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Information About Estuaries and Near Coastal Waters
June 1999 - Issue 9.3

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Public Involvement in Coastal Management

Increasing the connection to the public through education and consensus-building is an essential component in implementing any coastal policy. In the past few years the importance of involving the public in environmental education and policymaking has become a key tool in effective coastal management. The upcoming Coastal Zone 99 conference entitled The People, the Coast, the Ocean: Vision 2020 has made the Public Connection one of its four major themes.

This issue of Coastlines features several articles that will be presented at the conference. The Public Connection theme is exemplified in the following article on how the Charlotte Harbor National Estuary Program has streamlined the process of building public consensus.

For further information about Coastal Zone 99, see their web site at http://omega.cc.umb.edu/~cz99/ or E-mail: CZ99@gemini.cc.umb.edu.

COASTLINES

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Streamlining Public Consensus In the National Estuary Program

To date, 28 NEPs have been designated throughout the country and are in various stages of development; some are writing management plans while others are implementing them. The newer programs, Tier V programs designated circa 1995, are guided by a "streamlined" approach. The premise of this approach is that more than a decade of trial and effort has taught useful, transferable lessons and insights. Tier V programs can incorporate this knowledge into their workplans and program development. As a result, the EPA provides less time and money for completion of Tier V management plans.

The newest programs have an opportunity to base their planning process on nationwide experiences. Yet, the consensus-building task that is so critical to a program's success cannot be rushed or streamlined because of the time it takes to develop support for initiatives that will impact stakeholders. The Charlotte Harbor National Estuary Program, one of the Tier V programs, has attempted to build public consensus under this streamlined approach through a variety of methods.

Incorporating "Lessons Learned" Under the Streamlined Approach

Citizens' Advisory Committee

The success of the Charlotte Harbor National Estuary Program is dependent upon a community-based outreach strategy that enlists and involves support from diverse stakeholders in the study area. The program has a Citizens' Advisory Committee (CAC) comprised of representatives of major environmental organizations as well as boating, fishing, mining, agribusiness, and members of the general public. Due to Tier V time constraints for completing a management plan, this committee meets monthly at locations throughout the study area, yet has maintained a steady level of commitment from members since program inception.

Quarterly Newsletter

Like other NEPs around the country, the Charlotte Harbor NEP produces and distributes a quarterly newsletter which is a timely, consistent, and relatively inexpensive way to provide information about a program. The Charlotte Harbor NEP has attempted to maximize interest in its newsletter in a number of ways.

- Each issue of the newsletter has a different "focus," providing an opportunity to examine topics in-depth.
- The newsletter approach is journalistic and investigative rather than simply providing brief synopses of information.
- Outside contributors are intensively recruited for each issue. Drawing on a wide range of topics and writers has given the newsletter a wider appeal to a diverse and varied audience.
- To defray the cost of producing a lengthy newsletter and expanding mailing list, the program has sought and received additional funding from the Florida Coastal Management Program.

Volunteer Speaker's Bureau Although the program has an active and dedicated citizens' committee, the challenge to reach out to a broader audience still remains. Presentations to small groups of civic associations and other organizations can be an effective communication tool, but in a large watershed many groups and constituencies are difficult to reach. Under the streamlined approach and given such a large study area, the level of effort required to reach the many groups and organizations would require considerable staff time. To address this challenge the program has enlisted a group of volunteer speakers to provide presentations throughout the study area. A polished, easy-to-use slideshow was developed and speakers were trained to give the presentations in their communities. The script, terms, and photos are site-specific and tailored to the communities where they are presented. The Volunteer Speaker's Bureau is equipped with the necessary materials and audio-visual equipment and their efforts contribute significantly to public outreach on behalf of the program. To date, volunteer speakers have reached over 1,000 people through 30 presentations in over 25 different locations. The volunteer speakers also assist with the dissemination of written materials and publications, and the newsletter mailing list is growing in

response to these outreach activities.

Mini-Grants Program

Like other NEPs, the Charlotte Harbor NEP has provided early action demonstration grants to organizations for supplementing educational programs and tools. To streamline the demonstration grants to fit within budget and time constraints, a "mini-grants" program was implemented which maximizes the number of projects through smaller budgets and a minimal application process. In this way, individuals and smaller organizations are eligible to receive funds for valuable local projects. The program has funded 12 projects to schools, individuals, and not-for-profits, thereby maximizing grant effort and local presence, while not requiring a cash commitment from the grantee. The beneficial results are relatively quick and there is a plan to continue the mini-grants program under CCMP implementation.

CCMP Review and Public Consensus Building

One recommendation made by other NEPs with regard to building public consensus was to have the Citizens' Advisory Committee review objectives and actions in the draft CCMP. The Charlotte Harbor NEP involved the CAC during the entire planning process so that members are better prepared to understand the proposed objectives and action plans. Members of both the Citizens' and Technical Advisory Committees were brought together in an intensive series of workshops and a retreat to develop and finalize quantifiable objectives and proposed action items that address issues of water quality, hydrologic alterations, and fish and wildlife habitat. Another benefit of this process has been that committee members have become "ambassadors" for the CCMP in their local areas and to the groups they represent.

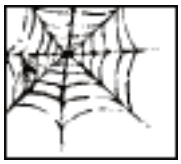
To streamline the process of developing a management plan during its third and final year of planning effort, the Charlotte Harbor NEP incorporated another "lesson learned" by the Tampa Bay NEP. Project partners and local governments were requested to write their own action plans with the guidance of an "action plan template" (to ensure uniformity of information). The rationale behind this approach is that the implementing agencies and organizations can best determine what their capabilities are with regard to achieving the quantifiable objectives because they can best identify their individual resources and needs. Further, this streamlined approach to planning and effort means that the implementation phase will begin immediately after CCMP approval.

Conclusion

Building public consensus for resource management decisions requires well-established, clearly stated environmental objectives and rational actions. Public input must be sought early in the decision making process because the consensus building aspect generally requires a significant amount of time. Efforts have been made to incorporate the "lessons learned" from other NEPs into one of the most critical steps in the planning process; the step by which the public and their local governments "buy-in" to the action plans that they will be implementing in the final plan. Additionally, some of the efforts have provided

more cost effective and efficient projects with beneficial results.

This paper will be presented at the upcoming CZ99 conference. For further information, contact: Melissa Upton, Charlotte Harbor National Estuary Program, 4980 Bayline Drive, 4th Floor, North Fort Myers, Florida 33917, Phone: (941) 995-1777; FAX: (941) 656-7724; E-mail: chnep-upton@mindspring.com.



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How Will the New Clean Water Action Plan Protect Coastal Waters?

A major new Clean Water Initiative is underway at the Federal level to speed the restoration of the nation's waterways. The initiative seeks to strengthen public health protections, target community-based watershed protection efforts in high priority areas, and provide communities with new resources to control polluted runoff. The US Environmental Protection Agency (EPA) and the US Department of Agriculture (USDA) are working with other federal agencies to prepare an Action Plan to "Respond to growth pressures on sensitive coastal waters."

Several of the actions that specifically work towards protecting coastal resources include:

- the development of a multi- agency Coastal Research Strategy and a coordinated monitoring plan for coastal waters;
- a National Contingency Plan for harmful algal blooms and Pfiesteria outbreaks in coastal waters and the National Harmful Algal Bloom Research and Monitoring Strategy;
- identifying watershed restoration priorities and implementing restoration action strategies;
- and reducing polluted runoff in coastal waters.

National Coastal Research and Monitoring Strategy

The Coastal Research Strategy will include a comprehensive review of existing research programs related to the generation, transport, and effect of coastal pollutants (including air deposition) on coastal waters, habitats, and living and economic resources. The Strategy will identify areas of overlap and recommend improvements, identify actions to integrate research results, and improve communication of research results to natural resource managers and the public.

Today, monitoring of coastal waters is conducted by several agencies. NOAA conducts the Status and Trends Program that reports on the condition of coastal waters and supports monitoring of shellfishing areas. EPA conducts some monitoring of coastal waters, especially related to coastal point source discharges, coral reefs, air deposition, hypoxia, and ocean dumping of dredged material. States and tribes monitor and assess coastal and estuarine waters to varying degrees. The USGS conducts limited monitoring of coastal waters, but has significant information about pollution loads in inland waters that are carried by rivers to coastal basins. As part of the strategy, these agencies will develop a plan to improve coordination of coastal monitoring activities.

Pfiesteria and other Harmful Algal Blooms: Research, Monitoring, Rapid Response and Prevention

To address the immediate threats posed by Harmful Algal Bloom (HAB) events, a coordinated response system is needed that supports state and local efforts in coastal waters for harmful algal blooms and Pfiesteria outbreaks. The "Federal Response Plan for Harmful Algal Blooms: an Initial Focus on Pfiesteria, Fish Health, and Public Health" has been developed to assist states in their efforts to limit the impacts of environmental problems and possible threats to public safety from outbreaks of Pfiesteria and other HABs.

Monitoring and assessment of the systems that have been subject to Pfiesteria outbreaks and other HAB events is critical to further the ability to manage and mitigate the impacts from such outbreaks. To address these concerns a "National Harmful Algal Bloom Research and Monitoring Strategy," was completed in November, 1997.

Within the upcoming year a Task Force will prepare a national assessment of the ecological and economic consequences of harmful algal blooms, strategies for reducing, mitigating, and controlling HAB impacts, and the social and economic costs and benefits of such measures. The ultimate goal of these activities is to develop predictive and preventive capabilities to reduce the impacts of HABs on public health, natural resources, and coastal communities.

Identifying Priority Coastal Watersheds for Restoration

The goal of the Clean Water Action Plan's Unified Watershed Assessment and Watershed Restoration Action Strategy is to target federal and state resources in the restoration of coastal watersheds. The Great Lakes Region could serve as a example for implementing this strategy in coastal watersheds.

In the Great Lakes Region, existing Lakewide Management Plans and Remedial Action Plans will serve

as foundations for the development of Watershed Restoration Action Strategies. Currently, Lakewide Management Plans are being developed for Lakes Michigan, Superior, and Erie, and 24 sites on the US side of the Great Lakes Basin have been identified as Areas of Concern. Problems in these Areas of Concern are addressed in Remedial Action Plans. All states and tribes are now in the process of developing and implementing Watershed Restoration Action Strategies for those watersheds most in need of restoration.

For FY 1999, EPA received an additional $100M in Clean Water Act .319 funds specifically to implement Watershed Restoration Action Strategies. The EPA is encouraging states to utilize this new funding to support restoration activities in priority watersheds.

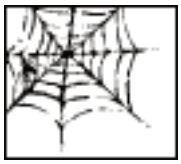
Reducing Coastal Polluted Runoff

At the core of the Clean Water Action Plan is the effort to improve the way federal agencies work together by coordinating and integrating their programs, particularly with respect to programs that help control polluted runoff.

The Coastal Nonpoint Pollution Control Program is one example of how a program can be improved through coordination and integration. Prior to the Clean Water Action Plan, the Coastal Nonpoint Program was designed to be a cooperative venture between the National Oceanic and Atmospheric Administration (NOAA) and the Environmental Protection Agency (EPA) at the federal level, and between state coastal zone management and water quality agencies at the state level.

Building on the coordination of state coastal management and nonpoint source programs, NOAA and EPA have been working together with the coastal states to further coordinate and integrate other state and federal programs, including agricultural programs and policies such as the Environmental Quality Incentives Program and the Animal Feeding Operations Strategy, urban stormwater programs, such as the National Pollutant Discharge Elimination System permits for stormwater, and other water quality activities, such as the development of Total Maximum Daily Loads.

A panel on the Clean Water Action Plan will be held at the upcoming CZ99 conference. For further information, contact: Betsy Salter, US Environmental Protection Agency (4504F) Office of Wetlands, Oceans, and Watersheds, 401 M Street, SW, Washington, DC 20460; phone: (202) 401-9923; FAX: (202) 401-9821; E-mail: salterb@fas.usda.gov or visit the website at www.cleanwater.gov.



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How Does Essential Fish Habitat Affect Coastal Management and Why Should You Care?

The 1996 amendments to the Magnuson-Stevens Act, which regulates fishing in US waters, included substantial new provisions to protect important habitats for all federally managed species of marine and anadromous fish. The amended Act defines Essential Fish Habitat (EFH) broadly as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." It requires the designation of EFH for federally managed species, sets new standards for minimizing the effects of fishing on EFH, and establishes a new consultation, coordination, and commenting process to address the adverse effects of other types of activities that could harm EFH. Early in 1999, the first official designations of EFH took effect throughout the coastal and offshore waters of the United States. How will these designations affect those whose livelihoods are linked to the coastal zone?

First, any action authorized, funded, or undertaken by a federal agency that may adversely affect EFH triggers a requirement for the federal agency to consult with the National Marine Fisheries Service (NMFS) regarding the effects of the action on EFH. The new consultation process will be integrated into existing environmental review procedures to avoid redundancy, but will result in more emphasis being placed on habitat conservation for valuable fishery resources. For example, businesses and individuals who are proposing coastal construction projects that require federal authorization will find that the permitting process must explicitly evaluate the effects of their activities on EFH.

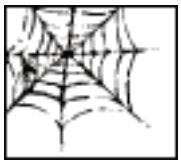
Second, NMFS is required to provide conservation recommendations to federal and state agencies to alleviate adverse effects of these agencies' actions on EFH. For federal agency actions, NMFS will provide these recommendations during the EFH consultation process. For state actions, which do not require consultation under the Magnuson- Stevens Act, NMFS will provide recommendations during state agency environmental reviews. In both cases, public interest reviews for federal and state actions will consider the pros and cons of EFH conservation as part of the overall environmental impacts analysis.

Third, the amended act requires all federal fishery management plans to minimize to the extent practicable the adverse effects of fishing on EFH. Recent research on the impacts of fishing gear on the marine environment suggests that physical disturbance of complex habitats may, in some cases, have lasting effects on productivity and recruitment. Another consequence of EFH designations, therefore, is that the fishing industry will see a new emphasis on habitat protection whenever management measures are developed to halt overfishing and rebuild depleted stocks. In some cases, EFH conservation may lead to fishing gear modifications, area closures, or other measures designed to limit unintended adverse effects on the productivity of important habitats.

A fourth effect of EFH designations, which may be most apparent to coastal resource managers and environmentalists, is that EFH will quickly become another criterion to consider in protecting and managing the coasts. EFH designations will supplement existing considerations in coastal zone management, such as water quality and endangered species. EFH conservation will thus become a new benchmark by which to measure our progress at balancing competing uses of coastal resources.

A special session on EFH will be held at CZ99 and will include discussions of these issues using several examples of how EFH conservation is beginning to take shape across the country. Individual presentations will review the Magnuson-Stevens Act's EFH requirements and discuss lessons learned thus far from the Pacific islands, California's rivers and coasts, and the waters off New England, as well as an overview of how EFH can provide another tool for the conservation of estuaries and other important coastal habitats. Using examples from the western Pacific, California, New England, and other areas, the session will illustrate how EFH designations may affect developers, the fishing industry, environmentalists, and others concerned with both healthy coastal ecosystems and healthy coastal economies.

For further information on the EFH session at CZ99, contact Jon Kurland, NOAA/NMFS Office of Habitat Conservation, 1315 East-West Highway, Silver Spring, MD 20910; Phone: (301) 713-2325; Fax: (301) 713-1043; or E-mail: jon.kurland@noaa.gov.



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Rhode Island Salt Ponds: Dredging and Restoration

Alteration of salt ponds along the New England coast has been a long-debated issue. Coastal management decisions made over the last fifty years have resulted in both changes in the public use of the water and the types of fish and wildlife habitat supported. One of the largest human impacts to the ecology of the salt ponds in Rhode Island was the establishment of permanent breachways. The breachways were constructed in the early 1950s and were intended to provide permanent boat access to the ocean and to enhance water quality and fisheries. The result of the permanent openings was an increase in the salinity range within the salt ponds and sedimentation in the breachways and tidal deltas.

Recently a Reconnaissance Study of the south shore of Rhode Island was conducted by the Army Corps of Engineers and included, amongst other things, stream and ecosystem habitat restoration viability. The study resulted in an agreement between the State of Rhode Island, local communities and the Army Corps of Engineers to focus on dredging the breachways and flood tidal deltas, restoring valuable eelgrass habitats, and providing fish passage in several streams. The Reconnaissance Study was completed in April, 1998, and the beginning stages of a Feasibility Study are underway to determine if the restoration objectives are attainable. The Feasibility Study will describe the existing hydrodynamics of the coastal ponds, the water quality status, and the sediment dynamics before determining the need for dredging and the viability of eelgrass restoration.

Water Quality Monitoring

Field measurements of dissolved inorganic nutrients, chlorophyll-a, light attenuation, salinity, temperature, total suspended solids and dissolved oxygen are being taken at several locations in the coastal ponds which coincide with stations monitored during previous research. Sampling stations will be monitored every two weeks from April through September and monthly thereafter for one year beginning in April, 1999. Relationships between the collected data and the long-term data set will be used to assess areas appropriate for eelgrass restoration as well as providing baseline information on pond water quality.

Sedimentation Rate Sampling

Understanding the sediment movements in areas close to the flood tidal delta is one of the primary criteria for success of eelgrass restoration within these coastal ponds. Eelgrass will not readily grow on active components of the flood tidal deltas. Gathering data on sedimentation rates will guide managers in determining the portions of the delta which are inactive or may become inactive once dredged. Examining the historical movement of sand through the breachway based on tidal movement and storm events is another component in determining the most viable areas for eelgrass restoration. Documenting the evolution of the delta over time will be done by collecting sedimentation rates obtained using depth of disturbance rods periodically measured at various locations around the tidal delta.

Winter Flounder Sampling

Because winter flounder utilize the coastal ponds as habitat, the Feasibility Study must define the potential for the project to impact winter flounder. To determine existing winter flounder populations and their habitats, demersal fish eggs will be collected in February and March of 1999 from the flood tidal shoal of each salt pond at known spawning areas and in an adjacent eelgrass bed.

Tide and Current Measurements

Tide and current measurements at various locations around the coastal ponds will be taken over the course of the study and incorporated into a hydrodynamic model. The data collected from these studies will be used in the hydrodynamic model to examine different dredging scenarios and assess benefits to eelgrass given water quality parameters and sedimentation rates.

Following the analysis of the Feasibility Study, the New England District will determine if the alternatives meet the cost to benefit ratio standards set by the Army Corps of Engineers: the state will need to fund 35% of the cost for the Construction Phase. An important aspect of this decision will be the local and state willingness to commit to the operation and maintenance needs following habitat restoration. For example, in order to limit the amount of sand moving through the breachways during tides and storm events, sedimentation basins will require dredging on a regular basis.

The US Army Corps of Engineers is taking large role in habitat restoration within New England. Rhode Island has developed an important relationship with the Army Corps of Engineers through other restoration projects, such as the Coastal America Galilee Salt Marsh Restoration project, a General Investigation of the Blackstone River Valley, the South Shore Habitat Restoration Project, and now a General Investigation which is starting this spring for habitat restoration in the watershed of Narragansett Bay, Rhode Island. Recognition by the agencies and communities involved of the need for commitment to maintaining and monitoring a restored habitat is crucial to the success of restoration projects. The future for habitat restoration in near shore coastal environments is very positive if states and federal agencies adopt a bottom-up approach and involve communities early on.

For further information, contact: Laura M. Ernst, Rhode Island Coastal Resources Management Council, 4808 Tower Hill Road, Wakefield, RI, 02879; phone: (401) 222- 2476; FAX: (401) 222-3922; E-mail: lauraernst@riconnect.com.

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Wetlands Health Assessments in Massachusetts

Measuring the success of national and state wetland policies has proven to be a difficult task. Up to this point, success in wetlands protection has been largely measured by the trend of wetland acreage. However, actions taken to stem losses and to recover historic and current wetland areas may not be adequately protecting wetlands functions and values. The Massachusetts Coastal Zone Management (MCZM) Program, the University of Massachusetts Cooperative Extension (UMass), and the Massachusetts Bays National Estuary Program (MBP), have developed a transferable approach to assess wetland quality or ecological health.

A pilot project in the watershed of Waquoit Bay on Cape Cod designed a comprehensive evaluation, incorporating ecological indicators and rapid assessment procedures. In the past year, the methods were successfully tested on study sites north of Boston where the geology and hydrology were significantly different from the coastal plain of Cape Cod. This coming summer, citizen volunteers will be involved in monitoring wetlands undergoing restoration as part of a longer term effort to encourage increased citizen stewardship and to aid in the development of a training module.

Measuring Ecological Indicators

Assessing a wetland includes measuring wetland vegetation, aquatic macroinvertebrates, avifauna, water chemistry, and hydroperiod. For each biological indicator, an index (or scoring mechanism) is used to combine a number of metrics (measurements, variables and attributes) into a single rank or score. Examples of the metrics include species diversity (or total number of species), community composition (such as the relative number of species representing certain families), and abundances of rare or pollution- tolerant species. Comparisons are made between test sites and a wetlands reference site. Reference sites are chosen, based on having minimal signs of human disturbance, being in permanent conservation ownership, and belonging to a similar hydrogeomorphic wetland class type. Chemical and hydrological data are collected to aid in interpreting the output scores. The final output is a cumulative Wetland Ecological Integrity Score, combining the scores of all the measured ecological indicators into one quantitative rank.

Rapid Assessment

The rapid assessment procedures include separate evaluations for habitat quality, nonpoint source inputs from surrounding land use (as a measure of human land disturbance), and a measure of functions and values. Distinct from field-based measurements, the rapid assessments rely on relatively simple observations, existing information, simple calculations, and questions to evaluate habitat quality, nonpoint source contributions, and wetlands functions and values. These methods can be applied quickly, easily, and inexpensively and compliment the field-based indicators by gathering basic information on wetland and landscape conditions. The field-based observations, along with the rapid assessments, can be combined into an overall measure of wetland ecological condition.

Results

Results from the pilot project on Cape Cod indicate that with increasing human disturbance and degradation, there was a concurrent decline in the integrity of the biological communities, as well as the water quality and hydrology. The results from the North Shore projects corroborate these findings. Shifts in plant and invertebrate community structure and indicator species richness and abundance were strongly associated with sources of nonpoint pollution, such as direct stormwater discharges and indirect septic system loads, and with direct physical habitat impacts, such as fill or hydrologic disturbance. High concentrations of nutrients, total and dissolved solids, and fecal coliform bacteria were found in the wetlands receiving direct discharges of stormwater and groundwater contributions from upland sources. Functional and habitat assessment scores decreased as the intensity of proximate land uses increased.

Citizen Monitoring

Citizen volunteers will be trained to conduct wetland health assessments this summer at several wetlands recently restored through improved tidal flow. The goal is to provide citizens with training to monitor the health of these wetland sites and to promote long- term stewardship of wetlands by citizens. Concurrent with citizen monitoring, program scientists will collect data to validate the citizen effort and will use this experience to develop an easy-to-use-training manual. The training of citizen volunteers may be the most innovative, as well as the most challenging part of the project, given the varying levels of experience in environmental monitoring and wetlands biology among individuals and citizens groups.

Conclusion

Measuring wetlands health is the next step in the evolution of regulatory protection for wetlands. Combining the rapid assessment with ecological indicators will allow for more thorough understanding of the health of wetlands and how they are impacted. Through engaging citizens to monitor wetlands, the project partners hope to foster stewardship of wetlands and to further educate communities on the complicated issues surrounding wetlands and their values and functions. As the project progresses this summer, the focus will be to better disseminate an understanding of the framework and purpose of the approach to the general public.

This paper will be presented at the upcoming CZ99 conference. For further information, contact: Jan Smith, Executive Director, Massachusetts Bays Program, 100 Cambridge St., MA; phone: (617) 727-9530 ext. 419; E-mail: Jan.Smith@state.ma.us.

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Boating Impact Workshop Proceedings Online

Proceedings from a workshop on the Environmental Impacts of Boating are currently available in PDF format on the Internet. The workshop attempts to address the impacts of intensive boating on coastal waters. The proceedings contain valuable information on impacts associated with turbulence, toxins, and legislation surrounding boating and docks. A valuable bibliographic reference on boating effects, as well as a list of workshop attendees is available, in the report. To download a copy, go to the Woods Hole website: http://www.whoi.edu/coastalresearch/.

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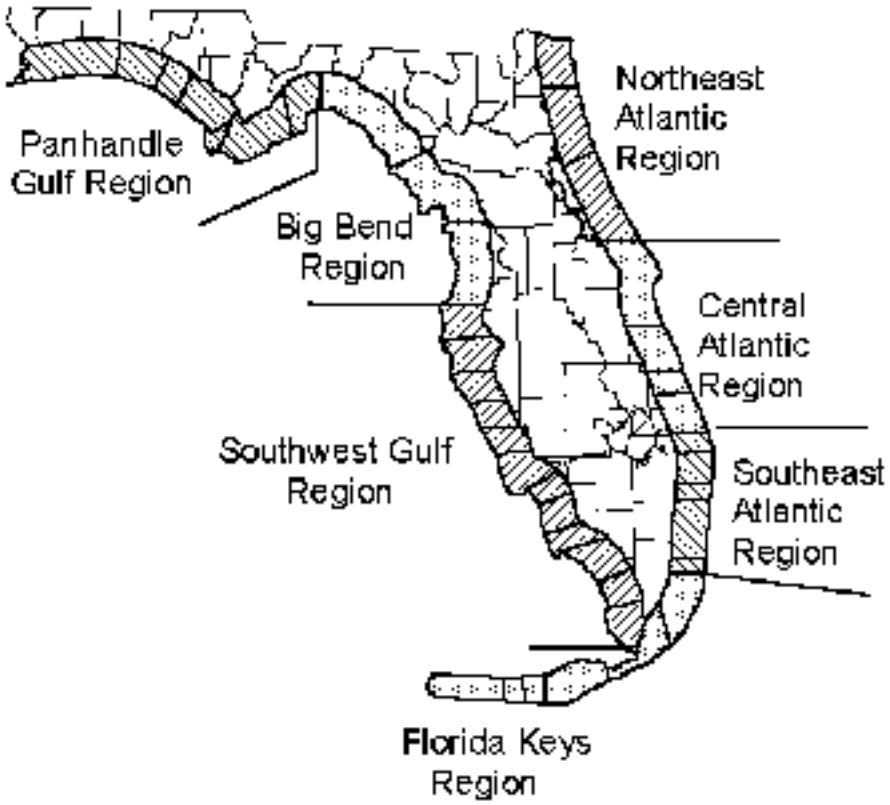
Development of A Statewide Strategic Beach Management Plan for Florida

The beaches and coastal areas in the State of Florida have tremendous value, generating revenue through both tourist and residential users. Extensive residential and commercial development exists along the Florida coast and many of these areas have been designated as critical erosion areas. Critical erosion areas contain valuable upland development, cultural resources or wildlife habitat. Although some coastal erosion in Florida can be attributed to natural shoreline change, much of it is a result of human interruption by ill- advised siting of development or activities at inlets, such as construction of jetty structures. In many of the highly-developed coastal areas, management strategies for conservation and protection of coastal natural resources are limited.

Historically, the state and federal governments have utilized beach restoration projects to re-establish lost property value in providing for storm protection and, in the process, re-established recreational beach. In order to optimize benefits, these projects have been narrow in scope, focusing on protecting upland development in densely developed areas from storm damage, but generally ignoring the causes of the erosion. Areas without beach restoration have had to rely on armoring for upland protection, often at the expense of the beach. The preferred means of providing for beach in these areas is through large-scale beach restoration projects in which sand material is placed along the shoreline usually by hydraulic dredging operations.



Beach restoration is a costly undertaking, although benefit-to-cost studies have demonstrated positive support for the expenditure of funds for restoration work. Restoration projects which are shown to provide sufficient public benefits (i.e., public access, etc.) qualify for cost-sharing between local, state, and federal programs. As federal support for beach restoration efforts has been more-greatly scrutinized, the State of Florida has made increased efforts to provide support for restoration. However, until recently, State of Florida funding for restoration-type activities has generally been year- to-year appropriations on the order of $10-12 million per year. In this climate, strong competition by local governments within the state for this scarce funding support and heavy reliance on federal funding has historically been the general mode of operation. However, recent changes in the state's role and funding support are establishing a new direction.

As far back as the mid-1980s, legislation was adopted in Florida for development of a statewide beach management plan, but as a result of resource limitations, such a plan was never fully developed. A special strategic beach management plan (SBMP) for the recovery of eroded beaches along the Florida Panhandle region was developed following Hurricane Opal in 1995. The post-Opal plan was supported by the Florida Legislature which appropriated a total of over $40 million for beach management projects in 1996. Beach management planning efforts continued in 1997 and 1998 through initiation of development of the comprehensive statewide SBMP which had been originally envisioned in the 1980s.

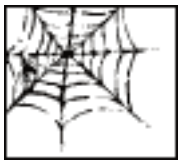
The Florida Legislature, in 1998, established a dedicated funding source to fund beach management/restoration projects which will provide a long-term source of state revenue on the order of $30-40 million per year. The statewide SBMP will assist the Florida Department of Environmental

Protection, Bureau of Beaches and Coastal Systems (BBCS) to manage these additional funds in a comprehensive and equitable manner. The SBMP identifies critical erosion areas, outlines management alternatives for addressing the problems at the critical erosion areas, and estimates costs associated with the recommended alternatives. Specific restoration projects are determined for implementation, funded based upon a ranking system and scheduled in a ten-year funding plan.

A significant policy change has also been adopted which shifts from the historical focus on the highly developed areas to a balanced strategy on a "regional" or "systems" basis. As a part of the SBMP development, seven coastal regions were defined, including a total of forty sub-regional planning units which are based on coastal physiographic and geomorphic characteristics, illustrated in the map shown. The subregional-planning unit will be the primary area in which coordinated systems management practices will occur.

This management concept allows for focus not only on solutions for the critical erosion areas, but also on the causes of the erosion. A major goal is to coordinate and consolidate both existing and new sediment management projects to maximize use of materials and equipment to reduce total costs. The regional management concept will redefine local, state, and federal partnerships and will consolidate management and project components, such as regional monitoring of coastal trends and project performance.

This paper will be presented at the upcoming CZ99 conference. For further information, contact: Mark E. Leadon or Alfred B. Devereaux, Florida Bureau of Beaches and Coastal Systems, 3900 Commonwealth Blvd., MS 300, Tallahassee, FL 32399; phone: (850) 487- 4469 ext.102; FAX: (850) 413-9688, E-mail: leadon_m@epic5.dep.state.fl.us.



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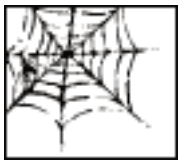
Can Seabirds and Salmon Nets Coexist?

Commercial fishing gear sometimes catch more than fish. Especially vulnerable within the Puget Sound sockeye salmon fishery are common murres and rhinoceros auklets. Both are easily entangled in gillnets while underwater chasing fish. Murres, auklets and several other species are protected under federal law, while marbled murrelets are listed as threatened in Washington state. Washington Sea Grant, the Puget Sound Gillnetters Association, and Washington Department of Fish and Wildlife worked together to develop and test methods to reduce accidental catches. Recommendations in the Seabird Bycatch Reduction Report include: eliminating the practice of fishing at daybreak (when auklets and murres are most likely to become entangled); sewing opaque twine into the upper portion of gillnets, making the nets more visible to seabirds underwater; and focusing fishing efforts on periods when fish are in high abundance, while minimizing efforts in years when seabirds are plentiful. These recommendations have since been incorporated into state regulations.

For further information, contact: Ed Melvin, Washington Sea Grant Marine Fisheries Specialist, phone: (206) 543-9968; E-mail: emelvin@u.washington.edu



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A New Tool in the Toolbox: the Massachusetts Coastal Access Legal & Mediation Service (CALMS)

The Issue & Problem

"Coastal access" is the ability to reach the shoreline--physically, visually, and even psychologically. Priorities vary depending on the person: a sandy beach for a beach-goer, an overlook for a picnicker, a pristine area for a birder, a boat launch for a sailor, a pathway for a clammer, a pier for commercial fishermen, or a coastal view for an artist. Public coastal access needs and opportunities vary from place to place. The scenic beauty, unique ecology, and recreational opportunities of the coast act as a magnet--irresistibly drawing people towards the shore to live, work, and play.

Over 86% of Massachusetts' residents live within an hour's drive of the coast, and visiting the shore is generally the most popular recreational activity. Unfortunately, public coastal access is restricted and threatens to grow more limited. Massachusetts has one of the most intensively residentially developed coastlines in the country. Furthermore, unlike nearly all other coastal states, the intertidal zone--the area between high and low water -can and very often is, privately owned in Massachusetts. Only about a quarter of the state's coastline is publicly owned, and much of this frontage includes barriers that functionally restrict access to the public.

The Program

The Massachusetts "Coastal Access Legal & Mediation Service" (CALMS) is aimed at addressing the complex and fragmented problems associated with public coastal access. The name is appropriate for the program's mission--to assist in the resolution of local disputes over public versus private access to coastal properties in Massachusetts, by referring volunteer professionals to local applicants.

In 1997, Massachusetts established the CALMS program to act as a central clearinghouse for pro-bono legal or mediation assistance to municipalities, non-profit organizations, groups, and individuals dealing with such conflicts. The program strikes a delicate balance between:

- advocating for increased public access by providing legal assistance referrals to local defenders of public coastal access rights, and
- promoting problem resolution through the provision of mediation referrals to any party engaged in such a dispute, including landowners and other private interests.

Through the program, a network of attorneys, mediators, and researchers has been established through advertisements, seminars, and workshops. Fact sheets, application forms, and databases have been developed, and the program has been publicized through press releases, mailings, and town-by-town phone calls. Applicants submit a written request on a standard application form, including contact information, a description of the issue and its public coastal access nature, type of assistance needed, prior litigation, and state agency involvement. A consensus decision is reached by the CALMS committee based upon several factors:

- consideration of whether the dispute has a substantial public access component,

- the potential approach is consistent with other state initiatives and policies,
- state property or public access rights enforced by a state agency are involved, and
- applicants are coming to the table in good faith.

Types of Cases

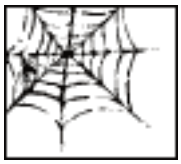
Many of the cases involve access ways that have traditionally been used by the public for decades, sometimes centuries, to access state- or town-owned beaches, and new landowners that wish to prohibit public access. In one community, an institutional landowner attempted to restrict fishermen's access, and sparked an ad-hoc citizen group's court challenge regarding ownership and use of the road. The case was won by the group, but is currently under appeal. In another town, an abutter to a public way constructed an artificial dune of fist-sized stones, which partially washed out to impede the public access way. Elsewhere, a suburban housing development engulfed a road to a town-owned landing and beach, and barriers, locked chains, and private security guards greet fishermen and others attempting to access the beach.

Most, if not all, of these cases have involved a substantial level of confrontation between the parties involved, ranging from shouting matches and intimidation, to trespassing charges pressed in court. Several cases deal with disputed ownership, property rights, and use of beaches, while a smaller number of cases deal with shoreline trails blocked by gates or hedges.

Outlook for the Future

Public access to the coast is an important national issue as coastal areas become further populated the need for states to focus resources to promote and enhance public coastal access becomes more urgent. While the uphill battle in Massachusetts to preserve and enhance coastal access for the public has proven to be challenging, the CALMS program is an innovative program to assist public access advocates. To date, there have been significantly fewer applications for mediation assistance than legal assistance. In the future, the program hopes to address the current uneven balance between mediation and legal assistance, and to further promote public access in Massachusetts through mediation, facilitation, and cooperation of interested parties.

For further information on CALMS, contact Geordie Vining, Coastal Access Planner; phone: (617)727-3160 x528; E-mail: geordie.vining@state.ma.us.



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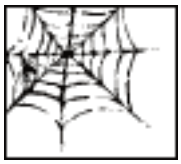
Clean Water Action Plan - First Year Report

A report on accomplishments under the Clean Water Action Plan has recently been released. The plan seeks to protect public health and restore waterways by setting goals and providing states, tribes, communities, farmers and landowners with the tools and resources to meet them. Accomplishments to date include the first national assessment of watershed conditions; a strategy to control runoff from animal feeding operations; an emergency plan to coordinate federal response to harmful algal blooms; and the first national Internet listing of beach water quality conditions. This first year report and fiscal year 2000 Clean Water Action budget information is now available online at www.cleanwater.gov.



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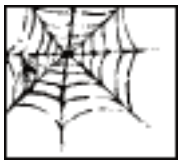
Coastal Wetland Restoration Database

The Gulf of Maine Council has recently compiled a database on promising coastal restoration efforts that have taken place in recent decades, including restoring tidal flow to salt marshes, transplanting seagrass, providing fish passage at dams for salmon and herring, and building wetland habitat. The Coastal Wetland Restoration database covers approximately 100 tidal marsh restoration projects, more than 100 freshwater impoundments in Canada, and several innovative projects aimed at restoring seagrass and tidal flats. The database also includes information on more than 400 potentially restorable tidal marshes, representing more than 2,000 acres. The database and accompanying report can be downloaded from http://gulfofmaine.org, or contact Susan Snow- Cotter at Massachusetts Coastal Zone Management phone: (617) 727-9800 ext. 210.



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National Estuary Program Meeting

A NEP National Meeting was held in Washington, DC, March 22-25, 1999. The major focus of the meeting was on the seven key management issues that were developed during a meeting in San Francisco in 1997. These issues include: toxins, pathogens, nutrients, living resources, habitat, introduced species, and freshwater inflow. Each session began with a presentation of a case study followed by a facilitated discussion. Information from the sessions provided groundwork for a discussion on a technical transfer document currently in development. In addition, a facilitated session was held on issues facing the seven newest NEPs that entered the program in 1995. The meeting concluded with a joint NOAA Coastal Programs-NEP panel discussion of lessons learned in non-point source pollution and opportunities for partnering among the coastal programs (excerpted with permission from the March edition of NEP news).

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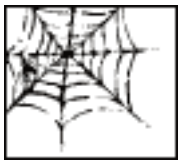
Sample Ordinances for Protecting Significant Coastal Habitats

This booklet, developed by the Association of New Jersey Environmental Commissions, focuses on protecting migratory bird habitat, but the same techniques can be used for other types of coastal resource protection. The booklet offers model ordinances dealing with impacts of new development on the community; flexible zoning techniques; open space planning and promotion; preservation of sensitive areas; landscaping and vegetation; stream corridor and stormwater management and dune protection.

For a copy of the booklet, send $5.50 (includes shipping and handling) to ANJEC, P.O. Box 157, Mendham, NJ, 07945; phone: (973) 539-7457; E-mail: anjec@aol.com.



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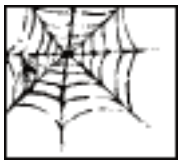
Stream Corridor Restoration Manual Available

A recently completed practical reference manual is available, entitled Stream Corridor Restoration: Principles, Processes, and Practices. The document was written to assist environmental managers in identifying stream restoration needs and designing and implementing restoration projects. An interdisciplinary team of stream and watershed management specialists, hydrologists, engineers, and federal and private sector experts on restoration developed the manual. The manual can be viewed on the Internet at www.hqnet.usda.gov/stream restoration. The web site features the final draft document as well as other resources including links, case studies, and a slide show. Paper copies are available for $71 or a CD-ROM version is available for $60. Both can be ordered through the National Technical Information Service by calling 1-800-553-NTIS.



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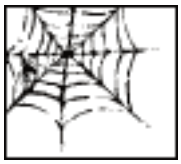
A Quick Guide to Marine Bioinvasions Available

A new educational publication is available on Marine Bioinvasions. The guide describes what constitutes a marine bioinvasion, the mechanisms by which they may occur, and what individuals can do to avoid transporting creatures from their native habitat. The guide also offers web sites for learning more about marine exotics, as well as two case studies on the Japanese shore crab and the Comb Jelly, two well known species that have severely impacted and disrupted native ecosystems. To obtain a free copy of this educational pamphlet, contact: MIT Sea Grant, MIT Sea Grant Publications Ordering, 292 Main Street, Building E38-300, Cambridge, MA 02139, phone: (617) 253-7092 or E- mail: chardi@mit.edu.



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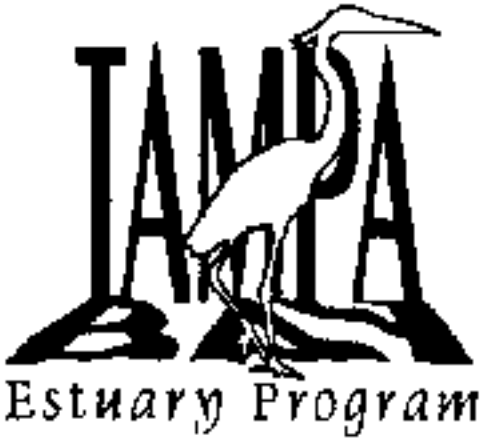
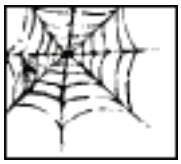
Get Connected to Tampa Bay

with the Tampa Bay Estuary Program's New Website!

- Discover the bay's habitats and inhabitants
- Order technical and general interest publications online
- Post your own bay-related event
- Participate in our community bulletin board
- Learn what YOU can do to help restore Tampa Bay



For further information, contact: Tampa Bay Estuary Program, Mail Station I-1/NEP, 100 8th Ave. S.E., St. Petersburg, Florida 33701; Website: www.tbep.org.



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Indian River Lagoon's New Website

A new website is available which takes visitors on a virtual tour of the Indian River Lagoon, on the east coast of Florida. The website explains how the lagoon works, its history, and the plants and animals that make the lagoon their home. The website is based on a CD-ROM produced by the Indian River Lagoon NEP called Living Lagoon. A discussion of human impacts on the lagoon and how the NEP is working to address those impacts is also on line. Check out their website at www.epa.gov/OWOW/oceans/lagoon/ [Link no longer available, January 2004].