Coral Reefs Program and Projects Overview

Summary of Tasks

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OBJECTIVES

Provide a comprehensive view of PR DNER coral reef systems program and projects developed during FY 06.

Discuss potential management gaps and tools for the Local Action Strategies in Puerto Rico.

Provide next steps action to follow in order to reduce potential impacts on PR Coral Reef Ecosystem.
PRI ORITY – LAS AREAS

Lack of Public Awareness

Overfishing

Recreational Overuse

Land-based Sources of Pollution
EDUCATION AND OUTREACH OVERVIEW

- A reproduction of 1,000 prototype coloring book were produced related to the conservation and protection of coral reef ecosystem. These books were distributed among public libraries, first grades schools and in activities related to the coral reef program.
  - The themes covered within the coloring book are the impacts related to sedimentation, illegal sewage discharges and impacts due to gas and oil spills by recreational vessels.
A presentation folder was created as part of the material to be distribute at the Coral Reef Symposium to be held in March 2007.

The presentation folder has a message warning recipients of the importance of protection and conservation of PR coral reefs.
A high impact visual public awareness media campaign was developed to reach all tourists traveling to the Islands from the US East Coast. This media campaign is placed at JFK US International Airport among others.

Production of a series of PSA Video-DVD Format Coral Reef Awareness Messages and Images that eventually will be Broadcast via TV and thru Internet website.

The Campaign also includes the placement of the Visual Media in Puerto Rico and the US Virgin Islands. The Media is produced in both English and Spanish and includes the International Airports of Puerto Rico and the US Virgin Islands. Additional Media will be placed near sensitive Coral Reef Zones of both Puerto Rico and the US Virgin Islands.
EDUCATION AND OUTREACH
OVERVIEW

- Installation of informational and/or educational signage in areas of high frequency of diving, snorkeling, kayaking and jet skiing over ecologically sensitive areas.

- With the assistance of a group of Eagle Boy Scouts, 10 educational signs related to coral reef ecosystem conservation were installed at the Cordillera Reefs Natural Reserve; Icacos (1) and Palominos (1) Cays; Buyé beach (2), Cabo Rojo; Flamenco (1) and Tamarindo, Canal Luis Peña Natural Reserve (1) beaches at Culebra; Mona Island (2) (Sardinera and Pájaros beaches); Caja de Muertos Island Natural Reserve (1); Parguera (1).
A coral reef and fisheries enforcement Capacity building workshop was held in May 2006 in San Juan, Puerto Rico.

An identification guide of the regulated fish species and the pertaining restriction for each one species was distributed.

Training in marine species identification was also part of the workshop.

A communication exchange workshop between enforcement, hearing officers, judges, state’s attorneys and biologists will be held the first week of November 2006 to strengthen case preparation.
CAPACITY BUILDING WORKSHOPS
WATERSHED PROTECTION

- A workshop was carried out in July with the participation of the following agencies: Planning Board, Environmental Quality Board, Municipalities, DNER, NOAA, NRCS, Corps of Engineers, Home Builders Association and Others.
- Improve implementation of erosion and sediment control measures in the Loiza watershed.
- Discuss roles and responsibility upon erosion control, stormwater and coral reef protection.
OVERVIEW LAND BASE SOURCES OF POLLUTION

- Land base sources of pollution at Belverede Natural Reserve work is divided in two phases:
  - An inventory of septic tanks.
  - Sampling and quality analysis of underground and coastal water that impact coral reefs.

- Sampling frequency of once/month for turbidity and microbial densities.

- Results: water turbidity and fecal coliforms higher on inshore waters. Nonetheless, fecal pollution pulses were found in offshores areas.
OVERVIEW WATERSHED PROTECTION
Belverede Reserve

Legend
- Sampling points
- Coastline

Water quality sampling sites

- Arrecife
- El Ron
- Punta Olotones
- Puerto Real Pier
- Puerto Real Fishing Village
- Punta Cerrero
- Punta Lamele, Outer Bay
- Punta Lamele, Inner Bay

Scale: 1:50,000

Legend:
- Less than 10% living coral cover
- 10 to 30% living coral cover
- More than 30% living coral cover
- Coral cover not measured
- Coral survey on reef
- Need survey
RECREATIONAL OVERUSE – CANAL LUIS PEÑA RESERVE

- Protect critical marine habitats against anchoring from recreational vessels.
- A professional contractor was hired to start work in November 2006.
- Nineteen (19) mooring buoys deploy at Canal Luis Peña. Anchoring system are single eye bolts, Manta Ray and Halas system.
- Depth ranges between 13 to 38 feet. Work to be performed at insular shelf platform on seagrass beds, coral reefs and sand bottom.
RECREATIONAL OVERVIEW – CANAL LUIS PEÑA RESERVE

Canal Luis Peña Natural Reserve, Culebra, Puerto Rico

Navy EOD Inspection for Proposed Mooring Buoys
For Canal Luis Peña Nature Reserve, Culebra PR
April 26-27, 2005
NDD.DODD

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RECREATIONAL OVERVIEW – LA PARGUERA NATURAL RESERVE

- Protect critical marine habitats against anchoring from recreational vessels.
- Ten (10) mooring buoys were deployed at La Parguera Natural Reserve.
- Anchoring system are single eye bolts, Manta Ray system.
- Supporting materials included aids to navigation and markers.
- Depth ranges between 3 to 18 feet.
- Lettering purpose was to alert boaters of grounding sites areas.
- Project ended September 30 2006.
RECREATIONAL OVERUSE – LA PARGUERA NATURAL RESERVE
Shallow Areas poorly define at La Parguera.

New signs containing international symbol of shallow areas are currently on display on site.
RECREATIONAL OVERUSE – DESECHEO ISLAND MARINE RESERVE

- Protect critical marine habitats against anchoring from recreational vessels.
- Eight (8) buoys were deployed displaying international signage alerting boaters of being within the Reserve boundaries and fishing closure.
- Project ended first week of October 2006.
RECREATIONAL OVERUSE – CAYO AURORA NATURAL RESERVE

- Prepare zoning maps of important benthic habitats and marine oriented activities.
- Recommendations includes:
  - Installation of mooring buoys and speed limit signs
  - Preparation of educational exhibits
  - Reforestation of red mangrove of Cayo Aurora
  - Establishment of a close fishing area on the backreef
  - Increase DNER personnel during peak recreational season
OVERVIEW – CAYO AURORA NATURAL RESERVE
RECREATIONAL OVERUSE – CAJA DE MUERTOS RESERVE

- Prepare zoning maps of important benthic habitats and marine oriented activities.

- Recommendations includes:
  - Installation of mooring buoys and speed limit signs
  - Preparation of educational exhibits
  - Installation of signage portraying special use areas
  - Refurbishing of DNER recreational educational support facilities
  - Permanent and seasonal closed seasons for certain areas