

**Grand Bay National Estuarine Research Reserve  
Coastal Training Program  
Three-Year Program Strategy  
2005-2008**

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**Introduction**

Since its designation in 1999, the Mississippi Department of Marine Resource's (MDMR) Grand Bay National Estuarine Research Reserve (GNDNERR) has sought to bridge the gap between science and management by providing training workshops to professional coastal resource management audiences and other coastal user groups. These workshops, collectively referred to as coastal decision-maker workshops (CDMWs), are coordinated through the reserve's Education Program. As the CDMW initiative has grown, so has the need to develop a more coordinated approach to training and information sharing based on assessments of audience needs and skill levels.

To accommodate this need, the GNDNERR is developing a regional Coastal Training Program (CTP) with funding and guidance from the National Oceanic and Atmospheric Administration's (NOAA) Estuarine Reserves Division (ERD). The program targets coastal decision-makers (e.g., individuals who make routine decisions about the management of coastal resources in a professional or volunteer capacity) and provides opportunities to create new and enhance existing interagency partnerships in an effort to implement a coordinated approach to coastal resource management training along the north-central Gulf Coast. The intent of the CTP is to identify and fill gaps in coastal resource management training opportunities without duplicating existing training efforts offered by other providers.

**Goal and Objectives**

The mission of the Grand Bay National Estuarine Research Reserve (GNDNERR) is "to increase our understanding of coastal resources through long-term research and monitoring and to transfer this knowledge using education and interpretation programs to foster informed decision-making and resource management of our coastal landscape" (GNDNERR Strategic Plan, 2003). In keeping with this mission, the goal of the CTP is to enhance the decision-making abilities of professional audiences whose actions influence the management of natural resources along the north-central Gulf Coast. This will be accomplished by transferring relevant science-based information, tools, and technology to targeted audiences.

Three-year objectives that describe the intended impacts of the GNDNERR CTP on participants include:

- Decision-makers will engage in and endorse coastal resource protection programs that encourage awareness of local coastal management issues;
- Decision-makers will consult the reserve's CTP regarding coastal management issues facing their communities;
- Decision-makers will access the CTP website for current training information; and,
- Decision-makers will participate in CTP training events.

**Target Audience Definition and Primary Training Themes**

Reflecting upon the results of the market analysis and needs assessment surveys, the CTP Advisory Committee agreed that the primary initial target audience for GNDNERR's CTP over the next three years should be local elected and appointed officials in Mississippi's three coastal counties (Jackson, Harrison, and Hancock). The majority of the training opportunities and products created by CTP will reflect the needs of this audience. However, GNDNERR's CTP will maintain enough flexibility to include other

audiences highlighted by market analysis survey results (such as realtors, state regulators, developers, business professionals, engineers, etc.) in its outreach efforts, and it will be open to partnership opportunities that address the needs of these professionals. Although these audiences were not targeted by the initial needs assessment survey, market analysis results indicated that these audiences are potentially high need for additional training opportunities, and these audiences will be addressed in future CTP planning initiatives, as opportunities and resources allow.

Primary training issues that will be addressed by GNDNERR's CTP over the next three years take into account the results of the market analysis and needs assessment surveys and include the themes of wetland protection and management and water resources, which encompass numerous issues as follows:

- **Wetland Protection and Management**
  - Recreational Use
  - Erosion Control
  - Watershed Management
  - Dredging and Filling
  - Environmental Legislation
  - Environmental Education
  - Building Codes
  - Sustainable Development
  - Coastal Erosion/Accretion
  - General Land Planning
  - Environmental Monitoring
- **Water Resources (Supply and Quality)**
  - Storm Water Management
  - Combined Sewer Outflows
  - Clean Water Act (CWA) Compliance
  - Point Source Pollution
  - Erosion Control
  - Environmental Education
  - NPS Pollution
  - Ground Water Issues
  - Sedimentation
  - Septic System Issues

These training issues also correspond to the GNDNERR management plan which identifies issues related to wetland protection and management as well as water resources as high priority. One of the primary goals of the management plan is to “advance the state of knowledge about reserve ecosystems (including basic estuarine processes and changes in estuarine ecosystems over time such as water quality, habitat, and biological diversity) and the interaction of humans with those ecosystems” (*Grand Bay National Estuarine Research Reserve Final Environmental Impact Statement/Reserve Management Plan*, 1998).

### **Reserve Strengths Relative to Training Issues**

The GNDNERR has a number of strengths that relate to the training issues presented in this report including its staff, existing and potential partners, and a new facility that is soon to be built.

### **Sector Integration**

The NERR staff is comprised of state and university employees with various backgrounds and levels of experience related to coastal and estuarine science, education, resource management, and environmental policy. Three core sectors (research, stewardship, and education) practice an integrated approach to promoting estuarine research and education from which CTP can derive direct benefits.

The reserve's research and stewardship sectors actively seek input from the CTP regarding the inclusion of training activities in grant proposals for future projects.

These sectors are primarily tasked with conducting and facilitating a variety of research and monitoring studies and land management activities. Existing projects include marsh bird monitoring; salt panne research; migratory bird studies; invasive species control; erosion studies; water quality, weather, and nutrient monitoring; and hydrology research. Research partnerships between the NERR and other universities provide local expertise and current, reliable data that can be transferred to local decision-makers. A strong opportunity for sector integration exists through research and CTP involvement in the Gulf of Mexico Coastal Ocean Observing System (GCOOS). CTP networks can be used to help identify audiences that may benefit from access to System-Wide Monitoring Program (SWMP) data, which is one of the federal backbone elements of GCOOS.

The education program has multiple responsibilities including community education, K-12 education, and professional teacher development. This sector already has a positive reputation for providing informative CDMWs to professional audiences and derives much of its strength from the partnerships that have been established over the years to reach audiences across the coast. Products and services developed through the CTP will be translated for and transferred to younger audiences and the general public, as appropriate.

#### Partnerships

GNDNERR's primary partners include the Mississippi Department of Marine Resources (MDMR), U.S. Fish and Wildlife Service (USFWS), Mississippi Secretary of State's Office (MSOS), Mississippi State University (MSU), the University of Southern Mississippi (USM), and The Nature Conservancy (TNC). MDMR is Mississippi's lead coastal zone management agency and is responsible for the coordination and administrative and financial management of the GNDNERR. Historically, the NERR has partnered with various sectors in MDMR such as Coastal Ecology and Marine Fisheries to provide training and information to regulatory staff members and other state agency employees. GNDNERR CTP intends to continue the existing partnership and investigate new ways that various agency programs can work together to reach a more comprehensive coastal management audience.

Regional collaborative opportunities between GNDNERR and the Weeks Bay NERR in Alabama will continue to be explored. The two reserves share a primary target audience (local officials) for CTP events. The reserves are also strategically located within approximately sixty miles of each other, and the geographic boundaries of their CTPs overlap in Mobile County, Alabama and Jackson County, Mississippi. The CTP Coordinators at both reserves maintain an active role on one another's Advisory Committees, and they disseminate workshop information from both programs regularly within their respective regions. This partnership was proven to be successful in August 2004, when the CTPs offered joint "Application of Water Level and Datum Information" workshops.

A number of organizations indicated a willingness to partner with GNDNERR CTP during the market analysis and needs assessment processes. Additional partnership opportunities will be explored as the GNDNERR CTP develops.

#### Facilities

GNDNERR anticipates the construction of a new facility with a tentative completion date of February 2007. The new building will enhance the reserve staff's research, monitoring, and education capabilities. Plans for the center include an interpretive center, a research wing equipped with multiple laboratories and dorm space for visiting

researchers, and an education wing with classrooms and a computer lab. The building will serve as an exciting new venue for CTP workshops and seminars.

### **Logic Model**

A program logic model was created (see **page 6**) to assist staff in developing a three-year program strategy. The overall goal of the program is, of course, to improve the decision-making abilities of professional audiences whose actions influence the management of Mississippi's coastal resources. Long term outcomes displayed by targeted audiences include:

- Decision-makers will promote actions in the community that protect coastal resources; and,
- Decision-makers will continue to access CTP resources for future information needs.

These outcomes will be monitored throughout the three-year period using a series of measurable objectives that describe the intended impact of the GNDNERR CTP on participants.

### Training Delivery Mechanisms

The majority of needs assessment participants reported that half-day field demonstrations and workshops are the most effective training delivery mechanisms. Seminars, conferences, and panel discussions were considered to be "somewhat" effective by the majority of respondents (*Grand Bay National Estuarine Research Reserve Coastal Training Program Needs Assessment Report, 2005*). Based on these results, the production of training workshops will be a large component of GNDNERR's CTP, although other mechanisms for information delivery will also be explored.

The GNDNERR Education Program has set a precedent for producing technical documents and videos in conjunction with CDMWs. The reserve's most recent publication, *Selected Plants of Grand Bay National Estuarine Research Reserve and Grand Bay National Wildlife Refuge*, corresponds to an annual wetland plant identification workshop. Another example, *Prescribed Burns: Prescription for Success*, is a CDMW video developed specifically for landowners and land managers to educate them about the importance of fire management in pine savanna landscapes. The CTP intends to continue collaborating with the various sectors in the reserve as well as external partners including state, federal, academic, and nonprofit organizations to produce and distribute technical guidance documents, brochures, or videos in conjunction with its workshop series, as appropriate.

In addition to the production of workshops and technical resources, a website with training information and workshop summaries will be maintained. Training databases will be developed to house workshop participant information.

### Measures of Evaluation

For short-term monitoring purposes, a workshop evaluation form has been developed to address the performance measurement standards designated by the CTP Oversight Committee (*Draft Performance Monitoring Manual: The NERRS Coastal Training Program, 2004*). This formative evaluation tool is used by the reserve staff to gauge the effectiveness of training activities based on participant responses to questions concerning content, format, delivery, intention to apply to future projects, and suggestions for future training events. These evaluations also track changes in participant awareness, skills, and networking opportunities relative to specific training topics.

At the end of the first and second years of implementation, the CTP will encourage feedback from targeted audiences (either through surveys or focus groups) to evaluate the success of the program at identifying and serving local needs. Additionally, the evaluation will assess whether or not participants are using the information provided by the CTP. This measure will provide preliminary information to determine not only whether or not audiences are recognizing the fact that their actions and decisions impact coastal resources but also if they are starting to make decisions that prioritize the protection of coastal resources. If audiences are not using the information provided by CTP, NERR staff will work with the CTP Advisory Committee (AC) to evaluate training mechanisms and develop methods to promote the use of training information. At the end of the third year of implementation, the program will evaluate its success at accomplishing the long-term outcomes of the program and develop new outcomes for the next three years of the program.

The administration of timely, sufficiently-spaced needs assessments of target audiences will help the CTP continue to identify critical issues and appropriate audiences for training. Such assessments will also monitor whether or not the CTP is successfully serving as a source of information regarding coastal resource management in the local coastal management community. Tools to monitor workshop participation levels and the number of information requests received will also be used to help track the success of the program within the targeted audiences.

All assessment techniques will be consolidated and reported to the CTP AC during quarterly meetings. The AC will take an adaptive management approach in its review of evaluation data, and use the information to provide guidance concerning modification of the existing program and suggestions for future activities.

#### Timeframe for Delivery of Outputs

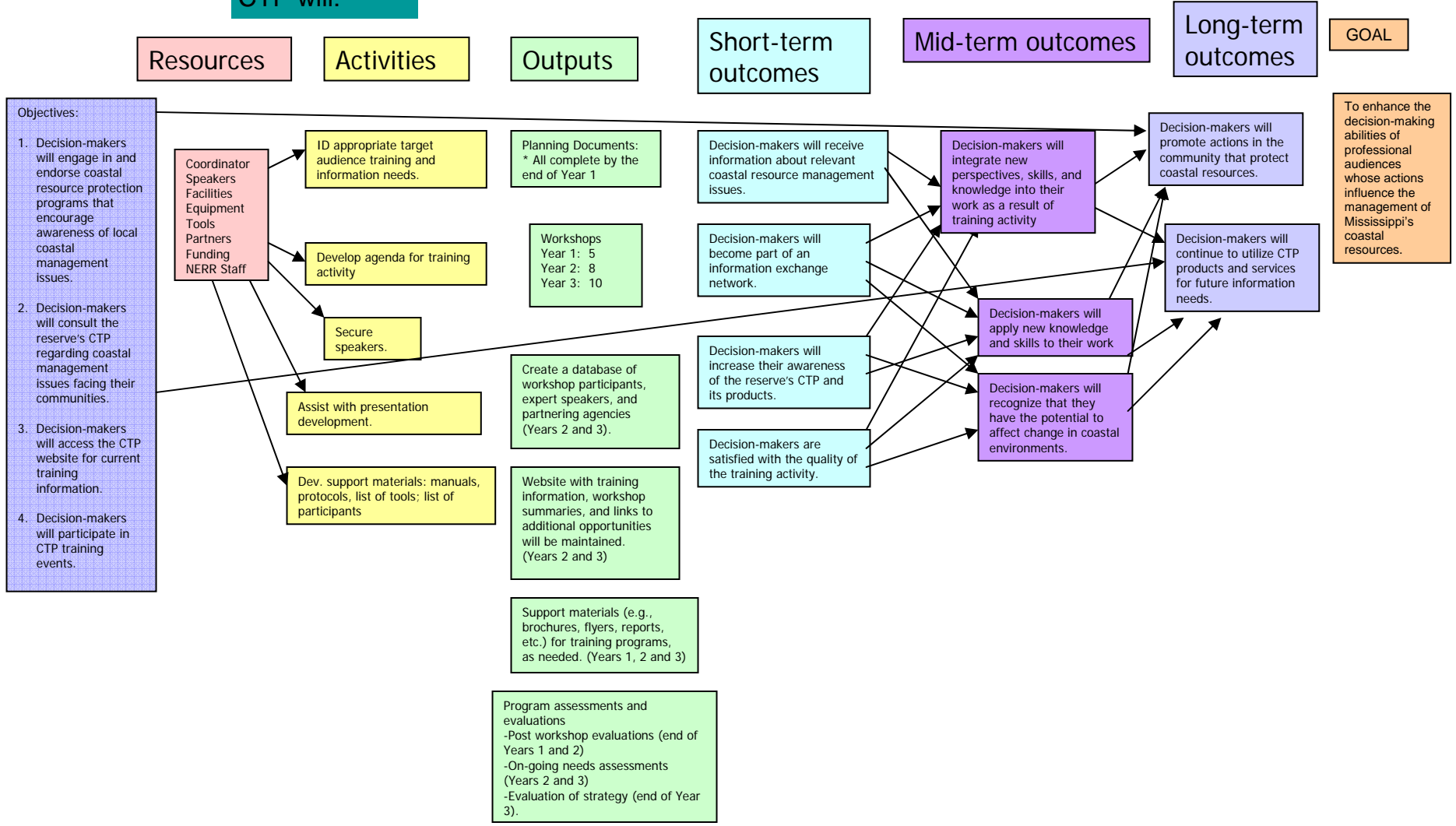
During the first year of implementation, the GNDNERR CTP intends to complete all of the planning documents associated with the CTP and actively promote the program within local government offices across the Mississippi Gulf Coast. The GNDNERR CTP will also increase the number of training events (from three to five per year) offered and begin to target issues identified by local officials through the needs assessment survey process. Partnership opportunities for future training events will be explored as well. Short-term evaluations will be conducted at the conclusion of every workshop, and results will be reviewed on a quarterly basis by the CTP Advisory Committee. At the end of the first year, an evaluation of workshop participants will be conducted to determine the effectiveness of CTP activities and how the information was used in the community.

During the second and third years of implementation, the CTP will develop a website and database to house workshop participant information. The number of workshops offered will increase incrementally each year. At a fully functional level, the program intends to offer 8-10 workshops per year. On-going needs assessments of target audience(s) will be administered to ensure the CTP is addressing relevant coastal management issues. At the end of the second year, a mid-term evaluation will be conducted to assess target audience(s) awareness of their ability to affect change in coastal environments. After three years, the AC will evaluate whether or not the program accomplished the long-term outcomes identified by the logic model.

# GNDNERR Three-Year Program Strategy 2005-2008

Audience: Local Elected and Appointed Officials (Coastal Decision-Makers)

CTP will:



## **Conclusion**

The purpose of this document is to outline a feasible three-year strategy for the GNDNERR CTP. The approach taken by NERR staff was based on a logic model theory outlined in the training document, *Project Design and Evaluation*, created by the NOAA Coastal Services Center (CSC). The objectives and outcomes for the program are focused on participant response to the program rather than program outputs; therefore, the success of the program will be measured not only by the NERR staff's ability to produce outputs such as workshops, databases, websites, and training materials but also by participant response to CTP products and services and use of the information provided.

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