



Monitoring and Assessment: Tools of Adaptive Management

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From Strategic Plan (April 2005)


- *Implement a county-wide water quality monitoring program*
- *Implement an improved beach water quality program*
- *Develop an alliance with the Riverkeeper to monitor discharges*
- *Develop a Waccamaw River management plan as a priority basin*

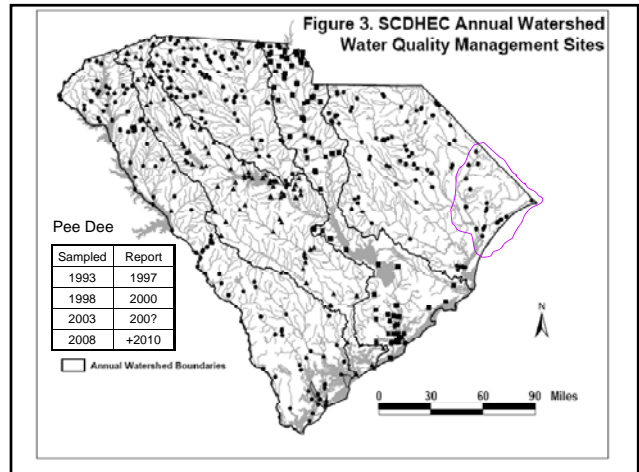
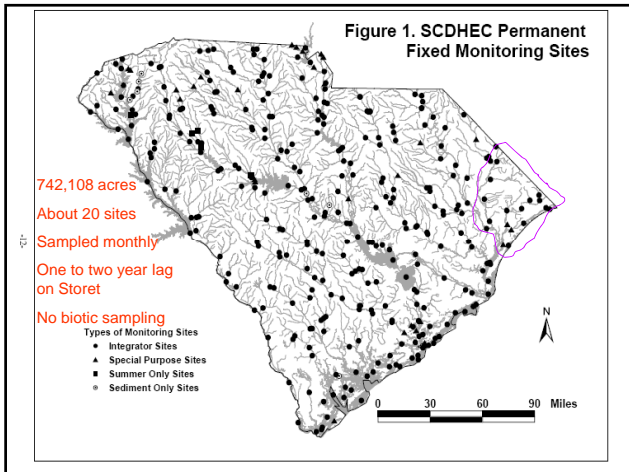
Why Monitor?

- Monitoring provides the gold standard for assessing success
 - Demonstrate that your pollutant reductions resulted in lower pollutant levels
- Troubleshoot management actions that aren't working
 - Adaptive Management
- Enable predictions
 - What if scenarios
 - Justify selection of future management actions

Monitoring

- Monitoring is not strictly required
 - Local solutions to local problems
 - First cut at IDDE by visual screen
- You can't monitor everything, all the time, everywhere.
 - Develop prioritized monitoring plan
 - Target highest priority issues
 - 303(d) listed sites
 - IDDE hot spots
 - Other important use impairments: surf swimming
- Partnering for a watershed approach





Watershed Approach

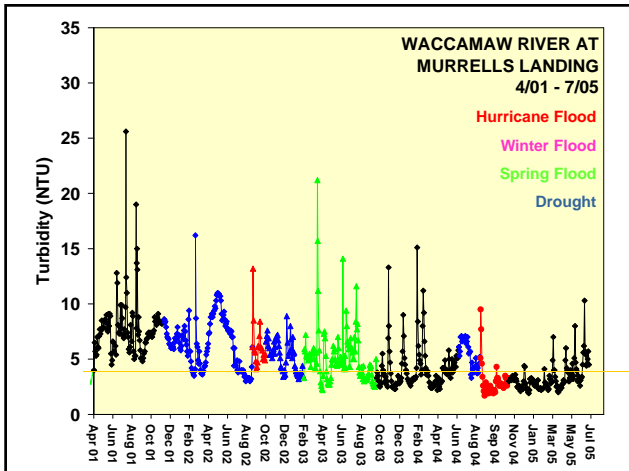
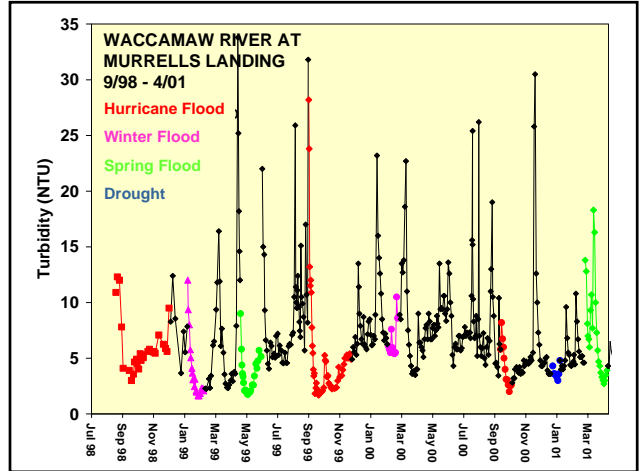
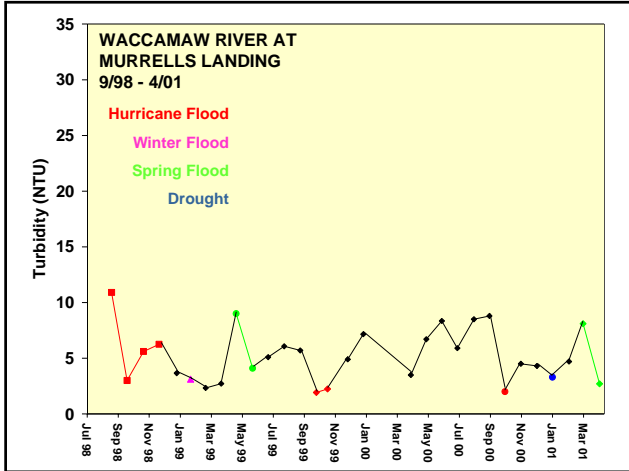
- SC DHEC Ambient Water Quality Strategy
- Next Step: Watershed Management Plans
 - Cover main stem and tributaries
 - Ecosystem Health
 - Chemical Integrity
 - Biological Integrity
 - Physical Integrity
 - New "Watershed-based NPDES Permitting"

Don't wait until you're on the 303(d) list to prepare a TMDL

Monitoring Strategies

- Rapid Survey Techniques
- Grab sampling
- In-situ sensing


Complexity & Cost

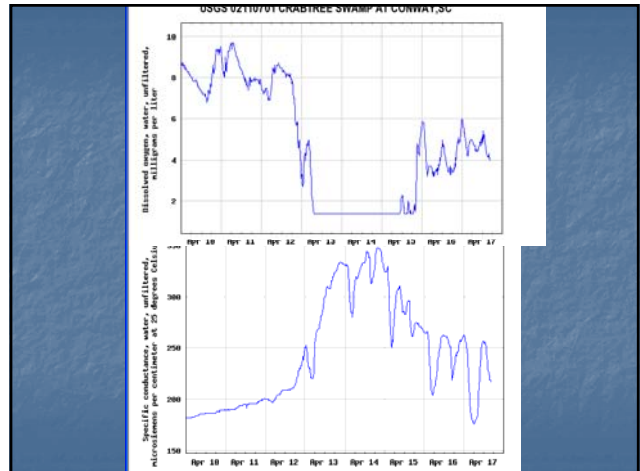
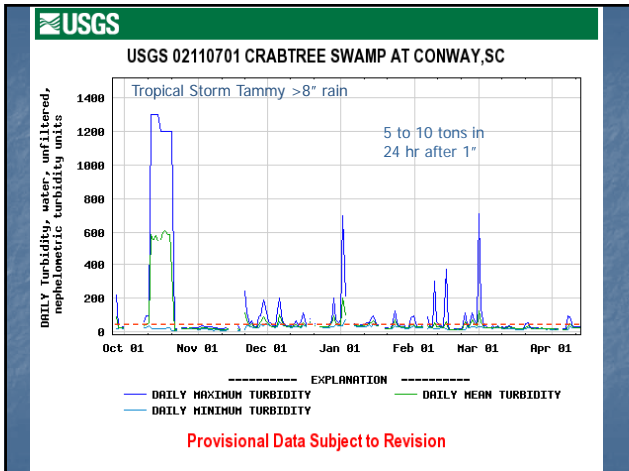
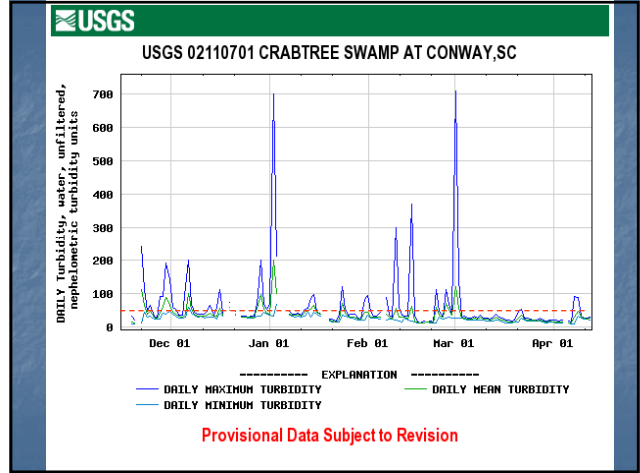
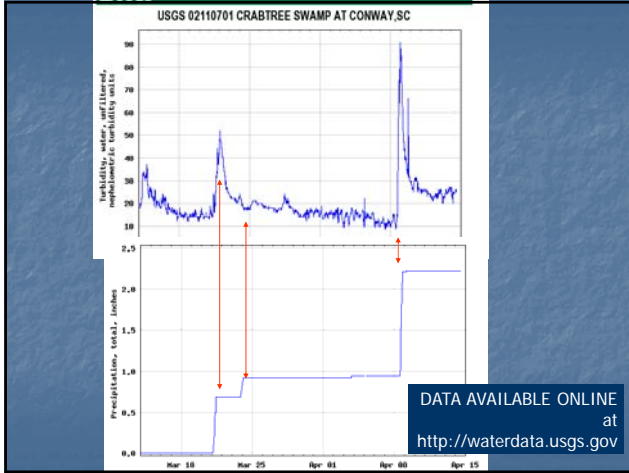


Strategies

- Rapid Survey Techniques
- Grab sampling
- In-situ sensing
- Modeling
 - Enable prediction
 - Useful management tool

Complexity & Cost





Where to get muscle power

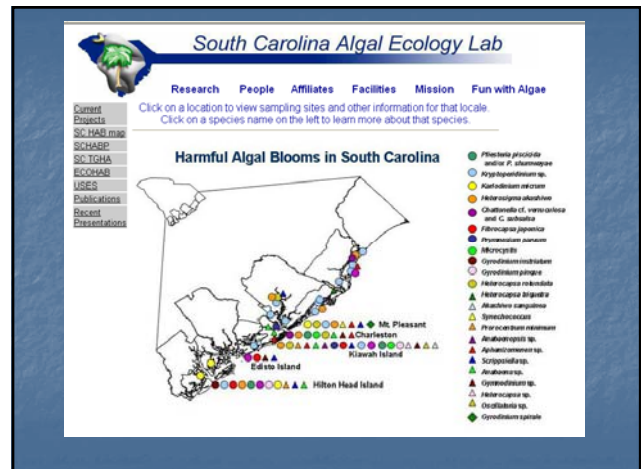
- Partnering with Government Agencies
 - USGS
 - SC DHEC
 - SC DNR
 - Waccamaw Regional Council of Governments
- Partnering with Coastal Carolina University
- Partnering with other SMS4s in Myrtle Beach UA
- Volunteer Monitoring

Volunteer Monitoring



- Coastal Carolina University
 - Waccamaw Riverkeeper
 - City of Conway
 - Georgetown and Horry Counties
- Sierra Club
- Surfrider

Volunteer Monitoring

- Supported by EPA and SC DHEC
 - Waterwatch
- Minimum measures
 - Public education
 - Public involvement
 - Illicit Discharge Detection and Elimination
- Other Benefits
 - Cross-generational activity
 - Engages students & their learning communities
 - Community building



Southeast Phytoplankton Monitoring Network
 Promoting a better understanding of Harmful Algal Blooms by way of Volunteer Monitoring

Partnering With:  

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[Active Volunteers](#) | [Raw Site Data](#) | [FAQ](#) | [Data Sheets](#) | [On-Line Data Entry](#) | [Acronyms](#)

Volunteers

How would you like to do something to help your community? This is a unique project to get you involved in a program that is happening in many coastal states. Phytoplankton Monitoring Networks have been in existence since the early 90s and volunteer groups have been providing researchers with the extra help they need in order to properly perform a statewide surveillance.

By joining this program, you can feel you are helping out your community and the scientists in your area. You will be trained on phytoplankton identification as well as sampling techniques. This is a great experience for middle and high school marine biology and biology classes as well as environmental citizen groups and state parks. We need people who have the time to sample once a week, identify what they find, and report the information back to us. We hope you will join the Southeast Phytoplankton Monitoring Network. We can promise you that this will be an experience you will never forget!

- Active Volunteers:** summary of school, citizen and park facility volunteers
- Activities:** exercises developed by SEPMN to aid volunteers in increasing awareness of phytoplankton and harmful algal blooms
- Data Sheets:** printable versions of basic and advanced datasheets
- FAQ:** four common questions asked by perspective and current volunteers
- Phytoplankton Art Contest**
- Raw Site Data:** listing of all sampling sites linked to a spreadsheet that contains all data for that site
- SEPMN Presentations: [General Information](#) (PPT -27MB) | [Student Presentations](#) (PPT -25MB)

When Nature Calls, Don't Get Caught

In Charleston, cats and dogs produce about 10,000 pounds of waste each day.
 Pet waste can wash into storm drains and go directly into waterways without being treated.
 Pet waste can also wash directly into marshes and waterways.



Help keep pet waste from polluting our water:

- Scoop the poop. Take a plastic bag with you on your walk.
- Wrap pet waste in a plastic bag and put it into the trash.
- Flush pet waste down the toilet (if you are on a public sewer). Do NOT flush kitty litter.
- Bury pet waste in your yard. Bury it 6 inches deep, away from waterways and gardens.
- Don't put pet waste in the compost pile.

 Promoting and protecting the health of the public and the environment
 South Carolina Department of Health and Environmental Control

Help keep our pets from polluting. Scoop the poop.

