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"...to cooperatively provide scientific knowledge of ground and surface water resources and advocate for the effective application of that knowledge toward management, conservation and protection."

October 17, 2013

Stephen Cioccia
Environmental Consultant
Watershed Planning & Coordination Section
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 3565
Tallahassee, FL 32399-2400

Dear Steve:

This is a comment, to be added to the public comments on the DRAFT BASIN MANAGEMENT ACTION PLAN, for the Implementation of the, Total Maximum Daily Load for Nutrient (Biology) by the Florida Department of Environmental Protection in the Upper Wakulla River and Wakulla Springs Basin prepared by the Division of Environmental Assessment and Restoration, Watershed Restoration Program, Florida Department of Environmental Protection, September 2013

We would like to have our monitoring plan, the monitoring plan developed by the Hydrogeology Consortium, Wakulla Springs Alliance and the Friends of Wakulla Springs State Park, called Safeguarding the Wakulla Spring/Spring Creek System, and dated September 9, 2013, included in Section 6.2 of the previously mentioned Draft BMAP. Biological monitoring is crucial.

We need to determine if the TMDL criteria and nutrient reductions set forth in the previously mentioned Draft BMAP Action Plan would cause a restoration of the biological diversity in the springshed and erase its impairment. We have already been awarded some funding and are applying for more. We have already started the Submerged Aquatic Vegetation Monitoring and would like to be included in future versions of the BMAP.

This is not duplication or replication of the BMAP monitoring Plan already included in Section 6.2 of the Draft BMAP, whose purpose is to determine if the BMAP nutrient reduction goals are achieved. We are expanding the existing Edward Ball Wakulla Springs State Park monitoring, with traditional biological methods in both the Wakulla River and the St Marks River (a reference spring) as well as augment the water quality stations.

We have seen a lot of changes in the wildlife at Wakulla Springs and it needs to be recorded and monitored. These changes were first noticed by the Wakulla Springs State Park Biologists, Scott Savery and Bob Thompson. This monitoring will continue and expand their diligent work. We will monitor changes in the biota as the restoration proceeds. We will measure improvements to this ecosystem as the water quality improves.

This extended monitoring plan continues current efforts and expands it to the entire basins of both the Wakulla and St. Marks Rivers. Noted hydrogeologist, Dr. Todd Kincaid, will model the system. We will compare the Wakulla River to the nearby St. Marks River, which is less impacted by septic and waste water. We will add fish and benthic invertebrates, as well as more detailed and comprehensive surveys of the reptiles, amphibians, and birds. We will be looking for sensitive creatures that are indicators of good water quality.

Over the past decade some things have improved and some have gotten worse. Wakulla Springs has been growing a lot of water weeds and algae. The limpkins and the apple snails are gone. Alligators and Anhingaa are declining. The largemouth bass are missing. Long gone is Henry the pole vaulting fish. There are only mullets now. But there are more manatees than before. And surprisingly, this year, we did not have to spend \$80,000 on the herbicide because the water weeds and algae didn't grow much. The nutrients are changing. Nutrients levels (nitrate) have been cut in half. But we have not yet reached the target goals. The flow in Wakulla Springs is changing. There is a new and dynamic connection between Wakulla Springs and Spring Creek. Often the flow from Spring Creek goes to Wakulla Springs. With the changing water sources, the color of the water is changing too.

Environmental biologists say "Managing a natural system without monitoring is like driving your car in a tropical downpour, without any wipers." Natural systems are extremely complex webs of interaction. Changing one factor may cause hundreds of other changes, some subtle and beneficial and others can be catastrophic. If we do not monitor the springs we will not be able to understand, comprehend or explain these changes. We will also get no warning of the changes and when we notice them it may be too late.

The Friends of Wakulla Springs, the Wakulla Springs Alliance and the Hydrobiology Consortium would like you to include our monitoring program for Wakulla Springs. We will assuage the health of Wakulla Springs so that we will understand its nature, enabling enhanced protection. It will be an expensive, sacrifice to save Wakulla Springs. We do not want it to disappear like so many other Florida springs, or turn sour like the Indian River, until nothing is left alive. By the time we fix all the sewage plants and septic systems within the springshed, the price will approach a billion dollars. This million dollar monitoring program is but a pittance compared to what we are spending to fix Wakulla Springs, so let's get some data, which truly diagnoses the patient and document the cure for posterity and preservation.

We will be seeking funding for our monitoring plan from the Restore Act Funds, Grants, and other State or Federal agencies.

We are very supportive of the BMAP process and also with the Springs Protection legislation that is slowly working it's way toward the Legislature.

We have attached the latest version of our monitoring plan for your use.

Regards.

Ron Piasecki

Ron Piasecki
Chairman