**A group of trees in a body of water

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**Board Meeting Minutes**

**Friday, May 21, 2021**

**9:00 to 11:45 am, via Zoom**

**Opening**

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

**April 23 minutes** - Tom Taylor

* Debbie Lightsey made the motion to approve the minutes, which was approved unanimously.

**March and April Financial reports**- Jim Davis

* Debbie Lightsey made the motion to approve the reports, which was approved unanimously.
* The IRS Form 990 has been submitted.

**A Glimpse of the Past at Wakulla Springs**- Dana Bryan

* Dana made 1000+ trips on the WAKULLA SPRINGS tour boat documenting the limpkin for his dissertation.
* Annual bird counts were a source of data on limpkin populations.
* Bruce Means was the thesis advisor.
* The natural history study was funded by Edward Ball.
* He was chief biologist for DEP
* Many came to WAKULLA SPRINGS to see the limpkin.
* The spoil piles from dredging may have provided habitat during the years when the populations were the highest.
* Apple snails are a major food source for limpkin.
* American Widgeons were the most common of many migratory ducks that are no longer present. They would cover the river at times. 1000s were fed on the beach in front of the lodge.
* In the 1950s there were snail kites that are rare and endangered that also consume apple snails.
* 1926 photos show eel grass and glass bottom boats.
* 1930 divers recovered mastodon bones.
* In 1937 Ball opened the lodge. He married into the wealthy Dupont family.
* A 1940 photo shows the multi-level diving tower.
* The Tarpons synchronized swimming club was made up of women from FSU.
* There were both jungle cruise and glass bottom boat pictures.
* The bream came to the glass bottom boat, supposedly in response to the boat captain’s song but it was really the result of secretly sprinkling breadcrumbs from the back of the boat.
* In 1953 Creature of the Black Lagoon was shot here.
* In 1955-57 FSU scuba divers explored the spring bowl and caverns and recovered mastodon bones.
* Photos showed the changing boats and docks over the years.
* Truckloads of sand created the beach area and deepened the swimming area.
* The State acquired the park in 1986.
* Don Gavin and other boat drivers provided special sing-song narratives for the jungle cruise boat passengers.
* Q – The Friends of Wakulla Springs site has a lot of pictures. Can we get and use your slides? A – [The FL Memory Project](https://w/) has 200k photos that be copied with credit.
* Q – What is the spoil? A – They dredged the channel for the jungle boats and the spoil banks have been used by the limpkins and alligators.
* Q – Where was the 1930 mastodon found. A – It was found on the other side of the spring bowl.
* Q – There were tons of sand brought in. It is not natural. Beaches at Alexander and Weeki Wachee springs are maintained. This should be questioned. A – When it became a state park bringing new sand was stopped and existing sand is pumped up on the beach now. Other springs have floating platforms to enter swimming areas that preserve more natural shorelines.

**Legislative and Florida Springs Council update** - Ryan Smart

* This was not a great year but some positives.
* There was a 50% increase in Springs funds, $75 million rather than $50 million.
* Several groups are doing springs projects.
* Rainbow River RV park was stopped, after legal and PR efforts.
* There was a manatee crisis that resulted in $16 M in the state budget to improve habitat by FWC. There may be good projects.
* The neutral Senate Bill 100, defunded M-Cores, a plan for 3 new toll roads. The SW section was repealed but may happen in the future. US 19 will be improved rather than building a new corridor. The extension of the toll road to US 19 may impact springs and conservation land and is still being funding. This is a terrible project, and we need to continue to oppose it.
* No good water policy passed. The bill based on the blue-green algae committee recommendations did not get a critical committee hearing. They spent $6m on the committee and then they didn’t implement the recommendations.
* There were bad growth management and energy bills. See details on the [1000 Friends](https://1000fof.org/legis/2021session/) and [FL Springs Council](http://www.floridaspringscouncil.org/about) websites.
* The 2 ugliest bills were related to cruise ships in Key West pre-empted local regulations. HB 1309 is a water project south of Orlando that exceeds available water for development. It reversed progress made in the rulemaking process. It makes us question the value of working on rulemaking. We need to deal with rulemaking in the administrative process.
* Q – I saw a construction project N of I-10. A – It could be for the new powerline corridor. This powerline continues west to Marianna.

**Update re Leon County Comprehensive Wastewater Facilities Plan and septic tank upgrade pilot project** -­ Theresa Heiker

* We have installed 22 enhanced septic systems. We are working with DOH.
* We will have 5 sites with monitoring including 2 lined systems.
* We are requesting more state funding and have more requests for assistance.
* [Comprehensive Wastewater Facilities Plan](https://cms.leoncountyfl.gov/Home/County-Projects/Comprehensive-Wastewater-Treatment-Facilities-Plan) tasks 1-3 have been completed. We are preparing for public meetings and the dates will be set soon. These may be virtual or hybrid meetings in June. Then we will develop recommendations for technologies and areas where sewering and advanced treatment or cluster systems should be located.
* Tasks 5 and 6 will come up in September.
* Reports will be posted on the website. Comments can be made online or at meetings.
* Q – Can we get these reports ASAP? A – Yes.
* Q – Public meetings on Tasks 1, 2 and 3 in June and final meetings in September. A – Yes.

**Springshed and river update -**Cal Jamison

* I was at Wakulla Springs twice this week
* The quarterly submerged aquatic vegetation survey was disappointing. All transects had just Sagittarius grass, algae, and nothing else, 90% bare bottoms and no coon tail and other native SAV.
* Visibility has been 50+ feet throughout May. Heavy rains brought tannic water in the second week of May and now it is clear (71’) but green.
* The water stage has been depressed for 6 weeks at less than 1 foot. It has raised a couple of inches in the last week. We have observed fish have all but disappeared in the bowl and around the dock. There was also not much wildlife for a while. Herons and yellow crowned night herons are there now.
* WKPP is starting diving on the National Forest to update maps.
* Bob Deyle reported that anhinga numbers are down, and this may be related to having fewer fish. He has seen one nest rather than the typical 5 or 6. The number of common gallinules are down. It is easy to see gators with lower water. The gage at the boat ramp was 0.4 last week and 0.6 this week and came up 2-3 inches in a few hours.

**Cave exploration update** - Andreas Hagberg

* Exploring near Sally Ward within 300 feet of the Ferrell property.
* Very interesting conduits and big chambers 70-100’ wide and 60-80’ deep down 200’.
* We will be editing a video of the best clips soon.

**Concept proposal for a Wakulla Springs Symposium** – Tom Taylor, Kathleen Coates

* Kathleen Coates and Tom Taylor presented the draft proposal for a Wakulla Springs Symposium, below and attached.  Many agencies and entities make critical policy and project decisions that affect Wakulla Springs.  This will be an opportunity to consider what we know and need to know to make better decisions and prioritize next steps to optimize outcomes for Wakulla Springs.
* Everyone is encouraged to review this proposal and email comments and suggestions for a successful Wakulla Springs Symposium to ttaylor@fsu.edu.

**Leon County fertilizer ordinance update**- Bob Deyle

* Amendments were adopted on May 11 to bring it into compliance with State requirements. The county adopted most of the recommendations of the FL and Big Bend Sierra Clubs, except the summer 4-month ban. Staff opposed this because these are the growing season in North Florida. The idea of prohibiting application related to projected rainfall would be hard to enforce or for companies with schedules to comply with.
* Bob talked with staff in Alachua County and learned about what they have done to address the requirement for science-based variances to the State law.
* Kristin Dozier encouraged adoption of the staff recommendations and asked for further consideration of summer bans.
* Q – Debbie volunteered to participate in lobbying once we have the science reduced to talking points. A – We will have a briefing document we can use in meetings with commissioners. Sophie Wacongne will read materials and help.

**Vegetation management at City of Tallahassee solar farms** – Bob Deyle

* Jim Stevenson raised this question in March. With the assistance of WSA member, Steve Urse, who also is a member of the City’s Utility Citizen Advisory Committee, Bob connected with Ben Cowart, the city’s Manager for Alternative Energy. He in turn connected him with Michael Eyman who is Managing Director of Origis Services out of Austin, TX.
* There are 2 sites, 20 MW/day on 120 acres and 40 MW/day on 240 acres. The farm is owned by KKR, a global investment firm. They contract with Origis Services to operate and maintain it.
* The ground cover is mostly Bermuda grass, and no fertilizer is used. They do mow. They use some herbicides to control smilax and other climbing vines around the posts. Pesticides are used for mice and insects in panels as needed. The facility has protected areas for gopher tortoise and golden aster. Golden asters that appear on where the panels are located are allowed to grow and go to seed. They are environmentally concerned and open to make changes.
* Jim and Cal would like to have a field trip. Bob will arrange it.

**Upcoming meetings and events**– Bob Deyle

**June 24 Symposium** (tentative)

**June 25**- TBA

**July 23**- TBA

**Other business**

* C - There was a big drop in water levels in Lake Jackson. A – Friends of Lake Jackson is looking at this. It may be sinkholes draining more than usual or rainfall variations. Other lakes are not going down. We hope to have a report soon.
* Debbie’s lake has held until 8 days ago and has now dropped rapidly.
* Jim’s cypress swamp near Lake Jackson that has gone down a lot.
* An observer in the 1800s hypothesized that water from Lake Jackson flowed to Wakulla Springs.

**Adjourn**

* Jim Stevenson made the motion to adjourn that passed unanimously.

Appendix A

**A group of trees in a body of water

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**Board Meeting Agenda**

**Friday, May 21, 2021**

**9:00 to 11:45 am, via Zoom**

**9:00   Opening**

·       **Welcome and introductions** - Bob Deyle

·       **Agenda review** - Bob Deyle

**9:10   April 23 minutes** - Tom Taylor

**9:15   Financial reports**- Jim Davis

·       **March 2021 financial report**

·       **April 2021 financial report**

**9:20   A Glimpse of the Past at Wakulla Springs**- Dana Bryan

**10:20   Legislative and Florida Springs Council update** - Ryan Smart

**10:30   Update re Leon County Comprehensive Wastewater Facilities Plan and septic tank upgrade pilot project** -­ Theresa Heiker

**10:45   What’s new?**

·       **Springshed and river update -**Cal Jamison

·       **Cave exploration update** - Andreas Hagberg

·       **What else?**

**11:00   Concept Proposal for a Wakulla Springs Research Symposium** – Tom Taylor, Kathleen Coates

**11:15   Leon County fertilizer ordinance update**- Bob Deyle

**11:25   Vegetation management at City of Tallahassee solar farms** – Bob Deyle

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

·       **June 25**- TBA

·       **July 23**- TBA

**11:40   Other business**

**11:45   Adjourn**

Appendix B

**5-21-21 WAKULLA SPRINGSA 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   
Debbie Lightsey \*

Terry Ryan

Lindsay Stevens \*  
Jim A. Stevenson \*

Members and Guests

Kathleen Coates \*

Jim Cook \*

Sue Damon \*

Scott Hannahs \*

Mark Heidecker \*

Gail Hankinson \*

Theresa Heiker \*

Ryan Smart \*  
Paul Thurman \*

Sophie Wacongne \*

Appendix C

**June 24, 2021, 10:00 – 12:00 Interagency Meeting**

**What does Success Look Like at Wakulla Springs?**

**Current Work, Goals and Needs**

Objectives:

* Summarize What Has Been Accomplished
* Identify What Remains to be Done
* Develop Ideas on how to Address

What does Success Look Like at Wakulla Spring?

* Current State of the Wakulla Spring and River System
  + Hydrogeologic connections to karst lakes
  + Tannic water from sinking streams
  + Spring Creek reversal dynamics
  + Channel geometry and hydraulics (scouring, stage changes)
  + Nitrate levels and Stream Condition Index (SCI) Trends
  + Minimum spring flow (MFL), Wakulla River flows and velocities
  + Sea level rise trends and effects on river
* Water Quality / BMAP / nitrate / nitrogen goals
  + Nitrate trends relative to TMDL of 0.35 mg/L
  + What ecological improvement is anticipated at 0.35 mg/L N?
  + 0.35 mg/L as target concentration
  + NSILT methods and data
  + Stream Condition Index (SCI) trend (effects of salinity, other factors)
* What processes and spring attributes can we reasonably manage versus those that we cannot? How do these affect expectations for restoration success at Wakulla Spring?
* Ecological/biological community trends and status
  + Improving Aquatic Vegetation
    - Relationship to 0.35 mg/L nitrate, tannins, Chl-a, and salinity pulses
    - Revegetation or natural recolonization
    - Possible constraints? (e.g., salinities, scouring, tannins?)
  + Chlorophyl a, and restoration success
  + Aquatic habitats and organisms – which aquatic habitats have changed?
* Priorities, next steps and responsibilities

|  |  |
| --- | --- |
| **Processes and Attributes We Can Potentially Manage and Improve?** | **Processes and Attributes We Cannot Manage** |
| Water Quality (BMAP / nitrate / nitrogen) | Hydrogeologic connections to Streams |
| Submerged Aquatic Vegetation   * Macrophytes and Algae | Tannic Water Inputs |
| Invasive / exotic species (hydrilla / herbicides) | Spring Creek Reversals, and Associated Periods of Elevated Salinity |
| Spring flow and groundwater withdrawals | Hurricanes, storms, and scouring (stream geomorphology) |
| Chlorophyl a | Sea Level Rise and climate change |

Participants - City of Tallahassee, FDEP (DEAR, FGS, and State Parks), FWC, Leon County

NWFWMD, Wakulla County, Wakulla Springs Alliance