

Methods and Data Comparability Board



**ACTIVITIES AND PLANS:
2010-2011**

Overview



- Review of recent accomplishments
- New and ongoing projects
- Goals for FY2011

Recent Accomplishments



- QA Tools
 - QA Matrix
 - Deployment guide
- Draft of metadata
- watersensors.org

Methods and Data Compatibility Board Aquatic Sensor Workgroup

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methods and data compatibility board

Quality Assurance (ACRR) Matrix
QA Checklist for Calibration, Quality Checks, and Record Keeping
to Ensure that Data Are of Known and Documented Quality

ASW Field Deployment Guide

Methods and Data Compatibility Board Aquatic Sensor Workgroup

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Field Deployment Guide
Checklist for Sensor Selection, Deployment, and
Maintenance: Rivers & Streams

March 24, 2010 acwi.gov/methods

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Welcome to watersensors.org

The Aquatic Sensor Workgroup is a cooperative partnership of water quality monitoring agencies, schools, and scientists. Our mission is to ensure that water quality data collected by sensors are of known and documented quality.

QA (ACRR) Matrix
The Aquatic Sensor Workgroup is a cooperative partnership of water quality monitoring agencies, schools, and scientists. Our mission is to ensure that water quality data collected by sensors are of known and documented quality. [\[Read more and download this book...\]](#)

Field Deployment Guide
The ASW Field Deployment Guide is intended to be used as a checklist of considerations to guide both new and experienced users in the deployment of water quality monitoring systems using sensors. The Guide is organized in four sections: [\[Read more and download this book...\]](#)

Data Elements
The Sensors Data Elements list includes the information MAC Documents: the 'who, what, where, how, and why' associated with your monitoring results. [\[Read more...\]](#)

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Focus areas for 2011: Sensors



- Specifications
- Data Quality Objectives
- Data management

- Additional project-specific activities
 - NEMI – ACT collaboration
 - NEMI – WQSA Stats collaboration

Specifications subcommittee



- Lack of ambient monitoring standards:
 - Impediment to adoption of sensors for monitoring
 - Massive investment in monitoring by sensors (Ex: GLRI)
- EPA asks: “What do we need to know to levy a fine against a violator?”
 - But for ambient monitoring...
 - Results are good enough for... what? (Compliance is defined; what is the purpose of ambient monitoring? *Range*)

Specs – next steps



- ASTM D19: starting in January – how to assess core specs (LOD, response time, etc.) for online sensors
- Board to contribute and comment on scope document (Jan. 2011)
 - Core analytes and specs
 - Field checks
 - Integration of checks into data-processing software

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- Specifications
- **Data Quality Objectives**
- Data management

- NEMI – ACT collaboration

Data Quality Objectives



- DQOs \neq “one size fits all”
- What do you want?
- What do you need?
- What can you afford?

DQOs



- What are the questions to ask before you set out to monitor at a high-resolution (i.e., sensors)?
 - How will the data be used
 - What is the user's tolerance for error(s)
 - What are the data acceptance criteria
 - What parameters to monitor
 - Where to monitor
 - How long to monitor
 - Percent data capture

DQOs



- **Product:**

- Short paper with guidance in the form of what are the questions to ask

- **Purpose:**

- To ensure that the questions are asked. Too many sites are installed w/o asking all the right questions.

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- Specifications
- Data Quality Objectives
- **Data management**
- NEMI – ACT collaboration

Data Management - Goals



- Store data
- Use data
- Share data

- Standards for reporting & storing

Data mgt – next steps



- Identify the functions & corresponding data elements
- Draft list of data elements
- Working on defining the functions
- Collaborative efforts:
 - EPA Advanced Monitoring Initiative – data elements
 - Software vendor – AI gave demo focused on functions of software
 - IOOS/QARTOD – to brief the Board in upcoming call
 - EPA Office of Air (?)

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- Data management
- Specifications
- Data Quality Objectives

- **NEMI – ACT collaboration**



NEMI
National Environmental Methods Index

Keyword Search

What's New

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General Information

Quick Links

Questions?

USGS Water Resources Discipline The USGS Center for Integrated

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Looking for an Instrument?

- Identify technologies available to meet your needs.
- Search by environmental parameters, sensor types or manufacturers.

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SEARCHABLE TECHNOLOGY DATABASE

 Physical Salinity, Light, Temperature, Turbidity, Pressure, and more...	 Chemical Inorganic, Dissolved gases, Oxido-Reduction, pH, and more...
 Biological Plankton, Microbes, Marine Tracking, and more...	 Sensor Type ADCP, Fluorometer, CTD, Multiparameter, and more...
 Hardware AUVs, Boats, Dataloggers, Power Supplies, and more...	 Manufacturer The A to Z of all manufacturers.

The National Environmental Methods Index (NEMI) is an online resource that complements the ACT Technology Database by helping users to find analytical methods and field sampling protocols. NEMI is maintained under the direction of the Methods and Data Comparability Board, a chartered under the National Water Quality Monitoring Council, whose mission is to coordinate and provide guidance on implementation of a voluntary, integrated, nationwide monitoring strategy.

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Methods of Environmental Measurements and Observations

Questions?



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