

Pam Hall – Email Addition to Wakulla 9/19/13 Draft Comments

From: Pamela Hall [<mailto:phall@curg.org>]
Sent: Wednesday, October 16, 2013 9:43 PM
To: Cioccia, Stephen
Subject: Comments on draft BMAP for Wakulla Springs

Hi there, Stephen;

I am submitting my comments from earlier BMAP meetings that are directly relevant to the draft BMAP, particularly the phasing component. These documents overlap and collectively contain redundant material. I apologize for not re-working them. But here they are.

Also - some brief comments:

Simple one:

On page 11, the Phase II Management Strategies:

Please organize the proposed strategies into groups of similar forms. It reads as a wish list and brain storming. You might even create subheadings with strategies included that are similar, overlapping, inter-related.

I sincerely hope that the first 30 months will not find Leon and Wakulla County governments "sitting on their hands" waiting for FDEP to act. Please make it clear that during this time they should be evaluating their need for facilities, programs, cash and recognizing that they need county-wide wastewater management utilities to handle this problem for the long haul, just like a city does ! Also if they dare to do something innovative - they will find State and certainly Federal funding much easier to attain.

Other Comments:

1. Leon County's cost of sewer in their designated Primary Springshed Protection Zone (PSPZ - nearly equal to the PFA) is listed at \$57 million. This figure seems to come from the Master Water and Sewer Plan in which Leon County lists "priority" locations for sewer. There are many and the list keeps growing. However, the two areas in the PSPZ, Woodville Rural Community and Lake Munson area have cost estimates of \$24 million and \$33 million. BUT that is ONLY FOR THE PUBLIC PIPES. This does NOT include any of the costs to residents to connect to the sewer lines. Therefore, this cost estimate does not represent the removal of a single "teaspoon" of nitrate from the PSPZ. In fact, putting these pipes in the ground would increase the nitrate load as new development, at much higher density and intensity than currently allowed, would be built to take advantage of the largess of public infrastructure.
2. The current Leon County Sales Tax Committee recommendation concerning wastewater treatment is to place all of the County and citizen proposals, (such as that from the Water Resource committee) into a single "pot" of money designated for "water quality projects". This "pot" of money is currently suggested to be \$85 million. This is to be split between the County and COT. It also includes many many projects, not just wastewater. So the County effort towards sewerage in the first 5 year BMAP is highly fraught with immensely optimistic financial planning.
3. Assigning those responsible for the source of the nitrate in the Wakulla Springshed will be complicated by the bi-phasic nature of the spring discharge volume and area the water is drawn from.

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One peak represents the smaller, northern spring shed with a load dominated by Leon County OSTDS both north and south of the scarp and a rapidly diminishing share due to the COT WWTF. The second peak represents the larger, northern and southern spring shed, capturing the spring shed of Springs Creek and hence a load of nearly twice the amount of nitrate. However, the water volume is also substantially greater so the concentration appears to be lower than when the spring is only discharging water from its northern spring shed.

This means that the TMDL - where L is load - cannot be calculated from a varying volume/concentration system. The concentration as a proxy fails when the volume is so variable AND the shed from which the volume is drawn varies.

This biphasic nature of volume and load will have to be taken into account when sources are computed.

Also, Leon County has accepted an analysis of the contribution from the unincorporated area in the PSPZ based on the mean of this bi-phasic system. This has no meaning - either statistically, biologically or hydrologically. Taking the mean of a two peak system means, at best, one is measuring the actual condition only half the time. This is equivalent to building an electrical power plant to provide electricity for the mean usage. If done, it would result in the lights going out half the time - at peak load in the evening and morning. The arithmetic mean is an inappropriate value.

4. My greatest concern is that the focus on sewer as the "solution" to nitrate loading by both Leon and Wakulla county fails to take into account the consequences of providing an infrastructure that best serves high density/intensity development of urbanized areas. The area they are trying to sewer to protect the springs is an inappropriate location for significantly higher density/intensity development than already exists. Technology is not going to make it possible for large numbers of people to live on top of the most aquifer vulnerable area without creating havoc in the spring shed ecological systems. The wastewater technology that can reduce nitrogen should also be technology that is appropriate for low density/intensity development and scaled to handle the existing clusters of OSTDS parcels.

Also - by using sewer as their only strategy for nitrogen reduction, the Leon County government is effectively passing the responsibility onto the COT government and its residents. As soon as Leon has money to pay for the big pipe of any given sewer plan, it will write a check to COT (or a private firm if COT won't build it) for the pipe and then the lots with existing OSTDS that are within connection distance of the pipe will be COT's "septic tanks", just like the few remaining ones COT has now within its PSPZ jurisdiction. Also, the money for the sewer will, most likely, come from the pocket books of all of the residents of Leon County - of which two thirds are already paying to reduce their nitrate contribution. They'll get to pay twice.

The above can be avoided by convincing Leon and Wakulla County that they can, must and will find it actually an opportunity, if they take on the full responsibility for providing wastewater infrastructure, scaled appropriately to the land use and local environmental conditions. They will be able to promote growth where it is most needed and will best suit both the private investor and public good.

Oh well, one can only hope that fear will give way to daring!

Thanks for your time. I hope my comments above and attached will be helpful.

-ph