



# New Jersey Water Monitoring Council:

## Building Collaboration & Continuous Monitoring Data Exchange Through a State Water Monitoring Council

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www.state.nj.us/dep/wms/wmcchome.html

**Vision** - Provide water information foundation for enhanced management & protection of NJ's aquatic environment

**Mission** - Promote coordination, collaboration & communication of scientifically sound, ambient water quality & quantity data

**Scope** - Biological, chemical, and physical water monitoring, including surface and ground waters, freshwater, estuarine, & marine environments

### Council Goals

- Promote partnerships & efficient use of resources
- Enhance data exchange & comparability
- Facilitate water monitoring technical exchange
- Serve as water monitoring information source
- Integrate with national monitoring council (NWQMC)
- Advocate state monitoring needs at federal level
- Identify research needs and emerging issues

### Membership

- 41 members from 22 organizations
- **Government** – NJDEP, NJDOH, USGS, USEPA R2, NOAA, Monmouth County Health Dept
- **Interstates** – Delaware River Basin Commission, Interstate Environmental Commission
- **Estuary Program** – Barnegat Bay Partnership
- **Regional Planning Commission** – NJ Pinelands Commission
- **Utilities Authorities** – NJ Water Supply Authority, Brick Twp MUA, NJ Harbor Dischargers
- **Watershed Associations** – Stony Brook Millstone, Great Swamp, Musconetcong, Raritan Headwaters
- **Academia/Research** – Rutgers, Montclair State, Monmouth, Meadowlands Env Res Inst., NJ Sea Grant

### Organization

- **Co-Chairs:** Leslie McGeorge (NJDEP), Robert Reiser (USGS NJWSC)
- **Coordinator:** Alena Baldwin-Brown (NJDEP)
- **Steering Committee:** NJDEP, USGS, DRBC, USEPA R2
- **Meetings:** 3x/year with NJ, other State & National speakers
- **Product:** Continuous Monitoring Inventory
- **Formed:** 2003 on World Water Monitoring Day

### Meeting Technical Themes

- Fish/Shellfish Tissue
- Biological Monitoring
- Pathogen Monitoring
- Wetlands Monitoring
- Water Quantity
- Continuous Monitoring/Sensors
- Nutrient Monitoring
- Harmful Algal Blooms (HABs)
- Coastal/Ocean Monitoring
- Volunteer Monitoring
- Stormwater/Flood Monitoring
- Mercury
- Groundwater Monitoring
- Lakes Monitoring
- Emerging Contaminants
- Water Quality Data Exchange

Presentations available on Council website

### Council Product: Continuous Monitoring Inventory

- Continuous water monitoring activities
- Within NJ & its surrounding waters
- Short or long-term in duration
- Links to online data (where available)



>600 entries from 10 organizations (both NJWMC members as well as others) conducting ambient water monitoring in NJ and its shared waters

### Inventory Listing: Long (>1 year) & Short-Term (≤1 year) Deployments

**Example Inventory Entry: HRECOS**  
(Hudson River Environmental Conditions Observing System)

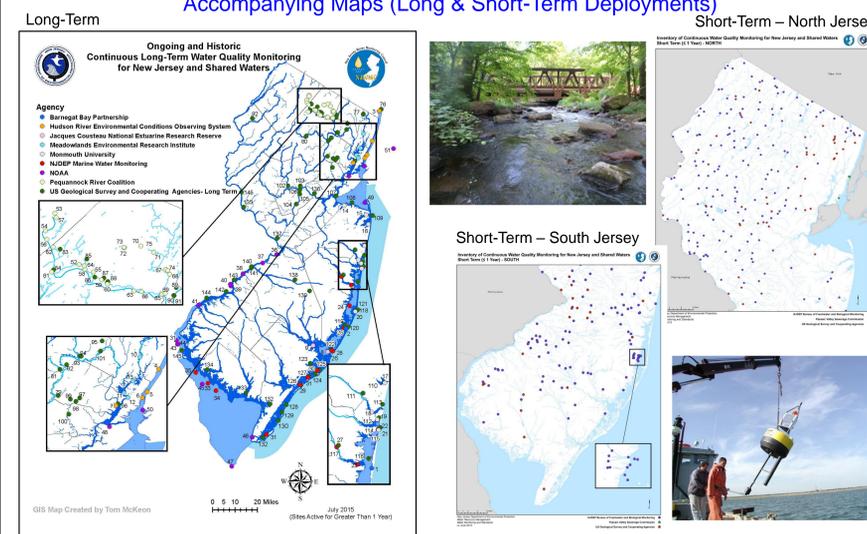
| Agency | Monitoring Program/Project | Waterbody Monitored | Coordinator     | Deployment Type | Start Date | End Date | Parameters   | Deployment Status | Deployment Frequency | Deployment Method | Deployment Location | Deployment Duration | Deployment Status | Deployment Frequency | Deployment Method | Deployment Location | Deployment Duration |
|--------|----------------------------|---------------------|-----------------|-----------------|------------|----------|--|-------------------|----------------------|-------------------|---------------------|---------------------|-------------------|----------------------|-------------------|---------------------|---------------------|
| NJDEP  | HRECOS                     | Hudson River        | Leslie McGeorge | Long-Term       | 2003       | Ongoing  | DO, Temp, pH, SC, Chl a, Nitrate, Flow, Stage, Depth | Active            | Continuous           | Fixed             | Hudson River        | >1 year             | Active            | Continuous           | Fixed             | Hudson River        | >1 year             |



### Inventory Fields

- Organization
- Waterbody Monitored
- Parameters
  - DO, temp, pH, SC, Chl a, nitrate, flow, stage, depth
- Location
- Duration/Status
- Data Management/Repository

### Accompanying Maps (Long & Short-Term Deployments)



### Organizations Contained in the Inventory



### Future Enhancements

- Display long & short-term data via interactive web tools (ArcGIS Online)
- Provide users with ability to view site information dialogue window along with direct access to raw data
- Explore interaction with USEPA pilot below

### USEPA Pilot: Continuous Monitoring Data Sharing Strategy

- NJ is partner in USEPA pilot
- NJ Council Inventory used to inform pilot
- Participants/Data Providers - NJDEP, USEPA, Rutgers University, Meadowlands Env. Research Inst., & USGS
- Exploring practical strategies to integrate continuous monitoring data into sensor data sharing network
- Includes sensor data catalogue & interactive map to discover sites & parameters & retrieve raw data