

# Biscayne Bay Minimum Flows and Levels Program

## South Florida Water Management District (SFWMD)

### Biscayne Bay, FL

#### Services Rendered

- Literature Search and Data Review
- Interviewing Biscayne Bay Researchers and Experts
- Evaluating Alternative Approaches for District Minimum Flows and Levels (MFL) Development
- Addressing/Summarizing Information and Information Needs

#### Project Summary

This project was undertaken as one facet of the SFWMD's MFL determination for restoring freshwater flows to Biscayne Bay. ATM performed a thorough review of Biscayne Bay literature to understand the historical freshwater inflows and salinity conditions, identify potential indicator species for use in tracking long-term salinity reductions in the bay (resulting from the Comprehensive Environmental Restoration Plan implementation), and examine alternative MFL methods used by other Florida Water Management Districts to determine their applicability to Biscayne Bay.

This project sought to establish a scientific connection between various methods to create MFLs for Biscayne Bay and indicators of conditions in the bay. The recommended process was to apply numerical rankings to potential indicator species and potential MFL approaches in order to determine the most appropriate approach for each of the bay's six subregions.

This was necessary due to the bay's large heterogeneous ecosystem, which has undergone major anthropogenic changes during the last 100 years. Each of the six subregions have unique characteristics that demand unique treatment regarding necessary freshwater flows. Special care must be taken to either maintain existing conditions or restore some semblance of historical conditions to allow for a particular ecological function to exist that is acceptable to water managers, citizens and scientists.

