

Volunteer Water Quality Monitoring

Volunteers are members of:

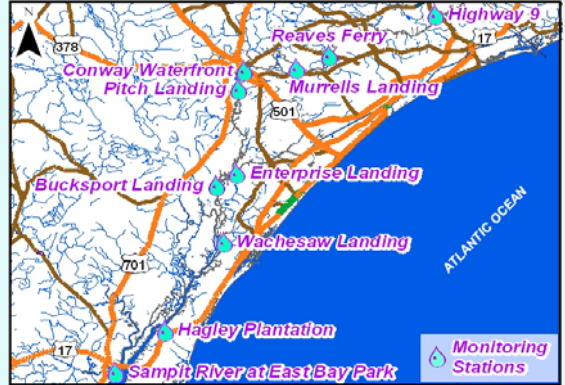
- Winyah Rivers Foundation
- Surfriders Foundation
- Winyah Group of SC Sierra Club
- Bassmasters
- and Other citizens

Waccamaw Watershed Academy
Burroughs & Chapin Center for Marine and Wetland Studies
Coastal Carolina University
Conway, SC



GOALS

- To get "high quality" data for the Waccamaw river to
 - Establish normal conditions for each sampling site
 - To detect Illicit Discharges
 - To detect subtle trends over time
- To provide data to SC DHEC for their biennial 305(b) report



Monitoring Stations

A History of Volunteer Monitoring in the USA

- Clean Water Act (1972) required states to assess water quality and provided impetus for Volunteer Monitoring.
- EPA recognizes that volunteer data can be used in state biennial assessment reports.
- In 1987 EPA approved first volunteer-based Quality Assurance Project Plan in Chesapeake Bay
- As of Jan. 2001, 3000 volunteer water monitoring programs exist in the US.

Sampling Sites



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Why do we need to do Volunteer Water Quality Monitoring?

- Augments state and federal monitoring efforts
 - Limited funding creates data gaps in time and space that can be filled by volunteer monitoring
- Provides benchmarks for measuring progress of community clean up actions
- Enhances environmental education

Benefits of Volunteer Monitoring

- Meets NPDES Phase II Stormwater Program Minimum Measures for
 - Public education
 - Public involvement
 - Illicit Discharge Detection and Elimination
- Other Benefits
 - Cross-generational activity
 - Engages students and their learning communities
 - Community building



Parameters to be Measured

- Temperature
- Total dissolved solids (conductivity)
- Total particulate solids (turbidity)
- pH (acid level)
- Dissolved Oxygen
- Nutrients (nitrogen and phosphorus)

To be added soon:

- Bacteria (*E. Coli*)
- Chlorophyll (algal pigment)
- Optical brighteners (from detergents)

Funding Sources

- USEPA
 - Wetland Program Development Grant
- City of Conway
- Horry County
- Georgetown County
- International Paper, Inc.

