



THE WATER INSTITUTE OF THE GULF®

WATER QUALITY

Water quality impacts ecosystems, and the people who depend on them, whether it is the need for safe drinking water, healthy fisheries, agriculture, or other uses. Ensuring good water quality, or measuring changes in water quality is essential but information about the current status and predicted future conditions of surface and groundwater is limited in many areas.

In order to preserve or enhance these vital resources, more information is needed about the source of potential pollution threats whether that's from the end of a pipe or the storm water runoff from an urban center.



WHAT WE CAN DO

- » Assess water quality of rivers, lakes, groundwater, estuaries and coastal waters
- » Measure and calculate point and non-point pollution sources
- » Identify best management practices and restoration alternatives
- » Assess how agricultural practices, restoration projects, or other activities impact water quality
- » Biological surveys of shallow benthic areas
- » Employ environmental tracers to determine water and sediment movement
- » Sampling for nutrient content and stable isotope surveys
- » Use of fish traps and suction samplers for assessing animals living in shallow water areas
- » Use Delft3D and Integrated Compartment Model computer simulations to determine current and future water quality conditions and budgets

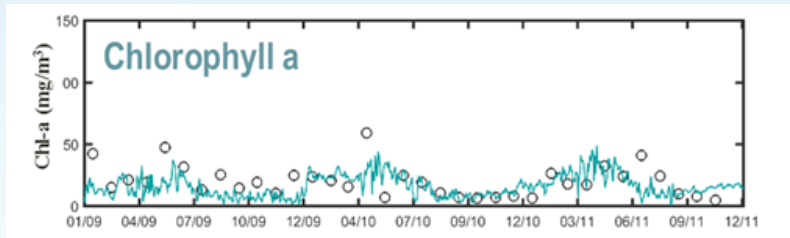


Because life happens at the water's edge



Instantaneous sampling and continuous monitoring capabilities.

Above: The Institute's water quality capabilities include multiple habitat types from freshwater to saltwater.



Applications for regional, state, or international water quality challenges

- Habitat assessment: Provide water quality maps and data to help address key environmental variables influencing fisheries
- Food web assessment: Evaluate how water quality influences aquatic food webs
- River hydrology: Analyze how and where water flows through the system for better management
- Evaluating connections: Mapping connections between surface and ground water
- Harmful algal blooms (HABs): Monitoring and coordination of efforts around HAB management and control
- Evaluating alternatives: Use Delft3D modeling to weigh pros and cons of various solutions
- Water Quality Trading: Determine baseline water quality conditions at watershed scale and quantify nutrient reduction strategies

WHAT WE MEASURE

Existing water quality data can be gathered from various sources. This information can be supplemented with additional field sampling or long-term monitoring using the Institute's fleet of boats:

- | | |
|------------------|---------------------------|
| Total nitrogen | Salinity |
| Ammonium | pH |
| Ammonia | Dissolved oxygen |
| Nitrate | Total suspended sediments |
| Total phosphorus | Temperature |
| Phosphate | Chlorophyll a |
| Silicate | |

Partner with us! For more information about the Institute's research capabilities and how they can benefit your organization, visit www.thewaterinstitute.org or contact info@thewaterinstitute.org.

