



Save the Manatee® Club

The Voice for Manatees Since 1981

October 18, 2018

Julie Espy
Florida Department of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000
Submitted via electronic mail to julie.espy@dep.state.fl.us

Re: Proposed Mosquito Lagoon Reasonable Assurance Plan

Dear Julie,

Our organization has followed the development of the Mosquito Lagoon Reasonable Assurance Plan and provided comments throughout the process:

- 1/24/17 re draft Watershed Model Development Report, to Brett Cunningham
- 3/2/17 re Watershed Model Development Report, to Brett Cunningham
- 7/28/17 re Proposed Water Quality Targets Report, to Tony Janicki
- 12/5/17 re Water Quality & Loading Targets Reports, to Tony Janicki
- 12/27/17 re Pollutant Load-Reduction Projects Report, to Brett Cunningham

In addition to posing questions in these letters, we expressed concern regarding:

- an appropriate reference period (reference condition) representative of a true healthy state, not an alternative or other stable state, for setting water quality targets. There is a perception among the consultants that Mosquito Lagoon was relatively healthy until 2015, but we lack assurance that this was indeed the case.
- limitations of the watershed model used.
- the impropriety of using seagrass cover to set nutrient targets because there is not necessarily a linear relationship between nutrients and seagrass. The system may be resilient to a point and then collapse abruptly.
- the use of simple predictive relationships (i.e. nutrient concentrations and seagrass cover) for very shallow coastal lagoon systems (i.e. Mosquito Lagoon).
- the unlikelihood that ecological tipping points or regime shifts can be identified where annual geometric mean data are applied because extreme events are often what trigger changes in a system.
- whether the resiliency of the Lagoon to withstand / overcome stressors is lower now than in the past.
- whether this RAP is intended to achieve restoration, or to meet a minimum regulatory requirement. Is the goal to prevent further degradation, facilitate recovery, or to simply reverse the "impaired" designation?
- opposition to the use of a Chl a target that is higher than what DEP set for estuarine numeric nutrient criteria, given what is known about the role phytoplankton plays in inhibiting seagrass growth.
- our view that the RAP should utilize the numeric nutrient criteria for estuaries that were previously developed by FDEP & approved by EPA.
- uncertainty re the appropriateness of the clarity parameter, given the shallow nature of Mosquito Lagoon.
- lack of inclusion of advanced treatment options for septic tanks in the watershed.
- the minor role that septic tank conversion plays, given that the Mosquito Lagoon is identified in the County's 2015 Water Quality Plan as a priority area for removal of septic.
- anticipated load reduction that can be achieved by education/outreach (we believe this is an over-estimate).
- projects to eliminate any routine or high volume discharges from waste water treatment plants within the watershed.

Our additional concerns with the Plan are that it does not significantly address canal discharges in all but the heaviest rain events or plan to address more than 10% of problematic septic tanks. It was iterated by the consultants that the RAP is only one mechanism to address impairments, but no other mechanisms have been shared to ease concerns that the proposed RAP is insufficient. We wish to additionally stress the importance of monitoring to document whether targets are being met. We understand that the proposed RAP will yield load reductions that should theoretically help the lagoon, we simply doubt that it will be enough.

It is intuitive that there was a period of declining health that preceded the algal blooms and seagrass loss observed in recent years. In retrospect, the decline in health that led up to this loss was missed. Perhaps the percent of light penetration target should have been higher and/or percent cover should have been being monitored instead of extent of bed, etc. With the relaxed targets proposed for adoption, we don't believe Mosquito Lagoon will achieve the level of health that stakeholders anticipate or that the estuary requires. We continue to urge you to revert back to the standard estuarine numeric nutrient criteria or at least implement an incremental process that achieves your proposed targets within 10 years, and EPA's targets within 15-20 years. From a public policy perspective, if this initial commitment/investment falls short, the Lagoon will continue to languish and there may not be enough support to ask for "more" from local governments 10+ years down the road.

Sincerely,

A handwritten signature in black ink that reads "Katie Tripp". The signature is written in a cursive, slightly slanted style.

Katie Tripp, Ph.D.
Director of Science and Conservation