

ACTION PLAN *Water & Sediment Quality*

WQ-1

Water Quality Monitoring

ACTION:

Continue monthly water quality monitoring of the Lake Worth Lagoon (LWL) at 14 fixed stations. Conduct trend analysis in five years and compare data to currently developed baseline.

BACKGROUND:

All the steps highlighted in the 2008 WQ-1 AP have been successfully implemented. The improved water quality monitoring program was expanded in 2007, with a total of twenty-two (22) sites of which 18 were actively monitored in the LWL within the past 5 years. A Monitoring Plan was created and the data stored in the centralized SFWMD Water Quality (WQ) database DBHydro, to be shared with local governments, State agencies and stakeholders. A formal interagency review of the Monitoring Network was conducted through an optimization study in 2011. Results of this evaluation concluded that four sites could be eliminated without compromising the information collected. In addition to monthly sampling, salinity data were also collected by high-frequency in-situ sondes for POR 2010-2012. Summary results are included in Chapter 2.

Monitoring the health of LWL is central to the success of the restoration and protection of the lagoon. An effective monitoring program provides the data necessary to assess the status and trends in the health and abundance of the lagoon's resources and habitats. Monitoring program data are used to evaluate progress towards restoration and protection goals of the Plan. The data are also used to evaluate the effectiveness of management strategies, the direct or indirect effect on the health of the ecosystem, and to indicate if the restoration goals in other APs have been met. Continuing the monitoring is an important goal of the management plan. Monthly water quality monitoring will continue at 14 fixed locations through a cooperative partnership between ERM, which collects the samples, and the SFWMD, which analyzes the samples and posts results on DBHydro.

STRATEGY:

STEP 1 Identify willing partners to assist in the long-term funding of the LWL WQ Monitoring Network.

Potential Partners: ERM, SFWMD, DEP

STEP 2 Conduct a 5 year evaluation in 2017 to determine status and trends and assess whether water quality and habitat projects have significantly impacted the lagoon's resources and habitats.

Potential Partners: ERM and SFWMD

STEP 3 Conduct a second interagency review of the Monitoring Network for further optimization.

Potential Partners: ERM and SFWMD

SCHEDULE:

Step 1 will be completed by FY'2014. Step 2 will be completed in 2017 and Step 3 will be initiated in 2017.

COST:

Annual costs for staff, equipment, material, and laboratory analysis are estimated at approximately \$135,000 per year.

EXPECTED BENEFITS:

Determine current status of WQ and nutrient levels and provide data to evaluate impacts of measures to improve WQ in the LWL (i.e. TMDL, NNC, BMAP, BMPs). WQ results can be correlated with changes in SAV, oyster and sea turtle.

MONITORING ENVIRONMENTAL RESPONSES:

Data will be collected, analyzed and integrated with existing monitoring program.

REGULATORY NEEDS:

None anticipated. Although not mandated by the legislature, the data can be used in verification of other potential impairments such as Numeric Nutrient Criteria, TMDLs, BMPs, etc. that have not yet been verified due to lack of relevant data. In addition, the baseline developed from this monitoring program will provide information to evaluate impacts of both CERP and non-CERP related projects to the LWL and its watershed.

FUNDING:

Monitoring is currently conducted through a partnership between the SFWMD and ERM based upon availability of resources. Additional funding sources may be needed in the future. ERM is committed to collect the samples for the next 5 years.

POTENTIAL PARTNERS AND FUNDING SOURCES*:

ERM, SFWMD, FDEP, Local governments

*Listed Agencies have not committed funds and are subject to Agencies' budget approvals