****

**WSA Board Meeting Minutes**

**March 26, 2021**

**9:00 am via Zoom**

**Opening**

* Welcome and introductions - Bob Deyle
* Agenda review - Bob Deyle (See Appendix A)
* See participant list in Appendix B

**February 26 minutes (attached)** - Tom Taylor

* Jim Davis made a motion to approve the minutes, which was approved unanimously

**February financial report** (attached in Appendix C)– Jim Davis

* One new member
* Payment for Directors and Officers insurance will be next month.
* $6775.59 balance.
* Debbie Lightsey made the motion to accept the report, which was approved unanimously.

**Leon County fertilizer ordinance** - Grant Gelhardt, Big Bend Sierra Club Group

* See attached letter in Appendix D.
* The Sierra Club is working on fertilizer ordinances all over the state.
* 2009 legislation required local ordinances to follow FDEP’s standards. Stricter standards require scientific documentation. Later the legislation restricted ordinances further.
* Sierra Club recommends a summer application ban, no phosphorus and other limits.
* Big Bend Sierra Club Group has talked to Leon County Environmental Services Director, Nawfal R. Ezzagaghi, who agreed to all requests except the summer ban. Big Bend Sierra Club Group also is requesting a public education program for professional appliers and the public. Ezzagaghi agreed to ban fertilizer application when a tropical storm or hurricane is forecast to make landfall within three days and when 1 inch or more of rain is expected within a 24-hour period.
* There will be a discussion at the March 29 County Water Resources Committee meeting; proposed ordinance will go to the County Commission on May 11.
* Q - Can we include a statement that fertilizer is not needed. A – There is a statement that the ordinance does not promote fertilizer use.
* Q – How will this be enforced? A – There is something about enforcement. Applicators are required to take training. People can report violations.
* Q – Does TAPP have PSAs that address fertilizer. A – Yes this is ongoing. This year’s campaign is on blowing leaves into drains and always on fertilizer and pet waste across the region.
* WSA will review the draft and make recommendations to the Commission on May 11.
* Terry Ryan is concerned with 15’ setbacks that may not be enough where there are hills. He found other localities that have 50-100’ setbacks when there are hills.
* It was suggested that WSA volunteers prepare presentations and emails for homeowner associations at appropriate times of the year.

**Explaining Declining Stage and Implications for Wakulla-Sally Ward MFL** – Bob Deyle

* See the ppt. on the [WSA Website](http://wakullaspringsalliance.org/wp-content/uploads/2016/11/Declining-Stage-Implications-for-Dark-Water-and-MFL.WSA_.Mar-2021.Deyle_.pdf) for details.
* This is the last in a series of presentations on Why Is the Water Dark? It focuses on declining stage and implications for the MFL
* Declining stage hypotheses
  + Upper river stage declined about 1 foot from 1987-2019
  + It is not from reduced flow. The flow has actually increased.
  + It is not from decreased ground water levels. They have been stable.
  + There have been changes in river hydraulics; erosion, apparently initiated from the initial hydrilla purge in 2002, appears to have altered the river cross section allowing spring flow to be carried away more quickly thereby lowering the stage
  + Stage peaks correlate with rainfall.
  + Median stage for longer time periods
    - 87-96 5.29 prior to hydrilla invasion
    - 97-01 5.22 during hydrilla invasion show no damming effect.
    - 02-20 4.89 since hydrilla purge despite increased flows
  + Theory is that the removal of river bottom sediments with the initial hydrilla purge enable continued scouring of the river channel and lowering of the stage.
  + % bare sediment ranged from 19 to 42% between 2013 and 2019 showing no sign of increased coverage by submerged aquatic vegetation (SAV)
  + River bottom depths at some SAV survey transects are getting deeper over time indicating continued erosion, although at one transect, depths are less indicating increased sedimentation.
  + Number of glass-bottom boat tours had a big drop in 1994. There were major rainfall events totaling about 84” that also decimated the apple snails and thus the limpkins that year
  + ’87 to ’93 stage trend increased while ’94-01 decreased. However, the 94 rain events affected the trend line slope.
  + Eliminating ’94 from time series shows a 5.23 median stage from 87-93 and 5.23 from 95-01, indicating that more than likely the 94 rain events and associated stage increases did not initiate the long-term erosion now being experienced with the accompanying decreasing stage
  + Q – Is there a logbook on glass bottom boats. A – Yes, staff is looking for the water front records. Bob Thompson may know where the records are.

**The Proposed Wakulla-Sally Ward Springs MFL**

* Bob Deyle, Terry Ryan and Doug Barr provided personal comments on the draft Technical Assessment that was published in November 2020.
* Deyle commented that because of the inverse relationship between river stage (level) and spring discharge (flow) the proposed minimum spring flow may not assure adequate depth for manatee passage. He recommended the WMD set a minimum level rather than a minimum flow. There is a precedent for doing so in the Fanning Springs MFL.
* The WMD has responded that the sole purpose of MFLs is to establish limits on ground water withdrawals, if necessary and there is no statutory basis for addressing stage per se in the MFL.
* The peer review panel submitted their final review of the draft Technical Assessment on March 1st. They state that “The change in Wakulla Springs flows and changes in hydraulics (stage-discharge) over time seems to be one of the largest, if not the largest, source of uncertainty in this minimum flow determination.” (pp. 6-7) “However, the risk that these uncertainties would result in an inappropriate or flawed MFL or harm to the system is very low due to the higher flows in the system . . . “ (p. 2)
* In addition, the Peer Review Panel stated that “groundwater withdrawals . . . that could reduce spring flow over the next 20 years are projected to be very small, which considerably decreases the risk that the proposed MFL would be reached in the foreseeable future or before the MFL is re-evaluated in the review cycle.” (p. 2) The review cycle is every 10 years.
* The WMD will publish the proposed rule soon with a 21-day window for comments.
* The WMD has made conservative assumptions. The WMD will continue work on SLR and improve monitoring and analysis to better understand the system over time.
* Q – How were the Spring Creek flows considered in the Wakulla Spring MFL analysis? How do we keep Spring Creek going? A – The WMD did not have to consider Spring Creek but they are looking into it. Spring Creek data only goes back to 2007 so data is inadequate. The WMD is working on models that will explain the connections between the springs.
* Q – Will there be a MFL for Spring Creek? A – MFLs are not done for submarine springs. USGS is no longer monitoring Spring Creek because they can’t do it accurately. This may be addressed at future meetings. There has been a suggestion that there be another Wakulla County spring protection zone for the Spring Creek springshed.
* Q – Since the MFL only deals with flow, and the WSA is concerned with the scouring and loss of submerged aquatic vegetation, who should we be working with? A – Not sure.
* We can compare increased velocities and vegetation. We have considered revegetation projects in areas with different velocities. This could rebuild the food web. However, this winter, manatee have removed much of the eelgrass from past planted areas.
* WMD has worked with the Fish and Wildlife Commission on other revegetation projects and they would do the planting. The FWC is designating Wakulla Springs a primary habitat for Manatee. The WMD will provide updates.
* Swimmers in the swimming area stir up sediment that goes downstream. There has been sand replenishing at the beach by using a hydraulic dredge to move sediment back to the beach from deposition sites downstream by the boat docks. Some drainage improvements were made at that time to reduce runoff to the beach, but not very effective.
* The flow at Spring Creek has had a decrease in fresh water as reported by residents as evidenced by oyster levels.

**Wakulla County’s Proposed RIB Site – Karst Topography Analysis -** Mike Core, Florida Resources and Environmental Analysis Center, FSU

* A copy of Mike Core’s presentation is available on the [WSA website](http://wakullaspringsalliance.org/wp-content/uploads/2016/11/Moore-Parcel-RIB-Presentation-to-WSA.Core_.03-26-21.pdf).
* The underlying limestone bedrock is mapped including sinking streams, tunnels and caves.
* There are 2 major sinkholes at the Moore site. It is in the WS PFA and is part of the BMAP basin. The site is 2.5 miles from the WS caves and closer to Spring Creek caves. The map shows caves, wetlands, soils and karst areas. Topographic wetness relates to elevations.
* Karst topography is important because of the potential for groundwater and well contamination.
* There is limited clay to protect the groundwater
* Wells in the area are shallow.
* Q – Will this determine if erosion will create new sinkholes? A - The current study does not address this but it could be done.
* Q – What is the potential for a designed wetland. A – You would need a liner. The engineers are proposing a lined wetland.
* Q – Will the engineers determine if there is adequate area to process the projected volume of wastewater. Can this be done in a wetland? A – They will be doing the engineering. There may be a way to engineer this in the wetland.
* Q – The Tallahassee WWTF can only reduce 90% of pollutants. What will the Otter Creek WWTF remove and not remove? A – It is similar to the Tallahassee WWTF in that it uses biological nitrogen removal but not identical.
* Chuck Hess said the golf course hasn’t sprinkled for 10 years. They have 600 sprinkler heads. They can discharge the treated WWTF effluent in 30 minutes/day. They need water and it will reduce adding fertilizer. It is a win-win. David Edwards will talk to the golf course. Some commissioners want control by buying the golf course.
* David Edwards, County Administrator, has been talking to the golf course owners. The sprinklers are a mess and there is a connection to Spring Creek. We need to assess the depths and more. It will take 2-3 months to assess the feasibility. The engineering contract to begin work likely will be approved at the May County Commission meeting.

**Legislative update** - Ryan Smart

* SB1522 (HB1225) is based on the Blue Green Algae Taskforce recommendations. There will be a Committee hearing Monday at 3:00. This needs support as the only environmental bill.
* SB100 repeals MCORES and goes on to authorize building 2 new roads in rural areas. There is confusion. Environmentalists should not support this.
* Committee Budgets are out. We are asking for more Springs funding. Senate numbers have increased that allocation from $50 to 75 million but it only addresses 15% of the problem.
* Senate has $50 million for conservation easements and no acquisition. House has $100 m
* The FL Springs Council has free membership and everyone should sign up to get action alerts. The last request worked to get a bill heard. Bob Deyle indicated that as the Alliance’s representative to the Council he receives those emails and passes along those he thinks are most pertinent to the WSA’s mission.
* Q - Do any bills address nitrogen from agriculture? A – SB5122 does mention BMPs that don’t work based on research and FDEP analysis. BMPs must project N reduction and test results. DACS collects fertilizer records and shares data with FDEP in a way that is not useful. We can request that BMAPs specify reductions, especially in high ag areas. Ag doesn’t want to admit that they are part of the problem and they have power.
* The WMD has partnered successfully with 90% of irrigation farmers near Jackson Blue Springs to adopt nitrogen-reducing BMPs.

**Upcoming meetings and events** – Bob Deyle

* **April 23** – Presentations by FDOT and Blueprint re (a) CCSW next segment - Rt. 20 to Springhill Rd and (b) Debbie Lightsey Nature Park and the Greenway
* **May 28** – **Memorial Day weekend; shall we move the meeting up to May 21?** Yes.

**Possible public education initiatives** – Rob Gelhardt

* There is a proposed bike trail from St. Marks Trail to Wakulla Springs
* Rob Gelhardt will contact the CRTPA to express interest in the trail.
* We will talk more about this in April
* We can use Springs Tag Grant (May) for PR efforts. This could include banner stands, flyers, etc.
* We did put signs up along Rte 267 in the past and it is time to replace them. Jim Stevenson is working with FDOT and Amy Connors at the Park on this.
* Bob Deyle encouraged volunteers to work with Rob to bring a Tag Grant proposal to the WSA board for approval in April.

**Springshed and river update -** Cal Jamison

* No action on the fish farm site.
* On March 4th Cal discovered an anchor near the spring bowl. The archeologists and divers have taken pictures. We also found bones and beer bottles. It could be Spanish Admiralty anchor or newer.
* Water visibility depth improved to 24.3’ this week. Dark water still going into the system.
* Q - What is happening with the Revel property? A – FSU students, the WMD and the County are considering a nature trail and other facilities. It is an open park and will be developed after the student’s report. There will be educational information on the water, geography and history.
* All stormwater ponds on 319 are holding.

**Cave exploration update** – Andreas Hagberg

* We have run into some dead ends.
* The water is darker in Sally Ward, dark green.

**WKPP report** – From Casey McKinlay

* They have received a five-year special use permit with the Forest Service to renew explorations north of Leon Sinks.

**Adjourn**

* Debbie Lightsey made the motion to adjourn, which passed unanimously.

**Appendix A**

**A group of trees in a body of water

Description automatically generated with low confidence**

**Final Agenda**

**March 26, 2021**

**9:00 am via Zoom**

**9:00 Opening**

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

**9:10 February 26 minutes (attached)** - Tom Taylor

**9:15 February financial report (attached)** – Jim Davis

**9:20 Leon County fertilizer ordinance** - Grant Gelhardt, Big Bend Sierra Club Group (see attached letter)

**9:35 Explaining Declining Stage and Implications for Wakulla-Sally Ward MFL** – Bob Deyle

**10:05 WSA comments on Wakulla-Sally Ward MFL proposed rule** - Bob Deyle

**10:25 Wakulla County’s Proposed RIB Site – Karst Topography Analysis -** Mike Core, Florida Resources and Environmental Analysis Center, FSU

**10:40 Legislative update** - Ryan Smart

**10:50 Strategic Plan update** - Tom Taylor

**11:35 Upcoming meetings and events** – Bob Deyle

* **April 23** – Presentations by FDOT and Blueprint re (a) CCSW next segment - Rt. 20 to Springhill Rd and (b) Debbie Lightsey Nature Park and the Greenway
* **May 28** – **Memorial Day weekend; shall we move the meeting up to May 21?**

**11:40 What’s new?**

* **Possible public education initiatives** – Rob Gelhardt
* **Springshed and river update -** Cal Jamison
* **Cave exploration update** – Andreas Hagberg
* **WKPP report** – From Casey McKinlay
* **What else?**

**11:55 Other business**

**12:00 Adjourn**

Appendix B

**3-26-21 WSA Meeting Participants**

**\* indicates those present**

Officers

Robert E. Deyle, Chair \*  
Howard Kessler, Vice-Chair   
Tom Taylor, Secretary, \*   
Jim Davis, Treasurer \*

Directors

Gail Fishman \*

Albert Gregory   
Rob Gelhardt \*

Andreas Hagberg \*

Cal Jamison \*  
Brian K. Katz   
Terry Ryan \*  
Lindsay Stevens   
Jim A. Stevenson \*

Members

George Apthorp

Doug Barr

Dana Bryan

Bill Carroll

Sandy Cook

Hal Davis

Sue Damon \*

Craig Diamond

Anthony R. Gaudio \*

Grant Gelhardt \*

Ryan Smart \*

Chuck Hess \*

Michael Hill

Don Lanham

John Outland

Fred Partin

Dan Pennington

Thomas Sawicki

Peter Scalco

Ryan Smart

Meredith Tanguay

Bob Thompson

Steve Urse

Sophie Wacongne-Speer \*

Nico Wienders

Zoe Kulakowski

Guests

Carlos Herd \*

Kathleen Coates \*

Mike Core \*

Brett Cyphers \*

Scott Dyer \*

David Edwards \*

Max Epstein \*

Grant Gelhardt \*

Maddy Hart \*

Mark Heidecker

Brian Lupiani \*

Lorie Cruz \*

Johnny Richardson \*

Courtney Schoen \*

Nannette Watts \*

Gil \*

**Appendix C**

****

**Appendix D**

Logo

Description automatically generated

March 7, 2021

Nawfal R. Ezzagaghi, Director

Division of Environmental Services

435 N. Macomb Street

Tallahassee, FL 32301

**RE: Sierra Club Support for a Strong Urban Fertilizer Ordinance**

Dear Mr. Ezzagaghi:

Thank you for considering the impacts from urban fertilizer to your watershed. With an updated urban fertilizer ordinance, you have the opportunity to join the thirteen counties and over 100 municipalities that have adopted “strong” ordinances since 2007. By “strong” we mean that they include strict rainy season application bans and a number of other protective provisions related to the content and rate of fertilizer application.

Leon County is lucky because these strong provisions, found in multiple other existing ordinances in the state, have already been vetted many times over. These provisions, which the Sierra Club urges you to incorporate into your ordinance, include the following:

**Weather and seasonal restrictions:**

No applicator shall apply fertilizers containing nitrogen and/or phosphorus to turf and/or landscape plants during the restricted season from June 1 through September 30.

**Fertilizer content and application rate:**

1. Fertilizers shall be applied to turf and/or landscape plants at the recommended rate per the "Florida Friendly Best Management Practices for Protection of Water Resources by the Green Industries", December 2008, as revised, with no more than four (4) pounds of nitrogen per 1,000 sq. ft. applied in any calendar year.

2. No fertilizer containing phosphorus shall be applied to turf and/or landscape plants, except where phosphorus deficiency has been demonstrated in the soil underlying the turf and/or landscape plants by a soil analysis test performed by a State of Florida-certified laboratory. Any person who obtains such a soil analysis test showing a phosphorus deficiency and who wishes to apply phosphorus to turf and/or landscape plants shall mail a copy of the test results to the County prior to the application of phosphorus.

3. Nitrogen fertilizer shall not be applied on newly established turf or new landscape plants for the first 30 days.

4. Not more than 1 lbs. of total nitrogen per 1000 sq. ft. per application shall be applied.

5. Nitrogen shall not be applied at an application rate greater than 0.5 lbs. of readily available nitrogen per 1000 sq. ft. based on the soluble fraction of formulated fertilizer.

6. Granular fertilizers containing nitrogen applied to turf and/or landscape plants within the County shall contain no less than 50 percent slow release nitrogen per guaranteed analysis label.

7. Liquid fertilizers containing nitrogen applied to turf and/or landscape plants within the County shall not be applied at a rate that exceeds 0.5 lbs./1,000 feet2 per application.

**Fertilizer-free zones:**

Fertilizer shall not be applied within 15 feet from the top of bank of any surface water, landward edge of the top of a seawall, designated wetland or wetland as defined by the Florida Department of Environmental Protection (Chapter 62-340, Florida Administrative Code, as it may be amended or superseded).

There are other provisions that should be included in a strong/protective ordinance, but the above is the most noteworthy and important.

**The science behind Florida’s many strong local ordinances is voluminous.** Each and every county that has adopted a strong ordinance since 2007, and especially since 2009, has a public record of all of the science it used to determine the viability of a strong ordinance in their respective watershed. In 2009, Florida Statute (403.9337) mandated that each ordinance stronger than the FDEP Model ordinance be “science-based, and economically and technically feasible” – since that date ordinances covering 11 counties, and in most cases all of their respective municipalities, have been adopted and implemented.

**The “Limited Urban Commercial Fertilizer Applicator Certification” Florida (certified applicator (GI BMP) training),** Statutes, 482.1562 adopted in 2009, mandated limited certification for all commercial fertilizer applicators by January 1, 2014. This limited certification is acquired pursuant to Florida Statutes, 403.9338. The certification process and test includes the following topics: Overview, Lawn & Landscape, Irrigation, Fertilizer, and Pesticides. The training also includes a pre-instruction test and a post-instruction test which is identical to the pre-test. It can be taken in person (price varies but approximately $30) or can be taken online or by DVD – the online test costs $15. The entire in-person course is taken in a 7.5 hour period that includes a lunch break. A passing grade is 75% which means that the test taker could get every single “Fertilizer” or every single “Lawn & Landscape” related question on the test wrong, but still pass the test. In as much, the certification process is not the only thing local governments should depend upon for protection from fertilizer pollution when nearby and downstream water bodies are at risk. The Sierra Club pored through all of the GI BMP training materials and produced a review (see attached); it details what is and is not covered in the training.

**FDACS has never challenged the legality or the science behind any of the existing ordinances.** It should also be noted that in December 2014 the Florida Department of Agriculture and Consumer Services (FDACS) updated the labeling requirements for DIY bags of turf fertilizer in the state to include the following language: “*Check with your county or city government to determine if there are local regulations for fertilizer use.”*

**The fertilizer industry’s response has been positive.** In 2015 Scotts® announced their new summer-safe, no N-no P, turf product. It is an example of the positive response received by many urban fertilizer manufacturers since the first summer rainy season bans were adopted in 2007.

**Lawns are healthier with less nitrogen.** Rick Barth, President, Palmer Ranch Master Property Owners Association gives powerful testimony in his 2009 letter: https://drive.google.com/file/d/0Byjb07VUznvMYzFLRGNqTmdlSG8/edit?usp=sharing

**In conclusion:** Strict rainy season ban ordinances have been in effect along the gulf coast for over 12 years and currently there are 13 counties and over 100 cities covered by strict rainy season application blackout periods. You will find attached the list of current strong ordinances in the state. Strong ordinance provisions are not a new idea but rather a set of well-established and accepted practices through which local governments can address and reduce pollution borne by local stormwater runoff.

Sierra Club is at the ready to assist you as you proceed through the drafting and adoption process.

Respectfully,

Text, letter

Description automatically generated

Grant Gelhardt, Chair

Big Bend Sierra Club

[grant.gelhardt@gmail.com](mailto:grant.gelhardt@gmail.com)

850-274-4951