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.

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

For further information:
Executive Secretary Advisory Committee on Water Information
tjohnson@usgs.gov

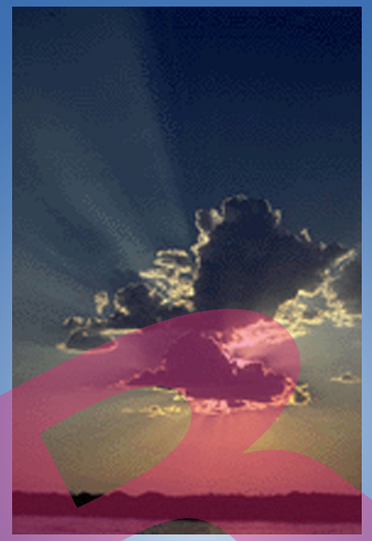
Co-Chair Agencies

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

A Network of the U.S. Ocean Action Plan



"Effective management and mitigation of the impacts of human activities, hurricanes and climate change on coastal communities depends on rapid detection and timely prediction of changes in the condition of coastal ecosystems ….Just as weather forecasts and predictions of climate change depends on the sustained provision of meteorological and oceanographic data. Timely predictions of these impacts depends on sustained provision of water quality information by the Network 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 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

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 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 - the Delaware River Basin/ Delaware Bay Pilot Study consisting of 15 participants including the Mid-Atlantic Coastal Ocean Observing Regional Association.***
- ***Lake Michigan - Great Lakes Commission on behalf of the Lake Michigan Monitoring Coordination Council and the Great Lakes Observing System represent nine groups.***
- ***San Francisco Bay - San Francisco Estuary Institute representing eight cooperating partners and the Northern California Coastal Observing System.***

These Pilot Studies will help to refine the Network design through evaluation and selection of environmental parameters, sampling protocols and details of measurements. They will conduct an inventory of ongoing monitoring to identify gaps in existing data through comparison with the Network design.

The next phase of Network development will be Demonstration Studies, which could begin as early as Fiscal Year 2008. This effort would 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 uses three basic approaches for data collection: remote sensing, continuous sampling, and discrete sampling.

The offshore environment is so vast that the primary means of monitoring will be remote-sensing, shipboard surveys, and moored or drifting buoys. Similar technologies may be used to supplement observations from fixed sampling sites in coastal waters.

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