

# LAKE WATCHER

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*The Newsletter of Lake Watch of Lake Martin*

*No. 54, January 2019*

*by Eric Reutebuch*

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## **2018 Achievements:**

- **20 sites monitored for water chemistry and bacteria in the Lake Martin Watershed**
- **200 data records submitted to the AWW water quality database**
- **Provided bacteria monitoring data to the Swim Guide, [www.theswimguide.org](http://www.theswimguide.org)**
- **Educated hundreds of children and adults about lake and watershed stewardship**
- **Created outreach posters and plans to fund kiosk in partnership with Wind Creek State Park, where kiosk will reside**

## **Lake Watch Officers:**

Eric Reutebuch...President  
Tom Collier.....Vice-president  
Dianna Porter.....Secretary  
Janne Debes.....Treasurer

## **LW Board of Directors:**

Matt Campbell	George Zorn
Myrna Lehman	Kathryn Braund
Judy Palfrey	Jesse Cunningham
Dick Bronson	Zelma dePasquale
Joanne Walker	

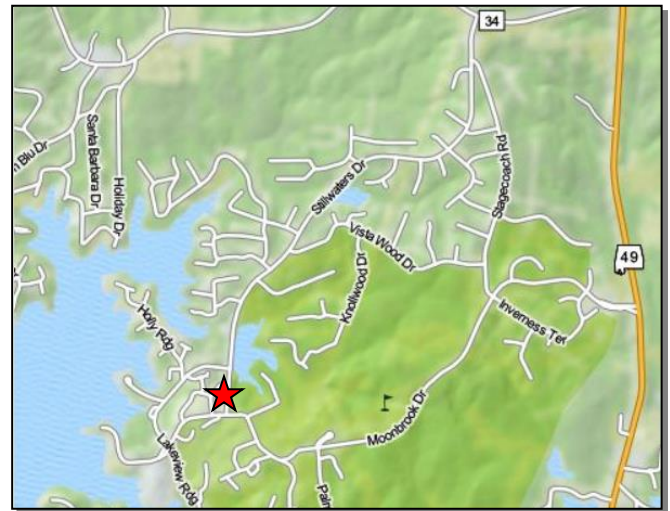
## **Lake Watch Annual Meeting February 17, 2019**

The Lake Watch Annual Meeting will be **Sunday, February 17, 2019, 2:00 pm to 3:30 pm at the StillWaters Residential Association Centre** inside StillWaters Resort (1816 StillWaters Drive, Dadeville, AL; map and directions below). The meeting will be followed by a social from 3:30-4:00 pm, with hors d'oeuvres, dessert and beverages, BYOB if you desire. We ask that you pre-register online so that we have a head count to prepare adequate seating and refreshments.

Register for the meeting at [www.lakewatch.org](http://www.lakewatch.org). Click the **Events** menu on the left side of the homepage, then under Annual Meeting click **Please register**, then the **Register** button, and follow instructions – be sure to add the proper number of ‘guests’ if you are bringing a spouse or friend(s) with you. Or, if you prefer, send an e-mail to us at [info@lakewatch.org](mailto:info@lakewatch.org) to let us know that you plan to attend, and we’ll register you. Once you’ve registered, please check in at the door at the meeting for an agenda, to update your Lake Watch contact info if needed, and for newbees – to become a Lake Watch member.

We are pleased to have Cindy Lowry, Executive Director of the Alabama Rivers Alliance (<http://alabamarivers.org>) as our guest speaker. Cindy will update us on the status of the development of a statewide water plan, a recent court ruling on relicensing of Coosa river dams and its relevance to Lake Martin. Lake Watch president, Eric Reutebuch, will follow with a brief overview of results from our 2018 Lake Watch water quality monitoring throughout the lake.

**Directions to StillWaters Residential Association Building:** From Dadeville take Hwy 49 south, turn into StillWaters onto Moonbrook Drive, take Moonbrook Drive to StillWaters Drive, turn right on StillWaters Drive, the StillWaters Residential Association Building will be on your left (see red star on map).



**Lake Watch Leadership and Budget**

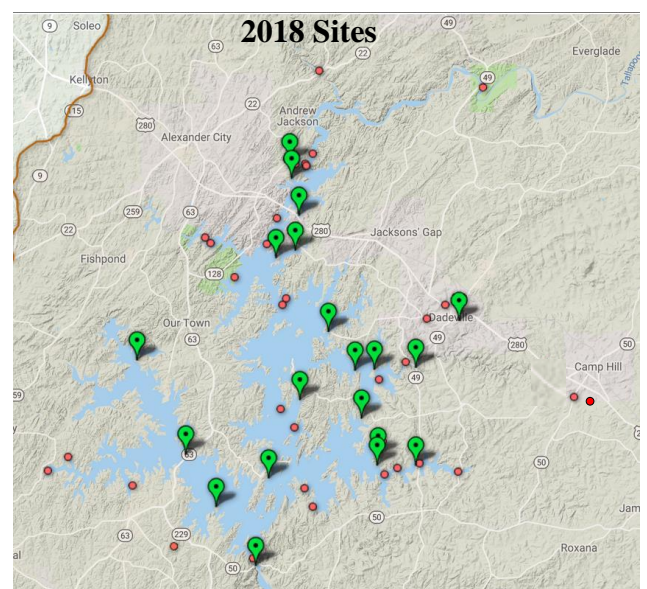
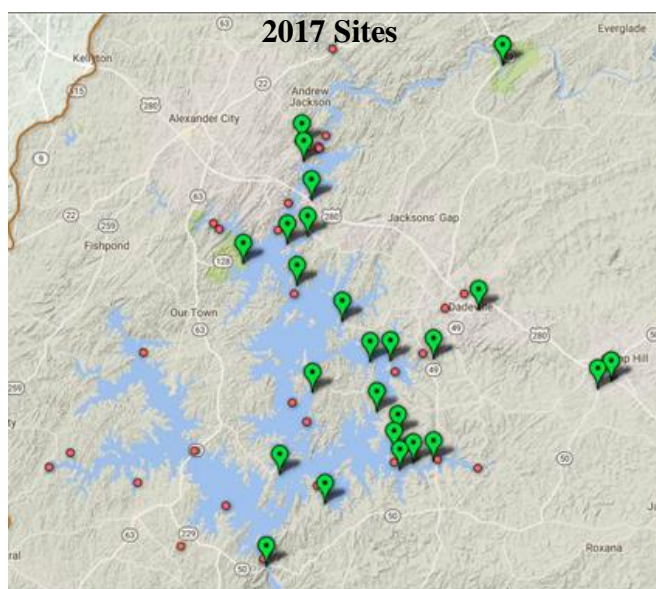
Changes in our board in 2018 included the loss of board of director Dave Hagan, who moved to Opelika, and the addition of Joanne Walker to replace Dave – THANK YOU Dave for your many years of service on the board, and THANK YOU Joanne for stepping up to replace him!

Lake Watch budget: end-of-year balance as of 12/31/2017 = \$6,022; 2018 expenditures = \$2,374; 2018 donations and dues = \$2,650, end-of-year balance as of 12/31/2018 = \$6,298 (\$4,419 general budget + \$1879 remaining in the Bronson Environmental Education fund). A big THANK YOU to all who’ve sent their annual dues in, especially to those who have donated at the Silver (\$50; eight donors), Gold (\$100; two donors; and Platinum (\$250; two donors). As you probably know, most of the Lake Watch budget is spent on the purchase of water testing supplies. Membership funds are also used to cover costs to spread the word of watershed stewardship, water conservation, to advocate for clean water, and to encourage others to join in our efforts. The website, newsletter, and teaching supplies are all part of these costs.

**Water Monitoring**

Judy Palfrey serves as Lake Watch water monitoring volunteer coordinator, ensuring that Lake Watch monitors have adequate supplies to do their water testing. Judy is also a monitor, and tests at multiple sites. THANK YOU Judy!

Lake Watch gained a new AWW-certified water monitor in 2018, Leanne Green. Lake Watch volunteer monitors have increased monitoring throughout the lake and tributaries to **200 water tests** (155 water chemistry records, and 45 bacteria records; compared to 121 records last year) at **20 sites** (down from 25 sites last year) from Coley Creek down to Martin Dam. Although fewer sites are monitored now relative to 2017, the distribution of monitoring sites has improved, now covering the Kowaliga arm of the lake (see maps below– green markers are active sites, red dots are inactive sites).



As you might expect, and hope, the vast majority of the Lake Watch data show that Lake Martin is clean and in excellent shape, though a few of the readings do indicate a couple of problem areas. Two parameters in particular, low dissolved oxygen (DO) and the presence of *E. coli* bacteria in the water, have indicated problems in a few areas.

Low DO is a problem for fish that ‘breathe’ in oxygen dissolved in the water through their gills. If DO readings fall below the state-mandated minimum of 5 parts per million (ppm), fish and other aquatic critters suffer, and could even die. Of the 155 water chemistry records taken over the past year by Lake Watch, only three were below 5 ppm. This represents 1.9% of all readings, meaning that for 98% of the monitoring, the DO was at healthy levels. The three low readings ranged from 4.1- 4.4 ppm, not low enough to kill fish, but low enough to negatively impact fish health. These measurements were obtained at Lake Watch site 07001007 at Smith Landing on Sandy Creek Embayment (where Sandy Creek enters the lake).



Dianna Porter testing DO at her home on Sandy Creek.

*E. coli* bacteria are considered a threat to human health when levels rise above 235 *E. coli* per 100 milliliters of water, according to the Alabama Department of Environmental Management, the state’s environmental protection agency. There were five instances when Lake Watch monitors got readings above 235 *E. coli*/100 mL of water, which represents 11% of all bacteria readings taken over the past year. None of these high *E. coli* readings were found in the lake, all occurred at stream sites. Four of the five readings were at Lake Watch site 07001041 in a small tributary stream of Chattasofka Creek near the Dadeville High School, readings ranged from 333-600 *E. coli*/100 mL, which prompted a follow-up investigation by local officials. They discovered and removed a dead animal from the stream, and the bacterial contamination of the stream has cleared up – YEAH! The one other site where one high reading occurred, a reading of 1,900 *E. coli*/100 mL (YIKES), was at Lake Watch site 07001053 on Sandy Creek upstream of the Highway 49 bridge. This very high reading was obtained in February 2018, shortly after a high rainfall/runoff event, emphasizing the recommendation from the Alabama Department of Public Health to avoid swimming in streams, rivers and embayments after a high rain event (evident by the presence of muddy water).

In conclusion, the lake continues to have occasional water quality problems in the Sandy Creek Embayment relative to DO levels, but no problems with bacteria (*E. coli*) contamination. Significant *E. coli* contamination has occurred in the Chattasofka Creek Watershed and occasionally in Sandy Creek (note, Chattasofka Creek flows into Sandy Creek). These problems underscore the need for continued water monitoring of the lake and its tributary streams to ensure that humans, fish and other aquatic critters are not harmed, and to ensure that we maintain our Treasured Lake status!

Note that some areas of the lake still go unmonitored, particularly the tributary streams flowing into the lake, as folks move away and long-time volunteers retire their test kits, so we are always in need of new water monitors. If you think it’s a necessity to have an insurance policy for your home and your car, think the same way about your lake – insure it through your involvement and investment in lake stewardship by becoming a Lake Watch supporter, and consider becoming a water monitor. Visit the Alabama Water Watch website at [www.alabamawaterwatch.org](http://www.alabamawaterwatch.org) for information on water testing and registration for free workshops held throughout the year, or email Eric at [reuteem@auburn.edu](mailto:reuteem@auburn.edu).



## Lake Watch Environmental Education Efforts

By Dianna Porter

Lake Watch environmental educators had a fun year teaching children and adults about our water and the environment. Judy Palfrey and Dianna Porter joined the fun at Montgomery Zoo Earth Day celebration. They put Lake Watch's new Enviroscope to great use, showing and teaching a few hundred students, teachers and parents about nonpoint source pollution and what 'loving thy downstream neighbor' really means.

Then came the Tallapoosa County Water Festival the next week at Wind Creek State Park. Two days of teaching 4<sup>th</sup> grade children the water cycle. The students also learned about aquifers, water safety, fish, how to paddle a kayak (see pic to the right: Tom Collier prepping youngsters for their first voyage), and litter awareness and clean-up.



4-H RiverKids was a great success this year, the kids and some adults learned about pH and turbidity (see picture to the left: Dianna teaching kids how to test the water using the AWW test kit).

In the fall Judy Palfrey had a great day of teaching with the Enviroscope at the Dadeville Fall Festival. She also brought her show case of aquatic macroinvertebrates which resulted in a lot of "ewws" and awes coming from the kids. Judy and Dianna emphasized caring for the environment, and student involvement. The Tiger Network News team from Dadeville Elementary School filmed at Keebler Park.

Dianna assisted AWW staff, teachers from Horseshoe Bend school, a Master Gardener and 30 6<sup>th</sup> graders to conduct a *Living Streams* sampling event to collect aquatic macroinvertebrates in Timbergut Creek near the school in October. The group collected lots of aquatic macroinvertebrates from all three ranking groups, indicative of a healthy stream. Students observed conditions of the stream and the surrounding area, had a great time, and learned a lot about watershed sampling and watershed stewardship.

The year wrapped up with the Dadeville High School Environmental Science Club spending a day at Keebler Park learning about storm water runoff and then implementing stormwater runoff control structures. The students built brush berms in gullies to slow rainwater runoff. They will continue to monitor their efforts and make improvements throughout the school year. The students also learned about habitat creation and we built two large brush berms. Bryan Henry from WSFA News surprised us with a visit, the piece aired December 12<sup>th</sup>.





## 2018 AWW Monitor of the Year

The AWW Mullen Award for Monitor of the Year recognizes the volunteer monitor who submitted the most water data records in the past year. AWW awarded the 2018 Mullen Award winner to our very own Janne Debes, who submitted a total of **97 records** (76 chemistry, 21 bacteria), WOW, that's a lot of water testing!

Janne was first certified as an AWW water monitor in December 2016. She spends time in both Auburn and at Lake Martin and is a member and monitor in both Lake Watch and Save Our Saughatchee. Oh, and she also serves as our Lake Watch Treasurer!



## Spreading the Word at Wind Creek

Working in partnership with Superintendent Bruce Adams at Wind Creek State Park over the past few months, Lake Watch is sponsoring the creation of a kiosk with three displays highlighting:

- Alabama's world class aquatic biodiversity,
- Watershed stewardship needed to protect our aquatic treasure, and,
- How folks can get involved with Lake Watch's ongoing environmental efforts.

The kiosk was the brainchild of Mary Ann Bronson, the brains of the operation, and the Bronson family is providing the majority of the funding for the project, supplemented by a donation by Lake Watch. Wind Creek State Park is doing the hard work of constructing the kiosk. We hope that it will inform, educate and inspire thousands of visitors who come to enjoy our Treasured Lake. Here are the three panels that will be displayed in the kiosk:

# WHAT'S SPECIAL ABOUT ALABAMA?

## America's Amazon

*Paradise on Earth*

10% of the freshwater resources in the continental United States flow through or originate in Alabama.

14 river basins form the waterways of Alabama.

There are more than **132,000** miles of river and streams in Alabama. That's enough to circle the earth 5 times!

Rank	State	Species
1	Alabama	332
2	Tennessee	320
3	Georgia	305
4	Kentucky	248
5	Mississippi	209

**Top 5 States Freshwater Fish Biodiversity**

22% of North American cordfish species

27% of North American loach species

28% of North American freshwater snails

57% of North American freshwater turtles

61% of North American freshwater muskies

**Native to Alabama**  
Alabama Ranks Number 1 in the US for the number of freshwater crayfish, fish, snail, turtle and muskie species!

**19% at Risk**  
19% of the freshwater fish species in Alabama are at risk due to pollution and destruction of habitat.

**Get Involved!**  
Get certified as a water monitor and volunteer. Learn more at <http://alabamawaterwatch.org>

**References:**  
Alabama Water Watch is a partner in the Alabama Water Watch program. For more information on the Alabama Water Watch program, visit <http://alabamawaterwatch.org>.  
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Alabama ranks **#1** among all states in aquatic biodiversity, and is a global hotspot for several aquatic species, home to:

- **332 fish species**
- **97 crayfish species\***
- **180 mussel species**
- **210 aquatic snail species**
- **34 aquatic turtle species\*\***

The Tallapoosa Basin, including Lake Martin and its tributaries, is home to many of these species, including **146** species of fish! This represents more fish species than most states have – 31 states have fewer species than the Tallapoosa Basin!

Some of these fishes are found only in the Tallapoosa Basin, and nowhere else! One example, the rainbow-colored Tallapoosa Darter below:

## Fishes of Alabama

**Legacy**  
1-800-240-5115  
[www.legacyfund.org](http://www.legacyfund.org)

\*Alabama is a GLOBAL HOTSPOT for crayfish, having more crayfish than most continents (Multiple Drivers of Decline in the Global Status Of Freshwater Crayfish, Nadia Richman et al., Philosophical Transactions of the Royal Society B: Biological Sciences, 2015).  
\*\*Alabama harbors more turtle species than any other state in the nation, and its Mobile River Basin is the center of the world's greatest biodiversity in turtles, surpassing all other river systems around the globe, including the Amazon and the Nile (Turtles of Alabama, Craig Guyer et al., UAB Press, 2015).



# HOW DO WE PROTECT WHAT WE'VE GOT?

Lake Martin was designated by the Alabama Department of Environmental Management (ADEM) as Alabama's one and only Treasured Alabama Lake (TAL) in 2011 after years of monitoring, outreach and lobbying by Lake Watch of Lake Martin.



Benefits of TAL for Lake Martin:

- ◆ No additional point sources\* (wastewater treatment plants, industrial outfalls) can discharge into the lake.
- ◆ Existing dischargers must meet strict limits on pollutants that they release into the lake; for example, phosphorus (algae nutrient) must be kept below one mg/L.
- ◆ Construction projects around the lake must limit nonpoint source pollution, especially sediment, from flushing into the lake by doing a stormwater plan, and implementing it; example – installing silt fences.

\*Unless there is no feasible alternative; any new point source must meet the strict water quality standards of the lake's TAL designation.

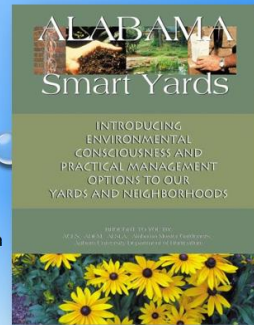
What can you do to keep our Treasured Lake clean?

- Reduce stormwater runoff – avoid over-fertilizing.
- Detain stormwater with rain gardens (see below) and rain barrels.
- Pick up pet waste.
- Maintain a vegetated buffer along lake, river and stream banks.



Integrate Low Impact Development (LID) design into your residence or business development: stormwater detention areas, pervious pavement.

Utilize other 'Smart Yard' practices in your lawn, garden, property management, available at: <http://store.aces.edu> – search for 'smart yards'.



Help monitor the water quality of the lake – join Lake Watch of Lake Martin at [www.lakewatch.org](http://www.lakewatch.org).

Posters created by Eric Reutebuch, January 2019

# HOW DO I GET INVOLVED?

Lake Watch of Lake Martin is an all-volunteer organization founded in 1991.

Mission: Protect and enhance the water quality of the lake.

Activities:

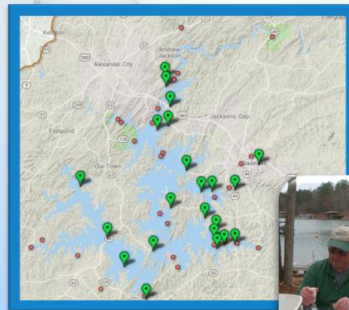
- ◆ Water monitoring
- ◆ Education/outreach
- ◆ Conducting scientific studies
- ◆ Preservation/protection

**HELP PROTECT OUR  
TREASURED ALABAMA LAKE**

JOIN US



[www.lakewatch.org](http://www.lakewatch.org)



Lake Watch monitors test water chemistry and bacteria in the waters of the lake. Explore the data at [www.alabamawaterwatch.org/water-data](http://www.alabamawaterwatch.org/water-data).



Lake Watch volunteers conduct education/ outreach at schools, festivals, public meetings and on the internet, [www.lakewatch.org](http://www.lakewatch.org).



Lake Watch has conducted numerous scientific studies of the lake and its tributaries alongside Auburn University researchers.



Lake Watch worked for decades to preserve/protect the lake and its watershed, and led the effort to establish Treasured Alabama Lake status in 2011. Martin is the only TAL lake in Alabama!

And here is a rough draft of the completed kiosk:



When completed (hopefully later this winter or early spring), it will be located at the base of the park's lookout tower.

### Lake Watch Helping Push Water Policy Forward

Lake Watch received a request from Alabama Rivers Alliance (ARA), urging individuals and groups to sign on to ARA's comments to the 'roadmap' for a state water management plan that the Water Resources Commission (WRC) completed for the governor. The governor terminated AWAAG, the Alabama Water Agency Working Group – the alliance of five key state agencies overseeing water management in the state – in late 2017, after AWAAG had spent several years in meetings, data collection, deliberation, and report-writing for the formation of a comprehensive statewide water management plan. The WRC is under the Office of Water Resources (OWR), who, arguably, should have developed strong proactive water management policies and a state water plan decades ago. In other words, the governor essentially reverted back to the status quo.

Comments compiled by the ARA urge the Commission and the governor to use the extensive information and reports generated by AWAAG (that you and I paid for), and go beyond the status quo, and include meaningful, protective legislation in a statewide water management plan. I'll keep you posted on the progress of this extremely important effort.

### Closing Thoughts

YOU are what makes Lake Watch of Lake Martin work! We urge each of our Lake Watch members to spread the word on Lake Watch, to support our programs and to participate. Renew your membership! Help sign up new members to our team! Consider an additional donation to Lake Watch! Not everyone can get out and monitor water or teach in a classroom, but each member is essential to our success. Together, we can and will make a difference in the protection of our lake, in water conservation and clean water advocacy, and in the world we leave for our children. If every Lake Watch member encourages one



or two friends to join in our efforts, it will go a long way toward ensuring the continuation of the good work we've accomplished over the past 27 years. Go visit your neighbor and sign him or her up. Or send your neighbor to our website, [www.lakewatch.org](http://www.lakewatch.org) to sign up. Better yet, bring them to our annual meeting on February 17<sup>th</sup> where they can hear about our work first-hand!

## **Dues Reminder**

*Take the plunge*, if you haven't already!

- Protect Lake Martin by supporting Lake Watch!
- And ask a neighbor to do the same!



For the many faithful Lake Watch members who already sent in their dues for 2019, thank you! And for those who haven't yet, don't forget to send your check to:

**P. O. Box 72, Alexander City, AL 35010**

to keep your membership current. Membership levels are listed below:

Regular dues (annual):    **Student \$10**    **Individual \$15**    **Family \$25**

Lake Martin Steward:    **Silver \$50**    **Gold \$100**    **Platinum \$250**

We also welcome donations. Don't forget—a donation in someone's honor/memory is a lovely gift/tribute.



P. O. Box 72  
Alexander City, AL 35010

