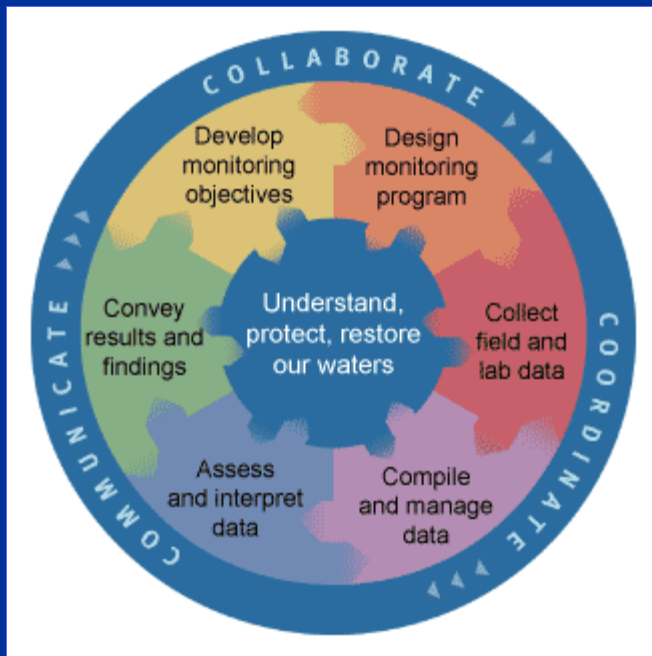
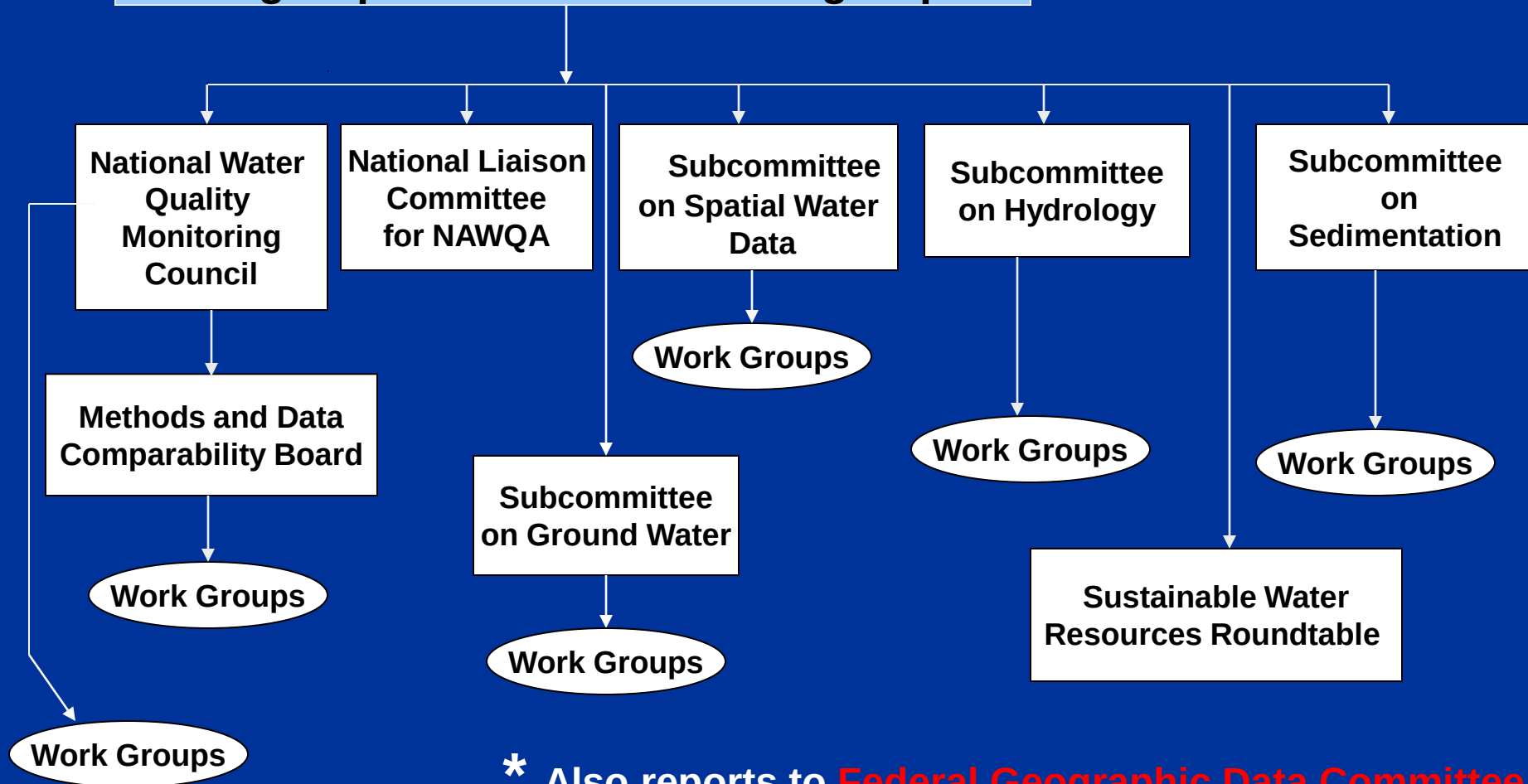


National Water Quality Monitoring Council



Provide a national forum for coordination of consistent and scientifically defensible methods and strategies to improve water quality monitoring, assessment and reporting. Promote partnerships to foster collaboration, advance the science, and improve management within all elements of the water quality monitoring community

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

Advisory Committee on Water Information**Subgroups / Task Force / Work groups**

* Also reports to **Federal Geographic Data Committee**

Membership

- EPA & USGS (Co-Chairs)
- TVA, NOAA, USFS, NPS, NRCS, COE, FWS (invited)
- State WQ agencies (10: one for each Federal region)
- Assoc. of State Geologists
- ACWA, NACWA
- Drinking water / public health
- Industry
- NALMS
- CUAHSI
- Am. Soc. Limnol. Oceanography
- Volunteer Monitoring
- Natl Tribal Water Council
- Natl Council Air & Stream Improvement
- Consortia (Gulf of Mexico, Great Lakes, ORSANCO)



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

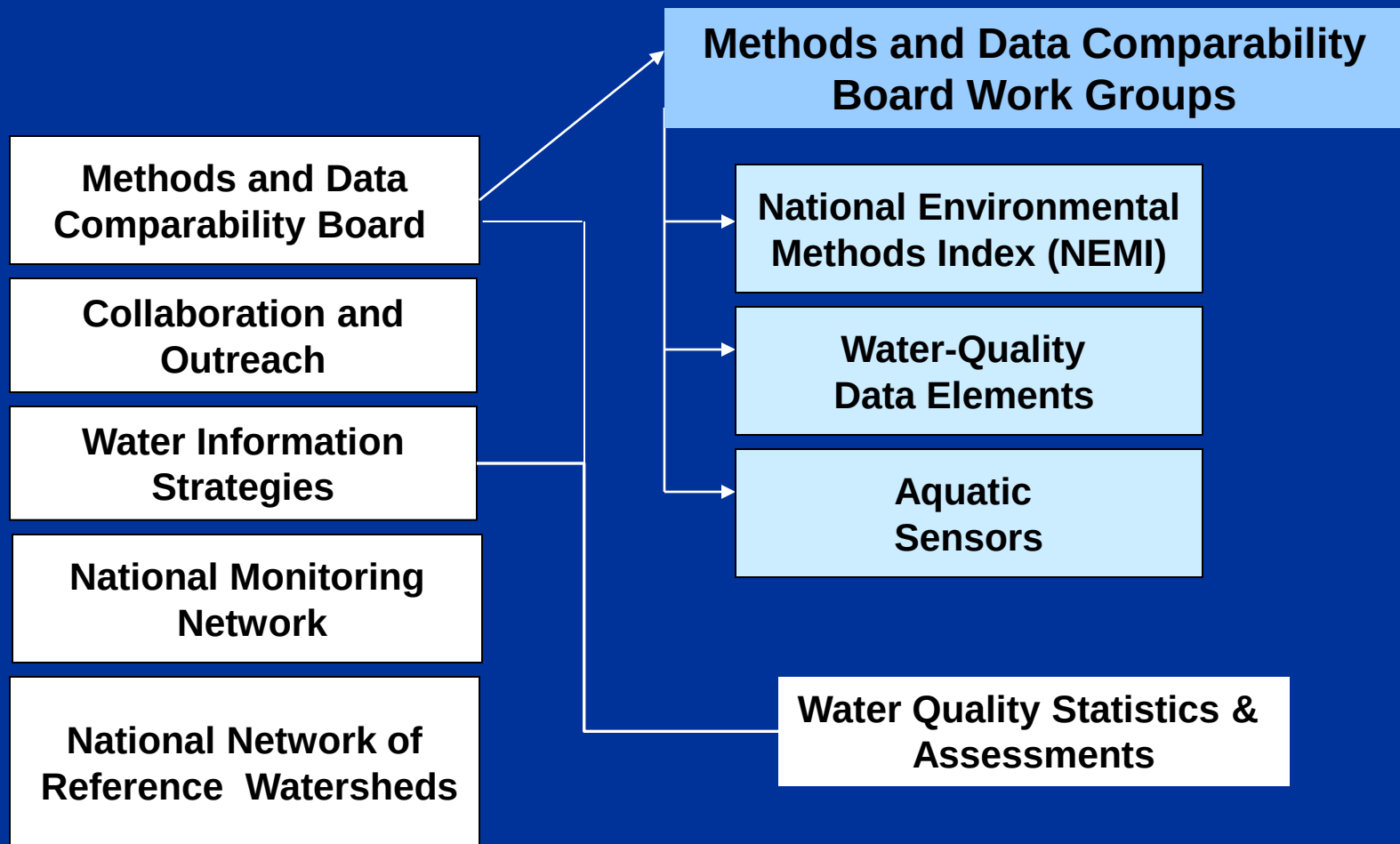




NATIONAL WATER QUALITY MONITORING COUNCIL

Working Together for Clean Water

Work Groups



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

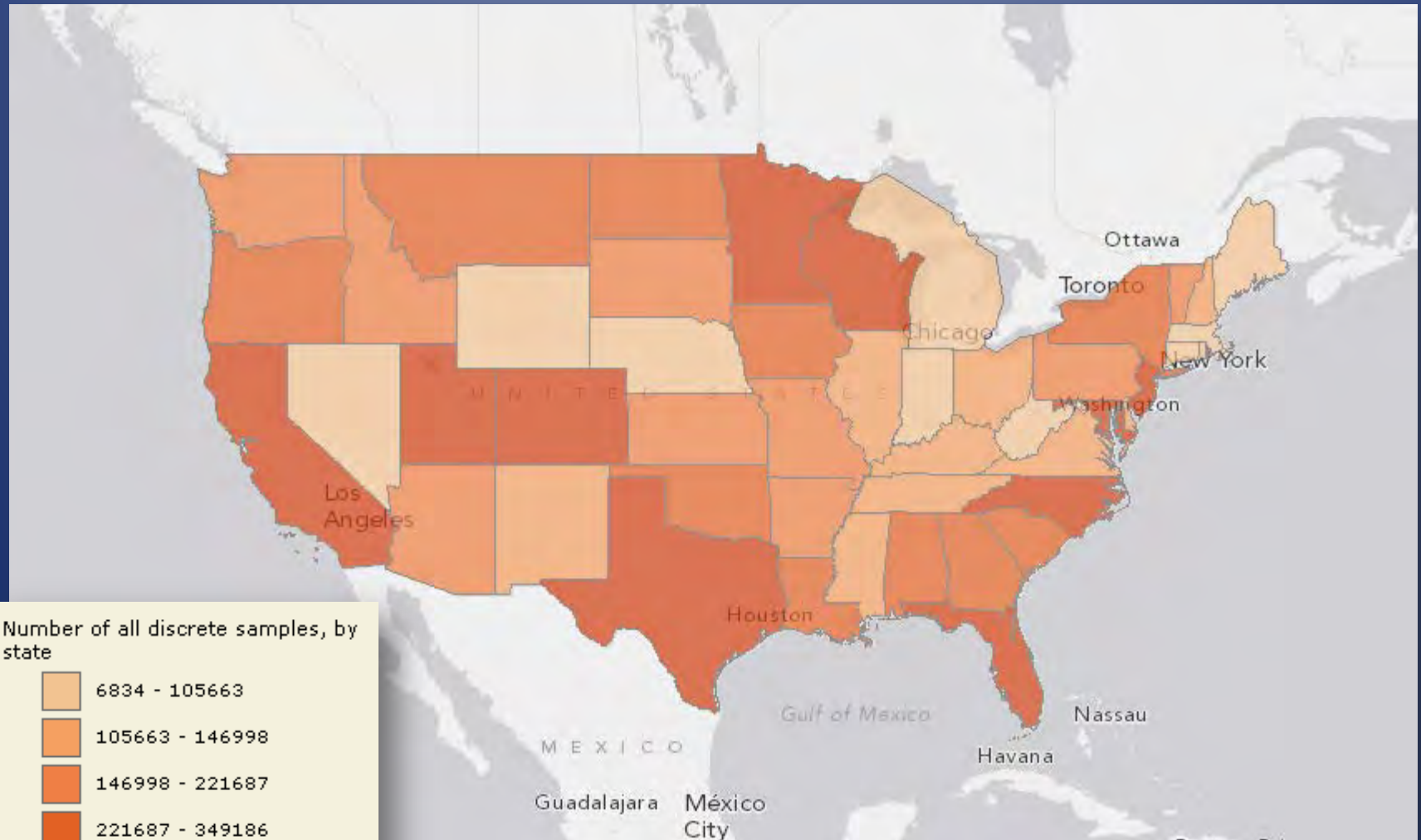
Water-quality data in your state.

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

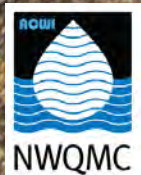
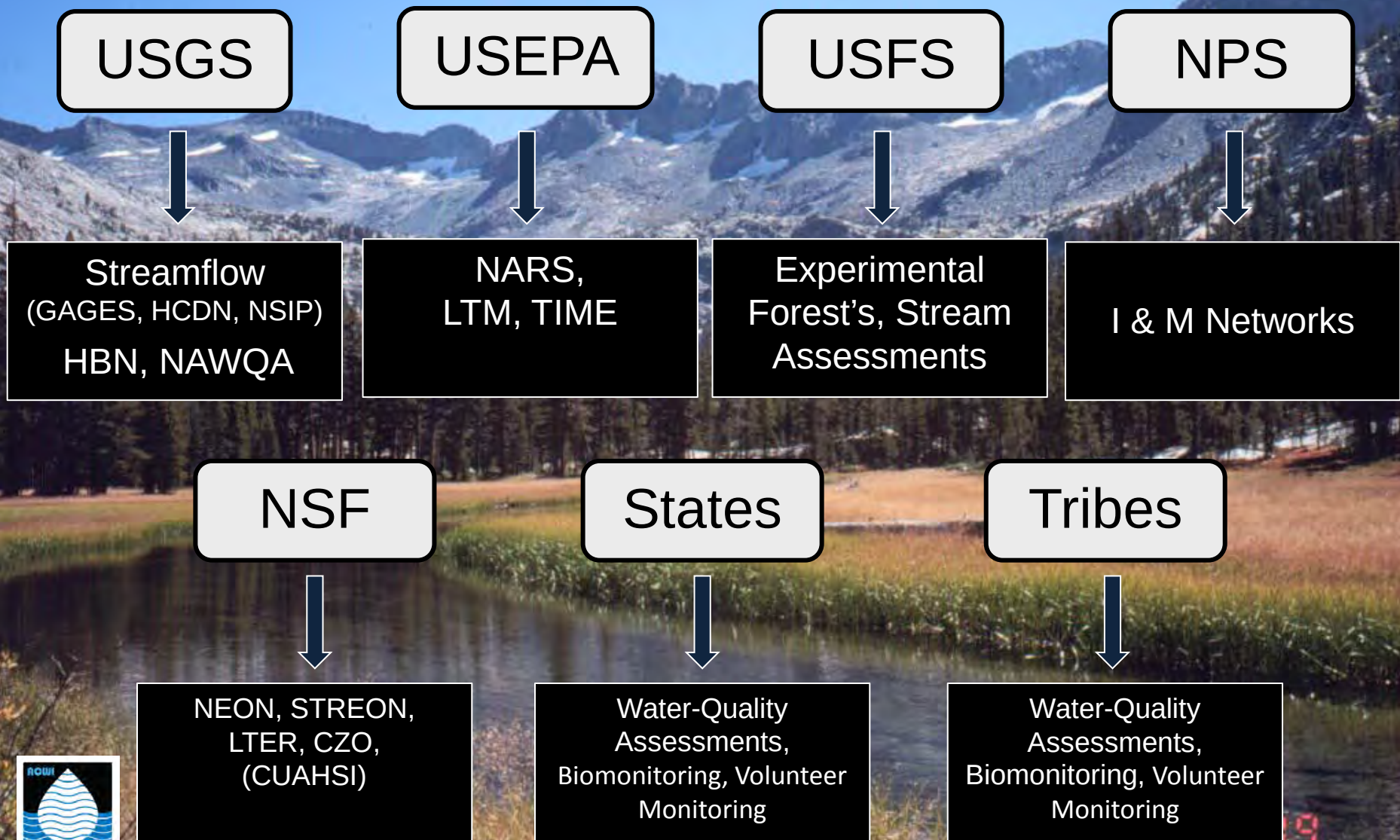


Establishing a National Network of Reference Watersheds for Freshwater Streams

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



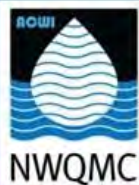
Example of Monitoring Networks



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.





NATIONAL WATER QUALITY MONITORING COUNCIL



Working Together for Clean Water

[About NNRW](#)[Network Map](#)[Network Sites](#)[Data Access](#)[Reference QW](#)[About the Data](#)[Cooperators](#)

The National Network of Reference Watersheds

is a collaborative and multipurpose network of watersheds and monitoring sites that provides quality-assured data and information to understand the effects of land use change, water use, atmospheric deposition, and climate change on freshwater ecosystems. The current scope of the network is limited to freshwater streams. Future collaborations will expand to freshwater lakes and wetlands. Membership in the network is voluntary and open to individuals and institutions interested in participating in monitoring and (or) research in minimally disturbed and pristine watersheds.

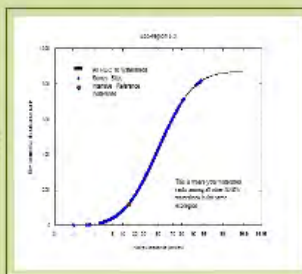
[How Do I add my watershed to the Network?](#)

WHAT IS A REFERENCE WATERSHED?

A reference watershed is a watershed minimally influenced by human activity against which disturbed watersheds can be compared. Rather than set specific reference site criteria for the entire nation, the NNRW's approach is to give the user the tools to define their own criteria for their own purposes.

Nonetheless, default criteria have been defined for all Level II Ecoregions to aid users who do not wish to define their own criteria. To see how these criteria are defined click on the diagram to the right.

Select the "Network Sites" tab to define reference criteria, identify sites, and access data available for the network.



TODAY'S FEATURED WATERSHED

Kawishiwi River, MN



Kawishiwi River is located in the Boundary Waters Canoe Area Wilderness, which is part of the Superior National Forest administered by the U.S. Forest Service.

WATERSHEDS WHERE I LIVE

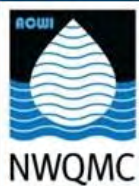
Find a reference watershed near your location

Input either a 5 digit zipcode or latitude and longitude.

Zipcode: Latitude:
Longitude:

Please indicate the position format

Decimal Degrees (dd.ddddd) ☐
Degrees, Minutes, Seconds (DD MM SS.S) ☐



NATIONAL WATER QUALITY MONITORING COUNCIL

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[About NNRW](#)

[Network Map](#)

[Network Sites](#)

[Data Access](#)

[Reference QW](#)

[About the Data](#)

[Cooperators](#)

The National Network of Reference Watersheds Site Map



[View Larger Map](#)

Methods and Data Comparability Board

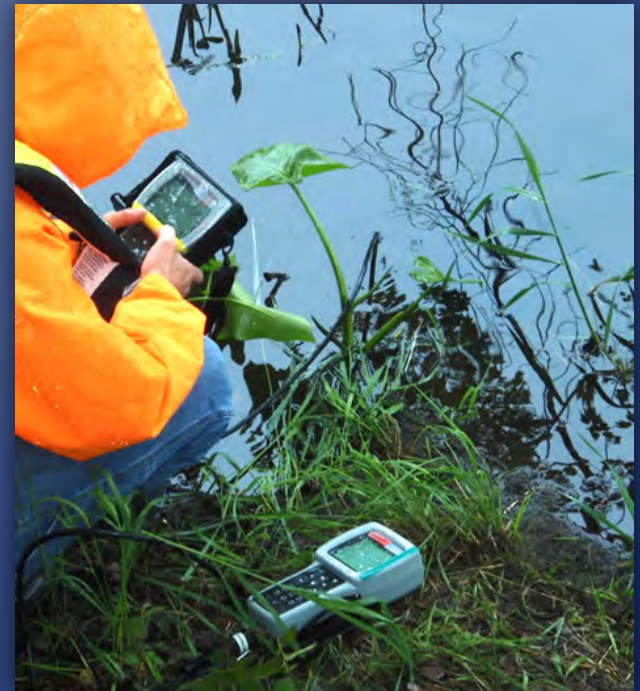


The NWQMC Methods and Data Comparability Board provides a forum for exploring, evaluating, and promoting methods that facilitate collaboration and further comparability between water monitoring programs.

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





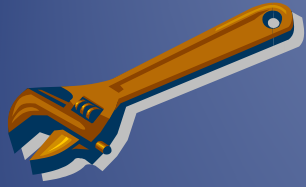
NEMI

National Environmental Methods Index

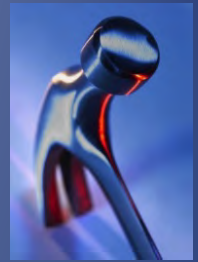


- Web-based source for environmental monitoring methods
- Format allows for easy comparison and contrast of critical method parameters
- Full methods are available for download
www.nemi.gov
- EPA regulatory status information
- Retirement of old methods (planning)

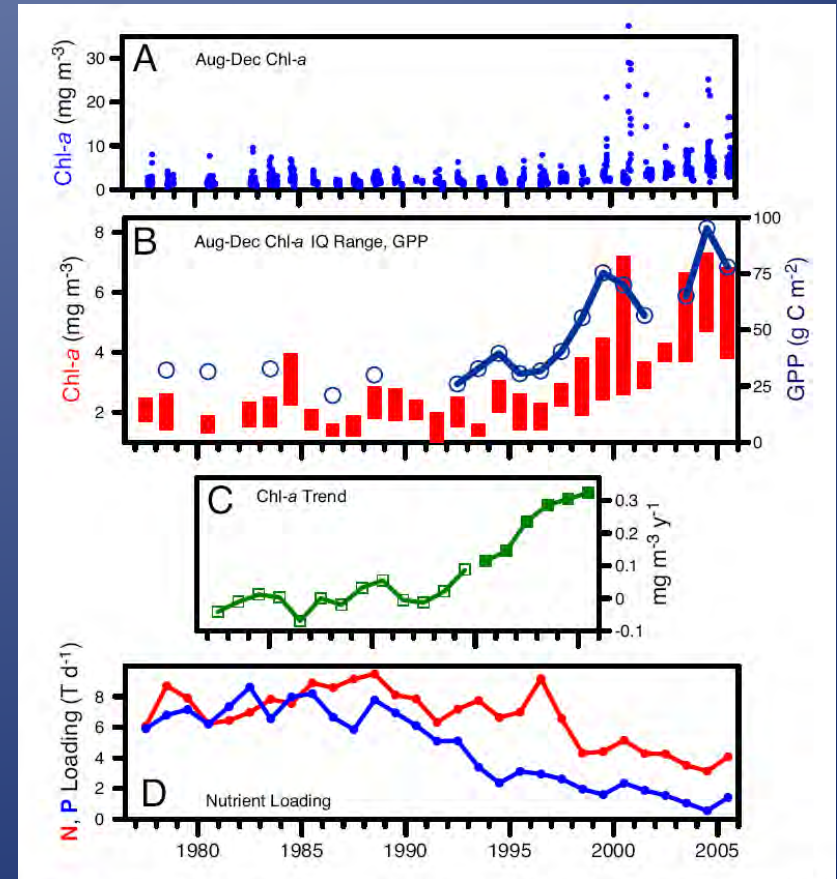




Statistics Tool Box



- 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 demonstration studies:
 - San Francisco Bay, Lake Michigan, Delaware Estuary, Albemarle Sound, Puget Sound
 - 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 WATER QUALITY MONITORING COUNCIL

Working Together for Clean Water

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: cm Tate@usgs.gov

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

Spring 2012



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



Volunteer Monitoring Directory

