**Overview**

The Wakulla Springs Alliance held a Board meeting on April 17, 2015 at the Renaissance Center. The draft agenda and list of board members, advisors and guests who participated can be found in Appendices A and B. Review the action items underlined below for your commitments and actions you can help with. This report is based on the secretary’s notes and does not capture everything or exactly what was said.

**Meeting Notes**

**Opening**

President Sean McGlynn welcomed everyone, Secretary Tom Taylor reviewed the meeting agenda and everyone introduced themselves.

**WSA Logo**

Maria Belingit presented the proposed logo with a Limpkin as suggested by the WSA board. It was pointed out that it looked very similar to the Apalachee Audubon logo that also has a Limpkin with the name forming a circle around it. An Anhinga was suggested but the Friends of Wakulla Springs is considering using the Anhinga on their logo. Jim Stevenson and Howard Kessler will work with Maria on an alternative logo.

**Water Quantity Modeling and Action**

Hal Davis made a presentation on the Wakulla & Spring Creek connections and overall modeling efforts. There is an abstract of his recent paper in Appendix C and his PowerPoint is available. There was also some discussion of whether there is adequate science to determine if withdrawals are a problem and what is needed to enhance modeling?A City of Tallahassee representative described what they are doing to reduce withdrawals, including: education, distributing low-flow showerheads, etc. They are in the process of renewing their Consumptive Use Permit with the WMD that has new rules. There will be opportunities for the WSA to provide input on the CUP and on messaging to the public. WSA is also concerned about the 2-½ million gpd transfer out of the basin of water from the Hopkins Power Plant.

Bill Howell with the Leon Soil and Water Conservation District talked about what they are doing locally and with Georgia. The Leon SWCD has met several times with the NWFWMD and advocated including GA water recharge and withdrawal data in the NWFWMD and have recently recieved confirmation from them that they will include GA groundwater data in their analysis for their minimum flows and water budget for the springs in our area. They have also agreed to include Karst variables if available. Mr. Howell is hoping to get the NWFWMD behind a springshed plan that would include three counties in Georgia four counties in Florida( The springshed for Wakulla/Aucilla springs). The National Resource Conservation Service has supported this multi-state plan but requires that the NWFWMD participate in the plan. So far Mr. Howell has been unsucessfull in getting the NWFWMD to agree to participate in such a plan. Mr. Howell also said that Georgia has many irrigation pivots in the springshed for Wakulla Springs and there may be more water withdrawls planned. in Georgia all lowering the amount of water Florida recieves . Stephen Tuller of the NRCS encouraged the group to look at George Coe’s and others’ presentations at the [SharingHYPERLINK "http://sharingwaterconference.com/?page\_id=151" the Water HYPERLINK "http://sharingwaterconference.com/?page\_id=151"Conference](http://sharingwaterconference.com/?page_id=151). Bill has talked to Senator Montfort and he agrees that some codified agreement with AL and GA regarding aquifer withdrawl is needed. The SWCD goal is to have a water budget, plan, agreement and support for needed actions. Federal funding could help, e.g. NRCS Innovation Grants. Bill Howell and Dan Pennington will meet to explore this. Hal Davis will check on a study of pivots in S GA done by the US Army Corp of Engineers.

**FL Springs Tag grants**

Bob Deyle and Jim Stevenson announced approval of the WSA applications.

|  |  |  |
| --- | --- | --- |
| Following the Water to Wakulla Spring Video | Jim Stevenson | $6,900 |
| Lake and Sinkhole Seepage N Loading to Wakulla Springs | Robert Deyle | $4,500 |
| Wakulla Spring Dark Water: Causes and Sources | Robert Deyle | $6,200 |

Bob Knight also had all his grants approved.

WSA will do formal scopes of work for each grant. Jim showed the film done for Ichetucknee and the group offered these suggestions for the Wakulla film:

* Talk about septic tanks
* Show leaf blowers, toilets, showers, faucets dripping, garden/yard chemicals; show we are the problem
* Show water levels, quality and quantity
* Add narration
* This was an art piece, funeral music, interpret for people
* Consider audience: commissioners, community, Wakulla Springs
* Show past, Creature of the Black Lagoon,
* Show effects like algae and people using it, pull up algae, and show rashes.
* Start with map, spring past and now, then do tour
* Show how we are creating the problem, individual sources

**What’s New?**

* Jim Stevenson took the new publisher of the Democrat on the springshed tour.
* Bob Deyle announced that Erica Rau research report on her Isotopic study of pollution sources to Wakulla Springs at our May 15 WSA meeting
* Land Acquisition team of Albert Gregory and Bob Deyle reported that they will get data and maps in mid June.
* Amendment 1 may not produce any money. Amd 1 bill in the Senate has 15m, the House bill has 10m, and much of the funding is for bad uses.
* House and Senate bills permit low-impact agriculture on State lands including parks. The House passed their bill.
* The water bill has been watered down, NWFWMD MFL is set for 2026, water quality features were dropped, nothing on RMEs and there are a few good things, e.g. monitoring large withdrawals, >100k, in springs priority focus areas,
* Everyone should write letters and make calls to legislators, they make a difference
* Howard Kessler predicted that the Wakulla County Comp Plan will pass; there is nothing we can do.
* 2 individuals want Panacea to incorporate.
* Howard Kessler talked about Wakulla County Septic System requirements. Wakulla Gardens is just south of the Wakulla Springs SPA and is platted at 8 units/acre, which is too much. See letter and diagram in Appendix D.
* Madeleine Carr will get the outline to us by mid-May for a Humanities Grant Application to conduct oral Black history interviews. The deadline is June 1 for grant money.
* An edict has come down from DEP to open Emerald and Clear Cut Springs to diving without the rules that have been in place in the past. In the past divers had to register and get a key and show certification. Now it is open. There will be erosion and plant damage.
* BMAP staff announced slowing efforts during session. DEP needs to be contacted after the session.
* We may want the state forest manager to present their plans at a future meeting.
* Sean and Jim will man table at Wakulla Springs Wings Festival and pass out flyers.
* We may want to apply for the Bring the Smithsonian to Your Home Town program. The application deadline is July 3 to host the Smithsonian traveling exhibit, "Water: Resource for Life" during its 2016-2017 tour of Florida. Selected sites receive $6,000 to implement public programs related to the exhibit. See [**Details**](http://r20.rs6.net/tn.jsp?f=001CG7VrYQZwXhoRPf-wwVEqhxGcEaO205wHQp0cy0jDInWvE8j5RSiKvjBqEG2bzxSBNb6GX_PiRLh_hg_V4O_CmsbY10hu_OQxQPNLNGD_xVnwJo08LEUO3JvwK0syL67yXAlOjmmGqJvHZ3o_q_3r4y_yJjezlYb48rC1me1aOlphAhSkKxJxgdcQ0uqAxgWz_OHGo0Zv-0MnBlWVbT55g_nL93LpY9vMSGakvKpIf0RsSUPX4inZQn08uKCzEGuA0SMmkyozUZq33CiWpKdPOJp45oaW7yE2xPUgD1Jf-MHt6S-R6-Fb5t_ygJ0bsNqLZonUy78WYJEuMXA5UfnIlH-ZhCHBFUg&c=iROrrh0sLXFFfJ_8i-ZvOrsHKmMffd347ly2gMna-ml25i50gY7zIQ==&ch=xevBNMly9yzeCDlGbCsUX37yj58Nqwn9BnS_VeKxegHg2nXkZI4MYg==).

Appendix A

**Proposed 4-17-15 WSA Agenda**

**Renaissance Center**

435 N. Macomb Street, 2nd Floor Conference Room

**9:00  Opening**

Welcome and meeting agenda review

Introductions

Secretary Minutes

Treasurer Report

WSA Logo, Maria Belingit (time to be determined)

**9:15 Water Quantity Modeling and Action**

Wakulla and Spring Creek connections and an overview of modeling efforts – Hal Davis

 Discussion of

 Is there adequate science to determine if withdrawals are a problem?

 What is needed to enhance modeling?

Discussion of what can be done to reduce withdrawals

 City of Tallahassee response

 Soil and Water Conservation District response (FL & GA) – Bill Howell

**10:15 Break**

**10:30 What’s New**

 FL Springs Tag grants approved – Bob Deyle and Jim Stevenson

 Erica Rau research report in May – Bob Deyle

 Hwy 319 Update – Bob Deyle

 Land Acquisition – Albert Gregory and Bob Deyle

 Report on meetings with Commissioners on wastewater management – Debbie Lightsey

 Legislative report – Rob Williams

Wakulla County Comp Plan - Howard Kessler

Wakulla County Septic System requirements – Howard Kessler

**11:45 Other Business**

**12:00 Adjourn**

Appendix B

**Board, Advisors and Guests**

\* Indicates 4-17-15 Participants

Board Members

Bob Deyle \*

Albert Gregory \*

Cal Jamison \*

Howard Kessler \*

Todd Kincaid

Debbie Lightsey

Sean McGlynn \*

Charles Pattison \*

Jim Stevenson \*

Tom Swihart

Tom Taylor \*

Rob Williams

WSA Advisors

Anthony Gaudio

Pam Hall

Julie Harrington

Bob Henderson \*

Bob Knight

Pam McVety

Dan Pennington \*

Bob Thompson \*

Guests

Gail Fishman \*

Bill Howell \*

Mark Heidecker \*

Dave Roberts \*

Appendix C

**Groundwater Flow Cycling Between a Submarine Spring and an Inland Fresh Water Spring by J. Hal Davis\* and Richard Verdi** Abstract

Spring Creek Springs and Wakulla Springs are large first magnitude springs that derive water from the Upper Floridan Aquifer. The submarine Spring Creek Springs are located in a marine estuary and Wakulla Springs are located 18 km inland. Wakulla Springs has had a consistent increase in flow from the 1930s to the present. This increase is probably due to the rising sea level, which puts additional pressure head on the submarine Spring Creek Springs, reducing its fresh water flow and increasing flows in Wakulla Springs. To improve understanding of the complex relations between these springs, flow and salinity data were collected from June 25, 2007 to June 30, 2010. The flow in Spring Creek Springs was most sensitive to rainfall and salt-water intrusion, and the flow in Wakulla Springs was most sensitive to rainfall and the flow in Spring Creek Springs. Flows from the springs were found to be connected, and composed of three repeating phases in a karst spring flow cycle: Phase 1 occurred during low rainfall periods and was characterized by salt water backflow into the Spring Creek Springs caves. The higher density salt water blocked fresh water flow and resulted in a higher equivalent fresh water head in Spring Creek Springs than in Wakulla Springs. The blocked fresh water was diverted to Wakulla Springs, approximately doubling its flow. Phase 2 occurred when heavy rainfall resulted in temporarily high creek flows to nearby sinkholes that purged the salt water from the Spring Creek Springs caves. Phase 3 occurred after streams returned to base flow. The Spring Creek Springs caves retained a lower equivalent fresh water head than Wakulla Springs, causing them to flow large amounts of fresh water while Wakulla Springs flow was reduced by about half.

Appendix D

Dear Commissioner Kessler,

Thank you for you note and questions.  I’m happy to provide some education that may help others to better understand these rules and regulations.  Development of 50’ x 100’ lots with wells has always been allowed as long as the appropriate setbacks can be met.  The 2 setbacks that are of most concern with respect to public health are the vertical separation of the drain field/leach field from the seasonal high water table and the horizontal separation of the septic system to potable water wells.  There must be a 24” separation from the bottom of the drain field to the seasonal high water table whenever a septic system is installed.  This 24” separation is to ensure that pathogenic organisms (bacteria, viruses, etc.) are filtered out via the soil so that they do not contaminate the ground water.  For potable water wells, a separation of 75 feet from any portion of the septic system must be met, once again as a protection factor to public health.  To date, we have not seen any higher rates of gastrointestinal or other illnesses associated with sewage in these more densely populated neighborhoods versus less densely populated areas that are on well and septic systems.

You are correct that in theory, you could have 8 septic tanks per acre on lots with wells, but the well and septic tanks would be staggered so as to allow proper setbacks not only from a homeowner’s own well, but their neighbors too.  Per F.S. 381.0065 (4) (g) 2, states that “Lots platted before 1972 are subject to a 50-foot minimum surface water setback and are not subject to lot size requirements”.  This applies to Wakulla Gardens since it was platted well before 1972.

Under current county ordinance, any new development on property that is less than 0.229 acres must have a Performance Based Treatment System (PBTS) installed.  This would apply to any 50’ x 100’ lots being developed in Wakulla Gardens.  The county commission put this ordinance in to effect in order to protect the karst environment and ground water from excessive nutrient loading.

We must abide by what is in Florida Statutes and Florida Administrative Code.  The Wakulla County Commission can always enact ordinances that are stricter than state law, just not less strict.  Unfortunately, we are not a P & Z office, so I cannot speak to property rights, since we deal with lots on case-by-case basis.  If you feel that this is presenting an environmental health issue, I suggest the BOCC could propose a county ordinance requiring any future development on property in Wakulla Gardens served by a potable water well must be of a specific lot size (e.g. 100’ x 100’, 0.25 acres, etc.).  It may be worth contacting the Department of Environmental Protection, as they may have suggestion on how to better protect the environment in these situations.  They were consulted on the development of the rules that we enforce and have concurred with our protection measures for Public Health.

Attached you will find a site plan that I have drawn up as an example of how eight 50’ x 100’ lots on wells can be all be developed while safely meeting all required setbacks.

If you should have any further questions, please do not hesitate to contact me.

Thank you,

Keith Lawhon, Environmental Specialist 3

Wakulla County Health Department

48 Oak Street

Crawfordville, FL 32327

Phone: (850) 926-0401

**From:** Howard Kessler [mailto:HYPERLINK "mailto:annhow23@gmail.com"annhow23@gmail.com]
**Sent:** Thursday, April 09, 2015 10:10 PM
**To:** Lawhon, Keith C; David Edwards; Luis Serna; Encinosa, Heather; James Melvin
**Cc:** Howard Kessler
**Subject:** one septic and one well per each 50' x 100' lot in Wakulla Gardens

Keith Lawhon,

I have included several staff on this email.  It is correct that the Wakulla Department of Health is permitting residential septic tanks on single lots with well water in Wakulla Gardens where the lot size is 50 feet by 100 feet?

That theoretically would allow eight or nine septic tanks per acre on lots with wells.  How is this possible?  Does this make for reasonable health protections?  Are the septic tanks performance based?  Is a density of 8 or 9 septic tanks per acre in our karst environment a reasonable health standard when each lot is using well water?

Can you lay out safely 8 or 9 septic tanks per acre along with 8 or 9 wells on the same acre and consider that reasonable health and safety measures?

I know that not all the lots that may be permitted may be adjacent.  But what is being created with the lots yet to be built on with respect to distances needed from septic tanks and drain-fields to wells?  Are potential property rights being taken?

What is the Health Department's rational for allowing a well and septic on 50 by 100 foot lots, lot after lot resulting in 8 or 9 septic tanks and drain-fields to the acre?

Respectfully,

Howard Kessler, MD

112 Old Still Road

Crawfordville, FL 32327

