The Network will make use of and build upon existing federal, tribal, state, and local monitoring. The Network will not replace existing efforts; rather, it will supplement these efforts and help make resulting products more definitive and useful.

For further information:
Executive Secretary Advisory Committee on Water Information
417 National Center
Reston, VA 20192

Partner Agencies

The University of West Florida
Center for Coastal Monitoring and Assessment, NOAA
California State Water Resources Control Board
National Association of State Conservation Agencies
Oregon Department of Environmental Quality
Tennessee Valley Authority
Indiana Department of Environmental Management
University of Rhode Island - Watershed Watch
U.S. Geological Survey- National Water Quality Monitoring Council
Center for Coastal Monitoring and Assessment, NOAA
U.S. Forest Service
Great Lakes Commission
U.S. Geological Survey- Advisory Committee on Water Information
Vermont Department of Environmental Conservation
Department of Public Utilities, Virginia Beach, Virginia
Alabama Department of Environmental Management
Iowa Geological Survey
South Florida Water Management District
National Park Service
Natural Resources Conservation Service
U.S. Environmental Protection Agency
New Jersey Department of Environmental Protection
University of North Carolina at Chapel Hill, Institute of Marine Sciences
Inter-Tribal Council of Arizona, Inc.
Louisiana Department of Environmental Quality
California Environmental Protection Agency
South Florida Water Management District
National Park Service
University of New Hampshire Cooperative Extension
Pennsylvania Department of Environmental Protection
U.S. Army Corps of Engineers
Iowa Department of Natural Resources
U.S.Environmental Protection Agency
Natural Resources Conservation Service
Ohio River Valley Water Sanitation Commission (ORSANCO)
City of San Jose, Environmental Services Department
U.S. Geological Survey Co-chair, Methods Board
U.S. Environmental Protection Agency Co-chair, Methods Board

Co-Chair Agencies

USGS science for a changing world

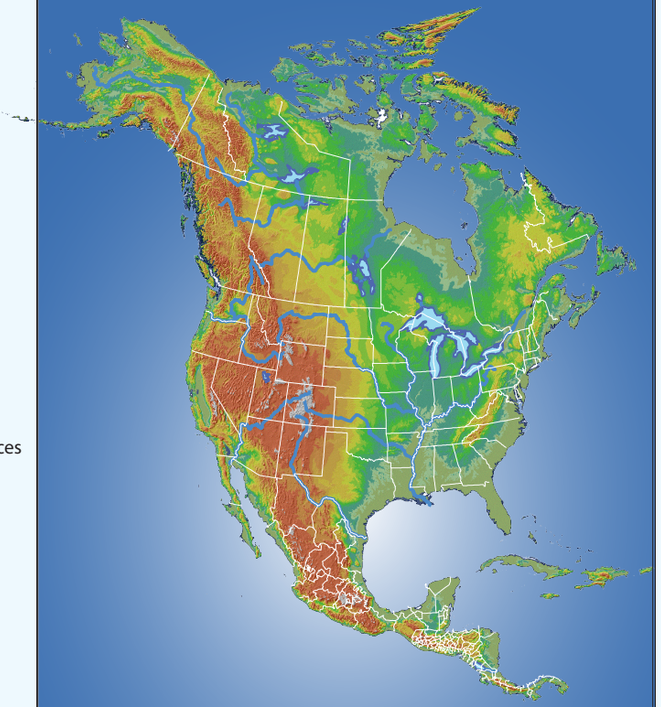
The full report and appendices are available on-line at:
http://acwi.gov/monitoring/network

NWQMC

NATIONAL WATER QUALITY MONITORING COUNCIL

Working Together for Clean Water

A National Water Quality Monitoring Network for U.S. Coastal Waters and their Tributaries



"Effective management and mitigation of the impacts of human activities, hurricanes and climate change on coastal communities depend on rapid detection and timely prediction of changes in the condition of coastal ecosystems ….Just as weather forecasts and predictions of climate change depend on the sustained provision of meteorological and oceanographic data, timely predictions of these impacts depends on sustained provision of water quality information by the NMN as a key component of the U.S. Integrated Ocean Observing System."

Tom Malone, Deputy Director of Ocean.US,
Professor at the University of Maryland Center for Environmental Studies,
and past President of the American Society of Limnology and Oceanography.

A National Water Quality Monitoring Network for U.S. Coastal Waters and their Tributaries

The Network

In response to the 2004 Ocean Policy Commission report, the Council on Environmental Quality (CEQ), the National Science and Technology Council (NSTC) Subcommittee on Water Availability and Quality (SWAQ), and the Joint Subcommittee on Oceans Science and Technology (JSOST) charged the Advisory Committee on Water Information (ACWI) with the task of designing a national water quality monitoring network. ACWI is a federal advisory committee, which has membership representing federal and nonfederal interests with a wide range of responsibilities for water resources. ACWI formally accepted the charge to design a national monitoring network in February 2005, and delegated leadership for the effort to the National Water Quality Monitoring Council (Council). About 80 individuals who represent 40 different organizations, including federal and state agencies, academia, interstate organizations, and the private sector, accomplished the network design.

Componets

The Network shares many attributes with ongoing monitoring efforts but is unique in that it uses an integrated, multi-disciplinary approach to address a broad range of resource components, from upland watersheds to offshore waters. Resource components included in the design are estuaries, nearshore marine waters, offshore marine waters, Great Lakes, rivers, groundwater, atmospheric deposition, beaches and wetlands. Constituents to be monitored include physical characteristics, inorganic and organic chemical concentrations, and biological conditions. Continuity of measurements will provide better understanding of linkages among resources, to calculate flow and loads of constituents from upland areas to coastal waters.

Objectives

1. Define status and trends of key water quality parameters and conditions on a nationwide basis.
2. Provide data relevant to determining whether goals, standards, and resource management objectives are being met, thus contributing to sustainable and beneficial use of coastal and inland water resources.
3. Provide data to identify and rank existing and emerging problems to help target more intensive monitoring, preventive actions, or remediation.
4. Provide data to support and define coastal oceanographic and hydrologic research, including influences of freshwater inflows.
5. Provide quality-assured data for use in the preparation of interpretive reports and educational materials.

Goals

The goal of the Network is to provide information about the health of our oceans and coastal ecosystems and inland influences on coastal waters for improved resource management through efforts to:

- Integrate, coordinate, and as necessary, enhance water quality monitoring efforts needed to make informed management decisions for sustainable use of aquatic resources.
- Communicate the availability of quality-assured data, and disseminate information products relevant to national, regional, and local needs.

Pilot Studies

Three Pilot Studies to test the Network design were selected from among 12 expressions of interest. The pilots are:

Delaware Bay
Lake Michigan
San Francisco Bay

These Pilot Studies will help to refine the Network design through evaluation and selection of some environmental parameters, sampling protocols and details of measurements. They will conduct an inventory of ongoing or recently concluded monitoring projects or programs to identify gaps in existing data through comparison of on-going monitoring with the Network design. Results of the analyses conducted by the Pilot Studies will improve estimates of the costs for improving data quality and filling data gaps.

The next phase of Network development will be Demonstration Studies which could begin as early as Fiscal Year 2008. New Federal funds will be needed to add sensors in the field, collect and analyze environmental samples, improve data sharing and data management, and other activities to move towards a fully implemented Network in the Demonstration Study areas.

The Network shares many attributes with ongoing monitoring efforts but is unique in that it uses an integrated, multi-disciplinary approach to address a broad range of resource components, from upland watersheds to offshore waters. Key design features include:

- Clear objectives linked to management questions
- Linkage to the Integrated Ocean Observing System (IOOS)
- Flexibility in design over time
- Importance of metadata, quality assurance, comparable methods and ready access