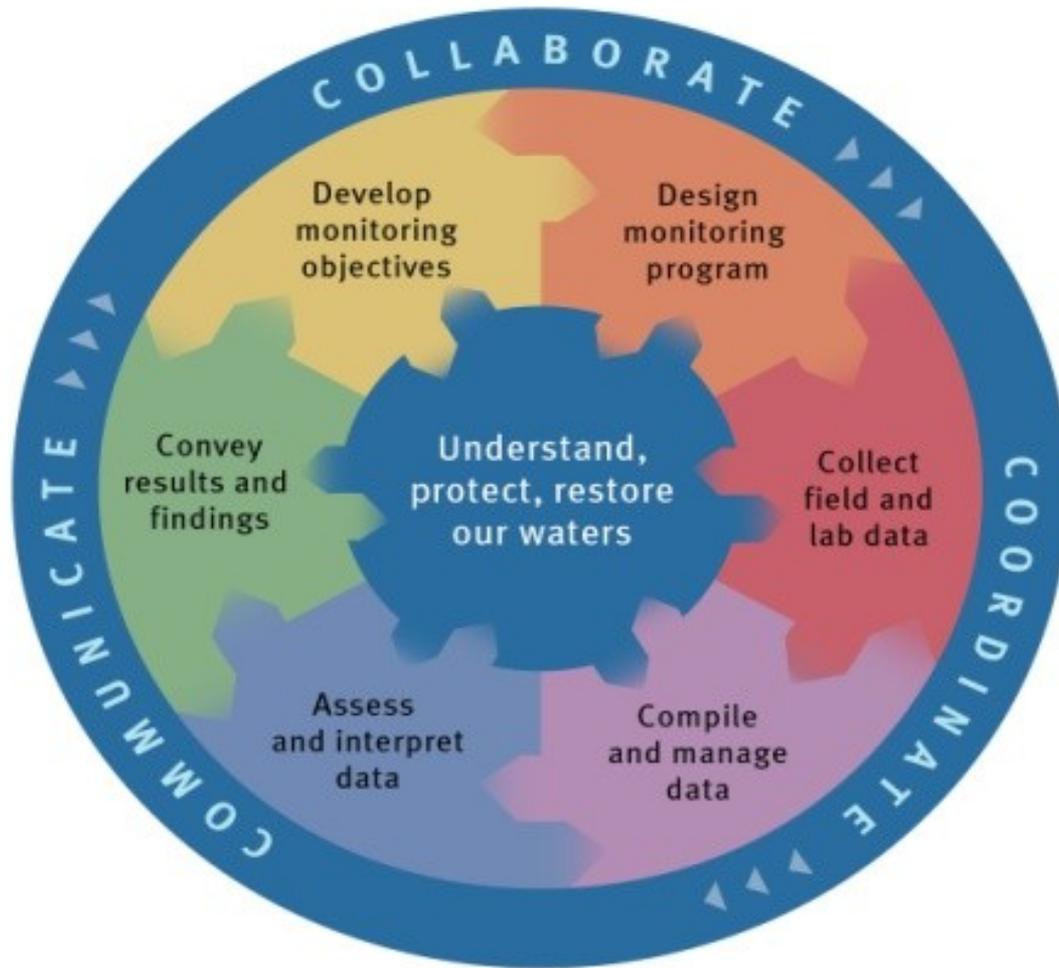
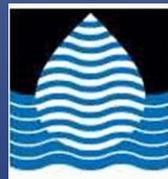


An Introduction to the National Water Quality Monitoring Council



- *Created in 1997 by the Advisory Committee on Water Information (ACWI) co-chaired by USGS and US EPA*
- *National forum for coordination of comparable and scientifically defensible methods and strategies to improve water quality monitoring, assessment and reporting*
- *Promotes partnerships to foster collaboration, advance the science, and improve management within all elements of the water quality monitoring community*
- *Provides a voice for monitoring practitioners across the Nation and fosters increased understanding and stewardship of our water resources.*



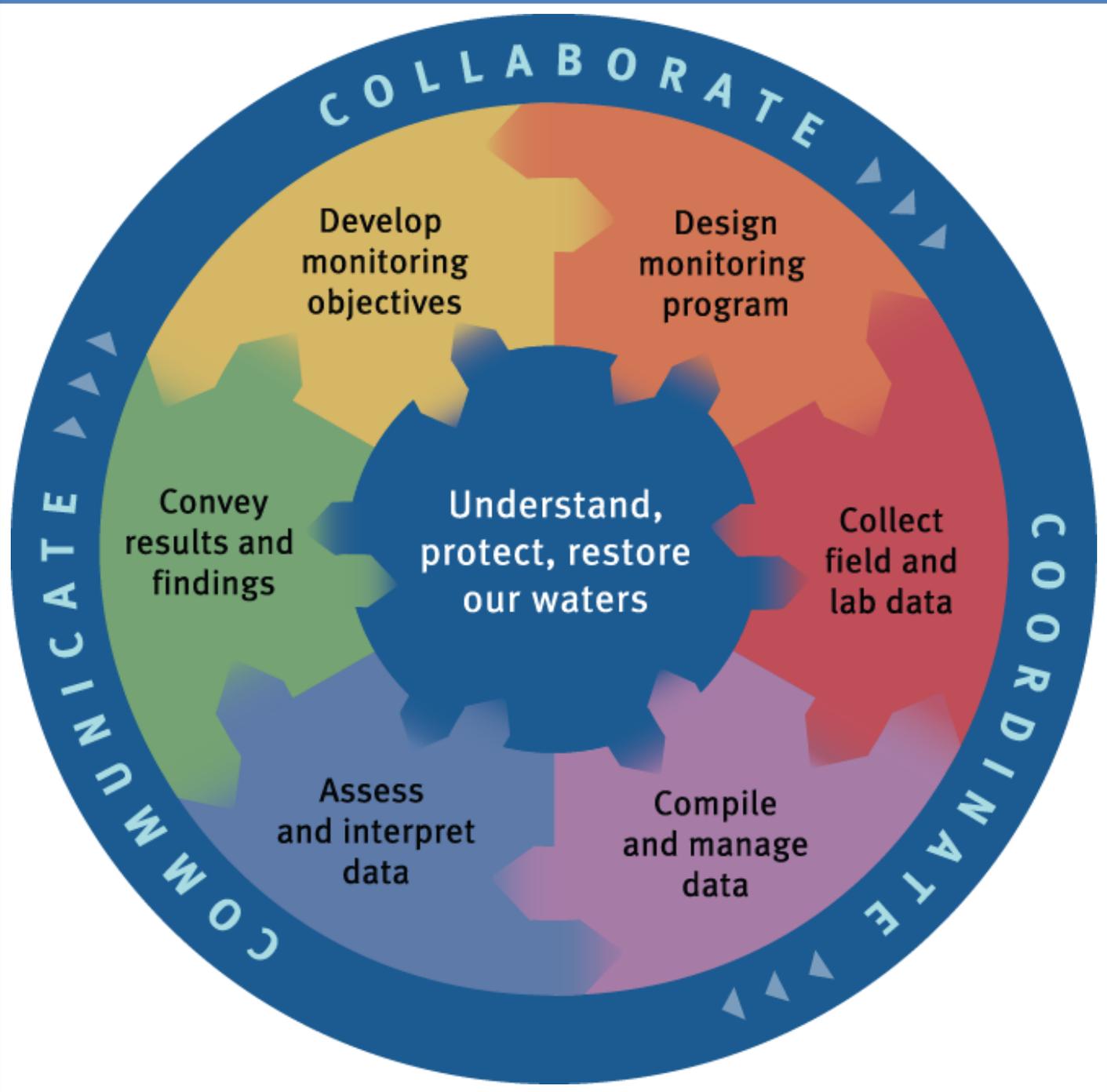
Membership

- EPA
- USGS
- NOAA
- US Forest Service
- US National Park Service
- US Dept. of Agriculture
- US Army Corps of Engineers
- State WQ Agencies (by region)
- Assoc. of State Geologists
- University Water Resource Research Institutes
- NALMS
- Nat. Science Foundation/CUAHSI
- Am. Soc. Limnol. Oceanography
- Volunteer Monitoring
- Tribal Council
- Water Utilities
- Assoc. of Conservation Districts
- Consortia (Gulf of Mexico, Great Lakes)



About 30% Federal, 70% State ,NGO, Academic, etc.





Working to Achieve Council Goals

- Water Data Portal
- Reference Condition
- Methods and Data Comparability Board
- Water Information Strategies
- National Monitoring Network for Coastal Waters
- Communication and Outreach



Water Quality Portal

www.waterqualitydata.us



NATIONAL WATER QUALITY MONITORING COUNCIL

Working Together for Clean Water

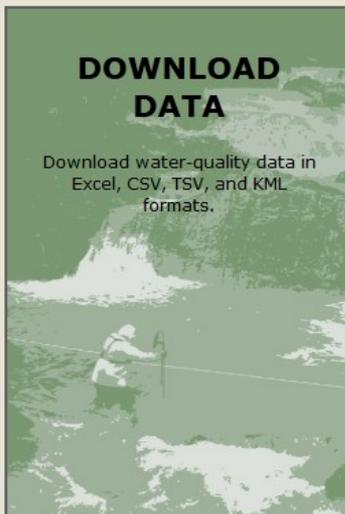
Search over 150 million water-quality records from States, Tribes, USEPA, and USGS

Water Quality Portal

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC).

DOWNLOAD DATA

Download water-quality data in Excel, CSV, TSV, and KML formats.



HOW TO USE THE WQP

User Guide
Web Services Guide
FAQs
Upload Data



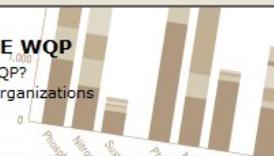
NATIONAL RESULTS COVERAGE

Water-quality data in your state.

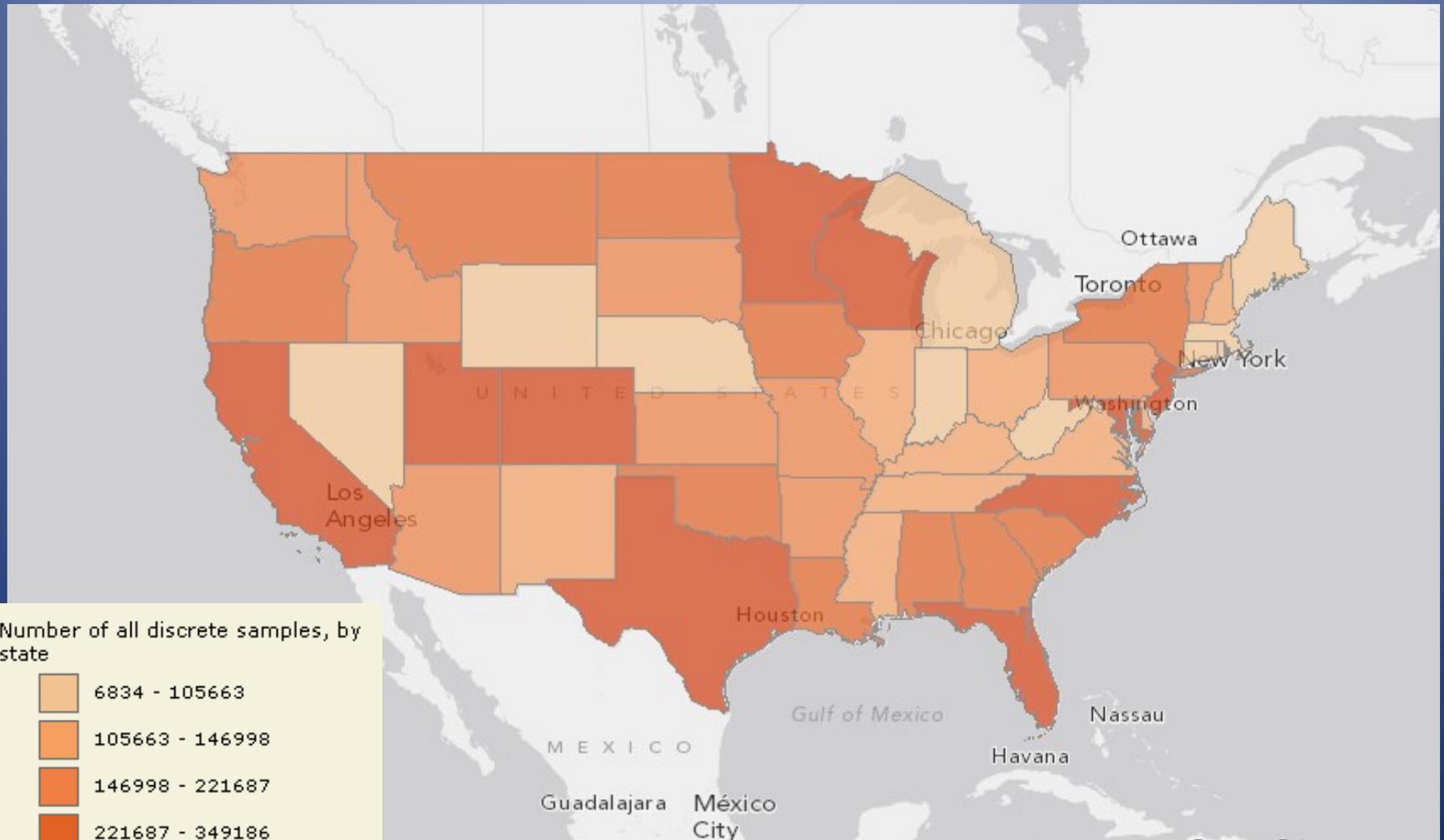


ABOUT THE WQP

What is the WQP?
Contributing organizations
Contact us



Water Quality Portal National Results Coverage STORET & NWIS



National Results Coverage map represents the number of discrete samples available through the Water Quality Portal.

Water Quality Portal

LOCATION

Country: [select](#)
State: [select](#)
County: [select](#)

Point location: ?

Within: miles from:
Lat: Long:
[my location](#)

Bounding box: ?

North:
West: East:
South:

SITE PARAMETERS

Site Type: [select](#)
Organization ID: [select](#)
Site ID: ?
HUC: ?

SAMPLING PARAMETERS

Sample Media: [select](#)
Characteristic Group: [select](#)
Characteristics: [select](#)
Date range: from to (mm-dd-yyyy)

DOWNLOAD

Select database: All databases USGS NWIS only EPA STORET only
Select data: Sites only Sample results only

Download tabular data:

File format:

- Comma-separated
- Tab-separated
- MS Excel (Excel 2003 and earlier versions have a limit of 65,536 rows. If your download exceeds this limit, only the first 65,536 rows will open.)
- WQX-XML ?

Download map data:

File format:

- KML (Keyhole Markup Language - this is available for Sites only)

Google maps limits the number of features shown to a maximum of 1000

DOWNLOAD

Compress file(.zip)

Show query

Sites Samples

RESTlike SOAP

Map sites



Establishing a National Network of Reference Watersheds for Freshwater Streams

Provide quality-assured data & information for use in understanding effects of land use change, water use, atmospheric deposition, and climate change of freshwater ecosystems.



Example of Monitoring Networks

USGS

USEPA

USFS

NPS

Streamflow
(GAGES, HCDN, NSIP)
HBN, NAWQA

NARS,
LTM, TIME

Experimental
Forest's, Stream
Assessments

I & M Networks

NSF

States

Tribes

NEON, STREON,
LTER, CZO,
(CUAHSI)

Water-Quality
Assessments,
Biomonitoring, Volunteer
Monitoring

Water-Quality
Assessments,
Biomonitoring, Volunteer
Monitoring



National Network of Reference Watersheds for Freshwater Streams

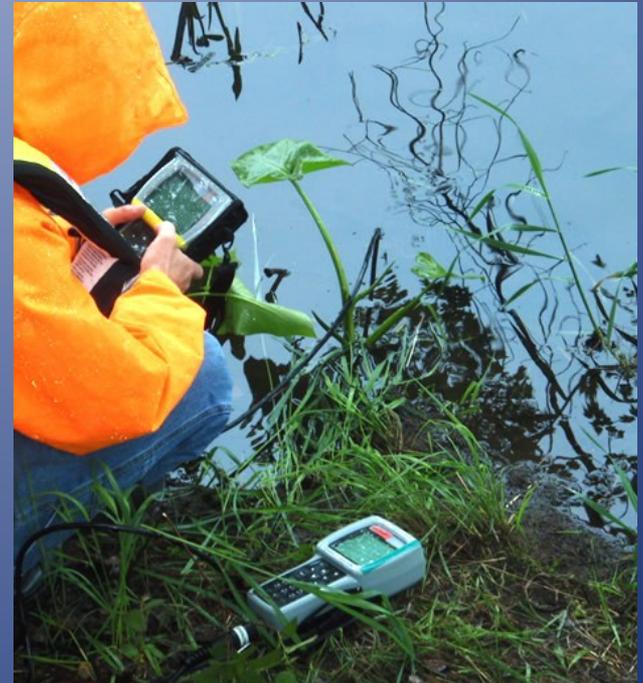
- National network of pristine and minimally disturbed watersheds
- Reliable long-term data and information from watersheds that are minimally disturbed by human activities
- Collaborative, multipurpose design will emphasize chemical, physical, and biological aspects of water quality and integrate, to the extent possible, with existing networks
- Membership in the network would be voluntary and open to interested individuals and institutions.



Methods and Data Comparability Board

Current activities:

- Sensor workgroup
- National Environmental Methods Index (NEMI)
- Statistics Tool Box



New Aquatic Sensors Guides

www.watersensors.org

- **QA Matrix:**
 - checklist for calibration and record keeping
- **Field Deployment Guide:**
 - sitting and maintaining sensors
 - enhance representativeness and reliability
- **Sensors Data Elements** (or metadata):
 - who, what, why, when, where, & how
- **Glossary of Terms:**
 - supporting documentation





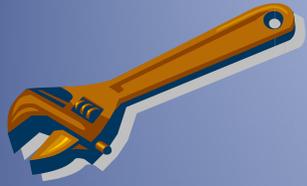
NEMI

National Environmental Methods Index



- Web-based source for environmental monitoring methods
- Format allows for easy comparison and contrast of critical method parameters
- Full methods are available for download
www.nemi.gov
- EPA regulatory status information
- Retirement of old methods (planning)

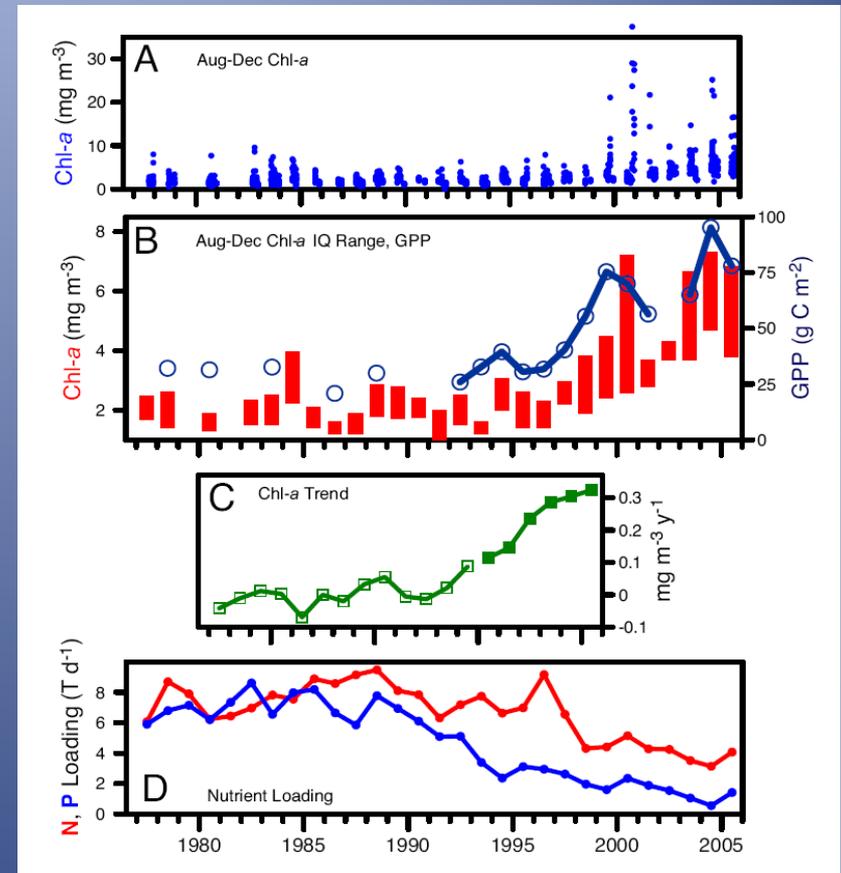




Statistics Tool Box



- New Water Quality Statistics and Assessment (WQSA) Workgroup
- Developing an online system
- Range of statistical & assessment tools :
 - Designing and analyzing monitoring data
 - Appropriate software



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

- Integrated land-to-sea assessments:
 - San Francisco Bay, Lake Michigan, and Delaware Estuary
 - Monitoring:
 - Traditional techniques
 - Real-time, continuous with sensors
 - autonomous underwater vehicles (AUVs)



The Network is a continuum of observations in:

- Estuaries, Coastal Beaches and Nearshore
- Offshore and Exclusive Economic Zone
- Great Lakes

With flow and flux from:

- Rivers (Hydrologic Unit Code 6)
- Coastal Streams
- Atmosphere
- Groundwater
- Wetlands





National Council
Highlights

Collaboration through
Partnerships

Council Workgroup
Updates

National Monitoring
Network

National Water Monitoring News

Highlights

- 2012 Conference
- Water Quality Portal
- Statistical NEMI
- Volunteer Monitoring Web page
- Forest Service's Inventory, Monitoring, & Assessments
- National Aquatic Surveys
- Spotlight on States
- Volunteer Monitoring News
- Tribal Water Quality Monitoring
- Spotlight on State Councils
- Monitoring Around the U.S.
 - California's San Gabriel Watershed
 - North Carolina's Coastal Waters
 - Lake Michigan near Chicago
- Tools and Technology
- National Monitoring Network



National Wetland Condition Assessment field crew identifying wetland vegetation as a part of the National Aquatic Resource Surveys. (Photo by Joanna Lemly)



The San Gabriel River Watershed supports a population of more than 2.3 million people. Protection and management ensuring sustainability of this resource requires an understanding of the watershed's overall health. (Photo courtesy of Council for Watershed Health)

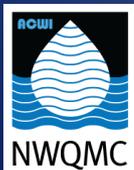


The National Water Quality Monitoring Council provides a voice for monitoring practitioners across the Nation and fosters increased understanding and stewardship of our water resources.

The National Water Quality Monitoring Council
Editor: Cathy Tate
(303) 236-6927 (phone) • email: cmtate@usgs.gov

<http://acwi.gov/monitoring/>

Spring 2012



The National Council currently interacts with more than 17 Councils and partnerships across the Nation.

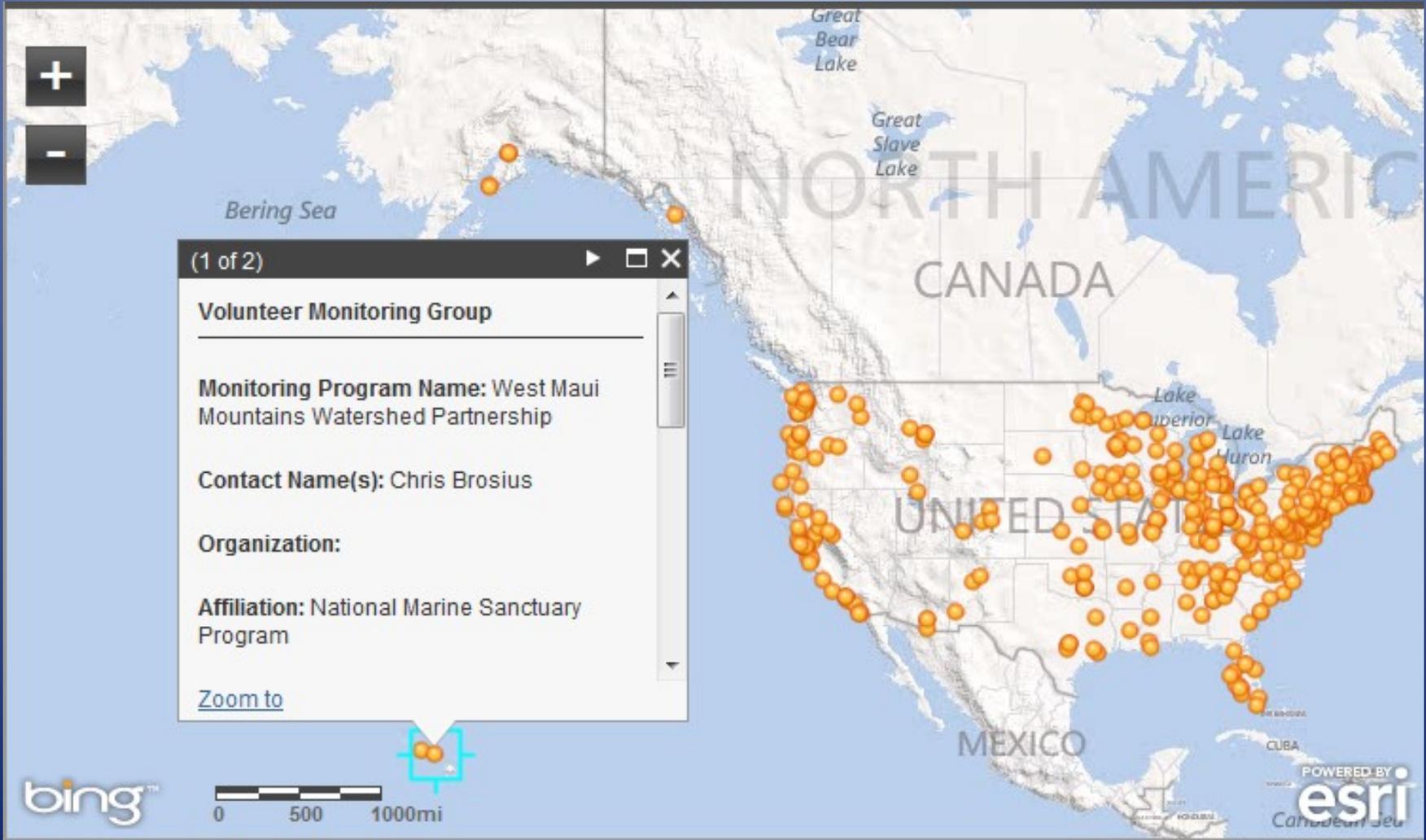


Potential Benefits of Monitoring Councils

- **Information Exchange Within and Among Monitoring Councils:**
 - Membership and operations
 - Support and funding
 - Monitoring conferences
 - Data exchange
 - Building partnerships and leveraging resources
 - Building constituencies for water info use in managing water resources



Volunteer Monitoring Directory





NATIONAL WATER QUALITY MONITORING COUNCIL

Working Together for Clean Water

