

## **Coastal Louisiana System-Wide Water Quality Characterization**

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Through the Louisiana Coastal Protection and Restoration Authority's System Wide Assessment and Monitoring Program, water quality monitoring and nutrient sampling has been implemented coast-wide. The SWAMP water quality network leverages existing long-term water quality programs (Louisiana Department of Environmental Quality, Louisiana Department of Wildlife & Fisheries, and the United States Geological Survey) and includes a total of 120 discrete monthly water quality stations across Louisiana's coast, in addition to data collection platforms with continuous measurements. Water quality parameters include in situ measurements of turbidity, dissolved oxygen, water temperature, specific conductance and salinity as well as discrete water samples for laboratory analysis of nitrogen, phosphorus, silica, chlorophyll a, total suspended solids and volatile suspended solids. The repeated System Wide Assessment and Monitoring Program coast-wide water quality measurements are analyzed to document baseline conditions and characterize the variability in water quality constituent levels at multiple spatial and temporal scales. Relationships with bathymetry, abiotic changes, and the detection of changes that may result from a variety of sources, including large-scale restoration and protection projects, environmental disturbances, and other major drivers that impact the system, are also explored.