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**Trends
Analysis of
Coastal
Training
Programs in
the National
Estuarine
Research
Reserve
System:**

**Executive
Summary**



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Executive Summary

The National Estuarine Research Reserves (NERRS) Coastal Training Program (CTP) is a system-wide training program that aims to increase informed decision-making related to coastal resource management at local and regional levels. The CTP serves as the NERRS flagship program for knowledge and information transfer, and provides an effective vehicle to ensure that science-based knowledge and skills get into the hands and minds of those individuals making decisions about the coast on a regular basis in a professional or volunteer capacity. At the local level, Reserve staff conducts intensive planning to develop targeted training programs that complement other training efforts within the region. The Reserves partner with multiple agencies and organizations to transfer relevant scientific and technical resources and information to key audiences around priority coastal resource issues.

Although spanning geographically diverse regions, the NERRS have effectively initiated this system-wide effort to identify the market and the capacity within each Reserve to provide coastal training activities to coastal policy- and decision-makers. CTP planning activities resulted in the development of planning documents outlining priority coastal issues to be addressed under the coastal training umbrella, the audiences to be targeted over a three- to five-year period, potential partnerships for the design and delivery of training venues, and methods to monitor and evaluate the impact of the training programs.

The CTP planning documents were developed in five separate segments – Advisory Group, Market Analysis, Needs Assessment, Strategic Plan, and Marketing Plan. The formation of Advisory Groups allowed the Reserves to assemble new partnerships, commit additional stakeholders, and create and enforce program accountability. The Market Analysis segment provided the Reserves with a sense of identified coastal training market opportunities. The Needs Assessment enhanced the Reserves' market perspective through the identification and prioritization of training opportunities most pertinent to coastal training providers. Information from the Market Analysis and Needs Assessment segments was applied toward developing strategies for effective program implementation (Strategic Plan), and toward identifying marketing methods for announcement and delivery of the program (Marketing Plan).

A review of the Reserve CTP planning documents was conducted to identify trends and commonalities in priority issues, programming approach, target audiences and their needs, types of partnerships, characterizations of regional training markets, and monitoring and evaluation techniques. Trends were identified throughout the NERRS and by NOAA-identified geographic regions. The five NOAA regions are:

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- Gulf Region – Jobos Bay NERR (Puerto Rico), Rookery Bay NERR (Florida), Weeks Bay NERR (Alabama)
- Mid-Atlantic Region – Delaware NERR (Delaware), Jacques Cousteau-Mullica River NERR (New Jersey), Old Woman Creek NERR (Ohio)
- North East Region – Hudson River NERR (New York), Narragansett Bay NERR (Rhode Island), Waquoit Bay NERR (Massachusetts), Wells NERR (Maine)
- Pacific Region – Elkhorn Slough NERR (California), Kachemak Bay NERR (Alaska), Padilla Bay NERR (Washington), South Slough NERR (Oregon)
- South East Region – Ace Basin NERR (South Carolina), North Carolina NERR (North Carolina), North Inlet-Winyah Bay NERR (South Carolina), Sapelo Island NERR (Georgia)

Coastal Training Program Trends and Commonalities

Trends in Priority Coastal Training Topics and Issues

During the Market Analysis and Needs Assessment segments of the CTP planning activities, the Reserves identified topical areas and issues needing to be addressed through coastal training activities. These topics and issues were then refined and prioritized, and included as part of Reserve strategies and marketing plans. These issues serve as topical areas for training in the Reserves' CTPs.

The trends in priority coastal training topics and issues that emerged among the NERRS were in the areas of habitat protection and restoration and land use planning (see Figure 1 below). Issues relative to habitat protection and restoration include sensitive species, habitat, riparian, buffers, invasive species, endangered species, biodiversity, restoration, and marine protected areas. Land use planning issues include zoning, master plans, land use change, community, growth management, urban sprawl, and greenways.

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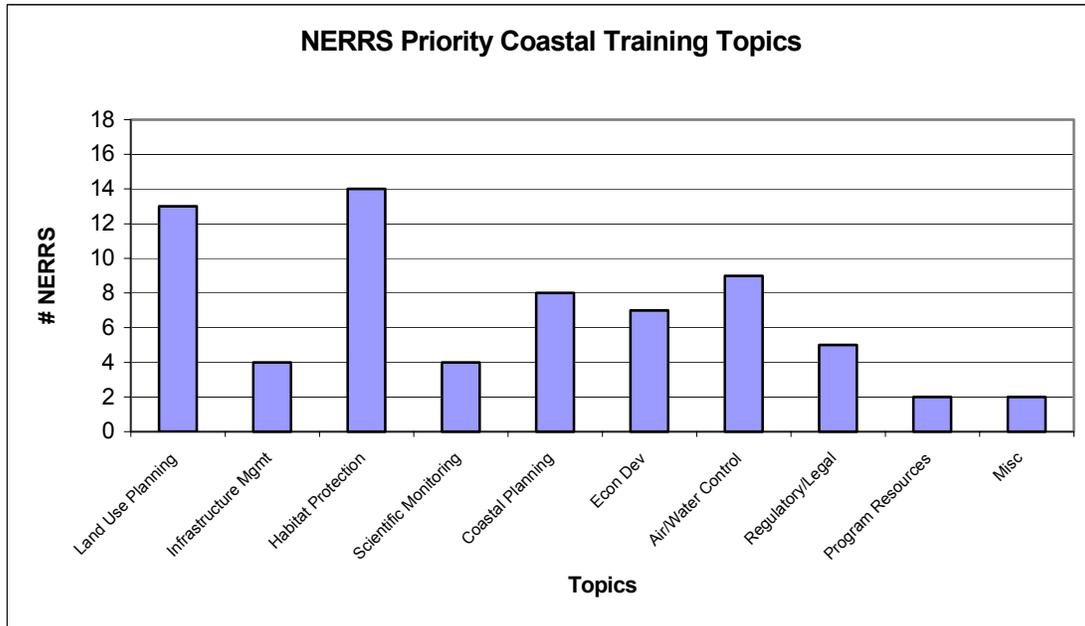


Figure #1

Other issues noted by the Reserves were regulatory enforcement and legal issues; infrastructure provision and management; scientific monitoring and study; and NERRS programs and partners. Miscellaneous issues of intergovernmental cooperation, grant writing, and public health were also cited by the Reserves.

The trends differ somewhat across NOAA regions. The NERRS within the Gulf Region identified land use planning and habitat protection and restoration as priority issues. Land use planning and coastal development issues were top priority issues in the Mid-Atlantic Region. In the North East Region, issues of habitat protection and restoration, economic development and cultural resources, and air and water pollution control were priorities. The Pacific Region cited habitat protection and restoration as a top priority. The South East Region indicated that land use planning, infrastructure provision and management, habitat protection and restoration, and air and water pollution control were top priorities. See Figure 2 below.

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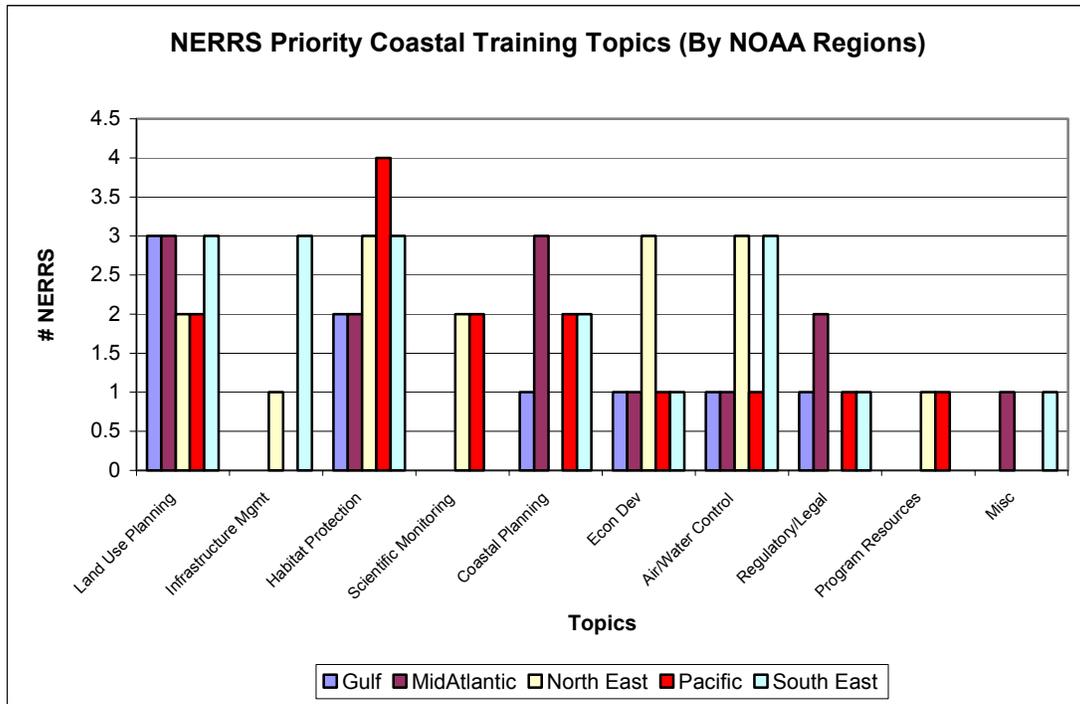


Figure #2

Trends in Program Training Delivery and Formats

The Reserves identified the methods and types of coastal training activities preferred by their audiences during the Market Analysis and Needs Assessment segments of their CTP planning activities. These preferences are included as part of the Marketing and Strategic Plans of the NERRS.

Although the Reserves are using multiple modalities for delivery of their CTPs, trends are evident in program delivery and technique. The overall trend among the Reserves for conducting training activities is the use of workshops, where some type of group interaction occurs. Field exercises and trips were a second common mode of training delivery. Other training delivery methods were lectures, conferences, courses, demonstrations, web/online, seminars, roundtable/group discussions, and consultations.

The miscellaneous methods as cited by the NERRS were technical training programs, books, coworkers, non-governmental events, professional meetings, short-term trainings, case studies, technical publication series, issue papers, presentations, and interactive videos. Figure 3 illustrates the approaches to training methods conducted by the Reserves.

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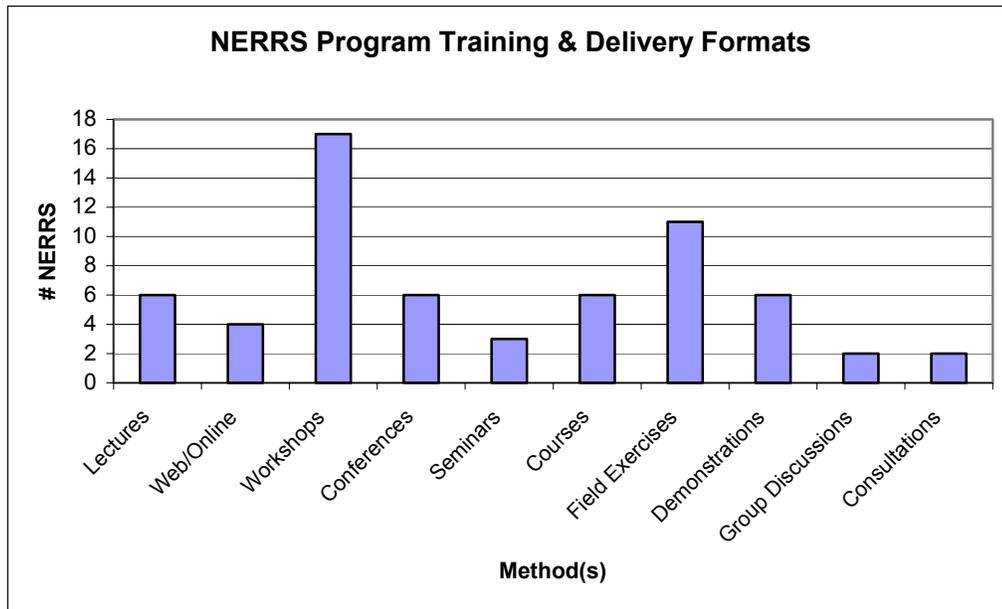


Figure #3

When examined individually by NOAA regions, the NERRS within the Gulf Region indicated that lectures, workshops, field exercises and trips, and demonstrations were equally preferred methods. The NERRS within the Mid-Atlantic Region also favored workshops, with courses and field exercises and trips a second popular format. Workshops and field exercises and trips were cited as preferred delivery modes among the NERRS within the North East Region, with conferences and web and online methods also being used. The Pacific Region's NERRS additionally used workshops, as well as several miscellaneous methods. Conferences, seminars, courses, and field exercises and trips were additionally noted. The NERRS within the South East Region cited workshops as preferred for training activities, but also indicated that lectures, conferences, field exercises and trips, and demonstrations were also used. See Figure 4 below.

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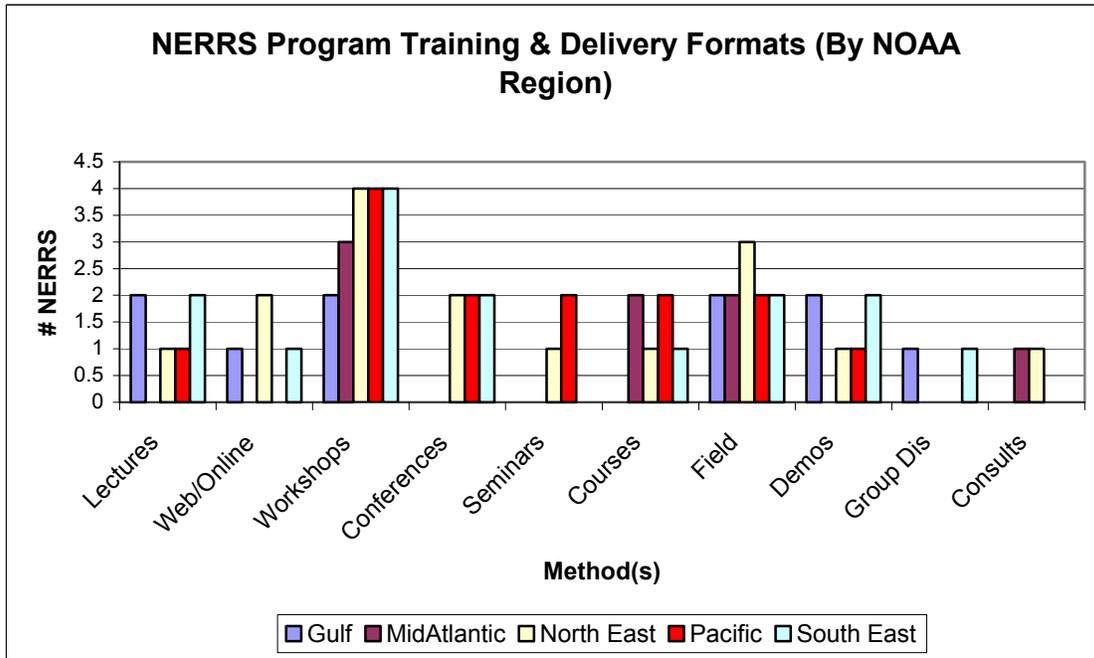


Figure # 4

Trends Among Target Audiences

The Reserves identified audiences to be targeted for training during the Needs Assessment phases of their CTP planning activities. These audiences were considered by the Reserves as coastal policy- and decision-makers. The Reserves define coastal decision-makers as individuals that make decisions about coastal resources on a regular basis in a professional or volunteer capacity.

The overall trend among the NERRS when targeting audiences for training was the selection of elected and appointed officials. This group includes municipal, county, regional, state, and federal elected and appointed officials, selectmen, councilpersons, managers, and administrator, as well as those elected or appointed to boards and commissions.

Two additional significant targeted audiences among the Reserves were government agencies and planners. Government agencies include municipal, county, regional, state, and federal government agency staff such as DNR, U.S. Corps of Engineers, U.S. Coast Guard, U.S. EPA and others. The planners include both elected and appointed planning personnel (private and public), shoreline and watershed planners, and engineers. Additional targeted audiences indicated by the Reserves include government personnel, environmental and conservation organizations, community groups, land owners and managers,

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volunteers, non-governmental agencies and nonprofits, business and professional, business and professional associations, science community, education community, regulatory and enforcement, and tribal. See Figure 5 below.

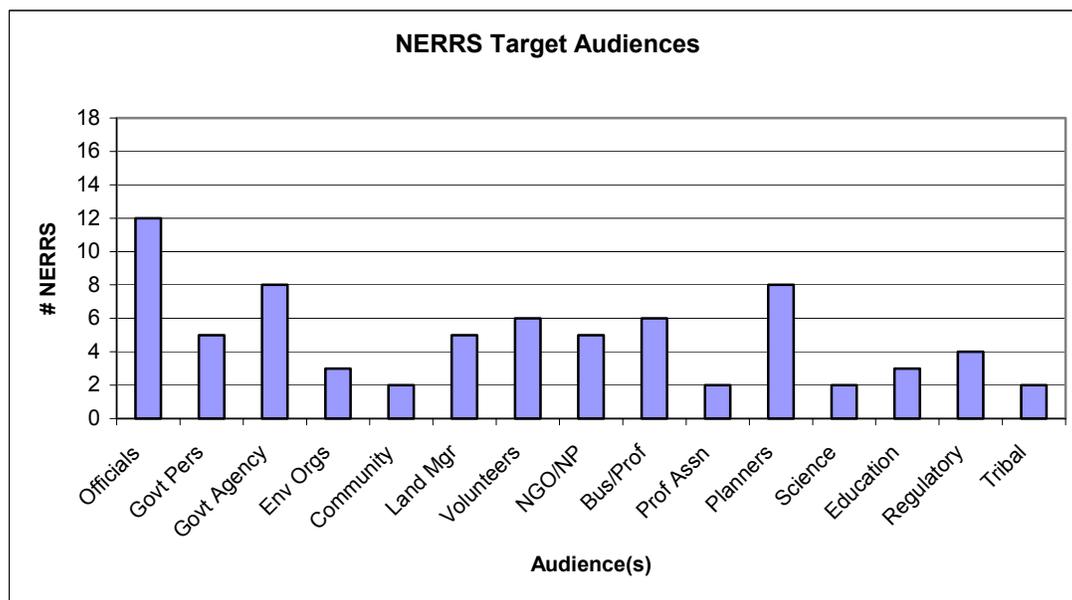


Figure #5

When examined by NOAA regions, the common target audiences in the Gulf Region were elected and appointed officials and planners. Within the Mid-Atlantic Region, the common target audience was elected and appointed officials; however, government agencies, volunteers, business/professional, and professional associations were also significantly noted. The common target audience in the North East Region was elected and appointed officials, with landowners and managers and planners also identified as significant. The Pacific Region cited planners as the common target audience, with government agencies, business/professional, science community, regulatory/enforcement, and tribal also significantly noted. Within the South East Region, the common target audience was elected and appointed officials. Government personnel, government agencies, NGOs/NPs, and business/professional were also indicated as significant. See Figure 6 below.

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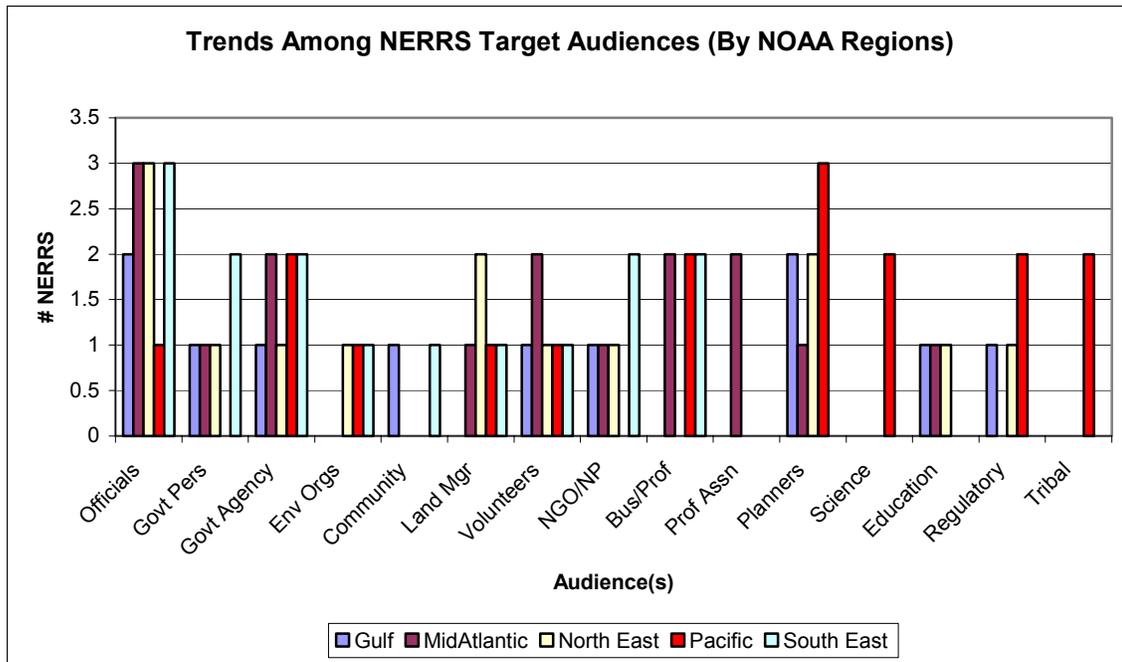


Figure #6

Trends in Training Needs as Identified by the NERRS Audiences

A number of specific needs were indicated by the survey and focus group audiences of the NERRS as a result of their Market Analysis and Needs Assessment CTP planning activities. The survey and focus group audiences cited their specific “needs and wants” (what they felt to be necessary) to coastal training activities. These needs and wants include both training needs and preferred methods for receiving training.

The NERRS audiences, overall, indicated an interest in building skills and knowledge in specific topical areas. The specific topics cited by these audiences include the priority coastal training issues identified by the Reserves – issues of habitat protection and restoration, land use planning, and air and water pollution control. Additional significant needs cited by the NERRS audiences were with technical assistance and communication technologies, and group interaction and networking opportunities.

Other training needs indicated by the NERRS audiences were the need for science based training, coordination and collaboration of training activities, building professional skills, and integrating science into practice. Reserve audiences also stated miscellaneous needs, such as a desire for field activities and to integrate training with site based K-12 education. The Reserve audiences additionally cited incentives as a preference for training programs. Specific

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incentives listed by the Reserve audiences include expert and knowledgeable speakers, that training should be offered at convenient times and at convenient locations, certification, and continuing education credits.

When observed by individual NOAA regions, the audiences within each of the five regions also indicated the need for training in specific topical areas. In fact, there appears to be an even disbursement within each of the five regions across all categories, with the exception of the Pacific and South East Regions. Within the Pacific Region, the need for technical assistance and communication technologies are indicated, and within the South East Region, the need for science-based training is cited.

Trends in Partnerships and Collaborations

The Reserves have identified partnerships and alliances that were integral to their CTP planning activities and to the delivery of their education and training programs. These partnerships and alliances are in the form of guidance, strategy, research, training, shared facilities, outreach, staff support, and other resources. The common partners across the Reserves are the core CTP partners, which are Reserve staff, Sea Grant and state coastal management program agency professionals that provided input for the design and administration of the CTP.

It is the trend of the NERRS to partner with government agencies in CTP training activities, either through Advisory Group participation or other direct/indirect roles. Other significant partners were higher education institutions and nonprofit organizations. Additional partners included planning and regulatory commissions; local, state, and federal government programs; city and county departments; foundations; businesses and professional associations; and other NERRS. See figure 9 below.

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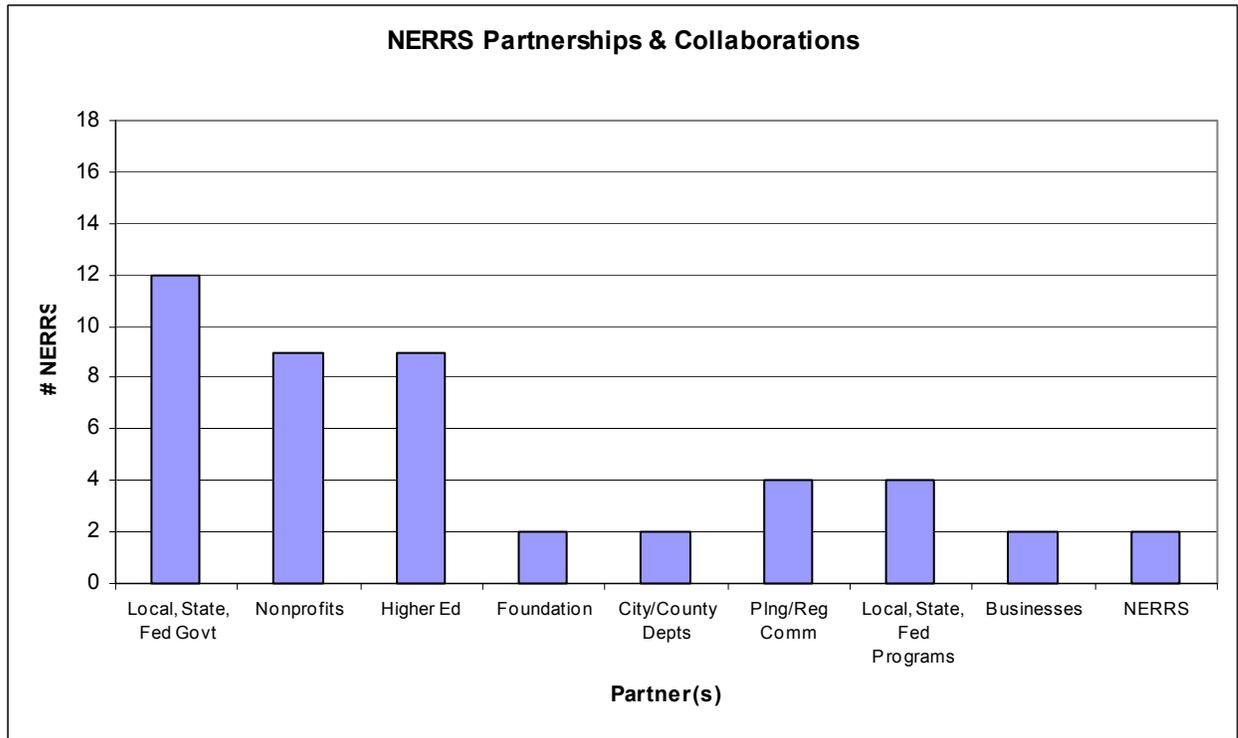


Figure #9

When examined by NOAA regions, the trend within the Gulf Region was partnerships with other local, state, and federal government agencies, nonprofit organizations, and higher education institutions. Within the Mid-Atlantic Region, the common partnerships were other local, state, and federal government agencies, and higher education institutions. The North East Region's common partners were nonprofit organizations and planning and regulatory commissions. Common partners within the Pacific Region were other local, state, and federal government agencies, nonprofit organizations, and local, state, and federal government programs. Within the South East Region, common partners were other local, state, and federal government agencies and higher education institutions. See Figure 10 below.

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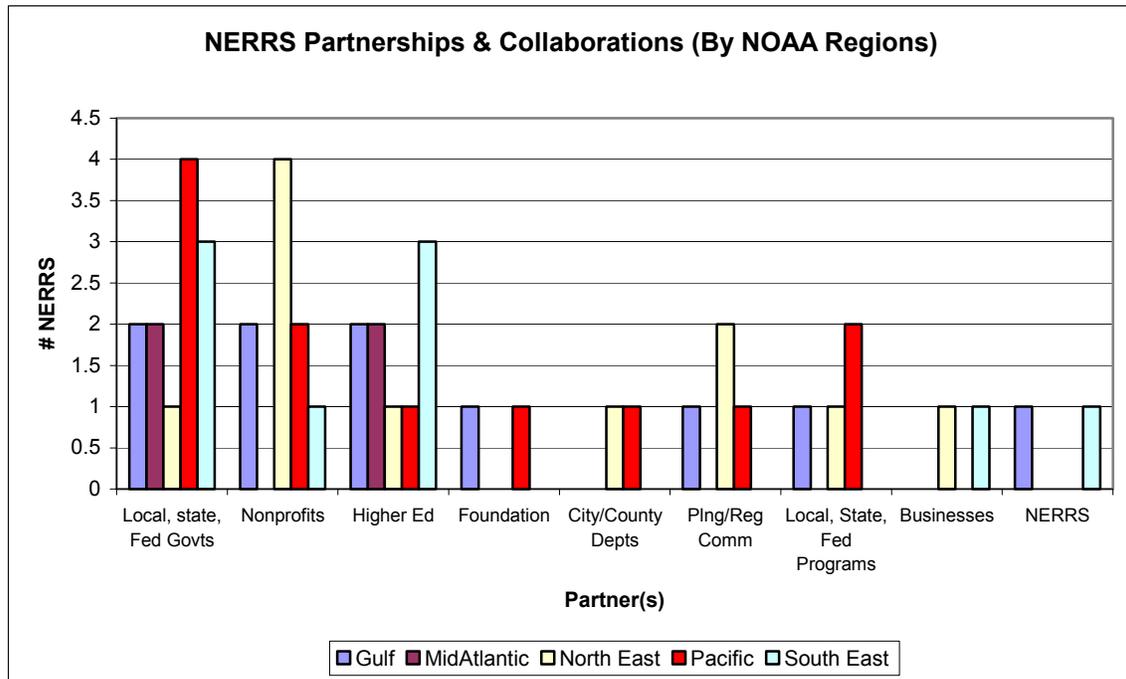


Figure #10

Trends with Regional Training Providers and Regional Training Opportunities

The NERRS have identified a number of valuable resources for providing coastal training to decision- and policy-makers. In many cases, the NERRS are working with or have prior relationships with organizations, groups, agencies, and businesses to deliver this training.

The trend among the NERRS is that training is primarily offered through the core CTP partners – the Reserve, Sea Grant, and state Coastal Management program agencies (Department of Natural Resources, Department of Environmental Protection, and Coastal Management Program offices). These core CTP partners not only serve as stakeholders in the design and administration of the CTP but as teachers and instructors that share research, experience, and expertise with decision- and policy-makers at all levels.

In addition to the core CTP partners, significant regional training providers identified by the NERRS were government agencies (state and federal), non-governmental and nonprofit organizations, and institutions of higher education (includes community colleges, colleges, and universities). It is significant to note that the same providers offer both training and collaborations with coastal training programs on training needs and audience outreach.

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Other regional training providers noted by the Reserves were businesses, community groups, and miscellaneous other entities. The miscellaneous regional training providers noted were professional associations, tribal organizations, recreational, environmental and planning organizations, and for-profits (see Figure 11).

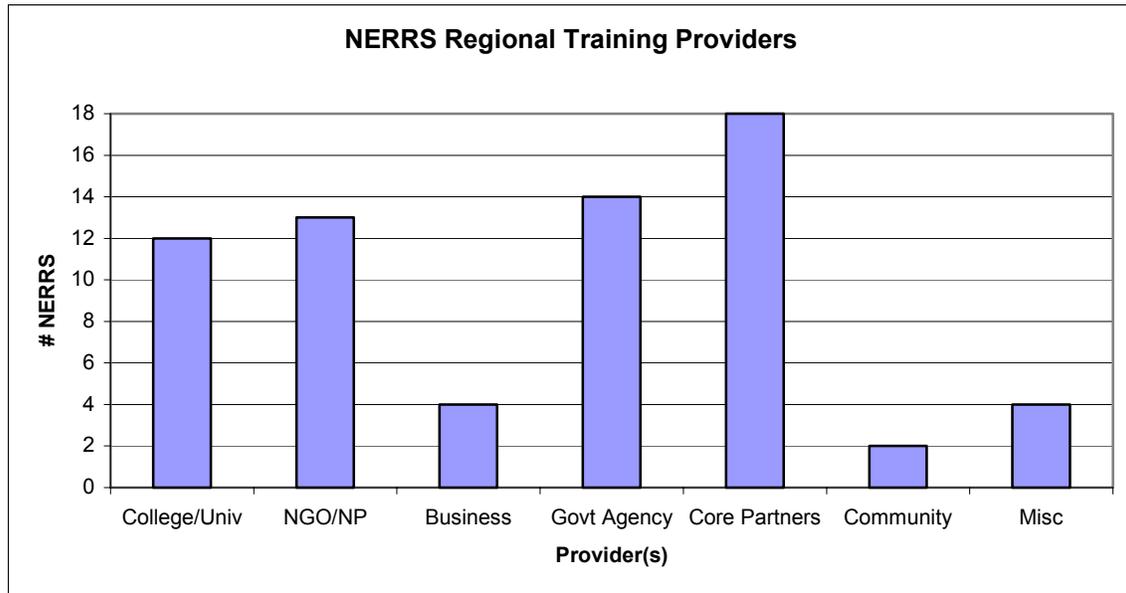


Figure #11

When examined by individual NOAA region, the trends are similar. Within the Gulf Region, the core partners and non-governmental and nonprofit organizations are significant regional training providers. The significant regional training providers in the Mid-Atlantic Region were the core partners and government agencies. The North East Region indicated that the core partners, government agencies, non-governmental and nonprofit organizations, and higher education institutions were all significant regional training providers. Within the Pacific Region, significant regional training providers were the core partners, government agencies, and higher education institutions. The South East Region's significant regional training providers were the core partners and institutions of higher education. See Figure 12 below.

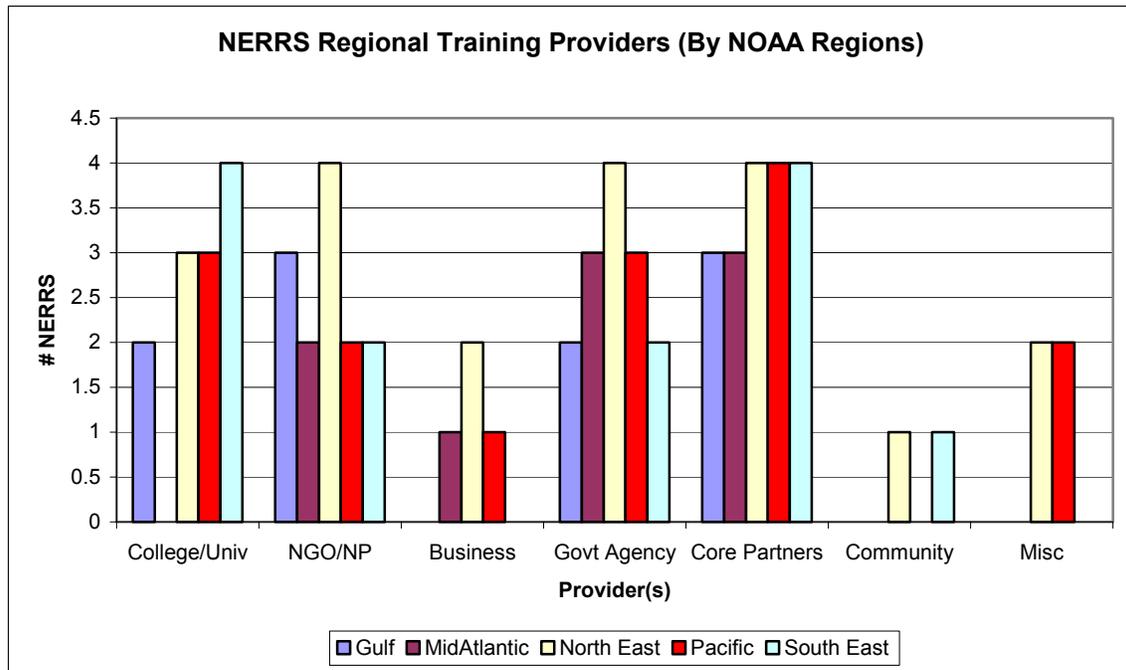


Figure #12

Trends in CTP Monitoring and Evaluation Strategies

The Strategic and Marketing Plan segments of the CTP planning activities enabled the Reserves to identify methods by which they could monitor program progress and evaluate the impact of their training programs. Effective program monitoring and evaluation strategies tied to well articulated training program (or events or activities) goals and objectives are critical to the continued success of the program.

There are a variety of evaluation and monitoring methods being employed by the NERRS to track the progress and measure the impact of their CTPs. The trend identified among the Reserves for evaluating and monitoring the progress of their CTPs involved the use of evaluations and feedback following the conclusion of specific training events.

More than half of the Reserves also indicated that some type of survey would be used to evaluate their CTPs. Other methods indicated by the Reserves were systems to track the number, type, and frequency of participants attending each training activity; evaluations and studies conducted by consultants or others external to the Reserves; and conducting telephone or in-person interviews.

Additional techniques cited were conducting focus groups, instituting performance measures, web-based or online monitoring methods, requests for brochures and other informative mailings, media clippings, annual or summary

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reports of progress, questions and inquiries from email, telephone, or U.S. mail contacts, and discussions with Reserve staff and external partners. See Figure 13 below.

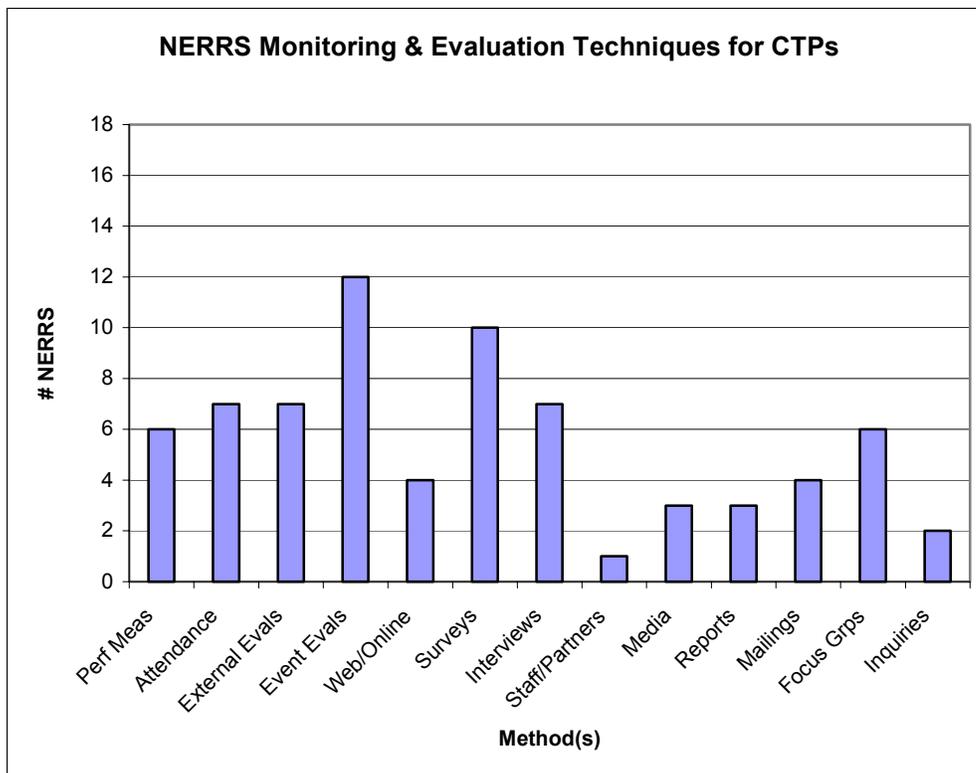


Figure #13

When examined by NOAA regions, the trends within the individual regions slightly differ. The Reserves within the Gulf Region indicated that end-of-session evaluations and feedback were the significant techniques to be used for assessing the progress of their CTPs. Performance measures and evaluations conducted by consultants and others external to the Reserve were also cited as methods by the Gulf Region NERRS.

Multiple methods were cited by the Reserves within the Mid-Atlantic Region. These methods were databases for tracking attendance, web-based and online techniques, surveys, telephone and in-person interviews, brochure and information mailings, and responding to questions and inquiries. Within the North East Region, the Reserves indicated that telephone and in-person interviews were the preferred method; however, evaluations and feedback following specific training events, surveys, and focus groups were also cited.

The Reserves within the Pacific Region indicated that evaluations and feedback from audiences following specific training events would be used, as

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well as surveys, performance measures, systems to track attendance, telephone and in-person interviews, and focus groups. The significant methods within the Reserves of the South East Region were evaluations conducted by external consultants and others. Additional monitoring techniques were attendance tracking systems, evaluations and feedback following specific training events, and surveys. See Figure 14 below.

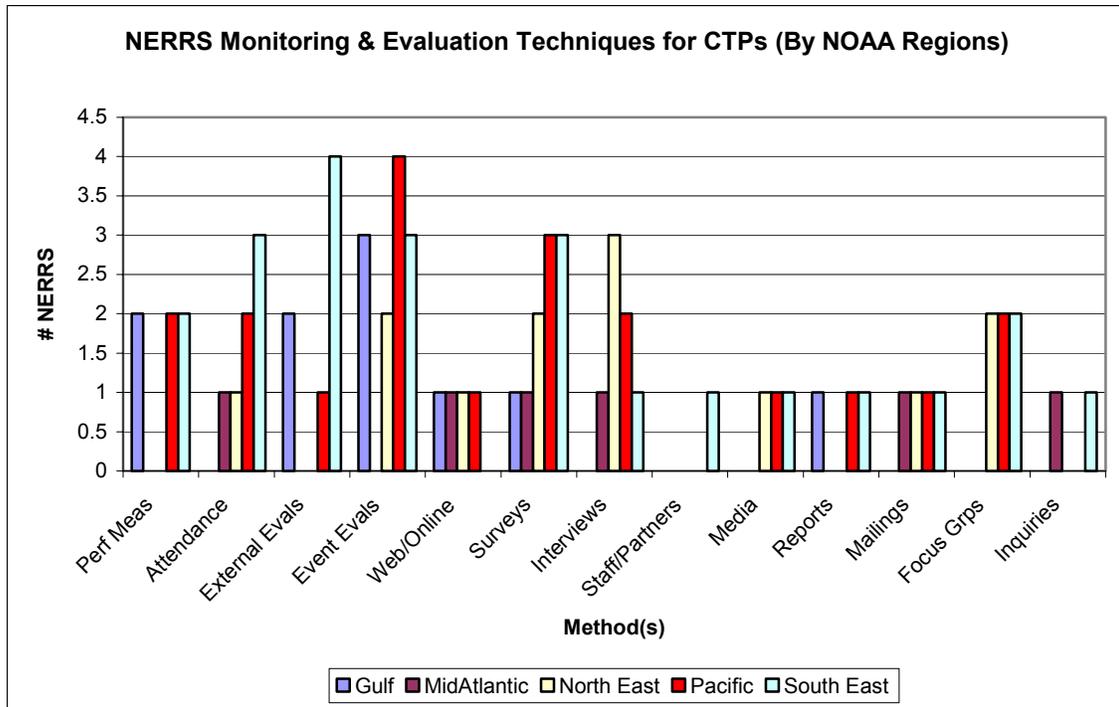


Figure #14

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