

Indian River Lagoon Basin Management Action Plans

Meeting Summary

Tuesday, May 16, 2017

9:30 AM – 10:49 AM

Brevard County Agricultural Center

3695 Lake Drive, Cocoa, FL 32926

Attendees

Holly Abeels, UF/IFAS Brevard County	Jan Miller, SJRWMD
Alix Bernard, City of Rockledge	Matthew Mitts, City of Vero Beach
Tiffany Busby, Wildwood Consulting	Keegan O'Brien, 3E Consultants
Fernando Cambra, Palm Bay Public Works	Judy Orcutt, Citizen
Erik Charest, Indian River County	Marion Parson, City of Palm Bay EGIS
Julie Clark, Palm Bay Utilities	Danessa Pecorino, City of Vero Beach
Matt Culver, Brevard County	Allen Potter, City of Satellite Beach
Teresa Coley, SFWMD	Robert Potts, E Sciences
Kevin Coyne, FDEP	Jeff Ratliff, City of Cape Canaveral
Robert Day, Citizen	Kim Reeder
Mark Ellard, Geosyntec	Joanie Regan, City of Cocoa Beach
Yesenia Escribano, FDACS	Sandra Reller, City of Titusville
Jake Fojtik, FDACS	HM Ridgely, Evans Properties
Hector Franco, Palm Bay Public Works	Gary Ritter, Florida Farm Bureau
Clyde Giesenschlag, Citizen	John Royal, Brevard County
Peggy Giesenschlag, Citizen	Frank Sakuma, IRL Council/IRL NEP
David Glassner, DEP	Todd Scaldo, Indian Harbour Beach
Lauren Hall, SJRWMD	Patrick Shearer, E Sciences
Katie Hallas, FDACS	George Simons, Carter Associates, Inc.
Tom Hill, Florida Farm Bureau	Jeff Smith, ECT
Chuck Jacoby, SJRWMD	Dani Straub, City of Melbourne
Victor Karycki, City of Rockledge	John Tarantine, NASA
Kerry Kates, Florida Fruit and Vegetable Assn.	Kelsie Timpe, ATM
Pam LaSalle, Citizen	Doug Toth, Jones Edmunds
Lance Lumbard, Amec Foster Wheeler	Joe Walter, UF-IFAS Extension
Sean Maroney, Volusia County Public Works	Everett Wegerif, City of Cocoa
Melissa Martin, Brevard IRL Coalition	Kevin Williams, II, DEP
Darren May, Cape Canaveral AFS	Terry Williamson, Brevard County
Mike McCabe, Melbourne-Tillman WCD	Heather York, Wildwood Consulting
Bach McClure, Brevard County	Kelly Young, Volusia County
Keith McCully, Indian River County	

Welcome and Opening Remarks

Tiffany Busby welcomed everyone to the Indian River Lagoon (IRL) Basin Management Action Plans (BMAPs) meeting, and noted that the meeting covered all three IRL BMAPs. She thanked Brevard County for the use of the facility. She asked attendees to sign in for the meeting. The Florida

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Department of Environmental Protection (DEP) uses the sign in sheets to update the new email delivery system. She introduced Kevin Coyne, the program administrator for the BMAP program. Kevin Coyne introduced David Glassner as the new coordinator for the IRL BMAPs. David also is the BMAP coordinator for the St. Lucie BMAP. Kevin Coyne also introduced Kevin Williams and stated that Kevin Williams will be providing assistance in South Florida. He thanked attendees for participating in the meeting and stated that there are big milestones coming in year five. The participants introduced themselves. Tiffany stated that David's contact information is listed on the meeting agenda along with a website to the public files for the IRL BMAPs.

Review of BMAP Annual Progress Reports

David displayed the meeting agenda and IRL background information. He stated that additional background information is available in the adopted BMAP documents. The goal of the IRL total maximum daily loads (TMDLs) is recovery of seagrass. Information in the year four draft annual progress reports has been compiled for the reporting period of March 1, 2016 to February 28, 2017. The draft reports were emailed to stakeholders yesterday and are posted to the public files website.

David stated that seven projects were completed in the Banana River Lagoon (BRL), 11 in Central IRL, and 13 in North IRL. More information about the completed projects can be found in the annual progress reports. David displayed graphs showing progress toward the total nitrogen (TN) and total phosphorus (TP) TMDLs in the BRL project zone Band the NIRL project zone A. He stated that the small bar is the TMDL target, the taller bar is the starting load, and the middle bar reflects the load reduction from projects. He stated that additional information is available in the draft annual progress reports.

Brevard County Muck Flux Project

David introduced Matt Culver with Brevard County. Matt stated that Brevard County began a project to review the flux of nutrients from muck to the IRL. The county passed a half-cent sales tax last year to fund IRL restoration projects. The first project completed using the sales tax was the Turkey Creek project that removed approximately 216,000 cubic yards of muck material. Before the sales tax passed, the county began research through the Florida Institute of Technology (FIT). The researchers at FIT estimate 37 % of TN sources in the IRL is from muck flux and 45 % of TP can be attributed to muck flux. FIT researchers estimated TN and TP flux in the sand and muck prior to dredging to be 73 tons per square kilometer per year (tons/km²/yr) and 20 tons/km²/yr, respectively. After dredging the flux was reduced to 32 tons/km²/yr of TN and 7 tons/km²/yr for TP.

Matt stated that 220 tons of nitrogen were removed and 97 % of the solids were retained. He added that 55 tons of phosphorus were removed and greater than 99 % of the solids were retained. Most of the material was delivered to a private property to be used as a potential fertilizer source in the future. The remainder of the material was stored in a dredge material management area (DMMA). Matt stated that this was the first project completed, but more muck removal projects are planned. The lifetime of the project is anticipated to be 20 years. The project cost about \$ 7,000,000.

Mike McCabe asked what the TN and TP levels were in the muck. Matt responded that he does not have that information with him today, but the information is available in the FIT report. He added that FIT continues to research the effects of muck on biology, chemistry, fish, and seagrass. The results from year

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two of the study will be available in a few months. Brevard County and FIT are currently planning for year three of the research.

Tiffany asked how the research was funded. Matt responded that the county received \$ 41.5 million from the legislature over the past three years to fund the dredging and the research. The county is currently planning muck removal at five other sites.

IRL Seagrass Mapping and Water Quality Update

David introduced Chuck Jacoby with the St. Johns River Water Management District (SJRWMD) and stated that Chuck will provide seagrass mapping and water quality updates based on the SJRWMD data. Chuck stated that seagrass mapping is conducted every other year. The data takes about two years to process. The flights have been completed and most of the imagery has been accrued. The next step is an accuracy assessment of 260 points. The seagrass footprint will include 2011 and 2013 data points as he indicated on the BRL, North IRL, and Central IRL maps. Chuck stated that the goal is to complete the mapping effort by May 2018. SJRWMD also looks at seagrass transects two times per year to assess seagrass density, species, and location.

Chuck displayed the location of the water quality stations. He discussed water quality starting at the north end of the basin moving south. Chuck stated that he would focus on the data period of 2011 to 2017. He displayed a map of rainfall and noted that 2016 was a wet year but 2017 so far has been dry. His water quality summary will include TN, TP and chlorophyll *a*. In the line graphs for Station IRL 106, the green line represents chlorophyll *a*, blue is phosphate, red is nitrite, and black is nitrate. He pointed out that the second red box highlights the superbloom in 2012 with chlorophyll *a* levels in the hundreds. The green peak in the third box is the brown tide.

Chuck stated that at Station IRL115, there was not a brown tide but chlorophyll *a* concentrations were elevated during the reporting period. At Station IRLB096, there was a late superbloom and brown tide which led to the fish kill. He stated that in 2017 the water clarity began to improve, most likely due to drier conditions in 2017.

Chuck pointed out a longer bloom at lower intensity occurred in the Central IRL at Station IRLI26. The superbloom did not make it to this station, but there was a brown tide as shown in 2016. Chuck stated that based on the information he has seen so far it will be difficult to achieve compliance again this year.

Chuck stated that at the start of the BMAPs, the stakeholders identified research priorities. Chuck is working with the IRL National Estuary Program (NEP) to consider re-evaluating the priorities. He was interested in knowing if stakeholders would be interested in resuming this task. He stated that the IRL NEP could use the priorities to develop the updated NEP plan. David stated that this would be a good topic to discuss during the next technical meeting. The attendees did not have any objections to reviewing the research priorities. Kevin Coyne stated that it would be beneficial to integrate the BMAP with the NEP plan as much as possible.

A lady in the audience asked what the next step would be once the information needs and research priorities were re-evaluated. Chuck responded that there would be a discussion with BMAP stakeholders and the NEP advisory committee. The committee could help determine the feasibility of the research and management information items.

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Water Quality Monitoring Update

Tiffany introduced Lance Lumbar, a contractor to DEP, to discuss water quality data in the tributaries. Lance stated that this year he used a different approach and screened the water quality data differently to improve data quality and to provide a more robust analysis of the results. He stated that he reviewed the available data and was not able to identify a significant trend for many of the stations. As indicated in the tributary station data summary slide, the yellow highlighted stations showed significant trends. He stated that many of the stations have small datasets, and multi-year datasets are preferred.

Lance stated that at station IRLTBC, which is north of the BMAP area, there is an increasing trend for TN. The trend for TP is also increasing at this location with a data record of 15 years. At station FPF-Site 1 there is also a significant increase in TN. He stated that there was no real trend in chlorophyll *a* at any of the stations. Patrick Shearer asked if Lance was aware of the inputs causing the increase in TN and TP at these stations. Lance stated that he did not look at potential sources.

David stated that Appendix B in the draft annual reports contains the water quality graphs and methodology used for the analyses. He added that the data collected is important even though significant trends were not identified. Tiffany asked Lance what p-value was used in the analyses. Lance stated that p-values below 0.5 were considered significant.

Melissa Martin asked David what other analytes might be beneficial in the analysis. David stated that this will be discussed during a future meeting for the second phase of the BMAP.

Watershed Information Network (WIN) Project

David displayed a slide summarizing the status of the Watershed Information Network (WIN). David stated that a monitoring plan was designed when the BMAPs were adopted, but he would like to update the monitoring network. He stated that WIN is a replacement for the Florida Storage and Retrieval (STORET) database. He stated that the WIN/STORET coordinators will be available to assist people with data uploads to WIN, for those organizations that collect water quality data.

Next Steps

David stated that Section 403.067, Florida Statutes (F.S.) contains new requirements for BMAPs including a priority ranking of projects, planning-level cost estimates, completion dates, and expected load reductions, as well as the source and amount of financial assistance from DEP, water management districts, and other entities. David stated that a list of projects will be sent to the legislature every year.

A Path Diverges

David stated that there are some key goals for the stakeholders during the next year, since this is the fifth year of the BMAP. He stated that the Central IRL will receive allocations for the second five-year phase of the BMAP. David stated that he would like to come back in a couple of months to have a technical meeting to discuss the following options moving forward:

1. Wait to see if the U.S. Environmental Protection Agency (EPA) approves the draft TMDL that Brevard County is writing and use the SWIL (Spatial Watershed Iterative Loading) model to develop allocations.
2. Use the currently adopted TMDL with the SWIL model outputs to develop allocations.

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3. Use the currently adopted TMDL with the PLSM (Pollutant Load Screening Model) outputs for allocations.

David stated that the technical meetings to discuss these options will be publicly noticed. David would like to make sure the IRL Council and NEP science advisory committee are in attendance.

Melissa asked if the meeting slides will be posted. David responded that he will post the presentations on Wednesday to the website at the bottom of the agenda.

Allen Potter asked about the timeline for re-adoption of the BMAP. Kevin Coyne responded that this is a detailed, multi-phase process with many meetings. The goal is to re-adopt the BMAP by the end of the fifth year. David added that it is important to select one of the path forward options first, because the timeframe for approval and adoption of a new TMDL through EPA and DEP is a big unknown. Allen's concern was the municipal budget cycle and planning which occurs in the summer. Kevin Coyne responded that he understands the need to move forward quickly. Tiffany re-iterated that there are two items to consider. The first item to consider is whether to move forward with the currently adopted TMDL or the draft TMDL that Brevard County is proposing. The second item to consider is whether to use the PLSM or the SWIL model for allocations. Then the municipalities can work to identify projects for the next phase of the BMAP. David stated that municipalities received an allocation for 15 % of the total required reduction during the first five-year phase. The stakeholders also will need to decide on a reasonable reduction goal for the next five-year phase.

Mike stated that many of the project load reductions in Appendix A of the report are labeled as "to be determined." He asked why the reduction estimates he submitted are not reflected in the report. David responded that DEP is working to verify the information. Mike responded that he has backup documentation he can send to David. David added that he will be reaching out to stakeholders for this type of information.

Patrick asked David if he could send the draft allocations from the SWIL model prior to the meeting so the stakeholders could review their numbers. David stated that DEP needs one last piece of information from Brevard County to determine allocations.

Darren May stated that the regulations have timeframes to achieve compliance within 15 years. He does not want the process to be drawn out so that there is little time for large reductions at the end of the timeframe. Kevin Coyne responded that there is some flexibility in the timeframe but his goal is to have the BMAP re-adopted within the fifth year. David added that some of the items can continue in parallel. DEP can move forward with allocations, using the PLSM or SWIL model, if the stakeholders choose to continue with the currently adopted TMDL. If stakeholders choose to move forward with the draft TMDL in development by Brevard County then the timeline for allocations and BMAP re-adoption is unknown.

A gentleman in the audience asked if the stakeholders will start over again with the BMAP if the SWIL model is selected. David responded that the stakeholders will receive credit for progress made to date. Stakeholders also will receive another allocation of the total required reduction to achieve during the second five-year phase. Kevin Coyne added that DEP is not resetting the clock.

David stated that it is good to start thinking now about priority projects for the next five or ten years regardless of the model and TMDL selected. Darren stated that during the last five years entities have

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been working independently to meet their allocations. He added that the revisions to Section 403-067, F.S. requires project prioritization. Tiffany stated that in the case of the springs BMAPs, stakeholders are ranking their own projects as high, medium, or low priority. All projects in the BMAP will not be ranked from 1 to 100, for example. Darren suggested that it may be more beneficial to look at regional cost-share projects within the BMAP. Tiffany and Kevin Coyne agreed this is a great approach that is receiving more interest around the state.

George Simons stated that there have been many projects and seagrass studies completed. He asked if there is any correlation between projects completed and progress toward restoration and monitoring trends. He stated it is difficult to justify the funding for the activities if progress is not made. Lance responded that the monitoring data he analyzed was for a small area, but data are available for other areas that could be analyzed. Kevin Coyne stated that this is a good reason to reassess the monitoring network. He stated that sites can be moved within the basins to better reflect improvements from key projects. He added that there can be a lag time between project completion and changes in trends. Tiffany added that all projects are not monitored. The goal is to use the monitoring network to show success and balance resources in a large basin, but not necessarily to measure the benefits of each BMP or management action.

Darren stated that it would be good to think about adopting SWIL as the DEP model if selected by the stakeholders. He stated that the model might be better maintained and accessible in the long-term.

Keith McCully stated that he is not too familiar with the SWIL model, but assumes it would result in lower load allocations. He asked if Brevard County would guarantee that they would not hold up the BMAP adoption if the SWIL model is not selected and the stakeholders choose to move forward with the currently adopted TMDL. David responded that this is a good question to ask Brevard County.

Tiffany stated that once a decision is made it can also be changed at a later point in time. She stated that the draft TMDL in development is a wildcard in terms of the approval schedule, but is still an option. The PLSM is not used in all BMAPs, but has been used in other BMAPs as the watershed loading model. Kevin Coyne stated that there have been lots of resources dedicated to SWIL and it is a solid model. DEP needs one piece of the model from Brevard County in order to perform the calculations for allocations. Tiffany added that the TMDL was based on the PLSM, but it will not be a problem to use the SWIL model for allocations even if the existing TMDL target is used. Kevin Coyne added that this conversation will be best to continue at the technical meeting.

Bach McClure reported that he spoke with Virginia Barker prior to the meeting. He stated that the Brevard County is working with DEP to develop the new TMDL. Virginia received the draft TMDL report from her consultant yesterday based on the report framework provided by DEP. The goal is to have the draft TMDL report available to stakeholders during the next meeting. The county has not done load reduction calculations. He added that planning for projects now will not be wasted.

Joanie Regan stated that the SWIL model brings in groundwater contributions that were not accounted for in the PLSM. She encouraged attendees to consider water conservation in their planning efforts rather than focusing solely on TN reductions. Bach stated that the Brevard County's Save Our Lagoon report is available on the county's website and includes multiple approaches to restoration.

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Public Comments and Wrap Up

Tiffany asked if there were any announcements or public comments.

Adjournment

The meeting adjourned at 10:49 AM.

Action Items

Tiffany stated the following action items from the meeting:

- Stakeholders should send any comments on the draft annual reports to David and/or Heather York by June 6, 2017.
- David will post the reports and presentations on the public website.
- Stakeholders should send any information and research needs to David and Chuck.
- Stakeholders should notify David of any regularly scheduled meetings to assist in selecting a date for the technical meeting.
- David will schedule a technical meeting and reserve a room. DEP will provide some preliminary information to compare the SWIL and PLSM models for the purposed of discussion.
- David will reach out to stakeholders for project supporting files so load reductions can be calculated or verified, and reflected in the annual reports.