

Water Monitoring Fact Sheet

ACWA Annual Meeting – August 4-7, 2013

Roundtable 3 - Monitoring Program Adaptations: Criteria and More

1. Clean Water Act (CWA) Monitoring Objectives

Monitoring is a core water program. Congress recognized monitoring as the foundation for Clean Water Act implementation when making it one of two eligibility requirements for states receiving 106 grants. The other eligibility requirement is enforcement authority.

CWA Monitoring Objectives include:

- Establishing, reviewing, and revising water quality standards (Section 303(c)).
- Reporting on the extent of waters that support the goals of the Act, and determining water quality standards attainment (Section 305(b), 314, 205).
- Identifying impaired waters (Section 303(d)).
- Identifying causes and sources of water quality impairments (Sections 303(d), 305(b), 319, 205, 604).
- Supporting the implementation of water management programs
 - Water quality based permits reflecting receiving water characteristics and assimilative capacity (Section 402).
 - TMDL models using ambient data to develop and validate load estimates (Section 303(d))
 - Watershed Plans, including source water protection plans
- Supporting the evaluation of program effectiveness (Sections 303, 305, 402, 314, 319, etc.).

Additional Monitoring Objectives include:

- BMP effectiveness monitoring
- Emergency response needs baseline data, quick response hazard assessment, and long- term impact assessment (e.g., BP spill, TVA coal ash, Hurricane Sandy, etc.)

2. Key Questions Answered by Monitoring

A State monitoring program that meets CWA objectives should be able to answer the questions below for the different water types (e.g., rivers, lakes, estuaries) and water uses (e.g., recreational, aquatic life). Different monitoring designs may be needed to answer different questions, or to assess various types of criteria.

- What is the overall quality of waters in the State?
- To what extent is water quality changing over time?
- What are the problem areas and areas needing protection?
- What level of protection is needed and how do we achieve that through point and nonpoint controls?
- What are the most effective monitoring and assessment indicators to track progress?
- How effective are clean water projects and programs at protecting and restoring water quality?

3. Programs and Functions Which Depend on Monitoring include:

- **Assessment & Listing** - CWA 303(d) and 305(b)
- **Water Quality Standards**
- **NPDES Permits**
- **TMDLs and Modeling**
- **Watershed Protection/Restoration**
- **BMP Effectiveness**
- **Source Water Protection**
- **Fish and Shellfish Consumption Advisories**
- **Compliance & Enforcement**
- **Emergency Response**



4. State Long-term Water Monitoring Strategies

All states develop and maintain a monitoring strategy that describes how monitoring objectives are or would be met, and the resources needed for implementation (*Elements of a State Monitoring and Reporting Program, EPA, 2003*). For each water type, these plans include: objectives, designs, indicators, quality assurance, data management, analysis and assessment, reporting, resources and infrastructure, and programmatic evaluation.

The State strategies identify monitoring gaps, help States set monitoring priorities, and guide program enhancement funding from the 106 Monitoring Initiative Grant. Examples of funded enhancements include new State lab capacities, fish tissue monitoring, data management, new biological monitoring protocols and index development. Some states have used the strategies, and the identification of monitoring gaps, to secure additional monitoring funding through State legislative mandates.

5. Potential Funding Sources for State monitoring programs include:

- CWA 106 base grant – Water Pollution Control Programs
- CWA 319 grant – Non–point source program
- CWA 604 grant – Water Quality Management Planning
- BEACH grant (available at least through FFY14)
- CWA 106 Monitoring Initiative – For monitoring gaps/enhancements
- State General Funds
- State Permitting Fees
- State Dedicated Funds (e.g., Watershed, Water Monitoring)
- Leverage Partner Resources - government (federal, interstate, local), private, nonprofit & volunteer

6. Water Monitoring Councils Assist with Monitoring Challenges

- Through communication, collaboration & coordination, Councils improve water quality through development of partnerships, sharing data and promoting the efficient use of resources
- The National Water Quality Monitoring Council (NWQMC), co-chaired by EPA and USGS, includes 10 state representatives and > 40 members from many types of organizations
- Water resource management in 18 States/Regions is benefitting from the partnerships and data exchange developed through their Water Monitoring Councils
- State Water Monitoring Councils include: CA, CO, FL, IN, MD, MI, NJ, ND, OH, OK, UT, VA, WI

National Water Quality Monitoring Council

