

**Friday, October 23, 2020 Meeting Minutes**

**Opening**

* **Welcome and introductions** - Bob Deyle
* **Agenda review** - Bob Deyle
* **WMD not today but before sending to peer review**.

**Presentation: Tallahassee’s** [**Think About Personal Pollution (TAPP) program**](https://tappwater.org/)–

Mark Heidecker, Manager, Stormwater Quality Programs, Courtney Schoen, Coordinator, TAPP

These are notes from the PPT. This is the full [TAPP PPT](http://wakullaspringsalliance.org/wp-content/uploads/2020/10/TAPP.WSA_.10-23-20.pdf).

* [Think about Personal Pollution, TAPP](https://tappwater.org/) is a public education program to reduce pollution at the source.
* The focus is on lawn care, pet waste, car washing, yard waste, septic tanks, trash and other non-point sources of pollution.
* Every drop you lose, nature finds. Slow the flow!
* The staff make presentations, assess impact and refine the programs.
* See [tappwater.org website](https://tappwater.org/). See videos, commercials and other resources
* Campaigns, grants, workshops on rain gardens and rain barrels.
* Promotes Low Impact Development, LID and green infrastructure (GI)
* Surveys confirm TAPP recognition and behavior changes including pet waste pickup and less fertilizer use.
* Urban fertilizer and septic tanks are major impacts on Wakulla Springs.
* 34% of loading to Wakulla Springs from septic tanks. TAPP has educational videos. There are 50,000 septic tanks in Leon and Wakulla Counties. Septic tanks can be upgraded or connected to central sewers.
* 31% of residents fertilize 2.88 times per year (probably less often). There is a city fertilizer ordinance with training for professional applicators and residents.
* Current efforts with 319 DEP grants include PSAs, Equity in Environmental Education and LID/GI
* PSAs on grass and leaf yard debris discourage blowing into the stormwater drainage system and encourage bagging and mulching.
* Equity in Environmental Education focuses on underserved areas like Lake Munson Drainage district in summer and after school programs.
* LID & GI distributes rain barrels, my Florida Yard, LID manual, grants for Tom Brown Park sediment and erosion control rain garden.
* Mark will make the PPT available and links to the website.

Q – Tell us more about the LID Manual.

A – This is being used by developers and we are working with Growth Management to apply the standards. We don’t have a community training program and we expect the state to require this.

Q – Education is a priority for the WSA and we would like to work with TAPP. Can low nitrate fertilizer be encouraged?

A – We are not anti-fertilizer but we do promote slow-release fertilizer and educate everyone on proper use.

**Initiative re Leon County fertilizer ordinance** - Danielle Irwin

* Danielle has 20 years of experience with water protection and recently ran for county commission.
* County Commissioner Kristen Dozier has been supporting an ordinance.
* We can use the energy of public concerns about algal blooms to motivate behavioral change.
* We have impairment issues. DEP is considering new water bodies for TMDLs. We need to address septic tanks, fertilizer and other sources of nutrients.
* There is federal and state funding that needs to be prioritized.
* FDACS and local governments control fertilizer use
* Street sweeping reduces nutrients in water bodies. There are many local ordinances in Florida. Some ban applications during the rainy season, June, July and August. Tallahassee and Leon County are behind many others.
* The December LCC meeting will consider a model ordinance. Growing season bans are an issue.
* Ordinances are not a silver bullet. Also look at landscape practices on right of ways and everywhere. Apply IFAS and TAPP guidelines. Consider HOA requirements for green lawns.

Q – Does IFAS recommend the no fertilizer option?

A – IFAS and DOT don’t recognize the no fertilizer option but need to be pushed to change their practices. There are organic ways to fertilize.

Q – When TAPP works with rain gardens there is a lot of resident education and outreach.

A - We work with FL Friendly Landscaping. People are interested in alternative fertilizing methods.

A –Follow Chesapeake Bay approach to nutrient reduction. They have a turnkey nutrient reduction plan.

**Big Bend Environmental Forum, BBEF**

* Dan Pennington has resigned from the WSA Board and being our representative to the BBEF.
* Jim Stevenson will be the WSA representative.

**Update on letter to County Commission on In-ground Nitrogen Reduction Biofilters (INRBs). – Bob Deyle and Anthony Gaudio**

* WSA previously sent a letter and copies to Vince Long, County Administrator, Theresa Heiker and others that raised issues about the consultant report and installation of passive system pilot project in the PFA (see Appendix C).
* Charles Wu, head of engineering, announced a meeting with FDOH and FDEP concerning the county’s INRB pilot project.
* Bob Deyle sent out notes from a follow-up meeting with county staff, FDOH, and FDEP. They agreed to install 2 systems with liners and low-pressure dosing (LPD) systems and monitor them quarterly monitoring for two years along with four of the current-rule INRBs which lack liners and LPD. FDOH will monitor two of the current-rule INRBs. FDEP will monitor the two systems with liners and LPD and two of the current-rule INRBs. We will request the monitoring results. The carbon source specifications about which we raised concerns are addressed by the current contracts with the system installers.
* We encouraged delaying more system installations until monitoring results are in. Theresa Heiker said that that is not possible.
* Anthony reported that there have been 843 installations of different types of nitrogen reducing alternative septic systems statewide with Springs Protection Grants administered by FDEP. There may be classification problems with some of them in FDEP’s database. The state has spent $14m on these systems. There is shared concern about the efficacy of these systems at FDOH, FDEP, the City and County.
* The County and FDOH and finalizing a memorandum of understanding for the 2 additional pilot systems. This likely will be presented at the December County Commission meeting with an update on progress.
* Data quality from monitoring is a concern. Anthony Gaudio will follow-up on this.
* Tom Taylor made a motion to send a letter and present it to the Leon County Commission meeting. Cal Jamison seconded the motion that passed unanimously.
* WSA needs to be recognized for our successful advocacy.

**Appointment of Nominating Committee** (see attached) – Bob Deyle

* We need nominations for officers and directors (10-15). There are members who have resigned and 5 current director's terms are expiring. Gail Fishman has resigned as Secretary.
* We need 3 members to serve as the Nominating Committee.
* Jim Stevenson, Albert Gregory and Howard Kessler volunteered for the nominating committee.
* Gail Fishman made a motion, CJ seconded, unanimous.

**Upcoming meetings and events** – Bob Deyle

* Ferrell tract tours – Oct 28 and 30, 1 to 1½ hour private car tour with masks. Contact Bob Deyle to attend.
* November 20 meeting (3rd Friday!) This will address MFLs or the dark water study.
* December 18 meeting (3rd Friday!)This will address the dark water study if not presented in November.

**Springshed and river update -** Cal Jamison

* There have been dramatic changes at Wakulla Springs
* Visibility had been very low: 4 feet.
* Visibility last week was 19’ and 19.5’ this week.
* The tannic comes fast and takes longer to clear.
* WKPP is doing a documentary on WS, sinkholes and swallets.
* Spring Creek has been flowing.
* If rains hold off, we expect changes at WS and SC
* Bob Deyle is gathering well monitoring data from different tunnels to analyze green and tannic color. He will be exploring flows in the boil.
* Bob Knight had a column in the Tallahassee Democrat on MFLs.
* Bob Deyle presented a webinar for the Friends of Wakulla Springs entitled “Where Have All the Gators Gone?” Jim Stevenson presented one earlier on the Wakulla Spring watershed similar to his field trips. Both are on the Friends of Wakulla Springs website.

Board Business Meeting

**Sept minutes** – Tom Taylor

* Cal Jamison made a motion to approve the minutes, seconded by Albert Gregory, that passed unanimously.

**Sept financial report**– Jim Davis

* Howard Kessler made a motion to approve the financial report as submitted, seconded by Albert Gregory, that passed unanimously.

**Website Upgrade Expenditure**

* A motion to approve payment up to $400 to Rob Gelhardt to set up our membership and donations on the WSA Website was made by Howard Kessler, seconded by Terry Ryan and passed unanimously.

**Settlement agreement status report**– Bob Deyle

* We sent a response to Sean’s attorney that included provisions for payment for Sean’s contract work. When we get the invoice, the funder will pay it.
* If there are more tweaks on the agreement they will be addressed by the Executive Committee

**WSA board conduct guidelines** - Tom Taylor

* Tabled until November.

**Vice-Chair Vacancy**

* Doug Barr resigned this week.
* Nominations must be made 14 days before filing the position.
* Debbie Lightsey agreed to fill the Vice Chair position. There was an affirmative informal vote approving Debbie that will be finalized next month.

**Adjournment**

* Gail Fishman made the motion to adjourn, it was seconded by Cal Jamison and passed unanimously.

Appendix A



**Agenda**

**Friday, October 23, 2020 9 to 11:40 am, via Zoom**

**9:00 Opening**

* **Welcome and introductions** - Bob Deyle
* **Agenda review** - Bob Deyle

**9:15 Presentation: Tallahassee’s Think About Personal Pollution (TAPP) program** –

Mark Heidecker, Manager, Stormwater Quality Programs

**10:00 Initiative re Leon County fertilizer ordinance** - Danielle Irwin

**10:20 Wakulla and Sally Ward Spring MFL Study Update** – Kathleen Coates **10:35 BBEF representative** - Bob Deyle

**10:45 Update on letter to County Commission re INRBs** – Bob Deyle

**10:55 Appointment of Nominating Committee** (see attached) – Bob Deyle **11:10 Upcoming meetings and events** – Bob Deyle

* **Ferrell tract tours – Oct 28 and 30**
* **November 20 meeting (3rd Friday!)**
* **December 18 meeting (3rd Friday!)**

**11:15 What’s new?**

• **Springshed and river update -** Cal Jamison • **Other?**

**11:30 Adjourn**

**11:40   Board business meeting**

·       **Sept minutes** – Tom Taylor

·       **Sept financial report**– Jim Davis

·       **Settlement agreement status report**– Bob Deyle

·       **WSA board conduct guidelines -** Tom Taylor

Appendix B

**10-23-20 WSA Board Meeting Participants**

**\* indicates those present**

Officers

Robert E. Deyle, Chair \*
Gail Fishman, Secretary \*
Jim Davis, Treasurer

Directors

Douglas E. Barr\*
Albert Gregory \*
Cal Jamison \*
Howard Kessler \*
Debbie Lightsey
Terry Ryan \*
Lindsay Stevens \*
Jim A. Stevenson \*
Tom Taylor \*

Guests

Kathleen Coates \*

Anthony Gaudio \*

Andreas Hagberg \*

Mark Heidecker\*

Susan Poplin \*

Johnny Richardson\*

Courtney Schoen \*

Carol Swartz \*

Paul Thurman \*

Nico Wienders \*

Appendix C

**Letter to County Commission on In-ground Nitrogen Reduction Biofilters (INRBs)**

Dear Commissioner X:

As you may know, Leon County is undertaking two important initiatives to reduce nitrogen discharges from septic systems to the aquifer that feeds Wakulla Spring: (1) a Comprehensive Wastewater Treatment Facilities Plan (Wastewater Treatment Plan) to identify the most cost-effective means to convert traditional septic systems to more effective nitrogen removal systems and (2) a pilot project funded by the Florida Department of Environmental Protection (FDEP) to install passive nitrogen reduction septic systems on approximately 120 properties.

Unfortunately, both initiatives are compromised by reliance on a relatively inexpensive but unproven technology, so-called In-ground Nitrogen Reduction Biofilters (INRBs).

A group of citizens who played an active role in advocating for the Wastewater Treatment Plan and in advising FDEP on development of the 2018 Wakulla Basin Management Action Plan1 have met with county staff on several occasions and recommended changes to the county’s approach to address this deficiency. To our knowledge county staff has not adopted those recommendations; they have stated only that minimizing cost is the priority.

While the Wakulla Springs Alliance fully understands the importance of minimizing the costs of septic system conversions so as to achieve high voluntary participation by homeowners and to accomplish as many conversions as possible, we believe that the current approach is “penny wise and pounds (of nitrogen) foolish.”

The Alliance therefore asks you to urge the County Administrator and the Department of Public Works to do the following:

**1. Use a lower nitrogen reduction rate estimate for INRBs in the Wastewater Treatment Plan**

INRBs have not been subject to the rigorous third-party testing required for all other advanced nitrogen removal septic system technologies. The Wastewater Treatment Plan consultants are assuming 65% removal based on a single field test conducted by Hazen and Sawyer for the

The INRB design that FDOH has approved by rule (64E-6.009(7) Florida Administrative Code) omits several critical elements needed to assure that the systems will perform as they did in the H&S study: a liner under the woodchip/sand biofilter layer of the drain field, a low-pressure dosing system to distribute the septic tank effluent evenly in the drain field rather than relying on gravity, and a minimum of 50% woodchip content in the woodchip/sand biofilter layer. In comments submitted to FDOH on the proposed rule, Damann Anderson, who conducted the H&S study, stated, that without those components INRB nitrogen removal is unlikely to achieve

1 Pam Hall, Debbie Lightsey, Anthony Gaudio, Robert Deyle, Alan Niedoroda
2 Hazen and Sawyer. 2015. *Florida Onsite Sewage Nitrogen Reduction Strategies Study: Evaluation of Full Scale Prototype Passive Nitrogen Reduction Systems (PNRS) and Recommendations for Future Implementation*.

Florida Department of Health (FDOH).
INRBs remove, on average, 50% of the nitrogen in septic tank effluent. At best, INRBs will have a small effect on total nitrogen reduction compared to other passive nitrogen reduction systems, but the additional 15% can only be presumed to occur IF the INRB systems are installed as designed and tested by Hazen and Sawyer.

Septic systems using conventional drain fields instead of 65% reduction. Because of these deficiencies, the Florida Springs Council has challenged several Basin Management Action Plans (BMAPs) adopted by FDEP which assume 65% reduction by INRBs.

We will be fooling ourselves if the Wastewater Treatment Plan assumes 65% nitrogen removal by INRBs unless Leon County requires the INRBs installed in the county include the components in the prototype tested by Hazen and Sawyer (see #2 below). Based on the field test conducted by Hazen and Sawyer, we recommend that the county assume no more than 50% removal until testing is conducted on the modified system design allowed under the FDOH rule. This is the level of nitrogen reduction Hazen and Sawyer documented for the upper sand filter layer of the INRB.

**2. Modify the design of the INRBs in the pilot project to include systems that more nearly replicate the system tested by Hazen and Sawyer and include some of these modified systems among those to be monitored by FDEP.**

1. Standardize the type, quality, and sizing of woodchips to assure consistency in nitrogen removal – The wood chips included in the woodchip/sand biofilter layer provide a carbon source for the bacteria that convert nitrate-nitrogen into nitrogen gas that then seeps up through the soil and is released into the atmosphere. Woodchips from different wood sources, and of different size and condition, will provide variable quality food source for the bacteria and, therefore, different levels of nitrate-nitrogen removal. The FDOH rule does not specify woodchip type, quality, or sizing. In the absence of clear state standards, the county should define specifications to be followed by installers of INRBs for the pilot project.
2. Require at least 50% woodchip content in the woodchip/sand biofilter, rather than the 40-60% range permitted by FDOH – This higher minimum woodchip content will provide more carbon for the denitrifying bacteria and, therefore, greater nitrogen reduction, especially in systems without a liner under the woodchip/sand layer.
3. Include low-pressure dosing in all systems that will require a pump to deliver septic tank effluent to the drain field because of site topography – This will enhance nitrogen removal and facilitate monitoring.
4. Include a liner under the woodchip/sand biofilter layer in several of the systems to be monitored – This will optimize nitrogen removal and extend biofilter life by maintaining saturated conditions.

We will be fooling ourselves about the benefits to Wakulla Spring from this pilot project without information about how INRBs that lack these elements of the system tested by Hazen and Sawyer actually perform.

3. **Collaborate with FDEP to expand their planned monitoring to more than four systems**

FDEP currently plans to monitor only four of the 120 systems to be installed in the pilot project. Monitoring of the alternative system designs called for in #2 above is needed at locations with different soil conditions. We recommend increasing the monitoring to at least four sites for each system configuration.

**4. Delay full implementation of the pilot project until one year of monitoring is completed on the alternative system designs called for in #2.**

We will be “penny wise and pounds (of nitrogen) foolish” if we proceed with full implementation of the pilot project without sound information on how the modified INRBs will perform. Once monitoring is completed, we can make wiser decisions about what system design will be most cost-effective in achieving the required reductions in nitrogen loading to Wakulla Spring from the BMAP primary focus area in Leon County.

Please contact me if you wish to discuss this matter further. Sincerely,

Robert E. Deyle, Chair Wakulla Springs Alliance

cc: Vince Long, Leon County Administrator
Tony Park, Director, Leon County Public Works