

**INDIAN RIVER COUNTY, FLORIDA  
MEMORANDUM**

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**TO:** Jason E. Brown, County Administrator

**THROUGH:** Richard B. Szpyrka, P.E., Public Works Director

**FROM:** Eric Charest, Natural Resources Manager

**SUBJECT:** Florida Department of Environmental Protection's Central Indian River Lagoon Basin Management Action Plan

**DATE:** March 3, 2021

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**DESCRIPTION AND CONDITIONS**

In 2009, the Florida Department of Environmental Protection (FDEP) developed Total Maximum Daily Loads (TMDLs) for segments within the Indian River Lagoon (IRL), including the Central Indian River Lagoon (CIRL) where Indian River County (the County) is located. TMDLs were needed due to the IRL being classified as impaired due to excessive amounts of nitrogen and phosphorus which were determined to correlate to a decrease in seagrass distribution. The purpose of TMDLs is to establish the allowable loadings of nitrogen and phosphorus discharged to the IRL that would restore the waterbodies such that they meet applicable water quality criteria. The 2009 TMDLs were derived from outputs from computer model runs of the Pollutant Load Screening Model (PLSM) prepared by the St Johns River Water Management District. These TMDLs served as the basis for the FDEP's work in the creation of the CIRL Basin Management Action Plan (BMAP).

The FDEP adopted the Central Indian River Lagoon Basin Management Action Plan (CIRL BMAP) in February of 2013 as a means to represent a long-term plan to restore deeper water seagrass habitats through a reduction of watershed loadings of total nitrogen (TN) and total phosphorus (TP) within the IRL basin. The BMAP document identified TMDLs as water quality targets based on state water quality standards for specific pollutants (such as TN and TP). The BMAPs also identified required pollutant reductions for stakeholders covered under the document where necessary in order to achieve compliance with the established TMDLs. It is important to note that in the initial inception of the CIRL BMAP, seagrass metrics within our segments of the Indian River Lagoon were such that no required reductions were imposed on the County.

Although the 2013 BMAP did not require TN or TP reductions be undertaken by the County, the BMAP document is also used by FDEP to chronicle projects undertaken by stakeholders within the basin and implemented to improve seagrass coverage within the basin. This inventory included both completed projects and planned projects. In the 2013 BMAP, even without any reductions being imposed, the County submitted a list of projects that it had completed, accounting for reductions of more than 11,470 pounds of TN and 4,190 pounds of TP from the waters not only heading to the Lagoon, but waters from within the Lagoon itself as well. Investments made by the

County to improve the water quality of the CIRL before the FDEP even allocated such reductions to stakeholders was well in excess of \$13 million dollars, with additional planned projects totaling more than \$13 million additional dollars and accounting for further estimated reductions of 5,200 pounds of nitrogen and 1,200 pounds of phosphorus.

In April 2015, County Staff were made aware of estimated TN and TP loadings and reductions that were anticipated to be imposed upon the County in the next update to the CIRL BMAP. At that time, the TN loading for the County was identified as 224,100 pounds, and the TP loading was 39,714 pounds. The required percent reductions adopted under Florida Administrative Code (FAC 62-304) required a 56% reduction in TN and a 48% reduction of TP. Based on the loading values presented to the County, it was expected that the County would be facing required reductions amounting to 125,496 pounds of TN and 19,063 pounds of TP when the CIRL BMAP was to be updated in 2018. These values presented to the County came from PLSM Model outputs as related to the TMDLs that were established for the CIRL in 2009.

The 2018 update target was not met by FDEP for the CIRL BMAP due to significant revisions that had been made since the 2013 version was adopted. FDEP points to their review of a new water quality model, the Spatial Watershed Iterative Loading (SWIL) Model as justification for the 2018 update not being released until 2020 for review, and recently adopted in 2021. Per the 2021 BMAP version, "The SWIL Model was developed through cooperative funding provided by Brevard County, all of its cities, and Florida Department of Transportation (FDOT) District 5, as well as support from the U.S. Air Force, in an effort to update data being used to predict loading." Although a major stakeholder within the CIRL and routinely in attendance at all FDEP BMAP scheduled meetings, Indian River County was not included in the design or implementation of this new model, nor made aware of its initial outputs. It is also important to note that the percent reductions adopted under the original TMDL Rules (from 2009 using data derived from the PLSM Model) were applied to the new loading values created by the SWIL Model.

Although draft in nature, FDEP continued to provide loading and reduction values to the County based on the PLSM Model run on several occasions, including as late as in 2019, strongly suggesting that Indian River County would be assigned those loadings and reductions, or something very close to them. This was even after FDEP had spent several years working with Brevard County stakeholders on the SWIL Model and continued to work with those stakeholders. It was not until April 21, 2020 that County staff were made aware of the significant allocation and reduction changes FDEP was planning on incorporating into the CIRL BMAP update for Indian River County due to the shift in the BMAP now being based on the SWIL Model.

County staff immediately began reviewing the information presented by FDEP, which included numerous staff discussions with not only FDEP, but also with the SWIL Model developers and outside consultants in order to attempt to gain an understanding on the significant increase in the County's proposed allocations and reduction requirements. County Staff responded to FDEP on June 9, 2020 documenting concerns and anomalies in the approaches used to define the County's TN and TP allocations and reductions. This was followed up by numerous conference calls and e-mails discussing the information presented in our June 9<sup>th</sup> letter to FDEP.

FDEP indicated it would be taking comments under consideration and acknowledged there would be revisions to the proposed numbers presented to the County. County staff followed up the June 9<sup>th</sup> concerns with an August 24, 2020 letter to FDEP reiterating our concerns with their flawed approach at using unverified data to impose new allocations and significant reduction requirements for Indian River County. It was not until a publicly held webinar in late August that the County was made aware of the changes made by FDEP to our values. The revisions FDEP made to the allocations for stakeholders within the CIRL did not address many of the items in our June 9, 2020, or follow-up August 24, 2020 letter. County Staff maintained on-going communications with FDEP over these items in an unsuccessful attempt to get them addressed prior to being published in the CIRL BMAP.

On November 16, 2020, FDEP released their draft update to the 2013 CIRL BMAP. County Staff reviewed this document within a very short comment period allowed by FDEP and provided comments in a December 4, 2020 letter and Draft BMAP Comment submittal. On December 16, 2020, FDEP released the revised BMAP document and identified a tentative timeframe for the adoption of the document. County Staff reviewed the revised document and noted that many of our concerns that had been submitted repeatedly had not been addressed. On December 22, 2020, County Staff submitted a letter of objection to FDEP Deputy Secretary Adam Blalock on the adoption of the CIRL BMAP in its current form, reiterating many of our unanswered concerns.

The current version of the CIRL BMAP document contains allocations and reductions for the County that have undergone several changes since the initial presentation of the draft values in April of 2020. The County is now being presented with new load allocations based off the SWIL Model of 357,237 pounds of TN and 51,895 pounds of TP, an increase 59.4% over our initial TN loading and a 30.7% increase in TP loading. As the required percent reductions established under the PLSM Model are still being used by FDEP with the SWIL Model, the use of the unverified SWIL Model for starting loads for Indian River County has resulted in increasing the required TN reduction by 72.8% from 125,496 pounds in 2015 to 216,862 pounds in 2021. Similarly, the approach taken by FDEP in relying on a model that had not been calibrated for our portion of the Lagoon has resulted in an increase of TP required reductions of 61.6% for the County, going from 19,063 pounds of reduction in 2015 to 30,811 pounds of reduction required in 2021.

These significant changes in both allocations and reductions presented by FDEP were done while repeated attempts by the County to have our documented concerns addressed were left unresolved. Of note, major concerns left unaddressed in the CIRL BMAP (identified in that December 22, 2020 letter from the County to the FDEP) include:

- FDEP has confirmed that the SWIL model was used for purposes that it was not originally designed for nor has it been calibrated for the Indian River County portion of the Central IRL. We have requested FDEP to explain, in the document itself, that the SWIL model needs to be recalibrated which will necessitate adjustments to the allocations assigned to Indian River County, along with an indication that the loadings assigned to IRC are subject to change, potentially with a downward revision. It appears that this has not been included in the proposed BMAP.

- Agricultural non-point producers should be required to verify on a set reporting schedule (no greater than bi-yearly) through independent water quality testing or other approved physical methods, that stormwater leaving their property actually meets discharge standards. To assume that compliance is being achieved through participation (whether regulated or not) in a Best Management Practice (BMP) is unrealistic. Because agriculture is the single largest contributor of TN and TP to the Lagoon, it would seem most appropriate that agricultural entities are held to the same standard of reduction proof as other stakeholders.
- IRC believes the milestones in Section 1.2.2 of the document are unrealistic. The County has spent millions of dollars attempting to reach the easier to remove inorganic forms of TN and TP, which is rapidly leaving only the much harder to remove organic forms. Short of total flow diversion from the Lagoon, it is unrealistic to believe that the goals will be met. Even nutrients in the diverted water must also be addressed before discharge or the pollution is simply being rerouted. Deep well injection should not be considered a cure-all, because as Orlando's CONSERV project and south Florida's deep well injection of wastewater have shown, it does not stay where it is put.
- FDEP has suggested that if target reduction goals are not met, there will likely be no monetary fines or other penalties. However, this statement provides little comfort to the County. Per section 403.067, Florida Statutes, BMAPs are enforceable per sections 403.121, 403.141 and 403.161, Florida Statutes. These provisions include civil actions, civil penalties and administrative remedies. This is especially problematic as the unrealistic proposed reduction goals and reduction milestones are going to be borne by the County, while other significant contributors, such as the water control districts and agricultural producers, are not going to be responsible for meeting such requirements.

The County does acknowledge FDEP's willingness to engage in discussions with us on our comments, and the County remains committed to continuing its efforts at restoring the Lagoon, but the information presented in FDEP's CIRL BMAP document appears to be based upon inaccurate information for our portion of the Lagoon, resulting in allocations and reductions that not only will be a significant burden on County taxpayers, but in some cases appear to not be attainable based on the available data and current field conditions within our portion of the Lagoon.

The County received notice of the CIRL BMAP final order on February 23rd. County's deadline for filing a petition challenging the CIRL BMAP is March 16<sup>th</sup>. County staff and FDEP staff are currently working to set up a meeting to occur before the March 9<sup>th</sup> Board meeting. County staff will present a verbal update to the Board on the outcome of that meeting, should it occur. Additionally, the County Attorney's Office has had an initial discussion with FDEP's General Counsel's Office. In the event the Board authorizes County staff to move forward with filing a petition, the attorneys discussed pursuing an extension of time to the filing deadline to allow for further conversations.

### **FUNDING**

A funding source has not been determined at this time. Based on the realized reductions reported by the County to date and the costs associated with those reductions, it is estimated that it would cost the County an additional \$61,000,000 above and beyond our current expenditures to meet reductions presented in 2015 by FDEP. Using those same projections, FDEP's current approach under the new model would result in costs to the County in excess of \$129,000,000 above and beyond our current expenditures to reach its required reductions, an increase in estimated project costs of over \$68,000,000 based on an unverified model change. Should the Board approve Staff to file a petition challenging FDEP's proposed agency action, fees associated with retaining legal counsel for this action is estimated to be \$300,000.

### **RECOMMENDATION**

Staff recommends that the Board authorize County Staff to seek an extension of time to the filing deadline in order to continue conversations to resolve County's concerns. In the event these discussions are unsuccessful, County Staff recommends the Board authorize the filing of a petition challenging FDEP's proposed agency action of finalizing the Central Indian River Lagoon Basin Management Action Plan as a last resort in order to preserve the County's rights.

### **ATTACHMENTS**

1. 6/9/2020 Letter of Objection to draft BMAP Allocations
2. 8/24/2020 Letter of Objection to BMAP Allocations
3. 12/4/2020 Comments on November 2020 Draft CIRL BMAP
4. 12/22/2020 Letter of Major Objections to adoption of December 2020 CIRL BMAP

### **APPROVED AGENDA ITEM FOR MARCH 9, 2021**