

Clean Water Act §316(a) Biological Plan of Study

Benthic and Thermal Monitoring

(2014 – 2016)



SERVICES PROVIDED

- CLEAN WATER ACT RULE 316(a) MONITORING
- WATER QUALITY AND TEMPERATURE MONITORING
- SEDIMENT ANALYSES
- BENTHIC MACROINVERTEBRATE TAXONOMY AND COMMUNITY ANALYSES
- PROJECT MANAGEMENT



EAI successfully completed a two-year benthic and thermal study within the St. Johns River as part of a Biological Plan of Study for Clean Water Act (CWA) Rule 316(a) monitoring in Duval County, FL.

Six sampling stations were established to determine sediment characteristics and monitor benthic macroinvertebrate community structure, water temperature, and water quality characteristics. Quality assurance and quality control of sampling procedures followed applicable sections of DEP-SOP-001/01 for Field Activities. Sediment characteristics were analyzed in conformance with FDEP's ROSS methodology.

Paired temperature loggers were deployed at each sampling station to continuously monitor water temperature. Water quality data, including temperature, dissolved oxygen, salinity, specific conductivity, and pH were collected *in-situ* at the surface, mid-depth, and bottom of the water column during each event at all six stations. Grab samples were collected during the initial sampling event and analyzed in EAI's laboratory to determine sediment characteristics.

Quarterly benthic macroinvertebrate sampling was conducted at each site to record seasonal variations in benthic communities. All macroinvertebrates were identified to the lowest practical taxon and enumerated.