

**Banana River Lagoon and North Indian River Lagoon
Basin Management Action Plans (BMAPs)**

Public Meeting Summary

Wednesday, November 14, 2012

6:00 PM – 7:30 PM

Cocoa Beach Public Library, 550 North Brevard Avenue, Cocoa Beach

Attendees

John Adair, Cocoa Beach Public Works	Lisa Good, Live Blue
Regina Batler, Air Force	Carol Happel, Suntime Technologies
Patona Bell, Cocoa Beach Resident	William Kowalik, Adventure Kayak of Cocoa Beach
Robert Berish, Morton Salt, Inc.	Susan Little, LWVSC
Roger Buchholtz, CBCB	Lou Martinez, Rotary Club
Pat M. Carron, Resident	Mary Paulic, FDEP
Maurice Carter, River Bend Condos	Marcy Policastro, Wildwood Consulting
Robert Day, Resident	Joanie Regan, City of Cocoa Beach
Adrienne Dillon, City of Cocoa Beach	Troy Rice, IRL NEP
Rebecca Elliot, FDACS	Sally Scalera, Brevard County Extension
Gordon England, Stormwater Solutions	Mary Schmitt, Cape Canaveral Resident
Chris Ferraro, FDEP	Michael Slotin, Floatin With Slotin
Mike Gautreaux, CBCB	Ron Thorstad, A Day Away
R. Mike Godfrey, RWG Associates	Jess M Yeaman, Cocoa Beach Kayaking

Banana River Lagoon and North Indian River Lagoon BMAPs

The question was asked if algae are only found in the water because there has been a brown fuzz on his pilings above the water level. Troy Rice responded that there have been several reports of this occurrence over the last year and this is good algae for the lagoon.

The question was asked about the synergy between the manatee protection plan and the BMAP. Mary responded that she is not familiar with the manatee protection plan but the BMAP focuses specifically on water quality. The participant noted that he has a permit from the St. Johns River Water Management District (SJRWMD) to operate several ponds and the permit includes requirements about vegetation to meet the manatee protection plan. Mary responded that this requirement might have something to do with creating habitat for manatees.

The question was asked if the near record level of manatees in the lagoon, the fact that they can eat 100 pounds of seagrass a day, and the increase in fecal matter as a nutrient loading has affected the seagrass. Mary responded that she has not seen any studies on manatees' impacts on seagrass. However, the algal blooms in the lagoon would have been caused by more extensive loading. Troy added that the Florida Fish and Wildlife Conservation Commission (FWC) is trying to determine if the loss of seagrass from the algae blooms would affect the manatees. However, manatees are a natural component of the lagoon so their excrement is considered part of the background load. Bob Day added that the northern portion of the Banana River Lagoon (BRL) has always had good seagrass and is home to 600-1,000 manatees. They do crop seagrass but the manatees move to another location once seagrass are no longer easily accessible. Their waste is a component of the system that has been there forever.

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The question was asked about what concentration of nitrogen must be found in the lagoon to achieve the total maximum daily loads (TMDLs). The participant noted that he was hoping to see historic information about nutrient concentrations in the lagoon. Mary responded that she was unsure of the target nutrient concentration but the TMDLs are based on nutrient loading. Marcy Policastro added that the purpose of the TMDLs is to reduce watershed nutrient loading to the lagoon to improve water clarity, which will allow for seagrass to grow at deeper depths. The TMDL target is a seagrass depth limit, not a nutrient concentration. The participant asked how the watershed load is measured. Mary responded that the load is based on the pounds of nutrients going to the lagoon and she can share reports for more details. The participant asked if the state is funding an effort to monitor the system. Mary responded that the Florida Department of Environmental Protection (FDEP) is working with the local governments and other agencies to monitor water quality and conduct the seagrass mapping. The participant asked if there are any plans to plant seagrass in the lagoon. Mary responded that seagrass planting is being considered as part of the plan of study in response to the algal blooms. This effort would be an experiment to test if planting would work in the lagoon. The participant asked what the goal is of the program to monitor loading. Mary responded that the goal is to have seagrass grow in deeper water habitats. The clarity of water is needed so that light can reach the seagrass at deeper depths. The participant asked if this is mainly a monitoring program. Mary responded that monitoring is an element of the BMAPs but the key to the program is projects, such as stormwater ponds and street sweeping, to remove loads to the lagoon.

A participant noted that this plan is measuring nutrients but there is no causal effect with seagrass because the issue is oxygen availability. Marcy responded that SJRWMD developed a model to estimate watershed loading, and that information is used in regression equations that illustrate the relationship between loading and seagrass depth. The goal is to remove nutrients to improve water clarity for the seagrass. Mary added that the correlation between loading and seagrass depth is an empirical relationship right now.

The question was asked how seagrass look around the inlets. Troy responded that seagrass around the Sebastian Inlet have disappeared in the last six months but the cause of this is unknown. The algal bloom concentrations were not as high in this area so the bloom does not seem to be the cause of the seagrass loss. The seagrass around the Fort Pierce Inlet look good. The participant noted that he was under the impression that good water quality was related to the water's ability to flush itself out. The causeways across the lagoon hinder the lagoon's ability to flush itself. Troy responded that a study was conducted several years ago and it found that the causeways do not have much of an impact on flushing. A study is underway to determine if residence times have increased because of sea level rise, which could have led to the blooms. Bob added that the residence time in the lagoon increases in areas that are further away from an inlet. The impact on residence time also depends on the size of the inlet and the Sebastian Inlet is relatively small. Troy noted that people have proposed adding inlets to the lagoon by using culverts. The culverts would improve water clarity but would majorly change the system, impacting the ecology.

The question was asked if anyone has evaluated the impacts on the BRL from the locks at the port. Bob responded that a study was conducted a few years ago and it found that the locks had

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very little impact, except in the immediate area, because there is a minimal volume of water going through the locks.

The question was asked if a determination that BMAP targets will be achieved or not achieved would be made at the end of the first year of the BMAP or wait until the end of the five year period. Mary responded that since the targets are for seagrass and new data are available every two years, changes to the BMAPs cannot be made yearly. The BMAPs do include a project list with a schedule from each entity and they have commitments for the next five years. It is more realistic to look at the lagoon response in five-year periods to gain a better picture of what is occurring to determine how to make management changes. Bob added the stakeholders did not want to base success or failure on one year of data and wanted to see how seagrass are trending. Joanie Regan noted that the local governments have been told that if the lagoon is still impaired, they will need to provide additional projects in the future. Marcy added that it is already known that the BRL and North Indian River Lagoon will not achieve the seagrass targets in the first five years. The BMAPs are iterative and the total reductions to achieve the targets are spread over 15 years.

Live Blue

Lisa Good stated that Live Blue is a community-based program that she created about a year and a half ago as an education/outreach/marketing tactic. Ten local governments fund the program and the Brevard Zoo will also be joining. The idea is to have one image and one message to help the lagoon. The program uses cyclic education and marketing techniques to educate young people at schools. Live Blue is also present at events and the students bring their parents to the booth where the parents receive information. The end result is to achieve improved water quality through behavior changes. The program using a book called “The Pledge,” which asks students to pledge not to leave trash behind. The marketing plan paid for digital billboards throughout Brevard County, and they are working with local companies to help with social marketing. A new public service announcement (PSA) is airing at movie theaters in Melbourne until January.

Florida Friendly Landscaping

Sally Scalera provided soil testing forms, a brochure on the principles of Florida friendly landscaping, and a brochure with tips on how to protect the lagoon. She noted that she has been trying to hold classes for homeowners but has not had much participation over the last year. Starting in 2013, she is going to focus on working with homeowner’s associations since they hire the landscapers for their neighborhoods.

The question was asked if it is possible to involve public schools in helping to educate homeowners. Sally responded that the Live Blue efforts with students are similar to the 4H program. A participant noted that she does not hear comments about the fact that reuse water for irrigation contains nutrients so there is not really a need to fertilize. Sally responded that reuse water does contain nutrients and this is something to consider before fertilizing. If a homeowner has a mature landscape, the plants can be used as an indication of whether they need fertilizer. The question was asked if the new fertilizer ordinance would require that the stores provide fertilizer with lower nitrogen concentrations. Bob responded that a few years ago, the state specified that fertilizer sold in Florida should not include phosphorus and should have slow

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release nitrogen. Brevard County's ordinance is more about fertilizer application and timing than fertilizer content.