



new jersey  
department of environmental protection

njdep

# *Enhancing the NJ Water Monitoring Community*

Leslie J. McGeorge, Administrator  
NJDEP Water Monitoring and Standards

Presented at: NJ Water Monitoring & Education  
Summit

Rutgers EcoComplex  
November 18, 2009



NJDEP Water Monitoring and Standards

# NJ Water Monitoring Events

- **2003-2007** – Volunteer Monitoring Summits
- **2006** – Water Monitoring Technical Workshop
- **2008** – Volunteer Monitoring and Educators Summit
- **2009** – NJ Water Monitoring & Education Summit
  - DEP & NJ Council Co-sponsored
  - Vision of Integrated NJ Water Monitoring Community





# DEP

## Water Monitoring & Standards Leslie McGeorge

NJ Water Monitoring Council  
Water Quality Data Exchange

### Marine Water Monitoring

Bob Connell

- Estuarine & Near shore ocean
- Beach monitoring
- Shellfish water quality
- Ecosystem assessment
- Microbial source trackdown
- Spill response
- Remote sensing

### Freshwater & Biological Monitoring

Al Korndorfer

- Rivers, streams, lakes, groundwater
- Chemical/physical/biological/habitat
- Stressor identification

### Water Quality Standards & Assessment

Debra Hammond

- Water Quality Standards – surface & groundwater
- Water Quality Assessment – Integrated Report (305(b) & 303(d))
- Local & volunteer monitoring



# NJ Volunteer Monitoring Program - Watershed Watch Network (started 2002)

- 29 River/Stream Monitoring Organizations

- Biological
- Visual
- Habitat
- Chemical
- Bacteria
- Physical



- 58 Lake Monitoring Organizations

- Bacteria
- Chemical
- Visual
- Physical



# Volunteer Program - Watershed Watch Network

- Internal NJDEP Advisory Council
  - Water Monitoring & Standards
  - Division of Watershed Management
  - Office of Quality Assurance
- External Advisory Council – Volunteer Program Coordinators from:
  - Riverkeeper Organizations
  - Watershed Associations



# Volunteer Program Outcomes

- Training (e.g., field collection, habitat assessment, data integration, benthic macroinvertebrates)
- Technical Assistance - NJ Service Provider Network
- Resource Support – Mini-Grant Program
- Volunteer Monitoring Data System
- Increased quality assured data submissions to NJDEP to meet CWA mandates
- Quality Assurance Tiers
- Annual Summit



# NJ Water Monitoring Council



- **Formed:** October 2003 on World Water Monitoring Day
- **Vision:** provide water information foundation for management of aquatic environment
- **Mission:** coordination, collaboration and communication of ambient water quality/quantity data to support effective environmental management
- **Scope:** biological, chemical and physical conditions of surface and ground waters, freshwater, estuarine, & marine waters



# NJ Water Monitoring Council

**30 Members** - 15 monitoring & research orgs.

- Federal, state, interstate, regional, county government
- Academia & Research Institutions, and Volunteer representation
- 3 meetings/yr

**Co-chairs** – Leslie McGeorge (NJDEP)

Rick Kropp (USGS NJ Water Science Ctr)

**Coordinator** – Alena Baldwin-Brown (NJDEP)

**Steering Committee** – NJDEP, USGS, DRBC

## Website

- includes meeting Technical Presentations (e.g., Emerging Contaminants, Nutrients)
- [www.state.nj.us/dep/wms/wmcchome.html](http://www.state.nj.us/dep/wms/wmcchome.html)



# NJ Water Monitoring Council

- NJDEP
- USGS/NJ Water Science Center
- USEPA Region 2
- NOAA
- Delaware River Basin Commission
- Interstate Environmental Commission
- Pinelands Commission
- Rutgers U. - IMCS, Coop. Extension Service, NJ Water Resources Research Inst.
- NJ Marine Sciences Consortium
- Passaic River Institute (Montclair State U.)
- Meadowlands Environmental Research Inst.
- Monmouth County Health Department
- NJ Water Supply Authority
- NJ Volunteer Monitoring coordinator
  - Watershed Association representation?





# NJ Council Benefits

- Enhanced state water monitoring community **partnerships**
- **Technical information exchange** (e.g., field/lab methods, contract labs, assessment methods, data mgt, monitoring parameters)
- Joint **project/grant** development opportunities to fill info gaps in NJ's Long Term Monitoring Strategy
- **National Water Monitoring Council** information exchange (NJ members)
- Increased **data submittals** for NJ's Integrated Water Monitoring & Assessment Report





# DEP

**Water Monitoring &  
Standards  
Leslie McGeorge**

**Marine Water  
Monitoring**

**Bob Connell**

**Freshwater &  
Biological  
Monitoring**

**Al Korndorfer**

**Water Quality Standards  
& Assessment**

**Debra Hammond**



# DEP's Freshwater Monitoring – Rivers & Streams, Lakes, Groundwater



## Ground Water Summit Presentation

- Ground water quality trends & land use impacts



## Rivers/Streams Summit Presentations

- Stream water quality & stressor identification
- New benthic indices



# DEP's Marine Monitoring

## Ecosystem Monitoring Presentation

- Ocean benthic indicators for ecosystem assessment



## Beach Monitoring Presentation

- Microbial Source Tracking

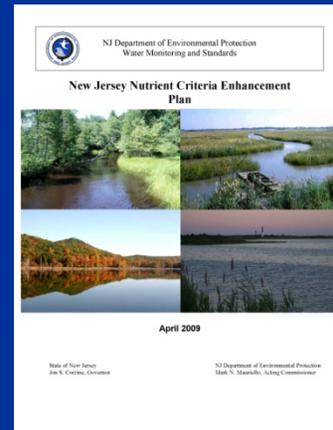


## Shellfish Water Quality Monitoring



# Water Quality Standards & Assessment (Summit Presentation)

- **Readopted** SWQS – Dec 2009 NJR
- Nutrients
  - New proposal – **narrative criteria** for all waters (Dec 2009 NJR)
  - 2009 **Nutrient Criteria Enhancement Plan** – ([http://www.state.nj.us/dep/wms/bwqsa/nutrient\\_criteria.htm](http://www.state.nj.us/dep/wms/bwqsa/nutrient_criteria.htm))
  - Nutrient assessment for **wadeable streams** – 2010 Assessment Methods
  - Additional nutrient response **monitoring data** needed (eg., diurnal DO, benthics)

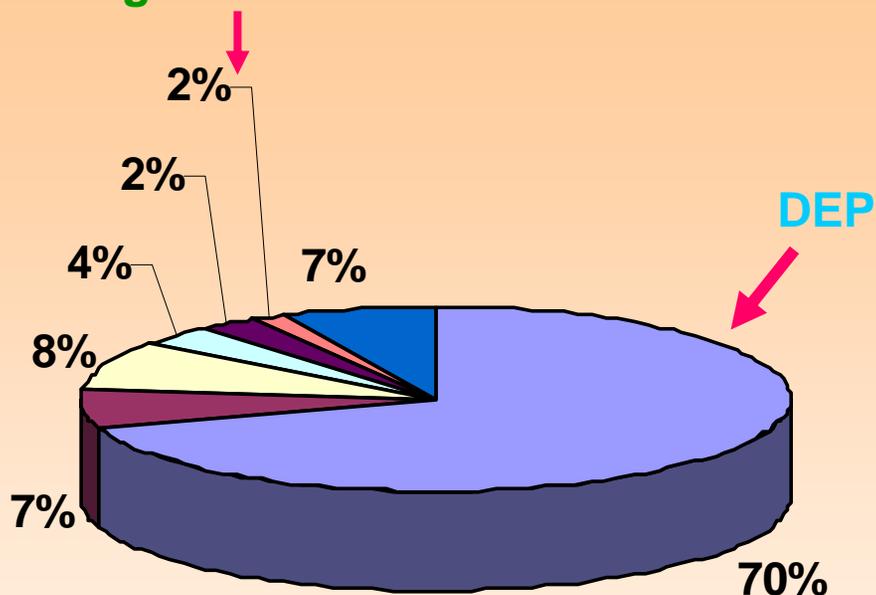


# Data Sources - 2008 Integrated Monitoring & Assessment Report

CWA requirement – all waters assessed for all uses

Watershed Organizations

Data Sources



- NJDEP
- Federal Government
- Counties
- Regional Entities
- Water/Wastewater Utilities
- Watershed Organizations
- Short Term Studies

- <20% watersheds fully assessed for all uses
- 94% watersheds assessed 1 or more use





# Vision



One dynamic NJ Water Monitoring  
Community: growing and learning from  
each other

## 2009 Summit Acknowledgements:

**DEP** – Danielle Donkersloot, Alena Baldwin-Brown, Debra Hammond

**Rutgers Continuing Professional Education** – Dalynn Knigge, Kristyn Saunders, Adam Modzelewski

