

Lake Okeechobee Basin Management Action Plan (BMAP)

Webinar Summary

Tuesday, February 9, 2021

10:00 am – 11:18 am

Participants

Silvia Alderman, Akerman	Kerry Kates, FFVA
Nagel Altrui, City of Kissimmee	Steven Kelly, FDOT
Irene Arpayoglou, DEP	Yogesh Khare, Everglades Foundation
Jana Ash, E Sciences	Lee Killinger, Citizen
Christin Avila, SFWMD	Lisa Kreiger, Lee County
Martha Avila, DEP	Juli LaRock, SFWMD
Bill Baker, MacVicar Consulting	Kimberly Lawrence, RCID
Vanessa Bessey, FDACS	Suzanne Lawrence, Citizen
Tabitha Biehl, Polk County	Len Lindahl, MacVicar Consulting
Katie Bowes, Martin County	Claudia Listopad, Applied Ecology
Patricia Burke, SFWMD	Lisa Lotti, City of Orlando
Ben Butler, Citizen	Logan Luse, FFBF
Lauren Campbell, DEP	Celeste Lyon, Wood
Elizabeth Caneja, SFWMD	Debbie Madden, Gunster
John Cassani, SW FL Watershed Council	Jan Mandrup-Poulsen, Hydro Solutions
Angela Chelette, FDACS	Jill Margolius, SFWMD
Carolin Ciarlariello, DEP	Ximena Medina, North Star Consulting
Kevin Coyne, DEP	Charles Murphy, Glades Media
David Davis, SFLCD	Jacob Newberry, DEP
Sara Davis, DEP	Edward Northey, FDOT
Shimelis Dessu, SFWMD	Stacey Ollis, SFWMD
Bill Eggers, Evans Properties	Steffany Olson, SFWMD
Rebecca Elliott, FDACS	Maria Paituvi, E Sciences
Kate English, Pavese Law	Denise Palmatier, Kimley Horn
Yesenia Escribano, FDACS	Chris Pettit, FDACS
Julie Espy, DEP	Jason Pim, Citizen
Marcy Frick, Tetra Tech	Nicolas Pisarello, ATM
Doug Gaston, Audubon	Robert Potts, E Sciences
Joe Gilio, Citizen	Jack Price, DEP
Susan Gosselin, Osceola County	Irene Quincey, Pavese Law Firm
Roxanne Groover, FOWA	Kellie Ralston, ASA Fishing
Ron Hamel, FGCU	Dawn Ritter, Highlands County
Noah Handley, Lykes	Ellen Rogers, Florida Senate
Kenny Hayman, DEP	Maria Romero, Lee County
Janet Hearn, ATM	Brianna Rossiter, DEP
Ray Hodge, Southeast Milk	Bob Roth, Citizen
Ruth Holmes, Martin County	Ted Saltos, DEP
Clinton Howerton, Highlands County	Warren Schirado, Citizen
Nicol Hughes, Orange County	Jerry Smith, Citizen
Nenad Iricanin, SFWMD	Jeff Sumner, Sumner Engineering
Manohardeep Josan, SFWMD	Amy Thibault, Pavese Law

Ansley Tilley, North Star Consulting
Andy Tilton, Johnson Engineering
Diana Turner, DEP
Pam Wade, SFWMD
Nia Wellendorf, DEP

Benita Whalen, Dispersed H2O
Kaylene Wheeler, Hydro Solutions
Joseph Whyte, Polk County
Cavel Williamson, E Sciences

The full webinar recording and supporting materials are posted to the Florida Department of Environmental Protection (DEP) file transfer protocol (FTP) site at:
http://publicfiles.dep.state.fl.us/DEAR/BMAP/LakeOkeechobee/Meetings/20%20Annual_Meeting_Feb_2021/.

Questions and Answers

Question on the Florida Department of Agriculture and Consumer Services (FDACS)

presentation: Can load reductions anticipated from agricultural best management practices (BMPs) be quantified or verified?

Answer from Yesenia Escribano, FDACS: Our manuals are based on scientific and technical literature that have been developed and demonstrate the effectiveness of BMPs. We worked closely with DEP staff to go through each of those pieces of literature and each manual is verified as effective by DEP prior to the adoption of each manual. We do recognize that these manuals are out of date so we are actively working to update the manuals and fund research programs to improve our BMPs. We are also developing a research database that contains the sources of literature we are basing our manuals on and justifying the effectiveness of those BMPs. In most instances, monitoring is not taking place on every farm due to different soil characteristics throughout the state and groundwater versus surface water. Our load reductions are estimated based on the peer reviewed research that is undertaken with our partners such as the University of Florida Institute of Food and Agricultural Sciences (UF-IFAS) and DEP.

Question on the FDACS presentation: How much water volume per year is used for all the irrigated acres in the Lake Okeechobee Watershed?

Answer from Yesenia Escribano, FDACS: I do not have that number but I would be more than happy to follow up with the person who asked the question and also refer them to our Florida Statewide Agricultural Irrigation Demand (FSAID) information so we can look at that information together.

Question on the FDACS presentation: Can you explain some specific FDACS BMPs? I do not believe they are consistent with DEP BMPs or other states.

Answer from Yesenia Escribano, FDACS: The BMPs that are applicable are specific to each type of operation, and the BMPs are listed in the manuals. I have not compared them to BMP programs in other states but I can follow up with the person who asked this question and get a better idea of the information they are looking for.

Question on the FDACS presentation: What are the proven removal efficiencies of the FDACS BMPs? Removal efficiencies must be measurable to matter. A fence is not a BMP.

Answer from Sara Davis, DEP: A lot of what we are using the BMAP came from studies that were done in the Northern Everglades (the Lake Okeechobee Watershed and also the estuary watersheds). There is quite a bit of work that went into those studies for determining average or expected efficiencies from the owner-implemented BMPs and from other types of BMPs, as well. Right now, those are the

data we are using for those efficiencies. Like Yesenia mentioned, there is a lot of work going on with the FDACS side of things, too, to improve the data that we have.

Answer from Yesenia Escibano, FDACS: We also have different types of BMPs for different purposes whether it is water resource protection, like fencing, or irrigation management or nutrient management. There are different categories that need to be considered.

Question on the FDACS presentation: Have any agricultural operations chosen the water quality monitoring option?

Answer from Yesenia Escibano, FDACS: As a result of this effort and in the past we have sent over a number of landowners and producers to DEP, in reference to the water quality monitoring option.

Answer from Sara Davis, DEP: None of them have submitted a plan or started down that path yet. This is a process in flux. Every couple of days there is something going on with this so I cannot say as of today if anyone started but, as far as I know, no one has started down that path.

Question on the FDACS presentation: Do you keep more drilled down data of land use within row/field crops?

Answer from Yesenia Escibano, FDACS: We maintain a great coverage called the FSAID geodatabase. We dedicate a lot of resources to update this coverage on an annual basis. It includes details such as corn, cotton, broccoli for the irrigated features. We derive that information from permits or actual field reconnaissance that is conducted by the U.S. Geological Survey on our behalf as part of a contract. For non-irrigated features, we do lots of aerial image analysis and we use a combination of datasets that our consultant creates for us. Our own field staff, when they are out there doing field visits, provide updated information so that we can then have a new geodatabase every year and provide the best agricultural coverage that we can statewide. I am more than happy to meet with the person who asked the question and walk them through our geodatabase.

Question on the South Florida Water Management District (SFWMD) presentation: Increasing nutrient concentrations in various Lake Okeechobee Watershed basins appear to contradict presumed load reductions from agricultural BMPs. Can you explain?

Answer from Steffany Olson, SFWMD: Nutrient concentrations can be affected by many different things, even the amount of rainfall received during the year at a particular site and historic land use. Sometimes it is very difficult to discern what is happening in a particular area. That is one of the reasons that SFWMD is moving forward with the assessment, and one of the things we plan to do is to look at all the activities and projects within a focus area to try and determine what are the causes of the water quality problems within that area, what appears to be working, and if there are certain things that are maybe not working as well as they should we can find solutions. We are working on that. We do not have any results to share at the moment but that is how we are proceeding.

Question on the SFWMD presentation: Any idea of the percent reduction of total phosphorus (TP) reductions into Lake Okeechobee from completion of all these projects?

Answer from Sara Davis, DEP: We are all tracking these projects in different ways. For SFWMD, any of the projects that Liz went over, they are looking at the individual project and the local benefits from that project but the BMAP is looking at a larger picture for the watershed. I mentioned before that the tracking and compliance with the TMDL is through measured data, that SFWMD does the calculations on, and it is a five-year average. In a few slides, I will show some of the numbers from their South Florida Environmental Report for the five-year average from the last published South Florida

Environmental Report. That will be updated, as Liz mentioned, in just a few weeks. You can see measured data, loading to the lake, and how that has changed. Tracking progress in the BMAP is sort of a two-pronged approach. We have the measured data we are following and then we also have the benefits from projects that we are either estimating or we are calculating based on the data that we have available. Sometimes right when they start operating, we do not have all of the measured data to rely on yet and some projects are more difficult to measure than others. There is a combination of things we are looking at tracking and, in a couple of slides, I will hopefully answer your question more specifically about the changes in the percent reductions.

Question on the DEP presentation: Which areas are you looking for good representative samples
Answer from Sara Davis, DEP: I mentioned the two basins in the Upper Kissimmee subwatershed: Lake Conlin and Lake Myrtle.

Question on the DEP presentation: Any idea of how much total nitrogen (TN) and/or TP inflows is natural groundwater flow versus man-made introductions in the entire system entering Lake Okeechobee?

Answer from Sara Davis, DEP: I do not have any numbers for this off the top of my head.

Answer from Steffany Olson, SFWMD: I do not have any numbers off the top of my head either. SFWMD does have some groundwater sampling and I am sure through the Watershed Information Network (WIN) there are probably some other groundwater information. Typically, in the past, we have always been concerned with the surface water. That has been the major contributor.

Question on the DEP presentation: The Okeechobee Utility Authority is undertaking several septic-to-sewer conversion projects, with significant funding support from DEP. Should those projects be included in the BMAP going forward, and if so, what is the process for adding them?

Answer from Sara Davis, DEP: We have talked with them about those projects and we are tracking them. I think when they get closer to completion that we would like to list them for sure. One nuance about the projects led by the Utility Authority is we have not listed the Utility Authority as a lead entity in the past but we can certainly do that. Typically, though, it is municipalities or counties. That is a little nuance but we absolutely want to list those projects in the future. About the process for adding them, we have been in contact with them. Every year we reach out for new projects and changes to projects so if they just keep in touch with us around that November/December timeframe and get us the information as it develops that will help us include it.

Question on the DEP presentation: The data presented indicate a net increase in water quality priority and net change in reduced water quality compliance. Any thoughts on what is driving those net changes toward reduced water quality?

Answer from Sara Davis, DEP: If you are referring to the priorities in the targeted restoration area (TRA), there are a number of factors that go into those priorities. It could be that the flow weighted mean concentrations are driving the priorities or it could be that the unit area loads are too high or, that last step we look at is the trend analysis, so even if the concentrations are low but are trending up that is something that bumps up the priority. It is not as straightforward as the other data that I presented from the South Florida Environmental Report, which is just that measured five-year average loading to the lake after it makes its way through the watershed. It is not apples-to-apples. Another thing that Steffany talked about earlier is that, under the Watershed Protection Plan evaluations, SFWMD is doing a lot

more digging in some of those areas that are the worst water quality areas and they are trying to answer some of the more specific questions about what is driving the net changes.