

Grand Bay National Estuarine Research Reserve
Coastal Training Program
Needs Assessment Report

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Executive Summary

Introduction

The Mississippi Department of Marine Resources (MDMR) Grand Bay National Estuarine Research Reserve (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 goals of the CTP are to:

- Improve decision-making related to coastal resource management at local and regional levels by providing coastal resource managers with information, tools, and techniques necessary to make informed resource management decisions within their respective fields;
- Increase collaborations across sectors and disciplines related to coastal management issues; and,
- Advance comprehension of the environmental, social, and economic consequences of human activity within the coastal landscape.

The attached report encompasses the results of a needs assessment (NA) survey conducted by GNDNERR staff. This is the second phase of the CTP planning and development process, and it is based on the results of a market analysis (MA) survey completed during the summer of 2004. Information acquired through this particular assessment will define the direction of the GNDNERR CTP with respect to the needs of its initial target audience, local elected and appointed officials. The goals of the needs assessment are to:

- Identify the baseline knowledge, skills, and attitudes of the target audience regarding local coastal resource management issues; and,
- Identify the training preferences of the target audience, including preferred training topics and information delivery mechanisms.

Methods

Twenty-five coastal decision-makers, representing six city governments and one county government across the Mississippi Gulf Coast participated in the GNDNERR needs assessment process during the months of January and February 2005. The Reserve Manager and CTP Coordinator compiled a list of prominent city and county officials with input from the CTP Advisory Committee and the Mississippi Department of Marine Resources' (MDMR) Bureau of Comprehensive Resource Management (CRMP). City and county offices were contacted by the CTP Coordinator, and informal interviews with local officials were scheduled. The interview process was used to ascertain a list of coastal resource management issues pertinent to the cities and counties and to solicit permission to gather information from department heads and staff through a needs assessment survey. A combination of survey packages and on-line surveys were distributed during January and February 2005 to those city and county offices that had previously agreed to participate in the process. Municipalities that did not provide consent were not approached at this time. SurveyMonkey, a web-based survey data collection tool was used to analyze the data. Further analysis was performed by reserve staff and the CTP Advisory Committee.

Results/Recommendations

Eighty-four surveys were distributed to local elected and appointed city and county officials. Twenty-five surveys were completed for a response rate of 30%.

Representatives from six of the seven cities and one of the two counties in which an initial interview was conducted participated in the survey process. Overall, 77% of the city and county governments with whom the CTP Coordinator and Reserve Manager were able to establish contact responded to the survey. These numbers represent 47% of the Mississippi Gulf Coast's city and county municipalities. Needs assessment results indicate that there is a need for additional training related to a number of coastal resource management issues. Specific recommendations concerning potential training topics and preferred mechanisms for delivery are addressed below.

Coastal Resource Management Training Topics

Survey participants were provided a list of coastal resource management training topics separated into five categories (habitat issues, coastal management issues, water/air issues, planning and regulatory issues, and resource management issues). Participants were asked to rank each issue as follows: high need for additional training, medium need for additional training, low need for additional training, or no opinion. Two central training themes emerged from the survey results: wetland protection and management and water resources (supply and quality). A variety of high need training issues are encompassed by these themes 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
 - Watershed Management
 - Environmental Education
 - NPS Pollution
 - Ground Water Issues
 - Sedimentation
 - Septic System Issues

Mechanisms for Training Delivery and Incentives

The majority of survey respondents prefer half-day workshops or field demonstrations, although, one to two-day classes are also acceptable. The biggest incentives for workshop attendance include the presence of expert speakers, use of field guides and identification manuals, easy access to the event, and networking opportunities.

Partnerships

Sixty-five percent of survey respondents indicated a willingness to partner with the Grand Bay NERR CTP to offer training opportunities to their staff. Sixty-four percent are willing to provide a facility for the activity, while 43% are willing to help with planning. Thirty-six percent of respondents are willing to provide either in-kind match or some funding. A few respondents indicated that a future partnership would be negotiable.

Acknowledgements

The GNDNERR acknowledges the following individuals for their contributions to this report. This needs assessment could not have been completed without their interest in this project or their guidance.

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Grand Bay National Estuarine Research Reserve Coastal Training Program Needs Assessment Report

Introduction

Grand Bay National Estuarine Research Reserve

The Grand Bay National Estuarine Research Reserve (GNDNERR) promotes wise stewardship of coastal environments along the north-central Gulf of Mexico through the implementation of estuarine education and outreach, research, and resource management programs. The GNDNERR was designated in 1999 as the 24th of 26 reserves in the National Estuarine Research Reserve System (NERRS). The National Oceanic and Atmospheric Administration's (NOAA's) National Ocean Service (NOS) implements NERRS as part of the Coastal Zone Management Act (CZMA), which established a network of estuarine reserves, each representing unique biogeographical regions of the United States. Within this network of living laboratories, reserve scientists and educators work together to communicate new findings to coastal managers and other community decision-makers.

Coastal Training Program

GNDNERR is developing a regional Coastal Training Program (CTP) with funding and guidance from the NOAA Estuarine Research Division (ERD). The goals of the CTP are to:

- Improve decision-making related to coastal resource management at local and regional levels by providing coastal resource managers with information, tools, and techniques necessary to make informed resource management decisions within their respective fields;
- Increase collaboration across sectors and disciplines related to coastal management issues; and,
- Advance comprehension of the environmental, social, and economic consequences of human activity within the coastal landscape.

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 partnerships 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 fill gaps in coastal resource management training opportunities without duplicating existing training efforts.

Market Analysis Survey

During the summer of 2004, GNDNERR initiated the first phase of the CTP planning process by conducting a market analysis survey. A market analysis is a systematic tool for addressing the specific training abilities and priorities of local and regional training programs and for identifying potential audiences for future services. During this process, agencies that provide training opportunities to coastal resource managers in south Mississippi, Alabama, and Louisiana were identified and surveyed. The survey results provided a synopsis of audiences targeted by existing training programs as well as a list of audiences perceived to be in need of additional training. The majority of survey respondents perceived state and federal legislators, business community members and

organizations, realtors, city managers, city council members, planning/zoning board members, and county supervisors to be the audiences most in need of additional coastal resource management training. The CTP Advisory Committee and GNDNERR staff reviewed these results and selected an initial target audience, “local elected and appointed officials,” for the program. Representatives of this audience include:

- City Managers and their staff;
- City Council members;
- Mayors and their staff;
- Planning/Zoning Board members and their staff; and,
- County Supervisors.

The market analysis results also helped to establish a list of coastal resource management issues that are perceived by existing training providers to be “high need” for additional training opportunities. These issues include:

- Nonpoint Source Pollution;
- Watershed Management and Planning;
- Habitat Restoration;
- Conservation Land Planning;
- Wetland Protection;
- Sustainable Building and Development;
- Coastal Zone Management; and,
- Invasive Species.

Needs Assessment

The next step in the CTP planning process was to conduct a needs assessment survey of the target audience to determine their training needs and training format preferences. The results of the needs assessment process will help the GNDNERR CTP identify the specific training needs of the target audience as well as acceptable formats for training and information distribution. For the purposes of this report, a needs assessment is defined as a systematic investigation of an audience to identify aspects of individual knowledge, skill, interest, and attitude relevant to a particular issue or objective (NOAA CSC, 2000). Whereas the market analysis identifies general gaps in training audiences and issues, the needs assessment process is used to correlate training needs to a specific audience. The goal of a needs assessment is to collect sufficient information about a target audience to design a program that effectively addresses the group’s needs. The objectives of a needs assessment may include the following:

- Identify the baseline knowledge, skills, and attitudes of the target audience regarding local coastal resource management issues; and,
- Identify the training preferences of the target audience, including preferred training topics and information delivery mechanisms (Coastal Training Program Planning Phase, CTP Technical Committee Review 2004).

Methods

The needs assessment was conducted by the GNDNERR CTP Coordinator with guidance from the CTP Advisory Committee (**Appendix A**). The Advisory Committee, which was established in April 2004 to oversee the CTP development process, is composed of members of partner organizations and regional collaborators who work together to facilitate the exchange of ideas and foster support for the CTP at GNDNERR.

Target Audience Selection

The Advisory Committee convened in August 2004 to review the market analysis and to identify a target audience for the needs assessment survey. Although several audiences were considered to be “high need for additional training,” committee members elected to focus the initial efforts of the CTP on “local elected and appointed officials.” This category includes City Managers and their staff; City Council members; Mayors and their staff; Planning/Zoning Board members and their staff; and County Supervisors. Justification for the selection of this audience is illustrated by **Figure 1**. Seventy-five to eighty-one percent of survey respondents considered the individuals in this particular category to be “high need for additional training.” Furthermore, as illustrated in **Table 1**, only 22%-31% of existing training providers are currently targeting these audiences; therefore, there is room in the existing training market to offer additional opportunities to these audiences (*Grand Bay National Estuarine Research Reserve Coastal Training Program Market Analysis Report, 2004*).

Figure 1
Percentage of Training Providers Who Target the Audience vs. Percentage of Training Providers Who Perceive the Audience to Be High Need for Additional Training

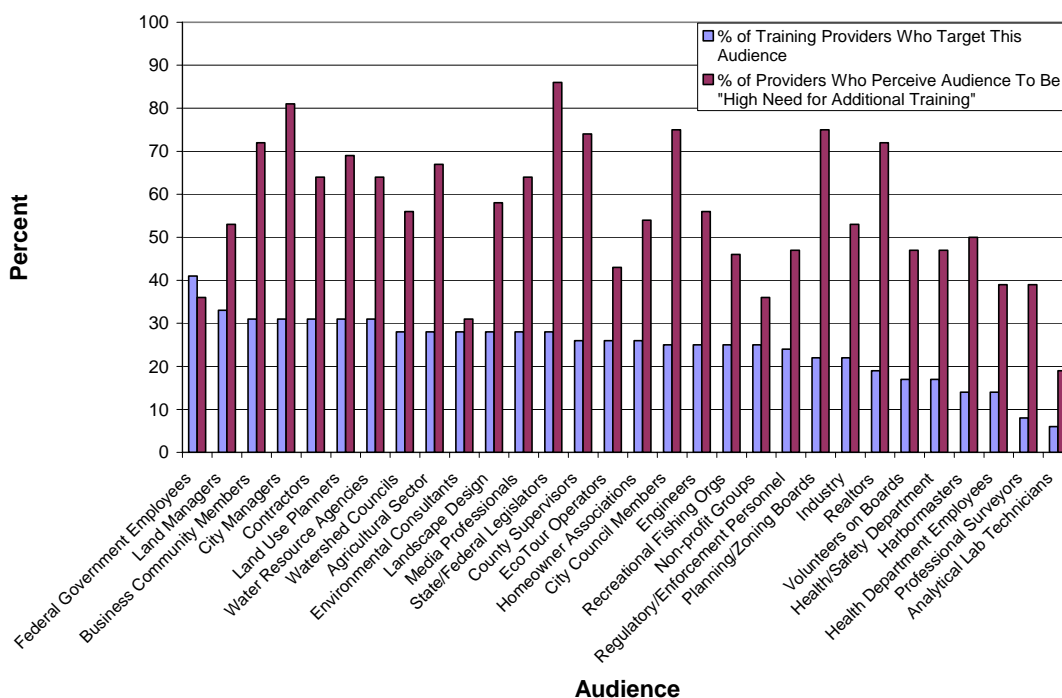


Table 1
Audiences Targeted by Existing Training Programs

Potential Audiences	% of Training Providers That Target Each Audience
Federal Government Employees	41
Conservation commissions and/or staff	36
Academic Community Members	34
Local, State, and/or Federal Land Managers	33
Business Community Members and/or Organizations	31
City Managers	31
Contractors	31
Land Use Planners	31
Scientists	31
Water Resource Agencies	31
Citizen-Based Watershed Councils	28
Agricultural Sector	28
Environmental Consultants	28
Landscape Design and/or Nurseries	28
Media Professionals	28
State and/or Federal Legislators	28
County Supervisors	26
Ecology Tour Operators and/or Coastal Recreation Businesses	26
Neighborhood/Homeowner Associations	26
City Council Members	25
Engineers, Technicians	25
Fishing Organizations or Individuals (Recreational)	25
Non-profit Organization Staff and/or Board Members	25
Enforcement/Regulatory Personnel (Including Law Enforcement, Permits)	24
Planning/Zoning Boards and/or Staff	22
Industry, Including Marine Industry	22
Sewage Treatment/Waste Water Management Employees	20
Fishing Organizations/Individuals (Commercial)	19
Realtors and/or Real Estate Developers/Architects	19
Volunteers on Decision-Making Boards	17
Health and Safety Department or Boards	17
Harbormasters and Harbor Commission Members	14
Health Department Employees	14
Professional Surveyors	8
Analytical Labs, Including Soil and Water Technicians	6

Scope of the Grand Bay NERR Needs Assessment

Although the market analysis survey boundaries extended from Baldwin County, Alabama west through coastal Mississippi and Louisiana, the Advisory Committee considered it appropriate to concentrate data collection for the needs assessment from local officials in Mississippi. Therefore, the scope of the needs assessment survey was confined to the three Mississippi coastal counties (Jackson, Harrison, and Hancock) and the eleven coastal cities (Moss Point, Pascagoula, Gautier, Ocean Spring, D'Iberville, Biloxi, Gulfport, Long Beach, Pass Christian, Bay St. Louis, and Waveland) within them.

Needs Assessment Survey Process

The names of prominent city and county officials were compiled by the CTP Advisory Committee members with additional guidance from the Mississippi Department of Marine Resources' (MDMR) Bureau of Comprehensive Resource Management Plan (CRMP). During the months of November and December 2004 and January 2005, the CTP Coordinator contacted city and county offices along the Mississippi Gulf Coast. In order to gain support for the needs assessment process, informal interviews were scheduled with mayors and/or city council members from the coastal communities. Representatives from seven of the eleven coastal cities and two of the three coastal counties participated in the interview process. Remaining city and county offices did not respond to the request for a meeting. The Reserve Manager and CTP Coordinator met with the responsive city and county officials to introduce them to the Reserve and the CTP, to acquire a list of coastal resource management issues pertinent to them, and to solicit permission to gather information from their department heads and staff members through a needs assessment survey.

The information collected during the interview process was used to modify the list of resource issues appended to the needs assessment survey. Additional information collected during the interviews (e.g., survey format preferences and contact information for city/county staff) was assimilated by the CTP Coordinator, and the survey methodology was modified accordingly. The survey was piloted to the Advisory Committee in early January 2005. Adjustments to the survey were made, based on the comments received from committee members, before it was distributed to the target audience. The final version of the survey is included in **Appendix B**.

During the months of January and February 2005, a combination of survey packages and on-line surveys were distributed to city and county officials at local offices and city council meetings. Survey distribution was limited to those municipalities that specifically agreed to participate in the survey process. Most city and county officials requested a survey package containing a hard copy of the survey that could be completed and returned in the mail. For those individuals who agreed to take an on-line survey, a link to the survey was forwarded to them via e-mail. Survey Monkey, a web-based survey data collection tool, was used to administer the on-line survey. This tool was employed successfully during the GNDNERR market analysis process and comes highly recommended by CTP Coordinators at other reserves who use the survey package regularly. As the survey completion deadline approached, follow-up phone calls were made and e-mail reminders were sent to several cities to elicit more responses.

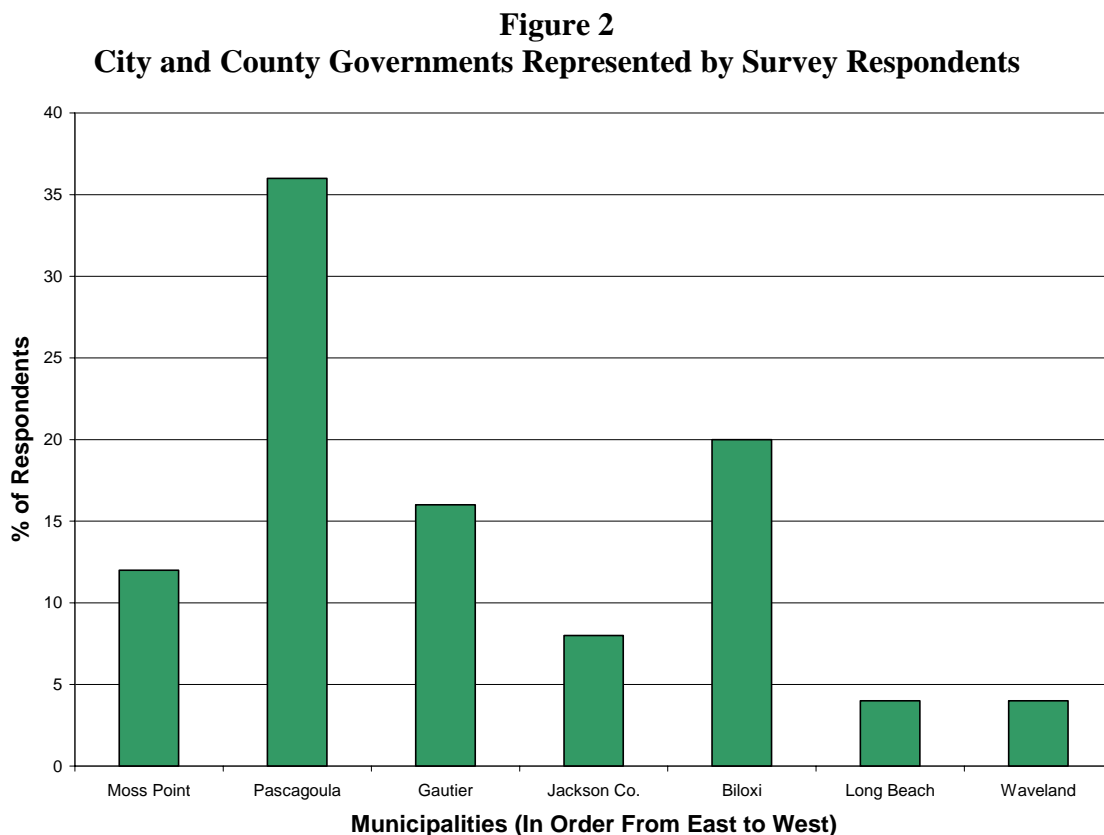
Data from paper-based surveys were entered into Survey Monkey so that the program could analyze the results from both the paper-based survey and the on-line survey. Additional assessments were performed by reserve staff. CTP Advisory Committee members were also active participants in the review and analysis of survey data.

Results and Discussion

Eighty-four surveys were distributed to local elected and appointed city and county officials. Twenty-five surveys were completed for a response rate of 30%. Representatives from six of the seven cities and one of the two counties in which an initial interview was conducted participated in the survey process. Overall, 77% of the city and county governments with whom the CTP Coordinator and Reserve Manager were able to establish contact responded to the survey. These numbers represent 47% of the Mississippi Gulf Coast's city and county municipalities.

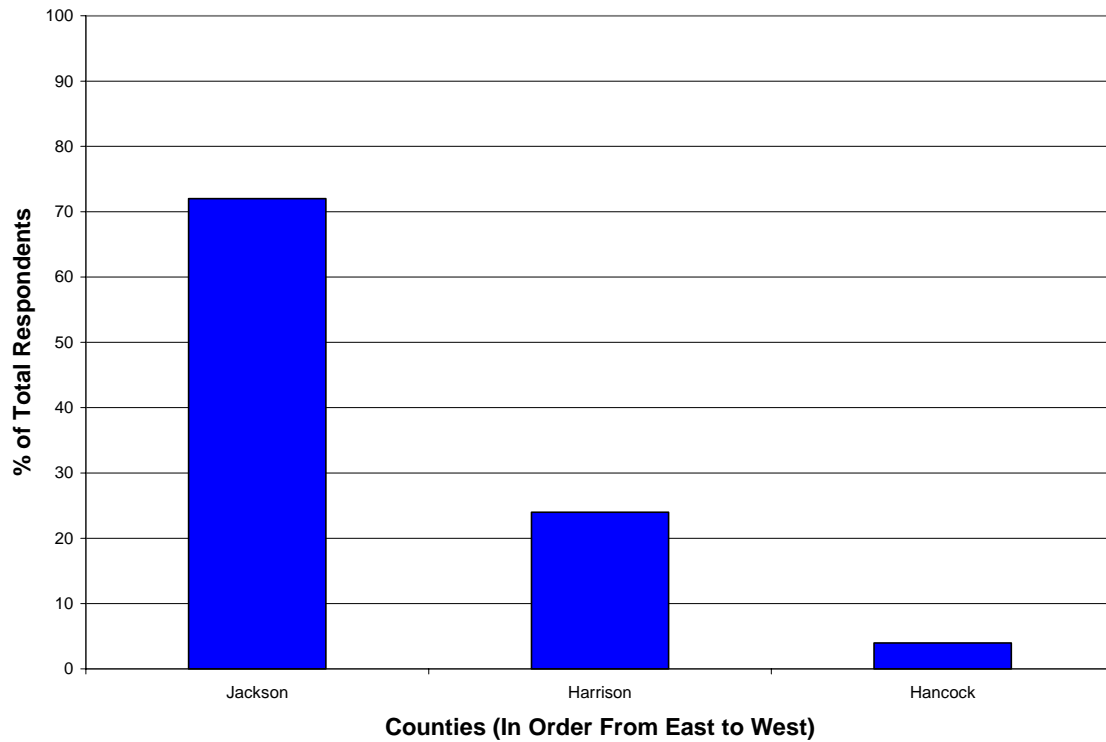
Overview of Survey Respondents

Survey respondents represented six city governments (Moss Point, Pascagoula, Gautier, Biloxi, Long Beach, and Waveland) and one county government (Jackson) along the Mississippi Gulf Coast (**Figure 2**).



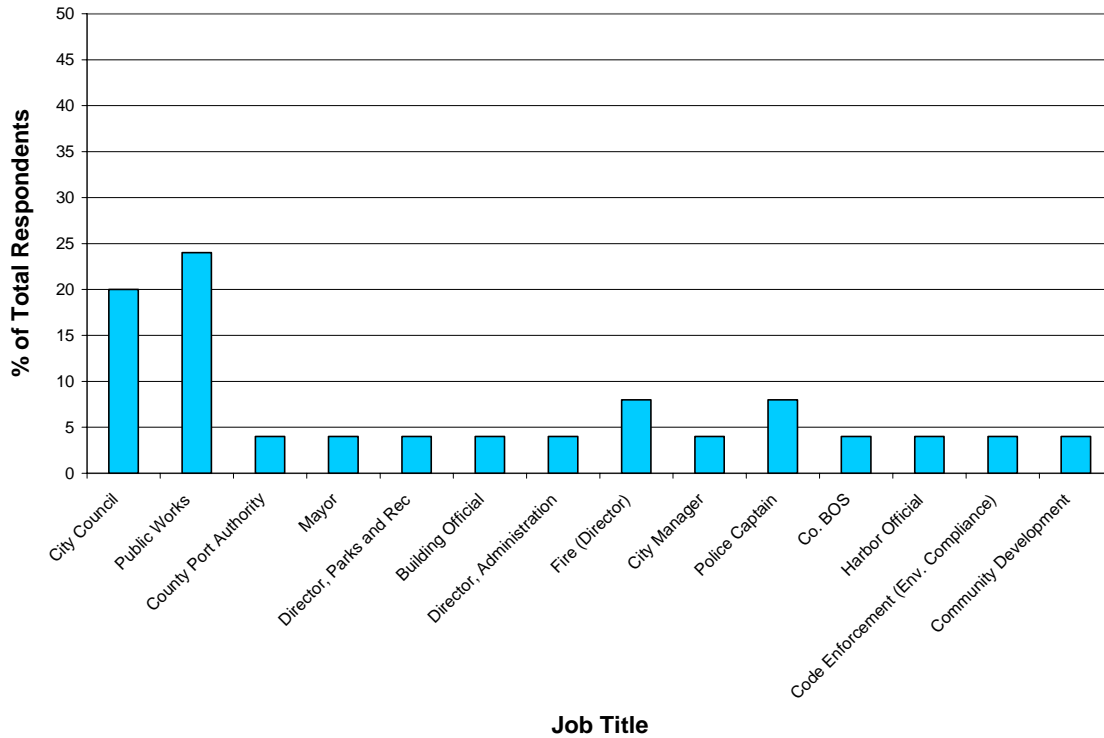
The majority of survey respondents were from Jackson County, Mississippi, specifically the city of Pascagoula. This was not surprising as the Grand Bay NERR is located in Jackson County, and many of the city and county officials were previously aware of the reserve and its programs. As the survey process moved west across the coast, it became increasingly difficult to garner information (**Figure 3**). There was a spike in responses from the city of Biloxi, which is located in Harrison County. This increase may be attributed to the fact that the MDMR main office is located in Biloxi.

Figure 3
Survey Respondents By County



The majority of survey respondents (24%) were public works officials. City council members (20%) and enforcement officers (fire and police; 16% collectively) were also responsive. Other respondents included mayors, building officials, city managers, members of county boards of supervisors, harbor officials, county port authority staff, community development staff, and environmental code enforcement officers (**Figure 4**).

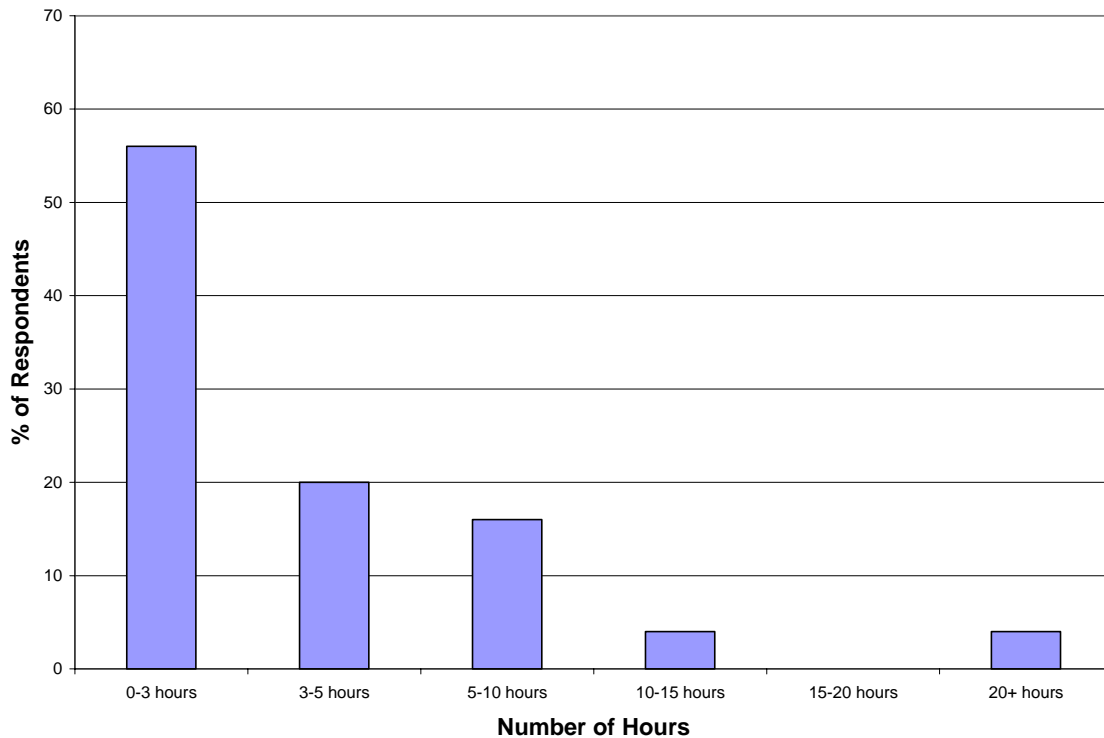
Figure 4
Profile of Survey Respondents



Ninety-two percent of survey respondents indicated that professional development training is part of their job responsibilities. When asked what types of trainings they typically attend, participants reported a variety of training events including flood plain management, economic development, Nonpoint Education for Municipal Officials (NEMO), public works, law enforcement, storm water, solid waste, leadership and management, recreation, grant administration, erosion control, building codes, sewer and drainage, etc.

The majority (56%) of respondents reported spending 3 hours or less on coastal management issues each week. Forty percent of respondents spend between three and 15 hours per week addressing coastal management issues, and 4% of respondents devote more than twenty hours per week to these issues (**Figure 5**).

Figure 5
Hours Per Week Spent Addressing Coastal Issues



Training Issue Identification

Coastal Training Topics

Needs assessment survey participants were provided a list of coastal resource management issues that was almost identical to the list distributed to market analysis participants for the purpose of comparing training providers’ perceptions of need for additional training with actual need for training in the target audience. Minor additions and deletions were made to the original list of issues based on suggestions made by city officials during pre-survey interviews. Potential training topics were classified into five categories: habitat issues, coastal management, water/air issues, planning and regulatory issues, and resource management issues. Survey participants were asked to rank each issue as follows: high need for additional training, medium need for additional training, low need for additional training, or no opinion. This question was designed to reveal basic information concerning participants’ knowledge of and attitude towards the issues presented.

Habitat Issues

The majority of survey respondents considered themselves to be most in need of training concerning issues of wetland protection and management (56%) and streambank restoration (30%). It is not surprising that wetland protection and management is the priority issue in this category as coastal Mississippi is composed of predominantly pine savanna wetland habitat. The majority of development projects in this region impact wetlands, either jurisdictional or coastal.

It is interesting that respondents identified more closely with streambank restoration than habitat restoration. Perhaps the term “habitat restoration” was too broad; however, it encompasses streambank restoration as well as wetland restoration and mitigation projects. Survey respondents considered their need for training to be predominantly low need for most of the other issues in this category (**Figure 6**).

Figure 6
Habitat Issues: Need for Additional Training

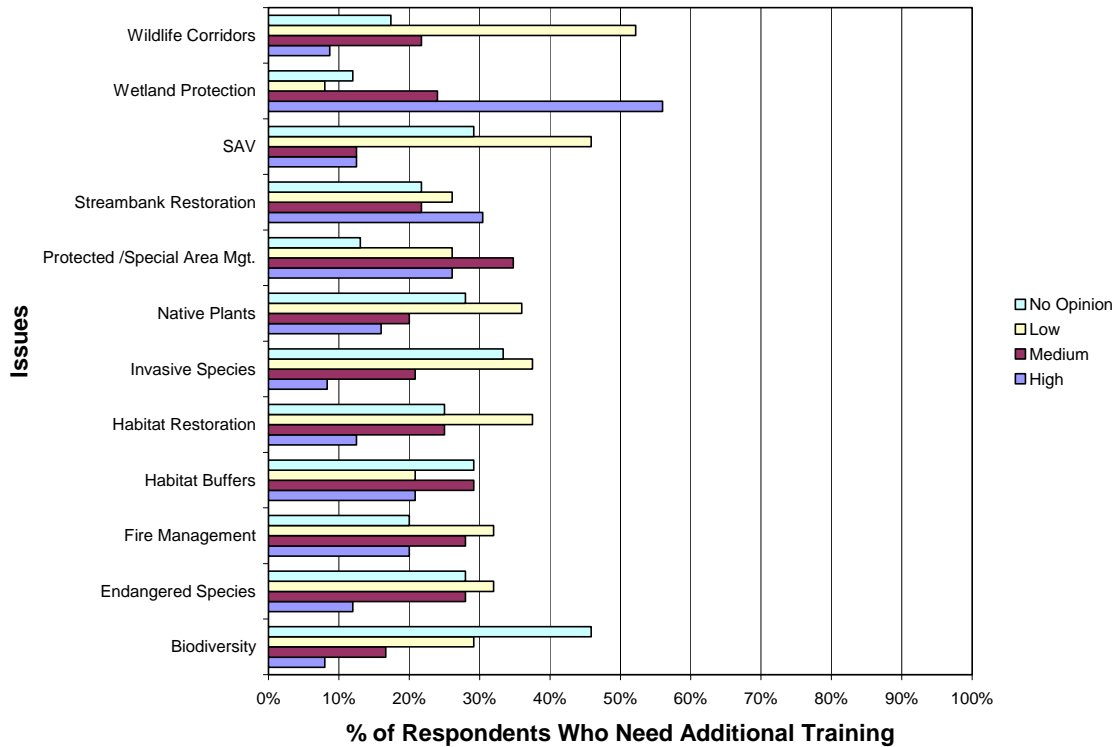
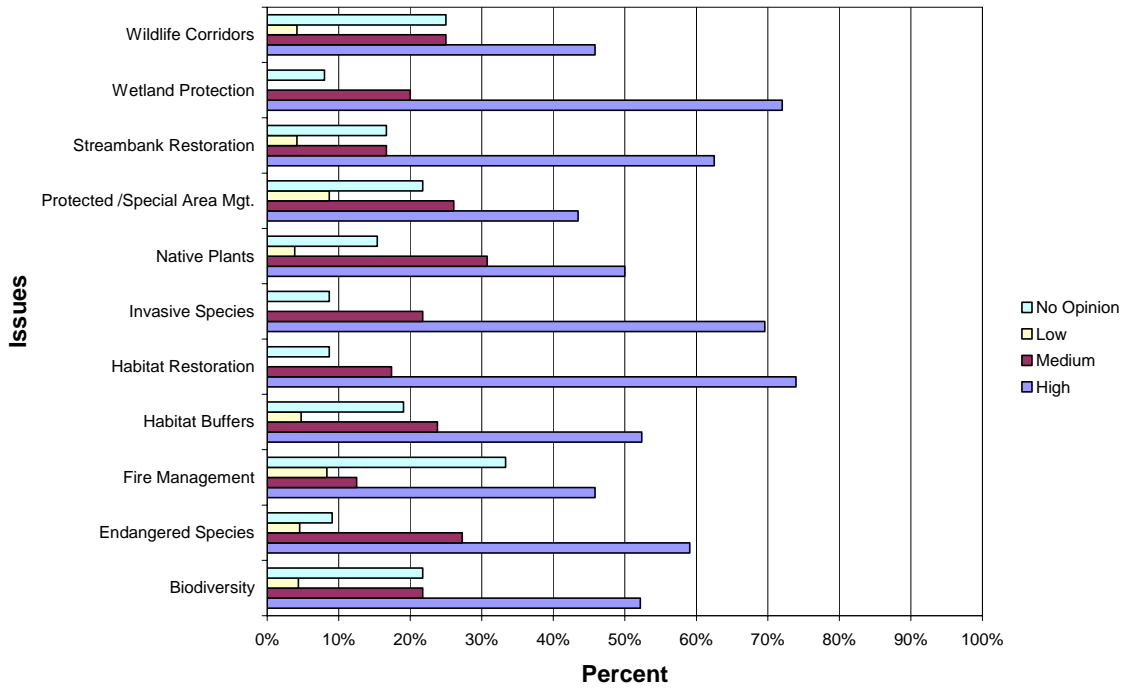


Figure 7 shows that the perception of need (among existing training providers) for additional training related to habitat issues is highest for habitat restoration and wetland protection and management. Data reflect a general perception of need for training in this category; however, training providers appear to be on target particularly in their assessment of need for additional training related to wetland management.

Figure 7
Habitat Issues: Trainers' Perceptions of Need for Additional Training



Coastal Management Issues

As seen in **Figure 8**, the majority of needs assessment survey respondents considered themselves to be most in need of additional training related to issues such as recreational use (43%), dredging and filling (42%), and coastal erosion and accretion (38%). It is difficult to determine how survey respondents interpreted the term “recreational use.” A land manager might interpret it as recreational use of coastal resources, whereas someone in a city parks and recreation department might focus on the development of recreation areas within communities. The fact that survey respondents identified with dredging/filling and coastal erosion/accretion is not surprising, however, as the maintenance of waterways and beaches is an important issue in many local communities. Survey respondents considered their need for training to be predominantly low or medium for the majority of the other issues presented in this category.

Existing trainers perceived all issues in this category to be “high need for additional training” (**Figure 9**), with the highest need issues being Coastal Zone Management (CZM), dredging and filling, and coastal and estuarine processes. CZM was deleted from the NA survey list of training issues because it was considered too broad in scope. Coastal and estuarine processes are training topics that probably appeal more to land managers and researchers; however, they are an integral part of wetland protection and can probably be encompassed by that category.

Figure 8
Coastal Management Issues: Need for Additional Training

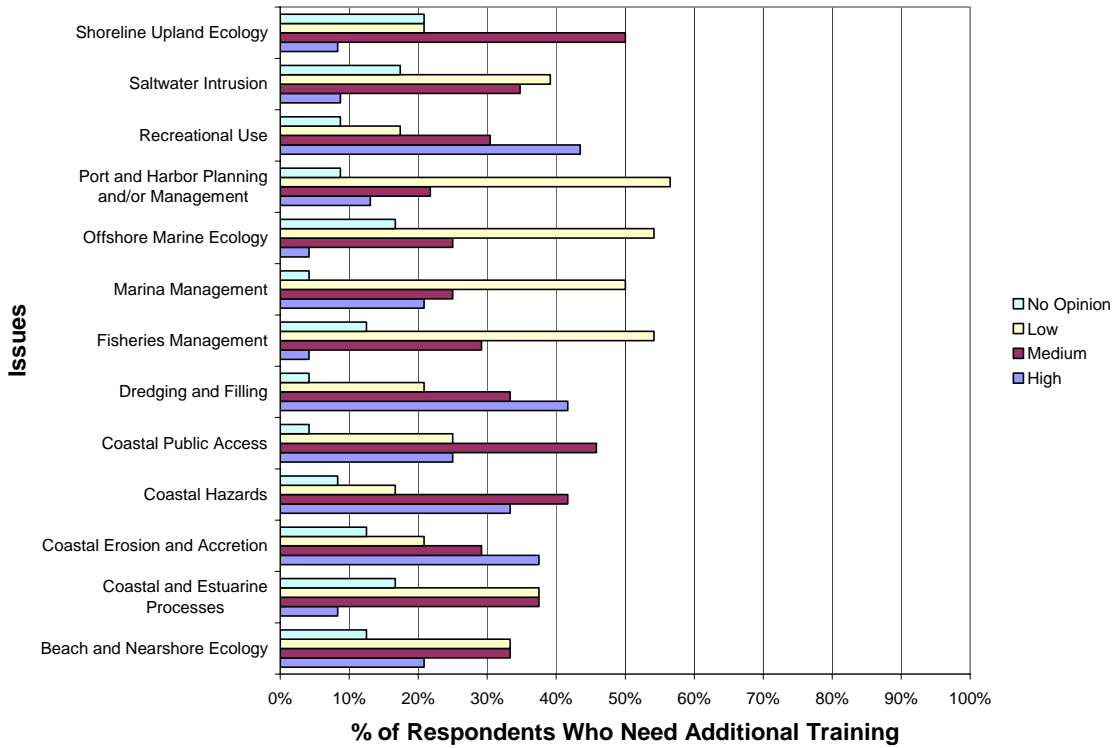
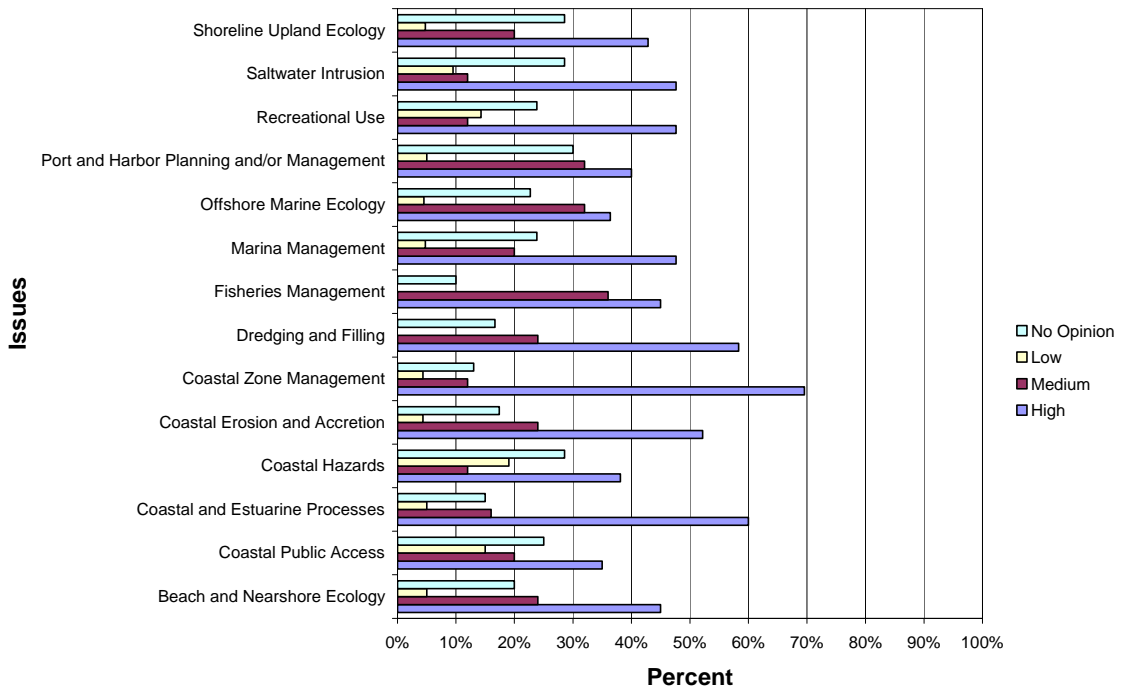


Figure 9
Coastal Management Issues: Trainers' Perceptions of Need for Additional Training



Water/Air Issues

Survey respondents seemed to identify with more topics in the Water/Air Issues category than any other category (**Figure 10**). Fifty-four percent of survey respondents considered themselves to have a high need for training related to pollution prevention, and 52% of respondents indicated a high need for training regarding stormwater management and regulation. Other predominantly high need issues for additional training include combined sewer outflows (48%), supply and quality of water resources (48%), Clean Water Act (CWA) compliance (48%), point source pollution (43%), watershed management and planning (42%), and nonpoint source pollution (41%). Eutrophication and nitrogen loading were the only predominantly low need issues in this category. It is interesting to note that CWA compliance and water resource supply and quality were priority issues, and eutrophication and nitrogen loading are related to these. The terminology used to specify water quality issues may have been less familiar to survey respondents.

The perception of need for additional training related to issues in this category was predominantly high for almost the entire category (**Figure 11**). The only exceptions were the Toxic Substances Control Act (TSCA), which was removed from the list of issues distributed in the needs assessment survey, and interstate air quality issues.

Figure 10
Water and Air Issues: Need for Additional Training

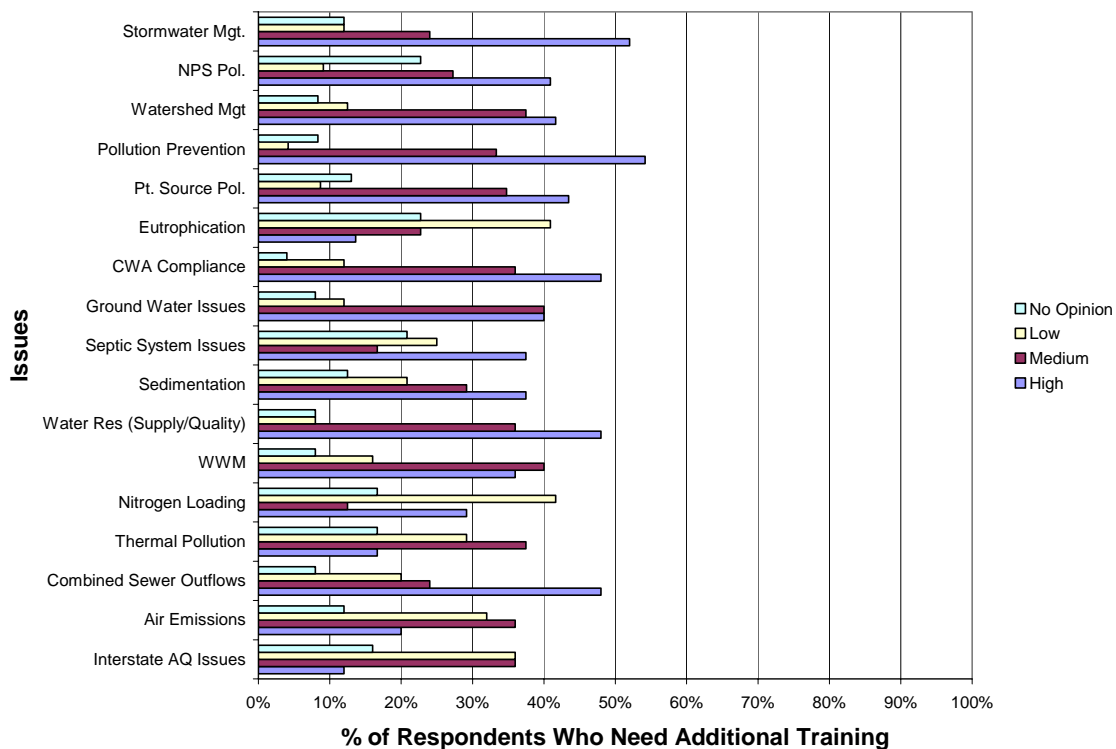
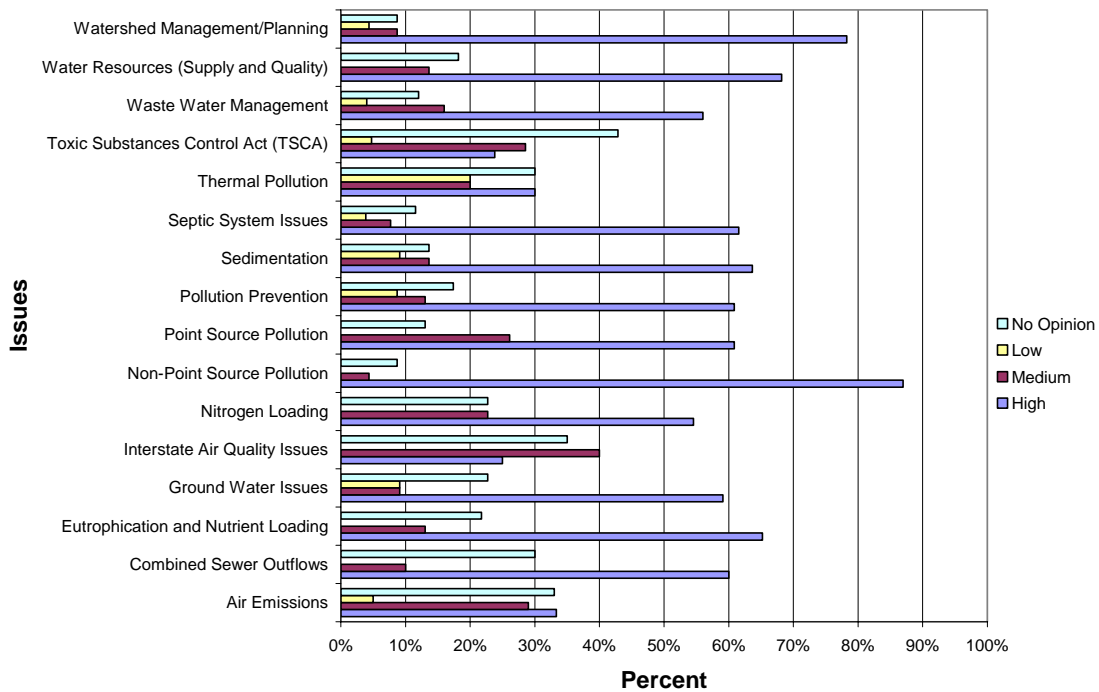


Figure 11
Water and Air Issues: Trainer’s Perceptions of Need for Additional Training



Planning and Regulatory Issues

With respect to planning and regulatory issues, most survey respondents considered themselves to be most in need of training related to issues of environmental legislation (42%), sustainable development (38%), and general land planning (35%). All other issues were predominantly medium need training issues with the exception of building codes, which 78% of respondents designated as either a high need or medium need issue, and conservation land planning, which 38% of participants considered to be a low need issue (**Figure 12**). It is interesting to note that general land planning was designated as a high need issue by the majority of respondents, while conservation land planning was designated as a low need issue. Perhaps this is indicative of the target audience and the nature of their jobs, which is primarily the management and development of municipalities. Conservation land planning is a term that is probably more applicable to resource managers.

The perception of need for additional training by existing training providers (**Figure 13**) is predominantly high or medium to high for all issues in this category, with the greatest need perceived to be among issues related to conservation land planning, sustainable development, environmental health, and environmental legislation.

Figure 12
Planning and Regulatory Issues: Need for Additional Training

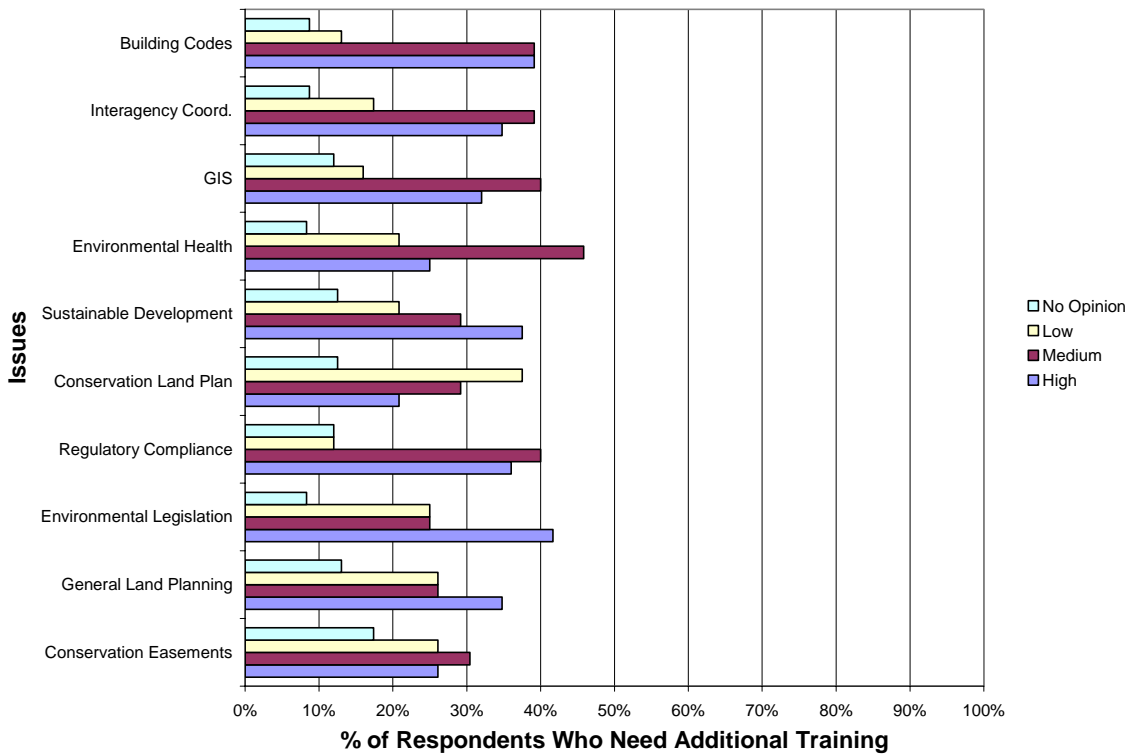
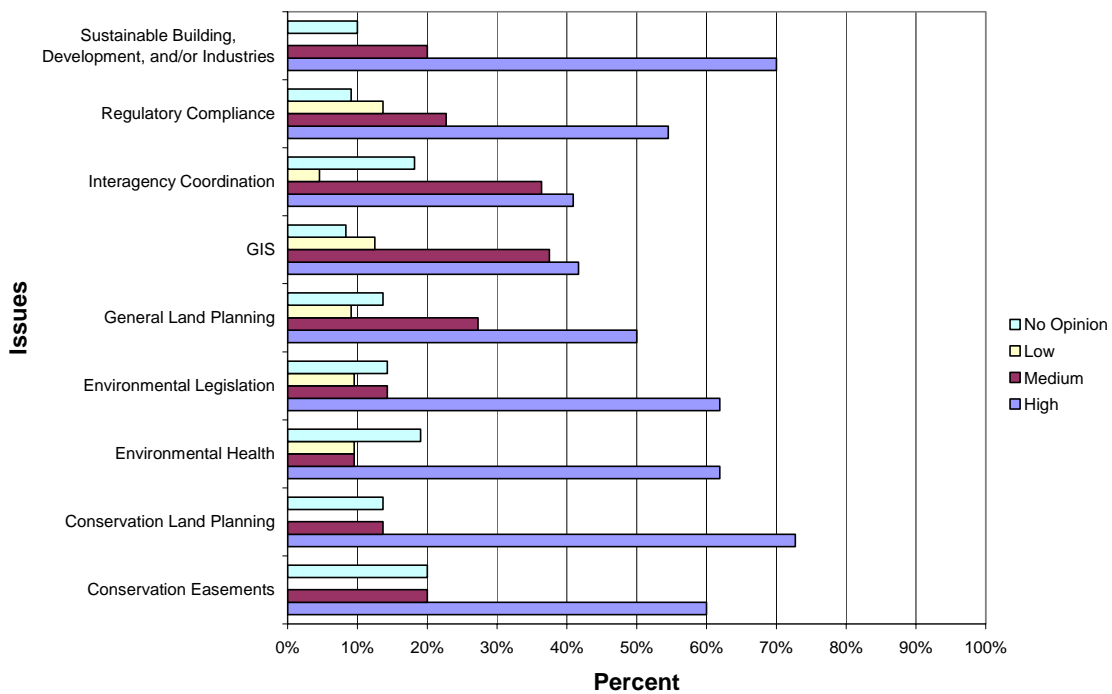


Figure 13
Planning and Regulatory Issues: Trainers' Perceptions of Need for Additional Training



Resource Management Issues

Among resource management issues (**Figure 14**), most survey participants indicated a high need for additional training concerning erosion control (42%) and environmental education (42%). Most other issues in this category were predominantly low need training issues with the exception of real estate, estuarine ecology, and critical area delineation, which were medium need issues. Environmental monitoring was seen as a high need issue by 33% of respondents and a medium need issue by another 33% of respondents.

The perception of need for additional training by existing training providers (**Figure 15**) is highest for issues related to environmental education, erosion control, ecological landscaping, and global climate change. Aquaculture/mariculture, natural resource extraction, and fishery law were predominantly “medium need for additional training” issues. None of the issues in this category were considered to be predominantly low need for additional training by existing training providers.

Figure 14
Resource Management Issues: Need for Additional Training

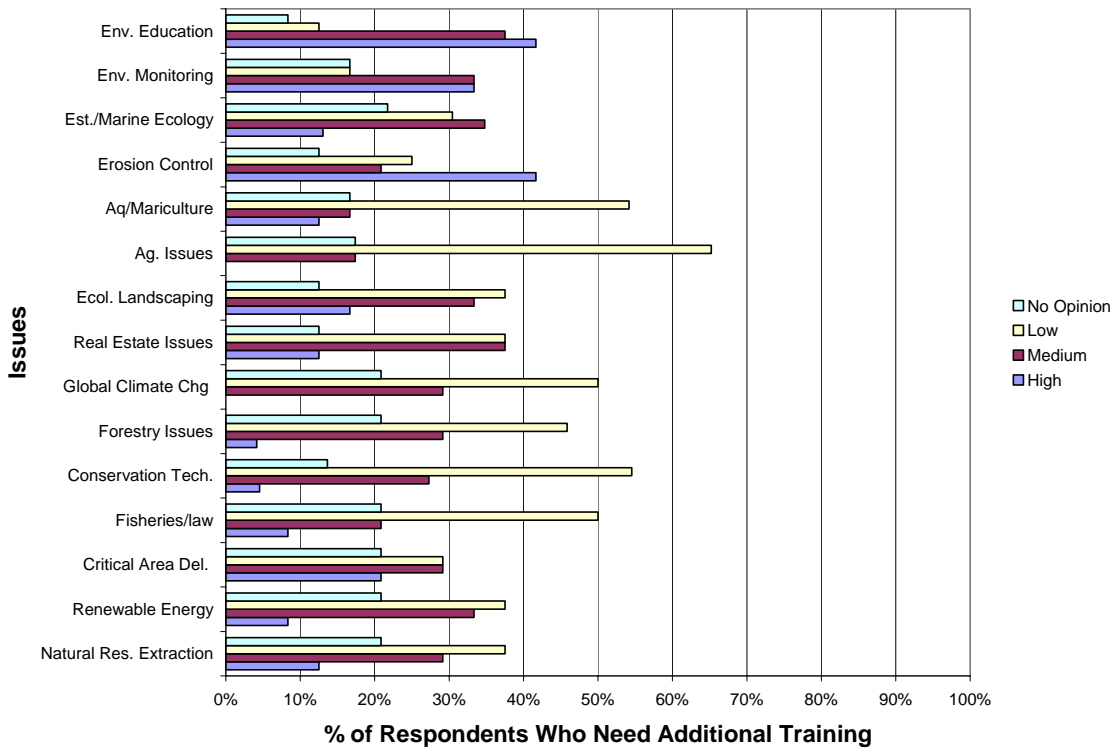
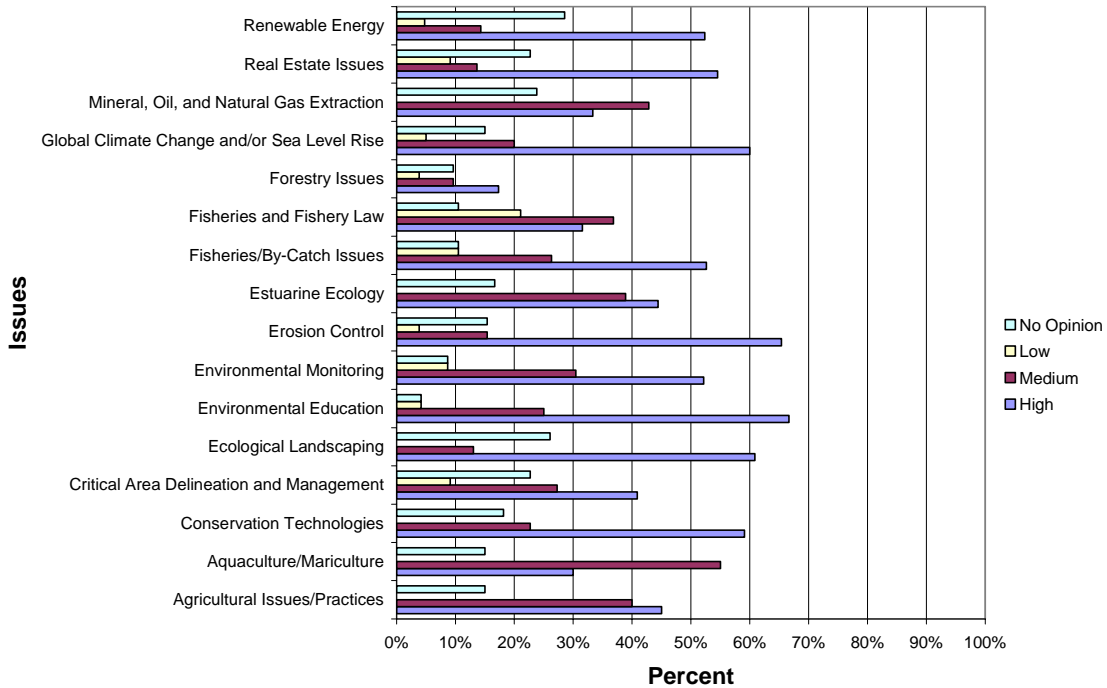


Figure 15
Resource Management Issues: Trainers' Perceptions of Need for Additional Training



Additional Resource Management Issues

When asked to list additional coastal resource management issues about which respondents feel they need additional training, only one additional issue was identified: the effect of ecotourism on natural resources. This recommendation is important to consider because ecotourism is currently a high priority topic in south Mississippi, especially Jackson County. The CTP is working to address this issue through programs related to visitor use management of coastal areas.

Based on the results of the survey, the issues about which survey respondents consider themselves to be most in need of additional training include:

- Wetland protection (56%);
- Pollution prevention (54%);
- Storm water management (52%);
- CWA compliance (48%);
- Water resource supply and quality (48%); and,
- Combined sewer outflows (48%).

When asked to identify (in their own words) the three coastal resource management issues encountered most often through work, the majority of survey respondents selected the following:

- Erosion control and sedimentation;
- Storm water management; and,
- Wetlands protection.

Other priority issues included dredging and filling, nonpoint source pollution, illegal dumping, port and harbor safety, and flood plain management. The same list of issues was mentioned again when respondents were asked to identify the top three issues of concern within their respective communities.

Training Methods and Resources

Survey respondents were asked to indicate the effectiveness of training methods listed in **Table 2**. The most effective training method appears to be field exercises and demonstrations; it was designated “very effective” by 80% of respondents. Sixty-six percent of respondents indicated that workshops are very effective, and 42% said that courses are very effective. The majority of respondents felt that conferences and seminars were somewhat effective, and most respondents had no opinion of roundtable discussions, panel discussions, distance learning, and on-line courses.

Table 2
Effective Training Methods

Training Methods	Effectiveness %			
	Very	Somewhat	Not Effective	No Opinion
Field Exercises/Demonstrations	80	6	0	14
Workshops	66	21	0	14
Courses	42	21	0	36
Conferences	31	44	0	25
Roundtable Discussions	31	25	3	41
Panel Discussions	19	34	9	38
Seminars/Lectures	21	58	0	21
Distance Learning	7	17	3	73
On-line Courses	7	7	7	79

Most survey respondents indicated that they would prefer to attend half-day training events during the morning hours, although one or two-day courses that extend into the afternoon are acceptable as well. The majority of respondents felt that training sessions longer than two days, evening courses, and weekend activities were not preferable. Self-directed activities that require no time commitment were considered to be somewhat desirable by the majority of respondents (**Table 3**).

Table 3
Time Commitment For Training Activity

Time Commitment for Training Activity	% Desirability			
	Very	Somewhat	Not Desirable	No Opinion
1/2 Day	58	29	4	8
1 Day	41	45	5	9
2Days	0	55	36	9
3 Days	0	27	64	9
Week-Long Course	0	18	68	14
Morning	67	17	4	12
Afternoon	18	64	5	14
Evening	9	23	59	9

Survey respondents consult a variety of sources for information regarding coastal resource management issues. Ninety-six percent of respondents consult state agency personnel, while 78% consult professional contacts. Other popular sources of information include federal agencies and internet resources (**Table 4**).

**Table 4
Professional Resources**

Sources of Information	% of Survey Respondents Who Use This Resource
State Agencies	96
Professional Contacts	78
Federal Agencies	70
Internet Resources	61
Municipal Officials	48
Personal Contacts	48
Personal Knowledge (education and professional background)	48
Environmental Non-Profits	30
Library	17

*Total percentage exceeds 100 because respondents were encouraged to choose all applicable professional resources.

When asked to evaluate the relative importance of a list of workshop incentives (**Table 5**), 50% or more of survey respondents chose expert speakers, availability of field guides and manuals, easy access to the event, networking opportunities, and field demonstrations as being the most important incentives. The majority of respondents indicated that certification and registration fees were somewhat important to them. Continuing education credits and the availability of meals and refreshments were not important to most respondents.

**Table 5
Workshop Incentives**

Incentive	% Relative Importance of Incentive to Attendee		
	Very	Somewhat	Not Important
Expert Speakers	83	12	4
Field Guides/Identification Manuals	63	33	8
Easy Access To Event	60	36	4
Networking Opportunities	58	25	17
Field Demonstrations	50	46	4
Take-Home/Follow-Up Materials	46	42	12
Certification	29	38	33
Continuing Education Credits	28	32	40
Registration Fee	25	54	21
Meals and Refreshments	4	44	52

The majority of survey participants indicated that workshop activities in Jackson County are the most desirable. This makes sense, as the majority of respondents were from Jackson County. The reserve currently hosts many of its coastal decision-maker workshops at the MDMR’s main office in Biloxi (Harrison County). This is a relatively convenient central location for the majority of people on the coast.

When asked how information regarding future workshop activities should be distributed, survey respondents were split evenly between postal announcements and e-mail notices. The same trend occurred when respondents were asked how they prefer to register for classes (on-line vs. mail-in registration).

Partnerships

Sixty-five percent of survey respondents indicated a willingness to partner with the Grand Bay NERR CTP to offer future training opportunities to their staff. Sixty-four percent are willing to provide a facility for the activity, while 43% are willing to help with planning. Thirty-six percent of respondents are willing to provide either in-kind match or some funding. A few respondents indicated that a future partnership would be negotiable (**Table 6**).

**Table 6
Support for CTP**

Support For Grand Bay NERR CTP	% of Respondents Who Favor Providing Each Type of Support
Provide a Facility for the Activity	64
Help with Planning	43
Provide In-Kind Match	29
Provide Some Funding	7
Other	14

*Total percentage exceeds 100 because respondents were encouraged to select all that apply.

Conclusions

The goals of this analysis were to examine the CTP initial target audience, “local elected and appointed officials,” to:

- Identify the baseline knowledge, skills, and attitudes of the target audience regarding local coastal resource management issues; and,
- Identify the training preferences of the target audience, including preferred training issues and information delivery mechanisms.

Local elected and appointed officials from the three coastal counties, and the cities within them were contacted and encouraged to participate in a survey in an effort to identify the coastal resource management training needs of this audience along the Mississippi Gulf Coast.

Analysis of the data indicates that there is a need for additional training related to a variety of issues as identified in **Table 7** below. Two central training themes emerged from the results: wetland protection and management and water resources (supply and quality). Many of the issues listed below can be categorized together and addressed through a series of workshops related to the broader theme. For example, a workshop series on wetland protection and management could address wetland function, land planning, habitat/streambank restoration, interagency coordination, erosion control, dredging and filling, watershed management, etc. The theme, “Water Resources,” encompasses storm water management as well as pollution prevention, sewer outflows, CWA compliance, NPS pollution, and erosion control. The two themes, “Wetland Protection and Management” and “Water Resources (Supply and Quality),” are also closely related because wetlands maintain an important function in Mississippi’s coastal communities as drains and filters for rain and storm water events and protection from flooding hazards.

The CTP Advisory Committee recommends that the issues listed in **Table 7** guide CTP program development over the next three years. This recommendation is based on the fact that existing trainers perceived all of the issues listed in **Table 7** to be predominantly high need for additional training. With the exception of issues such as wetland protection, pollution prevention, and environmental education, fewer than 50% of existing trainers intend to address these issues over the next five years. By addressing broader themes, such as wetland protection and management and water resources (supply and quality), the CTP can encompass many of the “high need” issues without duplicating existing training efforts. In developing an implementation strategy, we will focus on these issues, while providing enough flexibility in the program to address current issues and take advantage of additional partnering opportunities.

Table 7
Comparison of Actual Training Needs with Perceptions of Need and Current Resources

Issue	% of Respondents Who Think They Need Additional Training	% of Existing Trainers Who Perceive a Need for Additional Training Related to This Issue	% of Existing Trainers Who Intend to Address This Issue Within the Next Five Years
Wetland Protection	56	72	53
Pollution Prevention	54	61	50
*Storm Water Management	52		
Combined Sewer Outflows	48	60	30
Water Resources (sup./qual.)	48	68	29
*CWA Compliance	48		
Recreational Use	43	48	23
Point Source Pollution	43	61	42
Erosion Control	42	66	38
Watershed Management	42	78	47
Dredging and Filling	42	58	30
Environmental Legislation	42	62	31
Environmental Education	42	67	52
NPS Pollution	41	88	48
Ground Water Issues	40	58	33
*Building Codes	39		
Sustainable Develop.	38	70	38
Sedimentation	38	62	25
Septic System Issues	38	61	29
Coastal Erosion/Accretion	38	53	36
General Land Planning	35	50	19
Environmental Monitoring	33	52	35
Streambank Restoration	30	62	29

*These issues were not specified in the Market Analysis survey; therefore, a complete set of data is not available.

The majority of survey respondents prefer field exercises and workshop settings for training events. Additionally, 1/2 day morning events are most preferable, although 1 to 2-day events are also acceptable.

In conclusion, the decision-makers who responded to the needs assessment survey represent a cross-section of those individuals who may eventually participate in CTP training events. The GNDNERR CTP will strive to develop a series of training events that take into account the results of this survey process. The program will be adaptively managed, and the CTP Coordinator will remain open to additional training suggestions from the target audiences in order to address priority coastal management issues as they arise. The results of this assessment will be maintained by GNDNERR and made available for use by other coastal resource management training organizations in the Gulf Coast region.

Works Cited

CTP Technical Committee. *Coastal Training Program Planning Phase CTP Technical Committee Review*. January, 2004.

Grand Bay National Estuarine Research Reserve Coastal Training Program Market Analysis Report, January 2005.

NOAA Coastal Services Center. *Project Design and Evaluation*. February, 2004.

Appendix A

CTP Advisory Committee Members

CTP Advisory Committee Members

L. G. Adams – Weeks Bay NERR, Manager
Diane Altsman – EPA, Environmental Protection Specialist
Nicole Anderson – The Nature Conservancy, Program Coordinator
Laura Beiser – Mississippi Department of Environmental Quality, Water Education Specialist
Shelia Brown – USM Scott Aquarium, COSEE Scientist
Rick Christmas – Mississippi Gulf Coast Community College, Vice President
Jan Boyd – Mississippi Department of Marine Resources, Coastal Ecology
Margaret Bretz – Mississippi Secretary of State’s Office, Attorney
Jennifer Buchanan – Grand Bay NERR, Education Coordinator
Dale Diaz – Mississippi Department of Marine Resources, Staff Officer, Marine Fisheries
Marian Dicas – Grand Bay NERR, Coastal Training Program Coordinator
Marcia Garcia – Mississippi Department of Marine Resources, Comprehensive Resource Management Plan, Staff Officer
Terri Jacobson – USFWS
Mark LaSalle – Mississippi State University, Faculty
Chris May – Grand Bay NERR, Stewardship Coordinator
Cheryl McClary – Weeks Bay NERR, Coastal Training Program Coordinator
Karen Mitchell – NOAA NMFS, Research Fishery Biologist
Ben Posadas – Mississippi State University, Faculty
David Ruple – Grand Bay NERR, Manager
Tina Schumate - Mississippi Department of Marine Resources, Comprehensive Resource Management Plan, Manager
LaDonn Swann – Mississippi-Alabama Sea Grant Consortium, Director
Mark Woodrey – Grand Bay NERR/Mississippi State University, Research Coordinator

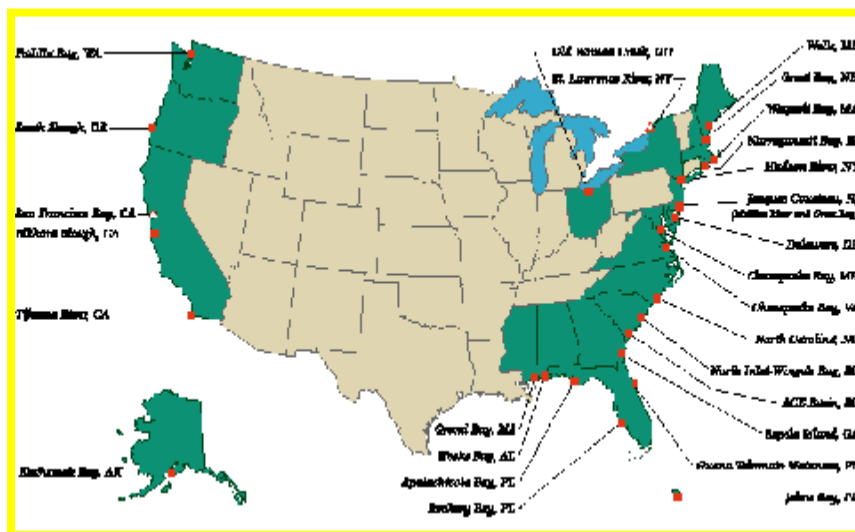
Appendix B

Needs Assessment Survey Questions

Grand Bay National Estuarine Research Reserve (NERR) Coastal Training Program Needs Assessment Survey

What is the Grand Bay NERR?

- Part of a national system of research reserves established to promote the health of our nation's estuaries through research and education.
- We are lucky to have such a reserve within our own coastal community!!



Where is the Grand Bay NERR?

- Grand Bay NERR is located in Jackson County, Mississippi between Chevron and the Alabama-Mississippi state line. It consists of 18,400 acres of property.

What Can the Grand Bay NERR Offer YOU?

- Grand Bay NERR is implementing a new **Coastal Training Program** to promote the distribution of information and technology concerning local coastal resource management issues to help local officials and others make informed decisions about resource management within their communities.
- The Coastal Training program can accomplish its objective by providing workshops, seminars, internet tools, fact sheets, etc. to local officials and other coastal decision-makers. Here's a picture from a recent workshop on tidal surveying held in Biloxi (Summer, 2004).



How can you help shape the Grand Bay NERR's Coastal Training Program?

- Please take time to complete the attached survey. It consists of 20 questions designed to pinpoint issues of concern to you and your community and to determine the most appropriate ways the Coastal Training Program can transfer information to you.

**Grand Bay National Estuarine Research Reserve
Coastal Training Program
Needs Assessment Survey**

Instructions: Please complete the following survey and return it to the Grand Bay National Estuarine Research Reserve using the enclosed envelope (previously addressed and stamped) **by February 11, 2005**.

Section 1: Personal Information

1. Background Information

- a. Agency/Organization: _____
- b. Position: _____
- c. Address: _____

- d. Phone: _____
- e. Fax: _____
- f. E-mail address: _____
- g. City/County: _____

2. Are you required or allowed to attend professional development training as part of your responsibilities? Yes No

If yes, what types of training do you attend?

3. Approximately how many hours of your work-week are spent addressing coastal resource management issues? Circle the most appropriate response.

- a. 0-3
- b. 3-5
- c. 5-10
- d. 10-15
- e. 15-20
- f. 20+
- g. Other (please specify)

Section 2: Coastal Resource Management Training Topics

4. The following is a list of potential training topics broadly categorized as HABITAT ISSUES. Please rank your need (high, medium, low, or no opinion) for additional professional training among each of the following issues:

	High	Medium	Low	No opinion
Biodiversity	___	___	___	___
Endangered/threatened species	___	___	___	___
Fire management	___	___	___	___
Habitat buffers	___	___	___	___
Habitat restoration	___	___	___	___

	High	Medium	Low	No opinion
Invasive species	___	___	___	___
Native plants	___	___	___	___
Protected area/special area management	___	___	___	___
Streambank restoration	___	___	___	___
Submerged aquatic vegetation	___	___	___	___
Wetland protection/management	___	___	___	___
Wildlife corridors	___	___	___	___

5. The following is a list of potential training topics broadly categorized as COASTAL MANAGEMENT ISSUES. Please rank your need (high, medium, low, or no opinion) for additional professional training among each of the following issues.

	High	Medium	Low	No opinion
Beach and nearshore ecology	___	___	___	___
Coastal and estuarine processes	___	___	___	___
Coastal erosion and accretion	___	___	___	___
Coastal hazards	___	___	___	___
Coastal public access	___	___	___	___
Dredging and filling	___	___	___	___
Fisheries management	___	___	___	___
Marina management	___	___	___	___
Offshore marine ecology	___	___	___	___
Port and harbor planning	___	___	___	___
Recreational use	___	___	___	___
Saltwater intrusion	___	___	___	___
Shoreline upland ecology	___	___	___	___

6. The following is a list of potential training topics broadly categorized as WATER AND AIR ISSUES. Please rank your need (high, medium, low, or no opinion) for additional professional training among each of the following issues.

	High	Medium	Low	No opinion
Interstate air quality issues	___	___	___	___
Air emissions	___	___	___	___
Combined sewer outflows	___	___	___	___
Thermal Pollution	___	___	___	___
Nitrogen loading	___	___	___	___
Waste water management	___	___	___	___
Water resources (supply/quality)	___	___	___	___
Sedimentation	___	___	___	___
Septic system issues	___	___	___	___
Ground water issues	___	___	___	___
Clean Water Act compliance	___	___	___	___
Eutrophication/nutrient loading	___	___	___	___
Point source pollution	___	___	___	___
Pollution prevention	___	___	___	___
Watershed management/planning	___	___	___	___
Nonpoint source pollution	___	___	___	___
Stormwater management and regulation	___	___	___	___

7. The following is a list of potential training topics broadly categorized as PLANNING AND REGULATORY ISSUES. Please rank your need (high, medium, low, or no opinion) for additional professional training among each of the following issues.

	High	Medium	Low	No opinion
Conservation easements	___	___	___	___
General land planning	___	___	___	___
Environmental legislation	___	___	___	___
Regulatory compliance (wetland permitting, docks and piers permitting)	___	___	___	___
Conservation land planning	___	___	___	___
Sustainable building and development	___	___	___	___
Environmental health	___	___	___	___
GIS	___	___	___	___
Interagency coordination	___	___	___	___
Building codes	___	___	___	___

8. The following is a list of potential training topics broadly categorized as RESOURCE MANAGEMENT ISSUES. Please rank your need (high, medium, low, or no opinion) for additional professional training among each of the following issues.

	High	Medium	Low	No opinion
Mineral, oil, and natural gas extraction	___	___	___	___
Renewable energy	___	___	___	___
Critical area delineation	___	___	___	___
Fisheries and fishery law	___	___	___	___
Conservation technologies	___	___	___	___
Forestry issues	___	___	___	___
Global climate change	___	___	___	___
Real estate issues	___	___	___	___
Ecological landscaping	___	___	___	___
Agricultural issues	___	___	___	___
Aquaculture/mariculture	___	___	___	___
Erosion control	___	___	___	___
Estuarine ecology	___	___	___	___
Environmental monitoring	___	___	___	___
Environmental education	___	___	___	___

9. Please list any additional coastal resource management issues about which you feel you need additional training.

Section 3: Coastal Resource Management Issues Encountered in Your Profession

10. List the three coastal resource management issues that you encounter most often in your work.

- a. _____
- b. _____
- c. _____

11. List the three coastal resource management issues that you feel are most important to your community (These may be the same issues listed in question 10).

- a. _____
- b. _____
- c. _____

12. How do you currently acquire the information you need to make decisions about coastal resource management issues? (CHOOSE ALL THAT APPLY)

- a. Municipal officials
- b. State agencies
- c. Federal agencies
- d. Environmental non-profits
- e. Personal contacts
- f. Personal knowledge (education and professional background)
- g. Library
- h. Internet resources
- i. Professional contacts
- j. Other (Please specify)

Section 4: How Can the Grand Bay NERR CTP Help Meet Your Needs?

13. The Grand Bay NERR Coastal Training Program would like to know how to best deliver needed information to you. Please rate the following information transfer methods:

	Very Effective	Somewhat Effective	Not Effective	No Opinion
a. Conferences	_____	_____	_____	_____
b. Distance Learning	_____	_____	_____	_____
c. Field exercises/demonstrations	_____	_____	_____	_____
d. Online courses	_____	_____	_____	_____
e. Panel discussions	_____	_____	_____	_____
f. Printed publications (brochures, fact sheets, newsletters)	_____	_____	_____	_____
g. Roundtable discussions	_____	_____	_____	_____
h. Seminars/lectures	_____	_____	_____	_____
i. Website information/ listserves	_____	_____	_____	_____
j. Workshops	_____	_____	_____	_____
k. Other (Please specify)	_____			

14. Please rate the following time commitments for training activities:

	Most Desirable	Somewhat Desirable	Not Desirable	No Opinion
a. 1/2 day	_____	_____	_____	_____
b. 1 day	_____	_____	_____	_____
c. 2 days	_____	_____	_____	_____
d. 3 days	_____	_____	_____	_____
e. Week-long course	_____	_____	_____	_____
f. Morning	_____	_____	_____	_____
g. Afternoon	_____	_____	_____	_____
h. Evening	_____	_____	_____	_____
i. Weekend	_____	_____	_____	_____
j. Self-directed study with no time commitment	_____	_____	_____	_____
k. Other (please specify)	_____			

15. Please rate the desirability of the following locations for potential training activities:

	High	Medium	Low	No Opinion
a. Jackson County	_____	_____	_____	_____
b. Harrison County	_____	_____	_____	_____
c. Hancock County	_____	_____	_____	_____
d. Mississippi Department of Marine Resources Biloxi Office	_____	_____	_____	_____
e. Other (Please specify)	_____			

16. How important are the following factors in influencing your decision to attend a training program?

	Very Important	Somewhat Important	Not Important
a. Meals and refreshments provided	_____	_____	_____
b. Continuing education credits	_____	_____	_____
c. Take-home or follow-up materials	_____	_____	_____
d. Expert speakers	_____	_____	_____
e. Field guides/identification manuals	_____	_____	_____
f. Certification	_____	_____	_____
g. Field demonstrations	_____	_____	_____
h. Easy access to workshop	_____	_____	_____
i. Registration fee	_____	_____	_____
j. Networking opportunities	_____	_____	_____
k. Other (Please specify)	_____		

17. How do you prefer to receive information about future training opportunities?

- a. E-mail notice with announcement and invitation
- b. E-mail notice that directs you to a web site for details and registration
- c. Postal announcement
- d. Fax announcement

18. How do you prefer to register for training opportunities?
- a. On-line registration
 - b. Mail-in registration
 - c. Phone/fax registration
19. Would you be willing to partner with the Grand Bay NERR to offer future training opportunities to your staff?
- a. Yes
 - b. No
20. If you answered yes to #19, in which way(s) are you willing to partner with the Grand Bay NERR? Please circle all that apply.
- a. Provide some funding
 - b. Help with planning
 - c. Provide in-kind match
 - d. Provide a facility for the activity
 - e. Other (Please specify) _____

Thank you for your participation in this survey!! If you have any additional comments regarding any of these questions or the Coastal Training Program, itself, please contact Marian Dicas (228-475-7047; marian.dicas@dmr.state.ms.us)

