



FLORIDA DEPARTMENT OF Environmental Protection

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Blue-Green Algae Task Force Staff Minutes

Sept. 20, 2023

9 a.m.

**South Florida Water Management District
and GoTo Webinar and Zoom**

General subject matter considered: The Blue-Green Algae Task Force (task force) met to engage in discussion of the information presented on identifying and optimizing projects in basin management action plan (BMAP) areas at the Sept. 12, 2023, virtual presentation. The task force also heard a presentation on the 2023 Florida Blue-Green Algae State of the Science Symposium II (BGASOS II).

Attendee Name	Title	Status
Dr. Mark Rains	Facilitator	Present
Dr. Evelyn Gaiser	Member	Present
Dr. Wendy Graham	Member	Virtual
Dr. Michael Parsons	Member	Present
Dr. Valerie Paul	Member	Present
Dr. James Sullivan	Member	Present

1. Dr. Rains provided opening remarks, called roll and facilitated the meeting.
2. Dr. Rains provided an overview of the agenda and introduced the BGASOS II topic. A task force suggestion was that Florida hold a statewide symposium for the purposes of ensuring experts are applying best practices while sharing updates on new findings and ongoing efforts; the result was the BGASOS II, funded by the Department of Environmental Protection (DEP).
3. Dr. Lisa Krinsky, Regional Water Resources Extension Agent for the University of Florida Institute for Food and Agricultural Sciences (UF/IFAS) Southeast District, provided an overview of BGASOS II, which took place on May 15-16, 2023 in Maitland, FL. She detailed goals of the symposium, the steering committee and attendees, objectives and themes. Dr. Krinsky also provided an overview of the major takeaways, the progress made, and the identified research priorities and best practices. She presented

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the next steps and detailed how a BGASOS II consensus document is being compiled and will be provided to DEP in Dec. 2023.

4. Task force members asked questions to clarify points of the presentation and participated in discussion, including:
 - a. Benthic algae
 - i. Benthic algae and interactions were a main area of discussion at BGASOS II. Benthic algae are a problem in some areas, but the scientific community does not currently have confirmation of what benthic species are present.
 - ii. The importance of thinking of recommendations for expanding benthic monitoring in areas where blooms are located.
 - iii. Information is necessary to determine how harmful algal bloom (HAB) chemical mitigation techniques are affecting in the environment.
 - iv. The DEP Innovative Technology Program is imperative and innovative technologies is an area that should be focused on.
 - v. Benthic HABs are often not visible until they have floated to the surface.
 - vi. Data on benthic HABs is coming in from different sources and needs to be better integrated.
 - vii. Strains can vary in toxicity and the compounds they produce. Many compounds have yet to be described or recognized.
 - b. Toxins
 - i. Speciation of unknown toxins was not discussed at length at BGASOS II, but is an area of need.
 - ii. Many toxins are not identified until they cause problems, and unfortunately it has to be an acute problem where there's a bloom that can be seen and worked on for scientists to have the ability to figure out the harmful substances being produced.
 - iii. The medical community has yet to produce a clear set of diagnostic criteria for establishing HAB exposure. Many symptoms of cyanoHAB exposure are mild, short-lived and are symptoms of other conditions as well.
 - iv. Florida Department of Health (DOH) and universities are funding research on exposure and aerosol studies.
 - c. Discussion of the research priorities identified
 - i. Scientists are digging further into the drivers of blooms.
 - ii. Questions on if priorities are being addressed through the state or if they involve coordination with other entities.
 - d. Forecasting of blooms
 - i. DEP is funding two forecasting efforts on a seven–10-day timescale. Two other projects are being funded by the U.S. Army Corps of Engineers.
 - ii. DOH, DEP and others should get public notices and warnings out as quickly as possible and preferably before a bloom is visible if one is forecasted.

- iii. Question posed on how forecasting systems in development are informing knowledge gaps. Whether there is a mechanism to collect data and incorporate it into these forecasting efforts.
 - iv. Linking public notices with science.
 - e. Discussion of public health
 - i. Recommendation to streamline public notices and signage for present blooms and toxins.
 - ii. Idea of initiating a watch/warning system as an intermediate step before a bloom or toxins are present and known.
 - iii. Suggestion for agencies to implement temporary signage as a caution, along waterbodies where sampling results are pending, to let the public know testing has been done there.
 - iv. It may be challenging for the public and others to find recent data on DEP dashboards ([Water Quality Status Map](#) and [Algal Bloom Sampling Status Dashboard](#)). A suggestion is to implement a table containing only the most recent information.
 - f. Discussion of how various stakeholder audiences want to receive information so agencies can improve their communication efforts and ultimately mitigate public health risks.
 - g. Recommend better communication on how the state uses any detectable level of toxin as the threshold for publishing a public health alert.
 - h. A suggestion for an annual peer review by an appointed committee for the DEP dashboards.
 - i. Request to continue the algae state of the science symposiums.
- 5. Kim Shugar, DEP Director of the Division of Environmental Assessment and Restoration, provided a recap of her virtual Sept. 12, 2023, presentation to the task force, “Project Identification and Optimization in Basin Management Action Plans.”
- 6. A broader discussion about methods DEP uses to identify and optimize projects in BMAPs and current and upcoming efforts. Dr. Rains and task force members discussed the following:
 - a. Current efforts
 - i. Interactions between DEP and stakeholders for bringing potential projects forward for funding.
 - ii. Explanation of [House Bill 1379](#) and the requirement that BMAPs have a list of projects and strategies that will achieve the five-year implementation milestones to meet total maximum daily loads.
 - iii. Questions about whether project prioritization and the hotspot analyses are being linked. Teams in DEP will be working together, using hotspot analyses and geospatial coverages to ensure necessary projects are funded.
 - iv. Clarifying questions about the “Summary of Updated Allocations from the Lake Jesup 2019 BMAP Amendment” document, which the task force members read through prior to the meeting.
 - v. Data requirements for hotspot analyses and what DEP does in the absence of data.

- b. Monitoring and modeling
 - i. Reflected on the BGATF [Consensus Document #1](#) recommendation for integrated monitoring and modeling for each BMAP to ensure projects are working as expected. Recommendation to publish a plan that integrates monitoring and modeling and describes how monitoring is to be conducted
 - ii. Some of the biggest BMAPs may benefit from independent advisory panels to review the monitoring and modeling plans.
 - iii. Tools for addressing causes of nutrient problems, specifically how DEP accesses and uses data on fertilization rates and soil legacy phosphorus content to understand probabilities of hotspots. Landowners need to know whether their fertilizer application rates are appropriate so their Best Management Practices (BMPs) function appropriately. This information should be included in the models. Information from Florida Department of Agricultural and Consumer Services (FDACS) about fertilizer applied should be combined with an integrated system that guides future actions and progress.
 - iv. In addition to phosphorus application rates, legacy phosphorus is also part of the phosphorus load to be incorporated into the model.
 - v. The need for hotspot analysis, legacy phosphorus, and models to work in conjunction.
 - vi. The information put into the model is what is anticipated, on average, during the timeframe of the modeling, not for future projections.
- c. DEP best practices and processes
 - i. The BMAP Program's biggest hurdles in terms of implementing projects in BMAPs varies by BMAP. Once hurdles are identified whether a team at DEP discusses these bottlenecks and tries to work through them to find solutions.
 - ii. Questions were raised about aging stormwater retention ponds, underperforming projects, and the mechanisms to revisit those projects and revamp them.
 - iii. The task force commended the "OSTDS Influent and Effluent Sampling Proposal" document they read prior to the meeting. This framework could be applied to BMPs.
 - iv. Request that DEP provide the urban and agriculture BMP effectiveness monitoring studies and results to the task force along with other scientists to show what they did and how/if they received the results they wanted or expected.
 - v. Discussed hotspot analysis processes that are done by DEP and the SFWMD. The task forces encouraged agencies to communicate with one another and conduct the hotspot analyses consistently.
- d. Tools or datasets DEP might develop/use
 - i. The OSTDS vulnerability map is a great planning-level tool that can be used for siting future projects, and overlay existing, old septic systems to prioritize projects like septic-to-sewer conversion.

- ii. What works in one part of Florida may work differently in another part. An independent advisory panel can help provide input for studies and projects.
 - iii. Exchanging information with others outside of Florida that are grappling with similar issues would be beneficial.
 - iv. A suggestion was offered to get easy-to-use tools in the hands of the stakeholders.
 - v. Integration of all data, resources and tools available can be very powerful, including data not owned or generated by DEP.
 - vi. Tools and datasets developed to help stakeholders choose the most effective project for their community could help with planning projects and preventing future water quality impacts.
 - e. Future meeting ideas
 - i. Recommendation to involve FDACS in a meeting to discuss agricultural BMPs to the task force and DEP. The goal of bringing the task force, DEP and FDACS together is to brainstorm and identify regional projects that are possible in BMAPs of groundwater-dominated or springs-dominated systems and how to implement regional projects for agricultural loading.
 - ii. Recommendation to conduct an evaluation of Florida's status with regional projects that address groundwater and regional projects in general, including expansion of stormwater treatment areas.
7. The public comment period included the following topics:
- a. Encourage agencies to look at working conditions of septic-to-sewer infrastructure and water treatment plants. Consider whether they can take the additional loading and their level of treatment. Increase understanding of enhanced nutrient reduction systems and review the options in a future task force meeting. An invitation was extended to the task force to attend the November 8 visitor's day at the Florida Onsite Wastewater Association Training Center in Lake Alfred, FL. Recommendation to involve stakeholder groups in any advisory committees and have public buy-in as well.
 - b. Fertilizing at the agronomic rate is not compatible with our water quality goals. A recommendation was introduced for the task force to meet with FDACS and UF/IFAS representatives to discuss developing agricultural models that reduce pollution. It will be extremely useful to discuss legacy nutrients and how BMPs work. Imploring the state to pass the state stormwater rule and ensure it is as effective as possible.
 - c. Encourage septic-to-sewer, especially for areas around the St. Lucie River and Indian River Lagoon. Recommendation to assist those who can't afford it and require those who don't convert to sewer to test their systems annually. Would like the task force to discuss biosolids-to-energy as a solution to spreading them north of Lake Okeechobee.
8. Dr. Rains announced Dr. Wendy Graham's departure from the task force as she will be relocating to Washington, D.C. for her appointment to the National Science Foundation. Task force members gave final comments.

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- a. Comment on nutrient reduction technologies for wastewater systems, and the implementation of advanced wastewater systems in Chesapeake Bay watershed. Suggestion for the task force and state to review a similar group to see how their program is working, understand challenges they are facing and how Florida can implement them.
9. Dr. Rains provided closing remarks.