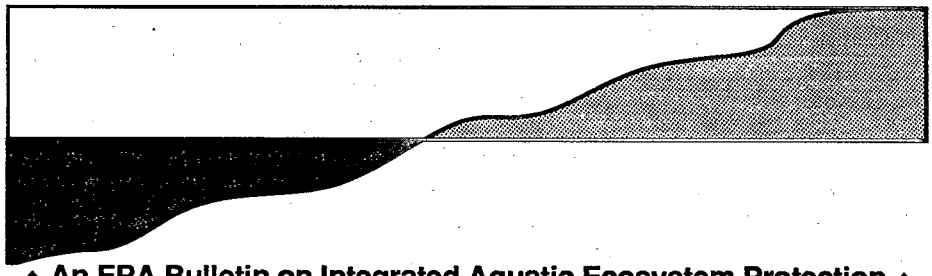
United States Environmental Protection Agency

Office Of Water (WH556F)

EPA 840-N-93-002 Winter 1993

EPA Watershed Events



♦ An EPA Bulletin on Integrated Aquatic Ecosystem Protection ♦

In This Issue...

Watershed Events is intended to update interested parties on the development and use of watershed protection approaches.

Watershed protection approaches are integrated and holistic. That is, they consider the primary threats to human and ecosystem health within the watershed, involve those people most concerned or able to take actions to solve those problems, and then take corrective actions in a comprehensive manner.

Questions and comments about *Watershed Events* should be directed to co-editors:

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A Note From Gary Margheim, SCS Deputy Chief for Programs

The Soil Conservation Service (SCS) has developed a Strategic Plan for the 90's which establishes a major focus on water management. The plan calls for leadership initiatives, an enhanced watershed approach, technology advancements, and education.

The Agency will be delivering water management assistance on a watershed basis using a total resource management approach. Total resource management means considering all related resource needs in a watershed including soil, water, air, plants, and animals, in relation to economics, sociology, and cultural concerns. This watershed assistance process will involve local people in identifying and solving local water and related resource concerns in an integrated manner in concert with both State and Federal levels of government as well as the private sector. SCS will provide staff to facilitate this process in selected areas to the extent that staff resources permit.

Emphasizing water management on a watershed basis responds to the public's call for a more locally driven approach with coordinated assistance and support from State and Federal agencies. This new approach will strengthen SCS's leadership role in water management, enhance our technical ability to address

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Controlling Nonpoint Source Pollution: A Cooperative Venture Between the NOAA and EPA by Ellen Gordon, NOAA

In 1990, Congress passed the Coastal Zone Act Reauthorization Amendments, including §6217, entitled, "Protecting Coastal Waters." The goal of this section is "to restore and protect coastal waters" through development and implementation of a Coastal Nonpoint Pollution Control Program (CNPCP) by each state with a Federally approved coastal zone management program.

The statute and legislative history make clear that the central purpose of §6217 is to strengthen the links between Federal and State coastal zone management and water quality programs in order to enhance state and local efforts to manage land use activities which degrade coastal waters and coastal habitats.

Congress has mandated cooperation between the National Oceanic and Atmospheric Administration (NOAA) and the Environmental Protection Agency (EPA), an extraordinary step that appears, so far, to be working. The two agencies have, in a joint effort, drafted guidance to the states on how to shape their programs to gain Federal approval (from both NOAA and EPA), as well

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SCS Supports 275 Watershed Projects

The Soil Conservation Service (SCS) administers programs which address the Nation's water resource and related environmental needs on a watershed basis. These programs respond to the public's concern about watershed protection, water conservation, erosion damage reduction and water quality, especially as related to potential nonpoint sources of pollution associated with production agriculture. Project needs are addressed under the Small Watershed Protection and Flood Prevention Program and through the U.S. Department of Agriculture (USDA) Water Quality Initiative. Annual funding for these projects is approximately $150 million.

Currently, 275 watershed protection projects are fully operational. Of these, 185 are watershed protection projects under the authority of PL-566 which address issues that include nonpoint source pollution and water quality. Both technical and financial assistance are provided to sponsors and landowners based on an approved watershed plan. The remaining 90 projects fall under the USDA Water Quality Initiative. For these, SCS provides technical assistance to 74 hydrologic unit areas and 16 demonstration projects. In addition, SCS gives technical support to six defined regional program areas and 18 estuaries of national significance.

All watershed projects undergo State level review through the clearinghouse process and are compatible with State pollution control efforts. States have identified 43 new high priority watersheds with local leaders ready to take action. These projects are in the final stage of plan preparation which documents the pollution control practices to be installed. Additional water quality projects are planned to be added in future years through SCS ongoing programs and in a partnership arrangement with EPA for future defined regional programs and designated national estuaries.

Benefits associated with watershed protection and water quality projects include but are not limited to: the protection of native cold water fisheries; the protection of environmentally sensitive aquifers; wildlife habitat restoration; flood protection; and reduced pollutant inputs into lakes, streams, estuaries, and reservoirs. Contact Tom Wehri, (202) 720-9484.

Forest Service Efforts to Protect Water Resources

The Forest Service is responsible for managing approximately 191 million acres of public lands that have been reserved from the public domain for the purpose of ensuring favorable conditions of water flow, and to furnish a continuous supply of timber. In addition, Congress has directed that these lands are to be managed for multiple use purposes including, timber, range, recreation, minerals, wildlife, fish, soil and water.

In 1992, the Forest Service launched a new policy on ecosystem management. This policy emphasizes public involvement, conservation partnerships, and land manager/scientist partnerships. Ecosystem management encompasses the protection and restoration of the integrity of soil, air, water, biological diversity, and ecological processes.

To protect and restore water resources, the Forest Service has an active Watershed Improvement Program that targets over 35,000 acres annually, treating those National Forest lands adversely affected by past uses and events. In addition, the Forest Service has an affirmative program to protect, wisely use, and improve valuable wetlands in the National Forests. The Forest Service's Wetlands policy recognizes wetlands as specific management areas in the National Forests. The goal is to preserve and enhance the natural and beneficial values of wetlands and to avoid adverse impacts which may be associated with their destruction, loss, or degradation.

Nonpoint source pollution that may result from land management activities is controlled by designing practices that are expected to meet water quality objectives. Monitoring is used to ensure that such practices are implemented and are effective. Land management design criteria are adjusted where necessary. This program is coordinated with individual states to ensure compliance with State water quality requirements. In addition, the Forest Service provides technical assistance through the State Foresters for managing nonpoint sources from state and private lands.

ASCS Helps Farmers and Ranchers Protect Watersheds

The U.S. Department of Agriculture's (USDA) Agricultural Stabilization and Conservation Service (ASCS) provides cost-sharing under the Agricultural Conservation Program to farmers and ranchers in USDA Water Quality Initiative project areas. The Initiative is a coordinated effort involving 11 USDA agencies working with State and local governments, and other Federal agencies (primarily the Environmental Protection Agency, the U.S. Geological Survey, and the National Oceanic and Atmospheric Administration) to protect ground and surface water from contamination by agricultural nutrients and pesticides. A major part of this effort includes education and provision of technical and financial assistance to farmers and ranchers in selected priority watersheds to solve agriculturally related nonpoint source water quality problems. Since 1988, 228 projects - 74 Hydrologic Unit Areas, 16 Demonstration Projects, and 138 Water Quality Special Projects - have been initiated in 48 states. Many of these projects were selected from areas identified by States as their most severe water quality problem areas in response to section 319 of the Federal Water Pollution Control Act.

ASCS provided $23 million for cost-sharing with landowners in the three types of Water Quality Initiative projects in fiscal year (FY) 1992, and has provided over $70 million in cost-sharing for Initiative projects since 1988.

As part of the Agricultural Conservation Program, ASCS, with the cooperation of the Soil Conservation Service and the Extension Service, administers the newly implemented Water Quality Incentive Projects (WQIP). Under WQIP, farmers and ranchers receive incentive payments from ASCS, generally on a per-acre basis, for 3 to 5 years to adopt source reduction management practices in areas where water quality is impaired by agricultural activities. WQIPs are similar to USDA Water Quality Initiative projects, but provide financial assistance for management measures only, such as nutrient and integrated pest management practices.

In FY 1992, $6.75 million were allocated to initiate the WQIP in ongoing Water Quality Initiative Project areas. For FY 1993, $15 million have been allocated for farmers and ranchers in 106 new projects, located in 42 states. The project areas, generally watersheds with an average size of 45,000 acres, were selected from proposals submitted by States in cooperation with local government agencies and State and local representatives of the participating Federal agencies. Contact Alex Barbarika, (202) 720-7093.

NEWS BITS

*** CZARA Guidance Signed** - On January 12, Martha Prothro, Acting Assistant Administrator for Water, and W. Stanley Wilson, Assistant Administrator for Ocean Services and Coastal Zone Management at NOAA, signed off on the Management Measures Guidance and the Program Implementation Guidance for Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA guidance). The Guidance was published in the Federal Register on January 19. This Guidance specifies technology-based management measures to be used by the States in developing Coastal Nonpoint Pollution Control Programs aimed at restoring and protecting coastal waters. Contact Stu Tuller, (202) 260-7112.

*** Clean Lakes Program Guidance Issued** - On November 30, the final FY 1993 Clean Lakes Program Guidance was issued. This annual guidance establishes the program priorities and procedures for awarding the $4.0 million Clean Lakes appropriation in FY 1993. This is the second year OWOW has implemented a more decentralized (Regional) approach in awarding the funds, which allows the States more latitude in building statewide program capacity. Contact Tim Icke, (202) 260-2640.

*** Wetlands and Watershed Management Act Proposed** - In January, the Association of State Wetland Managers (ASWM) issued a draft of its Wetlands and Watershed Management Act of 1993, a proposal to revise the Clean Water Act. This proposal promotes a federal, state, and local partnership to evaluate, plan, regulate, manage, restore, and protect wetlands on a watershed basis. This bill also strives to provide greater certainty, predictability, fairness, and flexibility for private landowners. Contact ASWM, (518) 872-1804.

USGS Operates National Water-Quality Assessment Program (NAWQA)

In 1991, following a 5-year pilot effort to test and refine assessment concepts, the Congress appropriated funds to the U.S. Geological Survey (USGS) to begin a multi-year transition to a fully operational NAWQA program. The goals of the program are to: (1) describe the status and trends in the quality of a large representative part of the Nation's ground and surface water resources, and (2) develop an understanding of the natural and human factors affecting the quality of these resources.

This information, obtained on a constituent basis, will provide sound nationally consistent water-quality information on which water resources decisionmaking at all governmental levels can be based. To meet its goals, the program will integrate water-quality information at local, regional, and national scales. Investigations of surface- and ground water resources of major regional hydrologic systems will be conducted on a rotating basis for 60 key areas located throughout the Nation. In 1991, assessment activities began in 20 areas. Twenty additional areas are planned for assessment activities in 1994 and in 1997.

A wide range of major water-quality issues will be addressed by the NAWQA program. One concern, which will be addressed on a national level during the early years of the program, is the relation of pesticides in the Nation's water resoruces to agricultural managment practices, factoring in climate, geology, and types of soil. Information on the principal factors affecting ground and surface water contamination by pesticides will be useful to land and water resource policy makers and managers. Contact Patrick Leahy, (703) 648-5012.

Intergovernmental Task Force Developing Framework for Monitoring

The Intergovernmental Task Force on Monitoring Water Quality (ITFM), which the Environmental Protection Agency (EPA) chairs and the U.S. Geological Survey (USGS) serves as vice chair, began in 1992 to develop an institutional framework for nationwide integrated monitoring. The primary objective is to provide better information on water resources and to use existing water monitoring resources more efficiently and effectively. The ITFM consists of 20 members from ten Federal agencies and from ten State agencies. Four task groups address the following problems: the nationwide institutional framework, environmental indicators, data collection methods, data management and information sharing, and assessment and reporting. More than 90 Federal and State staff members sit on the five task groups. The ITFM is a 3-year effort; it will disband in favor of full implementation activities in December 1994.

The ITFM is also producing "building block" products for use by individual monitoring programs. Draft products to date include a national monitoring vision and principles, an optimal monitoring program outline, a matrix for choosing environmental indicators, environmental indicator selection criteria, and an automated directory to water resources information.

The ITFM categorized the reasons for water resource monitoring into five major areas:

- Evaluating status and trends
- Characterizing existing and emerging problems
- Developing management and regulatory programs
- Evaluating program effectiveness
- Conducting emergency response monitoring.

This task force will recommend ways to improve efforts undertaken in each area. In its first year, the ITFM concentrated on the status of and trends for ambient water quality.

To improve status and trends data, the ITFM recommends creating an integrated, voluntary, nationwide monitoring strategy building upon the existing monitoring players and stations. Players would jointly provide status and trends information on water resource quality across the Nation. To implement the strategy, stations would use consistent or comparable monitoring methods, measure common parameters, store the data with enough information to allow others to use it, and participate in an integrated nationwide water quality report.

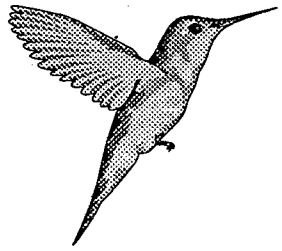
The ITFM recommendations will be carried out by a new national committee that will set guidelines and establish comparable methods and procedures. Monitoring will be carried out on a regional basis. A pilot project in Wisconsin, which is organized into river basins, is the first test of the ITFM recommendations. Contact Mary Belefski, (202) 260-7061.

Bureau of Reclamation's Watershed Protection Efforts by Judy Troast, Bureau of Reclamation

Watershed Protection and Management is being addressed as part of a number of Bureau of Reclamation efforts. In June of 1992, Reclamation completed its Strategic Plan which lays out a framework for how Reclamation will manage its projects through the coming decade. Protecting the environment is identified as one of Reclamation's highest priorities. Protection of water resources at the watershed level has been incorporated into the strategies for a number of elements of the Plan, including water quality, instream flows and wetlands and riparian habitat. Implementation Plans will detail how the strategies will be carried out.

Reclamation is working in conjunction with other Federal and State agencies, and outside groups to address a variety of environmental problems at the river basin/watershed level. Specific programs include Colorado River Salinity Control Program; Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin; and the Department of the Interior's National Irrigation Water Quality Program.

Reclamation is examining re-operation (changing the amount of water released by a dam) of a number of its projects to improve protection of water resources at a watershed level. Re-operation often involves complex problems and decisions concerning how the many needs for water (flood control, irrigation, municipal/industrial, fish and wildlife protection) will be met. Reclamation is working with other Federal and State agencies and has a very active public involvement program for these efforts. Some of the more complex projects which Reclamation is currently working on include re-operation of the Central Valley Project in California, review of system operations on the Columbia River; and re-operation of Glen Canyon Dam on the Colorado River. Contact Judy Troast, (202) 208-4442.



Partners in Flight - Aves de las Americas Protection of Migratory Birds Benefits Water Resources

Partners in Flight is an innovative public-private partnership to protect neotropical migratory birds that breed in North America and winter in Central and/or South America. Partners in Flight was established under the auspices of the National Fish and Wildlife Foundation in 1990 through the execution of memoranda of agreement among a number of key Federal agencies and conservation and research organizations. Participating Federal agencies include the Bureau of Land Management, the Forest Service, the Department of Defense, the Environmental Protection Agency, and the Fish and Wildlife Service.

The impetus for Partners in Flight came from the concern for declines in the populations of neotropical migratory birds. The causes of these declines are complex and not fully understood, but habitat loss and related problems are key issues. International efforts will focus on Canada, a major breeding area, and Mexico, Central America, and the Carribean, the major overwintering grounds. The objective of this program is to create the first integrated federal, state, and private program for research, monitoring, and habitat management for migratory nongame birds. Participants will include public agencies at all levels, foundations, private organizations, and businesses in North America and the neotropics.

Because neotropical migratory birds depend upon healthy aquatic habitats for some or all of their life functions, actions by Partners in Flight and watershed management efforts are mutually beneficial. Increased interest in bird conservation will help marshall the resources and public support needed to protect aquatic resources since people often have strong emotional ties to wild birds. Thus, they are more likely to rally to their protection, with spillover benefits for water quality and aquatic habitats. At the same time, watershed management, with its holistic approach, presents opportunities to incorporate protection of neotropical migratory birds into efforts to protect water and habitat integrity. Contact Peter Stangel, (202) 857-0166.

EPA HIGHLIGHTS

Watershed Protection Advocated at EPA Administrator's Confirmation Hearing by Patty Scott, U.S. EPA

Watershed protection themes were very apparent at the confirmation hearing for Carol Browner, EPA's new administrator. Browner, who formerly served as Florida's Environmental Protection Secretary and as an aide to then Senator Al Gore, stressed the need for greater creativity and ingenuity in tackling environmental problems. The need to go beyond EPA's traditional "command and control" approach to water pollution was emphasized. Geographic targeting, pollution prevention and market incentives were several themes that committee members advocated and Browner endorsed.

Dave Durenberger (R-MN) was one senator who championed watershed protection during Browner's confirmation hearing. In his opening statement he declared,

> *"It is time to realign priorities and to give the ecological effects of pollution more attention. ... We have made a start on an ecosystem approach under the Clean Water Act with the work in the Chesapeake Bay and the Great Lakes and through the National Estuary Program. Adding a thorough watershed planning component to the basic structure of the Clean Water Act is an additional step we must take. We need an integrated view of each watershed if we are to make the best choices using our limited resources."*

In her testimony, Browner noted the importance of looking at receiving bodies of water as entire ecosystems, including the flora and fauna, when developing environmental solutions. Browner observed that the unique character of the individual system must be taken into account and all considerations brought to the table. She also conveyed that Florida has taken an ecosystem approach with regard to wetlands.

Another point espoused by several committee members and echoed by Browner was the concept that economic growth and environmental protection are not mutually exclusive. Browner also supported the view that new environmental technologies offer opportunities for job growth, and she said EPA should be a leader in their development and use.

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EPA Announces Grants for Colonias Improvement

The U.S. Environmental Protection Agency (EPA) recently announced the award of grants to two southwestern states (New Mexico and Texas) for development of wastewater treatment facilities in U.S. communities known as "colonias" along the U.S. - Mexican border. Through these grants, EPA will promote improvement of both the border ecosystem and public health in the U.S. colonias and neighboring communities.

Colonias are unincorporated, low-income, primarily Hispanic areas with substandard housing. Most colonias do not have sewer systems and must rely on poorly-built septic tanks, privies, or outhouses for wastewater disposal. About 280,000 people live in these impoverished communities and are subject to increased health risk because of their exposure to untreated sewage.

Outbreaks of dysentery and hepatitis A are common in the U.S. colonias. While these diseases are considered Third-World diseases in the rest of the U.S., the prevalence of water-borne illnesses persists in these underserved developments along the border.

EPA awarded $50 million in matching grants to the Texas Water Development Board and $10.65 million to the State of New Mexico, primarily for treatment facility construction assistance. A portion of the New Mexico funds are earmarked for construction of a demonstration wastewater facility.

The demonstration facility planned for New Mexico will use constructed wetlands technology, based on the natural cleaning action of plants and microorganisms found in wetlands, to treat municipal wastewater. The technology is well suited for treatment systems in the colonias because of its low cost, minimal operation and maintenance requirements, and low energy consumption compared with conventional water treatment systems.

These grants are part of the U.S. - Mexico Integrated Border Environmental Plan (IBEP), which involves all levels of government, business leaders, environmental groups, and interested citizens from both the U.S. and Mexico in a broad range of projects and activities. IBEP's goal is to improve environmental conditions in the border area. Contact Eliot Tucker, (202) 260-5842.

RECENT RELEASES

An Approach to Improving Decision Making in Wetlands Restoration and Creation - This report presents a summary of the approach that EPA's Wetlands Research Program has developed to improve decision making in wetland restoration and creation projects. Contact the Wetlands Hotline, 1-800-832-7828.

Management Measures Guidance and Program Implementation Guidance for Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 - The *Management Measures Guidance* specifies technology-based management measures to be used by the States in developing Coastal Nonpoint Pollution Control Programs aimed at restoring and protecting coastal waters. The *Implementation Guidance* addresses the processes and criteria that apply to development and approval of State coastal zone nonpoint source programs. Contact Dov Weitman, (202) 260-7088.

Managing Nonpoint Source Pollution - This report focuses on the state of the national effort to control nonpoint source (NPS) pollution as of October 1, 1989. This report contains the findings of the state NPS assessments and discusses the state programs that are addressing the problems identified in the assessments; the related activities of EPA, other federal agencies, and other organizations; and achievements to date on controlling NPS pollution. Contact Ann Beier, (202) 260-7108.

Monitoring Guidance for the National Estuary Program - This document provides the National Estuary Program (NEP) with guidance on how to design, implement, and evaluate a monitoring program. Contact Joe Hall, (202) 260-9082.

A Synoptic Approach to Cumulative Impact Assessment - A Proposed Methodology - This report describes the steps of conducting a synoptic assessment and illustrates the use of synoptic information through four case studies. The synoptic approach is designed to assist wetland regulators in assessing the cumulative effect of individual wetland impacts within the landscape and is intended for situations in which time, resources, and information are limited. Contact the Wetlands Hotline, 1-800-832-7828.

Third National Citizens' Volunteer Monitoring Conference Proceedings - These proceedings include detailed summaries of over 25 workshops, panel discussions, and technical sessions. Topics include collecting quality volunteer monitoring data; sharing volunteer data with State and local governments; volunteer nonpoint source monitoring; environmental education and community outreach; and watershed walking. Contact Alice Mayio, (202) 260-7018.

Total Maximum Daily Load (TMDL) Case Studies - TMDLs provide for more stringent water quality-based controls when technology-based controls are inadequate to achieve State water quality standards. As of January 1993, seven TMDL case studies have been published. Each case study discusses the problem, TMDL development, pollution control implementation, and follow-up monitoring. Contact EPA's Watershed Branch, (202) 260-7074.

Water Quality Videos - Eight videos designed to provide information about the role and the importance of water quality standards and criteria programs in the effort to clean up the Nation's waters are now available on loan from EPA. The video titles are:

- *"Economic Consideration in Water Quality Standards"**
- *"Water Quality Standards on Indian Lands"**
- *"Introduction to Water Quality Standards"*
- *"Antidegradation Policy: A Means to Maintain and Protect Existing Uses and Water Quality"*
- *"Development of Water Quality Criteria and Its Relationship to Water Quality Standards"*
- *"Enumeration Methods for E. Coli and Enterococci"*
- *"Water Quality-based Approach to Pollution Control"*
- *"Water Quality Standards and 401 Certification"*

*Just released November 1992. Contact Frances Desselle, (202) 260-1320.

The Watershed Protection Approach: Annual Report 1992 - This report summarizes activities in EPA Headquarters and Regions to adopt and implement watershed management. More than 30 project summaries are included. Contact Anne Robertson, (202) 260-9112.

Watershed Protection: Catalog of Federal Programs - This catalog is a directory of federal programs that contribute to and participate in watershed management. Contact EPA's Watershed Branch, (202) 260-7074.

Wetlands Education System - A computer-aided instructional program with windows-driven text and illustrations about wetland functions, values, and policy. This program is available on disk, and a VGA card is needed to run it. Contact the Wetlands Hotline, 1-800-832-7828.

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water issues, and provide our customers with quality watershed assistance.

SCS State Conservationists, in cooperation with our Federal, State, and local public and private partners, are currently developing individual State water management strategic plans to identify watershed boundaries; develop a priority setting process; more actively involve conservation districts; provide training in watershed assistance; market the watershed approach; and implement needed organizational changes. We will combine and integrate these State plans by the end of this fiscal year. The implementation of this national initiative will be a major redirection for many of our Agency's program activities, including water quality, water quantity, and land management assistance, on a watershed assistance basis.

For some time, SCS has been taking a more holistic approach to natural resource management. SCS employees have collaborated with EPA staff to assure Agency efforts are coordinated and that they complement and support State and local programs for watershed planning and implementation. We enjoy and appreciate the teamwork we are experiencing with our EPA partners.

Implementing our SCS Water Management Strategic Plan demonstrates our commitment to help local citizens better manage water quality and quantity to meet our Nation's evolving needs.

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as what type of management measures must be included. If a state does not develop an approvable program, financial penalties can be administered under both §306 of the Coastal Zone Management Act and §319 of the Clean Water Act.

States are in the earliest stage of developing their CNPCPs. NOAA and EPA will be looking for evidence of cooperation between all relevant state and local agencies in developing the CNPCP. To be approvable, the programs must include enforceable policies that will ensure the implementation of appropriate management measures. Contact Marcella Jansen, NOAA's Office of Ocean and Coastal Resource Management, (202) 606-4181.

"Our greatest challenge in the next century and beyond, will be to learn to live more harmoniously with our fellow creatures and to redefine our place within the complex systems that govern our earthly home."
John Williams, Conductor, The Boston Pops Orchestra

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