TREASURE COAST REGIONAL PLANNING COUNCIL

M E M O R A N D U M

To: Council Members AGENDA ITEM 11

From: Staff

Date: July 17, 2015 Council Meeting

Subject: Impediments to Implementation of the Indian River Lagoon Basin Management Action Plans

Introduction

In May 2015, Council staff completed a report identifying impediments to implementation of the Indian River Lagoon Basin Management Action Plans (BMAPs). The report is part of a cooperative effort by East Central Florida Regional Planning Council and Treasure Coast Regional Planning Council to provide a regional evaluation and assessment related to the Indian River Lagoon, and St. Lucie River and Estuary. The work is intended to assist the state and local governments in Volusia, Brevard, Indian River, St. Lucie, and Martin counties by providing a better understanding of the challenges associated with implementing BMAPs. The ultimate goal of the report is to provide recommendations that will assist local governments and other entities to fully implement the BMAPs and improve the ecological health and economic value of the Indian River Lagoon and St. Lucie River estuarine systems. This work was supported by a Community Planning Technical Assistance Grant from the Florida Department of Economic Opportunity. This agenda item provides a summary of the report. The full report is available on Council's website.

Background

The Florida Department of Environmental Protection (FDEP) Total Maximum Daily Load (TMDL) program is a statewide watershed-based management approach to restore and protect water quality in Florida. TMDLs are developed, allocated, and implemented through a phased approach, which includes the development of a BMAP. Each BMAP contains a comprehensive set of strategies for restoring impaired waters by reducing pollutant loadings to meet the allowable loadings established in a TMDL. TMDLs are water quality targets based on state water quality standards for specific pollutants, such as excessive nitrogen and phosphorus. BMAPs are broad-based plans that are developed with local stakeholders and rely on local input and local commitment for implementation. Each BMAP is designed to address key elements required by the Florida Watershed Restoration Act (Section 403.067, Florida Statutes). The BMAPs are adopted by Secretarial Order to be enforceable.

There are currently 20 adopted BMAPs in the State of Florida covering over 7,325,000 acres. Portions of the Indian River Lagoon are addressed by four of the adopted BMAPs, which cover an area over 990,000 acres (Exhibit 1). These plans outline specific projects that have provided or are expected to provide load reductions and a schedule for implementation for the first five-year iteration of the BMAPs. The BMAPs are intended to be implemented in three five-year periods with the total required reductions spread over a 15-year time frame.

Methods

In order to identify and evaluate impediments to BMAP implementation, Council staff interviewed county staff and representatives responsible for identifying projects to achieve nutrient reductions. Separate meetings were held with individuals from Brevard, Indian River, Martin, and St. Lucie counties in April, 2015. Volusia County staff chose not to meet to discuss impediments to BMAP implementation, because the county does not have a required nutrient reduction in the BMAP and the county has no projects for BMAP implementation at this time.

Based on the information provided in the meetings with local government representatives, Council staff compiled a list of possible BMAP impediments. This list was then sent back to the staff of the five counties and they were asked to use their best professional judgment and experience with the BMAP program to assign a score to each of the items in the list. They were asked to score each item based on the perception of how the impediment may impact the ability of their organization to implement the BMAPs. After assigning scores, the list of impediments was then returned to Council staff for tabulation and analysis. The same list of possible impediments was also sent to the municipalities within each BMAP for scoring.

Results

Discussions with county staff resulted in the identification of 15 impediments to implementing the BMAPs. The impediments are listed in order of importance with those being viewed as major impediments occurring higher in the following list:

- Inadequate funding.
- Nutrient loading from muck is not being addressed.
- Nutrient loading from groundwater is not being addressed.
- No incentive for innovative stormwater management.
- Incomplete water quality data.
- Inadequate water quality monitoring.
- Unequal treatment of public and private entities, agriculture, and water control districts.
- Onerous conditions attached to BMAP projects.
- Inadequate technology to meet TMDL goals.
- BMAPs are based on flawed TMDLs.
- Trends in nutrient loading from the atmosphere are not being considered.
- Legacy Loading in Lake Okeechobee.
- Lack of operations and maintenance monitoring.
- Load allocation process is not consistent between BMAPs.
- Incomplete knowledge of existing infrastructure.

Discussion

Project Funding. Lack of adequate funding has been identified as probably the most significant impediment to meeting BMAP and TMDL goals. According to an analysis by FDEP in 2014, nearly $269 million has been spent across the four BMAP basins on constructing and implementing Phase 1 BMAP strategies and TDML reduction projects. Much of these funds were expended in the five counties over the last 15 years by the public and private sector. With two five-year phases remaining, it is unlikely that BMAP participants will be able to achieve TMDL goals. This is likely the case with the 16 other adopted BMAPs around the state. In fact, meeting adopted TMDL targets in the five-county BMAP area is estimated to cost $4.6 billion.

Currently, local funds are the main funding source for carrying out TMDL reduction strategies and construction projects. Primary funding sources to augment and defray local implementation costs are the Clean Water State Revolving Loan Fund, the TMDL Water Quality Restoration Grant program, the EPA Section 319(h) Grant program, and special legislative appropriations. Unfortunately, only $9 million is available annually from the state's grant and loan programs.

Last year, Florida voters approved a constitutional amendment to ensure annual investment in a Land Acquisition Trust Fund. The trust fund is to be used to acquire, restore, improve, and manage conservation lands including wetlands and forests; fish and wildlife habitat; lands protecting water resources and drinking water sources, including the Everglades and the water quality of rivers, lakes, and streams; beaches and shores; outdoor recreational lands; working farms and ranches; and historic resources. Based on the voter approved ballot language, BMAP/TMDL projects should be eligible for financial assistance from the trust fund. The following recommendations are offered to help resolve the issue of inadequate funding for the implementation of BMAP projects:

1. FDEP and all affected local governments should support an annual allocation of state funds to be dedicated to the implementation of BMAP strategies for achieving TMDLs for the Indian River Lagoon, and St. Lucie River and Estuary.

2. FDEP should establish a matching grant program specifically designed to equitably define and distribute allocated trust fund monies for implementing BMAP strategies achieving TMDLs.

Water Quality Monitoring. Calculation and allocation of TMDLs from the various land uses in a BMAP basin and establishment of future TMDL goals for BMAPs are primarily calculated using mathematical water quality modeling. Throughout the five-county region there have been disputes about how many TMDL reduction credits should be assigned to BMAP projects and Best Management Practices (BMPs) due to lack of actual water quality monitoring data. When long term, continuous water quality monitoring is feasible, it is the most reliable way to determine: 1) ambient load to basin water bodies and water body segments; and 2) how much credit should be assigned to various pollutant load reduction projects and BMPs in a BMAP basin. The following recommendation is offered to help resolve the issue of inadequate water quality monitoring:

1. FDEP should establish and fund a comprehensive water quality monitoring program as part of its overall statewide BMAP program. The purpose of such a comprehensive program would be to: 1) establish actual daily loading and water quality status at numerous points of outfall within each BMAP region; 2) establish consistency and certainty in assigning credits for pollutant load reduction projects and BMPs; 3) improve accuracy in determining the actual water quality improvement values/credits assigned to various BMPs and TMDL reduction projects; 4) remove the onerous conditions related to water quality monitoring often attached to BMAP projects undertaken by Municipal Separate Storm Sewer Systems (MS4s) entities; 5) create some incentive for innovative stormwater management techniques; and 6) better determine and assess progress or meeting of TMDL and BMAP goals.

Time Frames and Implementation Schedule. The four BMAPs in the region contain several water quality management strategies designed to achieve TMDL reductions for the lagoon and estuary. BMAP implementation for the region is scheduled in three five-year phases. The region is in the first five-year phase of BMAP implementation. Nearly all of the projects receiving credit in the first five-year phase were completed prior to adoption of the BMAPs. Over the last 15 years, hundreds of millions of dollars have been invested by the public and private sector in the five-county BMAP area to build water quality improvement projects and implement best management practices. With two five-year phases remaining, it is unlikely that BMAP participants will be able to achieve TMDL goals. Even if there were adequate funds available, the necessary water quality improvement projects could not be planned, permitted, and developed in time. In addition, imperiled water bodies with connections to large legacy sources of nutrients may never achieve TMDL goals. This is particularly true for the St. Lucie River and Estuary BMAP where the ability to meet TMDL goals is significantly impaired by regular discharges from Lake Okeechobee to the estuary. The following recommendations are offered to help provide more appropriate time frames and schedules for BMAP implementation:

1. By January 1, 2018, FDEP or an independent authority should conduct a comprehensive audit of program goals and progress to determine: a) whether the time frames for accomplishing BMAP strategies and TMDL goals are realistically achievable; and b) what, if any, adjustments to BMAPs are necessary regarding implementation time frames and schedules.

2. Consider establishing an end point or a process for establishing BMAP completion dates for MS4 entities participating in the program that are presumed to have completed the equitable share of TMDL reduction projects required to meet TMDL goals.

Equitable Treatment of Participants. Agricultural and non-agricultural participating entities under the BMAP program are addressed differently. For agricultural producers, there is a presumption of compliance with water quality standards if a producer signs a notice of intent (NOI) and implements BMPs appropriate for the commodity. Monitoring and compliance of NOI requirements to assure proper implementation and the continued operation and maintenance of agricultural BMPs remains a concern of some BMAP participants. The concern is that BMPs designed for agricultural producers as a whole may only achieve a partial load reduction from

contributing sources. Stakeholders are concerned that the burden of cleaning up the remaining load contributions from agricultural entities and meeting a basin's TMDL goals may be left to downstream participants.

For non-agricultural entities, obtaining BMAP credits and compliance with water quality standards is not as presumptive and often requires entities to propose specific pollutant load reduction projects in addition to implementing BMPs. Innovative projects frequently come with FDEP requirements for continuous water quality monitoring, bathymetric surveys, sea grass monitoring and operation, and maintenance schedule commitments. Compounding this inequity, some actions that appear to be productive in reducing pollutant loads do not receive enough credit. For BMAP credit purposes, exfiltration and dry retention projects, which were presumed to remove 100 percent of the nutrients from treated stormwater, may no longer receive full credit. In addition, public education programs, muck removal projects, and lands purchased for wetland rehydration and additional water storage may not receive enough credit.

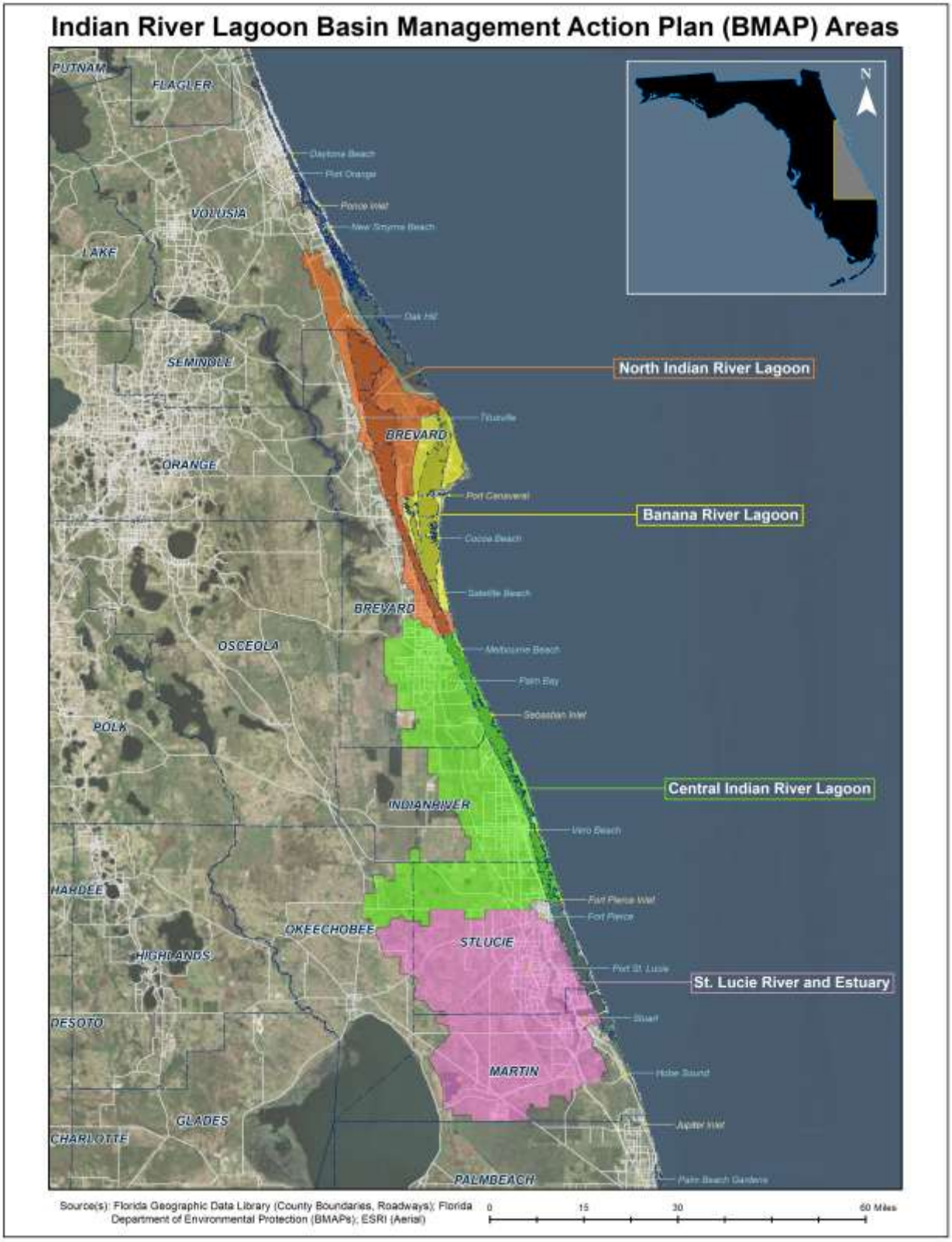
Equity issues between agricultural and non-agricultural participating entities; and certainty, predictability, and stability in the program related to issuing BMAP credits should be resolved before beginning the second phase of the BMAP process. The following recommendation is offered to help resolve the issue of unequal treatment of BMAP participants:

1. Prior to starting the second phase of the BMAP process, FDEP and the Florida Department of Agriculture and Consumer Services should work with all participating entities to rectify any flaws or concerns raised by the region's BMAP participants related to: a) monitoring and enforcement of the NOI process; and b) finalizing presumptive criteria for granting BMAP credits for BMPs and pollutant load reduction projects.

<u>Recommendation</u>

For informational purposes only.

Exhibit 1


Indian River Lagoon Basin Management Action Plan (BMAP) Areas
PUTNAM
FLAGLER
VOLUSIA
LAKE
SEMINOLE
ORANGE
BREVARD
BREVARD
OSCEOLA
POLK
INDIANRIVER
HARDEE
OKEECHOBEE
HIGHLANDS
STLUCIE
DESOTO
MARTIN
GLADES
CHARLOTTE
PALMBEACH
North Indian River Lagoon
Banana River Lagoon
Central Indian River Lagoon
St. Lucie River and Estuary
N
Source(s): Florida Geographic Data Library (County Boundaries, Roadways); Florida Department of Environmental Protection (BMAPs); ESRI (Aerial)
0
15
30
60 Miles