate ballast water under a united, and ultimately international, policy. The SFOMC is being considered as a possible test center for ballast water treatment technology as part of the USCG/EPA/NSF Environmental Technology Verification Program.
- The importance of developing consistent coral reef policy worldwide. The SFOMC houses the National Coral Reef Institute, which was created by Congress in 1998 to conduct key research in the areas of coral reef assessment, monitoring, and restoration. Support for research on coral reef restoration was singled out as a particularly urgent issue for consideration by the Commission. The Commissioners were told that escalating threats to coral reef resources in the U.S. warrant increased funding for restoration research.
- Results of a study on the socioeconomic values associated with coral reefs in Southeast Florida. The two year study (completed in October 2001) was a coordinated effort of the Florida Fish and Wildlife

Conservation Commission, NOAA, and several South Florida counties. Study results are meant to enhance coral reef management in the region by guiding infrastructure assessment, investment decisions, resource damage assessment, and the decision of whether or not to designate “no take” zones.

- The benefits of marine reserves, including the protection of marine ecosystems and the support of sustainable fishing. NOAA researchers presented evidence of the benefits of marine reserves (also called “no take” areas, fully protected areas, and refugia) and discussed principles of reserve design and other scientific and social questions associated with marine reserves.

**South Florida Ocean Measurement Center
South Campus, SeaTech, Florida Atlantic University**

- Multiple Presenters

In the afternoon, the Commissioners traveled to the Florida Atlantic University’s SeaTech Campus located on the south campus of SFOMC. Here, the Commissioners heard presentations on the topics of ocean observing systems, the coastal ocean impacts of land use decisions, oceans and human health, and ocean exploration. Major points of the presentations included:

- The success of industry in developing many of the “building blocks” (i.e., sensors, connectors, buoys, cables) required for establishing an integrated ocean observing capability. Dr. Andrew Clark, President of the Marine Technology Society, stated that with the proper demand, industry has the potential to develop the infrastructure needed to create a truly integrated ocean observing system.
- The need to coordinate local land use decisions that impact the coastal ocean. The interagency South Florida Ecosystem Restoration Task Force was presented as a model for how a region could address issues related to competing land and ocean interests. However, it was noted that the Task Force is limited in scope and a more comprehensive (possibly national) approach to addressing land based sources of ocean pollution needs to be developed.
- Required attributes of linked coastal ocean observatories were discussed. It was noted that the location of the SFOMC as well as the technology and expertise possessed by SFOMC partners make the Center well-poised to create coordinated, overlapping observatories in Florida.
- The oceans are a tremendous source of biological, genetic, and chemical diversity with mostly unknown—but very promising—biomedical applications. Creating a greater focus on marine organisms as a source of pharmaceuticals, biomedical probes and medical devices has the potential to benefit human health and contribute to the nation’s economy.
- Advances in ocean exploration technology are needed to more accurately assess the biota and productivity of the world ocean. The future of undersea exploration and understanding needs the emphasis and resources historically given to space exploration and national defense.

Diplomat Hotel, City of Hollywood Beach

- Multiple Presenters

The day concluded with presentations made by science, government, and industry representatives from the Broward County area at the Diplomat Hotel in Hollywood Beach. The speakers remarked on the significance of the marine and coastal resources to the South Florida economy noting that with the large influx of residents and visitors comes an increased urgency to address potential hazards. Mr. Steve Somerville, Director of the Broward County Department of Planning and Environmental Protection, spoke on the history of the interplay between coastal development and the state of the shorelines. He noted that beach erosion is a consistent issue for the area and that several beach renourishment projects had occurred and were planned for the future. Dr. Stephen Leatherman, Director of the International Hurricane Center, briefed the Commissioners on the latest efforts to enhance the ability to track hurricanes and predict if, when, and where they will make landfall. It is imperative, he stated, that this type of information be communicated to the public in an effective manner—preventing, as much as possible, harm to life and property in coastal areas. The final presenters of the day reinforced to the Commissioners how much of the lifestyle in South Florida is centered around the ocean. Mr. Gary Sims, General Manager of the Westin Diplomat Resort and Spa, and Ms. Nicki Grossman, President of the Greater Fort Lauderdale Convention and Visitors Bureau, remarked on the large contribution made to the economy by tourism and expressed the importance of tourism to any coastal and ocean management plan.

Appendix I

Participants:

- Broward County Sheriff Ken Jeane
- Mr. Phil Allen, Acting Director, Port Everglades
- Mr. Jim Walsh, Vice President, Carnival Cruise Lines
- Mr. Garth Jensen, Executive Director, South Florida Ocean Measurement Center
- Dr. Richard E. Dodge, Executive Director, National Coral Reef Institute
- Dr. Andrew Rogerson, Director, Institute of Marine and Coastal Studies
- Mr. Ken Banks, Manager of Marine Resource Programs, Broward County Department of Planning and Environmental Protection
- Dr. Grace Johns, Senior Associate, Hazen and Sawyer, Inc. and Broward County
- Dr. Richard Spieler, Professor, Oceanographic Center, Nova Southeastern University
- Dr. Nancy Thompson, Director, NOAA Southeast Fisheries Science Center
- Dr. Jim Bohnsack, Research Fishery Biologist, NOAA Fisheries Southeast Science Center
- Dr. Stewart R. Clegg, University of Technology, Sydney, Australia
- Dr. Judy Gray, NOAA Office of Oceanic and Atmospheric Research, Atlantic Oceanographic and Meteorological Laboratory
- Dr. Robert Weisberg, Professor, College of Marine Science, University of South Florida
- Dr. Shirley Pomponi, Director, Division of Biomedical Marine Research Harbor Branch Oceanographic Institution
- Dr. R. Grant Gilmore, Senior Aquatic Scientist, Dynamac Corp
- Mr. Steve Somerville, Director, Broward County Department of Planning and Environmental Protection

- Dr. Stephen Leatherman, Director, International Hurricane Center, Florida International University
- Mr. Gary Sims, General Manager, Westin Diplomat Resort and Spa
- Ms. Nicki Grossman, President, Greater Fort Lauderdale Convention and Visitors Bureau
- Dr. Grace Johns, Senior Associate, Hazen and Sawyer, Inc. and Broward County

Tampa-St. Petersburg Site Visit

The site visit to Tampa-St. Petersburg included an education roundtable meeting with junior high school students and visits to the Port Manatee Hatchery, the Longboat Key and Lido Key beaches and the Mote Marine Laboratory.

Commissioners participating in the site visit:

Dr. Frank Muller-Karger
 Mr. Bill Ruckelshaus
 Dr. Andy Rosenberg
 Dr. Robert Ballard
 Mr. Ted Beattie
 Mr. Larry Dickerson
 Mr. Chris Koch

Commission staff:

Ms. Kate Naughten
 Ms. Deb Trefts

Also in Attendance:

Dr. Mary Matthews, University of South Florida
 Mr. George Henderson, Florida Fish and Wildlife Commission
 Dr. Kumar Mahadevan, Executive Director, Mote Marine Lab

Education Round Table

The Commissioners kicked off their site visit by meeting with a group of junior high students from the area who participated in a unique summer science camp. The camp, run in conjunction with the University of South Florida, focuses on marine science, and includes several USF graduate students as counselors. The students opened up a dialog with the Commissioners that touched on a variety of topics, including ocean exploration, fisheries and ocean-related laws.

Port Manatee Hatchery and Facility

- Bill Halstead, Florida Fish and Wildlife Commission

Following the student dialog, the Commissioners traveled to the Port Manatee fish hatchery for an overview of various stock enhancement programs using an array of fishery management tools. The program was led by Bill Halstead of the state's Fish and Wildlife Commission. Among the topics discussed by the staff and Commissioners was the idea of fish stocking as a management tool, genetics, disease and the efficacy of restocking programs. The fish hatchery is located on port property, which the Commissioners would tour later that morning.

Piney Point Phosphate Facility (Abandoned)

- Sam Zamani, Florida Department of Environmental Protection

Led by Sam Zamani, of the Florida Department of Environmental Protection, this driving tour took the Commissioners through an abandoned phosphate plant, which still poses a huge environmental risk to surrounding people, plants, wildlife, marine life and water quality, especially now that it is abandoned. The tour underscored the inherent environmental risks posed by locating industrial facilities in the coastal zone. The tour also stressed the added responsibility and cost for the local, state and federal government when they must ensure that the infrastructure of the facility is maintained for public health and safety reasons.

Port Manatee Office

- David McDonald, Port Director
- Steve Tyndal

The Commissioners toured the facilities at Port Manatee, including the loading docks and the sea grass restoration project. A variety of port-related topics came up for discussion at this visit, including future port expansion, economic development and environmental trade-offs. The port's sea grass restoration project also was highlighted.

Longboat Key and Lido Key Beaches

- Mr. Dennis Daughters, Director of Engineering, City of Sarasota
- Ms. Carolyn Mason, Mayor, City of Sarasota
- Ms. Lou Ann Miller, Sarasota City Commissioner
- Ms. Mary Anne Servian, Sarasota City Commissioner
- Ms. Mary Quillin, Sarasota City Commissioner
- Mr. Richard Martin, Sarasota City Commissioner
- Mr. Jim Brown, Town of Longboat Key, former Mayor

This brief stop included presentations by the elected officials of neighboring beach communities addressing the pros and cons of beach replenishment projects.

Mote Marine Laboratory

- Dr. Kumar Mahadevan, Mote Marine Lab

The Commissioners then traveled to Mote Marine Lab, where they were welcomed by Dr. Kumar Mahadevan and received program overviews from Mote experts in a variety of areas.

Mote Marine/Distance Learning Demonstration

- Ms. Elizabeth Metz, Distance Learning Program Director
- Mr. Dan Bebak, Director of Aquarium and Special Projects

First, the Commissioners sat in on a demonstration of Mote's distance learning program. According to the staff, Mote's science education programs are now available to high schools in Sarasota and Manatee County via the internet.

Mote Marine/Aquaculture

- Dr. Ken Leber, Director, Center for Fisheries Enhancement
- Dr. Kevan Main, Director, Center for Aquaculture Research & Development

Next, the Commissioners toured Mote's aquaculture center and received a firsthand look at the lab's sturgeon and caviar aquaculture program, which focuses on producing luxury consumer goods such as caviar.

Mote Marine/Sharks

- Dr. Bob Hueter, Director, National Center for Shark Research
- Dr. Carl Luer, Program Manager, Biomedical Research

The tour of the shark tank included a discussion of the heightened public interest in sharks, shark population dynamics and the ongoing studies of shark immune systems for cancer research and shark cartilage for other medical uses.

Mote Marine/Marine Mammals/Sea Turtles

- Dr. Randy Wells, Director, Center for Marine Mammal Research
- Dr. John Reynolds, Program Manager, Manatee Studies
- Dr. Jerris Foote, Program Director, Sea Turtle Research

Next, the Commissioners saw several marine mammal and turtle rehabilitations in progress. At the time of the visit, the rehab program included a pygmy sperm whale and an injured green sea turtle. The nationally-recognized program is jointly run by Mote, the Florida Fish and Wildlife Commission and the Florida Department of Environmental Protection.

Mote Marine/Harmful Algal Blooms

- Dr. Rich Pierce, Director, Center for Eco-Toxicology
- Karen Steidinger, Florida Fish and Wildlife Commission

The Commissioners received a brief overview of the numerous studies underway at Mote labs which are looking at red tides and other harmful algal blooms and what – if anything – scientists or resource managers can do about them.

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- Steve Tyndal
- Sam Zamani, Florida Department of Environmental Protection
- Bill Halstead, Florida Fish and Wildlife Commission
- Mr. Dennis Daughters, Director of Engineering, City of Sarasota
- Ms. Carolyn Mason, Mayor, City of Sarasota
- Ms. Lou Ann Miller, Sarasota City Commissioner
- Ms. Mary Anne Servian, Sarasota City Commissioner
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