

## **ACTION PLAN** *Water & Sediment Quality*

### **SW- 3**

#### **Identify and Increase Stormwater Retrofit Projects**

**ACTION:**

Identify and increase the number of stormwater retrofit projects to benefit water quality of Lake Worth Lagoon (LWL).

**BACKGROUND:**

Stormwater pollution is one of the most significant threats to LWL. Much of the urban and coastal area surrounding the lagoon was developed before the 1980's when stormwater treatment standards began to be required. As a result, much of the stormwater discharged is untreated. Because of the density of development, the lack of vacant land is a major limiting factor in the ability to treat stormwater. The coastal basin is particularly challenging, but has a direct impact on the lagoon. As a result, more innovative and expensive treatment technologies are required. Since 2008 \$6.8 million in LWLPGP grants were matched by \$8.0 million in local funds to construct over \$14.8 million in restoration and water quality projects. Three stormwater treatment projects have been implemented within the LWL watershed treating runoff from more than 526 acres that was previously untreated and discharged directly to the LWL. The use of pollution control devices, stormwater ponds, wetland treatment, and treatment swales has reduced the amount of nutrients, sediments, and heavy metals entering LWL.

In PBC, NPDES stormwater regulations require that local governments are issued NPDES stormwater permits to reduce to the maximum extent possible the discharge of pollutants both into and from municipal separate storm sewers to "Waters of the U.S." This is accomplished through the implementation of an approved stormwater management plan, which addresses the various aspects of how pollutants reach municipal storm sewers. This action plan calls for identifying areas and outfalls that are not part of the NPDES Municipal Separate Storm Sewer System (MS4) permit, and that are not currently mapped in [Map Direct](#) database from FDEP. Some of these outfalls have little or no treatment before discharging to LWL or a receiving water body that discharges to LWL. Identifying potential treatment solutions, and identifying funding sources for the construction of the most effective stormwater treatment projects is a priority for this AP.

**STRATEGY:**

**STEP 1** Identify and collect ArcGIS compatible data of existing outfalls not currently mapped that discharge to the LWL or receiving water body in the watershed and integrate them with Map Direct. Develop spatial coverage of areas with no stormwater treatment and produce LWL maps depicting outfalls with

natural resource coverage and land use.

***Potential Partners: ERM, FDEP, SFWMD, PBC NPDES Program***

STEP 2 Prioritize stormwater basins in need of retrofits based on size of drainage basin, loading, proximity to the lagoon, potential for pollutant reduction, cost, impacts to natural resources, and other factors.

***Potential Partners: ERM, FDEP, SFWMD, PBC NPDES Program***

STEP 3 Identify and provide funding mechanisms and grant opportunities to implement retrofits in high priority locations.

***Potential Partners: ERM, PBC NPDES Program, FDEP, SFWMD***

STEP 4 Allocate funds to targeted stormwater retrofit projects in high priority locations.

***Potential Partners: ERM, FDEP***

**SCHEDULE:**

Steps 1 through 2 will be implemented by 2013. Step 3 to be completed by 2014. Step 4 will be completed after Step 3.

**COST:**

The anticipated cost of the ArcGIS coverage of stormwater outfalls and project prioritization is \$50,000. The potential cost of constructing a major municipal stormwater treatment system is \$5 million. This number was based on the City of West Palm Beach Stormwater Master Plan.

**EXPECTED BENEFITS:**

Improve water quality by treating stormwater before entering LWL. Reduction in TSS, nutrients, and metals is anticipated.

**MONITORING ENVIRONMENTAL RESPONSES:**

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

**REGULATORY NEEDS:**

Permits are required by SFWMD after FDEP review.

**FUNDING:**

Funding sources to be determined. Potential grants and program: [Florida Section 319 Grants](#), [TMDL Water Quality Restoration Grants](#); [Potential Stormwater Utility Development](#); PRTF

**POTENTIAL PARTNERS AND FUNDING SOURCES\*:**

*SFWMD, ERM, FDEP, Municipalities, PBC NPDES Program, EPA*

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