Issue 1—Water Quality

Goal One: In collaboration with other entities currently doing monitoring, develop, implement, and adapt a strategic, long-term water quality monitoring program within SJBAP that will assist with identifying and addressing issues pertaining to the natural resources.

Objective One: Sustain a strategic long-term water quality monitoring program that includes biotic and abiotic parameters, and compile analyzed data to evaluate water quality status and trends.

Integrated Strategies:

1. Dataloggers will be established at priority locations, and continuous in-situ measurements will be collected for the following water quality parameters: temperature, specific conductivity, salinity, dissolved oxygen, pH, turbidity, and depth. Aquatic preserve staff will be responsible for the implementation of this project; with one staff member assigned to calibrate, deploy and retrieve, the dataloggers approximately every two weeks. Additionally, approximately 20 hours each month will be dedicated to maintaining the meters and organizing, plotting, and analyzing the data.
2. Monitor nutrients and water clarity in SJBAP through a partnership with the University of Florida's LAKEWATCH and DEP's DEAR Water Quality Monitoring programs to determine total nitrogen and phosphorous, chlorophyll, and water clarity. Monitoring efforts began in 2001 and 2019, respectively, and aquatic preserve staff will be available to conduct sampling efforts. These projects will also remain a high priority over the next 10 years as coastal development continues to increase.
3. Evaluate and, if needed, expand LAKEWATCH and DEAR water quality sampling in SJBAP by adding more water quality monitoring sites within the aquatic preserve.

Performance Measures:

1. Collect high quality continuous and periodic water quality monitoring data within St. Joseph Bay.
2. Identify additional water quality monitoring sites, and if needed, install dataloggers at additional water quality monitoring sites.

Objective Two: Analyze and interpret the status and trends of water quality in SJBAP to identify potential impacts to natural resources and provide quality scientific data and recommendations to address such issues.

Integrated Strategies:

1. Partner with other state and local agencies to identify potential point and nonpoint sources of pollution in St. Joseph Bay and develop a monitoring plan to effectively evaluate the impacts from this type of pollution. Efforts may include integrating current water quality data with geographic information system (GIS) technology to trace possible pollution sources.
2. Support the review of numeric nutrient criteria. In 2014, numeric nutrient criteria were established in St. Joseph Bay. In a collaborative effort with other state agencies, staff contributes water quality data to assist in the review of those criteria. The list of impaired waters is scheduled to be reviewed again in 2021.
3. Support the development of TMDLs as needed. Staff will contribute water quality data to assist in the development of an assessment report documenting scientific data, results, conclusions, and recommendations regarding TMDLs within SJBAP.

Performance Measures:

1. Produce an annual report detailing scientific results, including status and trends of nutrients, clarity and chlorophyll *a*, and recommendations regarding the water quality within SJBAP.
2. In coordination with other agencies, analyze data and identify potential pollution threats and other water quality issues.
3. **I**n coordination with other agencies and stakeholders (i.e. St. Andrew and St. Joseph Bays Estuary Program, NWFWMD, etc.), identify and implement appropriate planning, action, and prevention strategies to address water quality issues, i
4. Maintain an archive of all water quality monitoring projects within SJBAP.

Goal Two: Provide timely and accurate water quality data and information to the public and other entities/agencies.

Objective One: Submit data to a repository to store water quality data in a centralized database that is user-friendly, provides quality assurance and quality control for the data collection effort, and can be accessed via the internet to provide site specific information, generate reports, graphs, tables and metadata for review by the public and other entities/agencies.

Integrated Strategies:

1. Work with the University of Florida's LAKEWATCH and DEP's DEAR Program to ensure their data are entered into WIN, DEP's centralized water quality storage database. LAKEWATCH samples are collected and evaluated, and results are available in WIN and SEACAR.
2. Submit continuous water quality data to SEACAR.

Performance Measures:

1. Water quality data is submitted to databases, in collaboration with DEP and the University of Florida, to ensure data are available to the public.
2. Implement and adapt a quality assurance (QA) plan to ensure that the data generated are verifiable, and that the procedures used to generate data are designed to produce data that are reproducible, comparable, and defensible within known limits of precision and accuracy. The department's quality assurance requirements for analytical laboratories and field activities are codified in Chapter 62-160, Florida Administrative Code (F.A.C.), Quality Assurance (QA Rules).

Objective Two: Utilize a variety of methods to inform the public and other entities regarding water quality conditions, the importance of water quality, and suggestions to improve water quality within SJBAP.

Integrated Strategies:

1. Utilize educational signage at strategic access points to SJBAP to educate the public on the ecological significance of the bay and how the public can assist in conserving natural resources.
2. Coordinate and participate in public lectures and other events where staff can address water quality issues and discuss methods for improving water quality.
3. Provide and/or create opportunities for the public to volunteer to assist with monitoring efforts and unique events (i.e. Earth Day).

Performance Measures:

1. Create and revise informational brochures to disseminate to the public.
2. Track number of SJBAP kiosks that are installed, updated, or repaired throughout the Gulf County area.
3. Track number of volunteers that assist with SJBAP programs.
4. Track the number of people that attend public lectures or other outreach events.