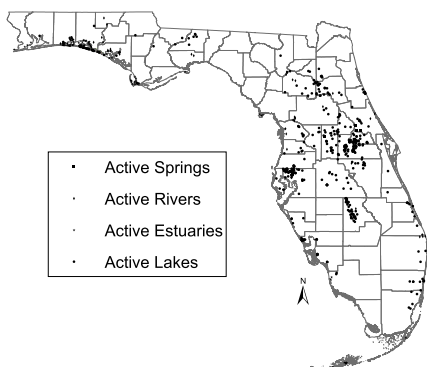


# LAKEWATCH

Dedicated to Sharing Information About Water Management and the Florida LAKEWATCH Program Volume 87 (2019)

## These Waters Are Monitored by Florida LAKEWATCH



To better understand and serve our Florida LAKEWATCH participants we asked volunteers to fill out a short three question survey during our 2018 Regional meetings. In question #3 we asked volunteers to list one to three ways, in order of importance, how they would like to be recognized for their participation in the LAKEWATCH Program. Several volunteers thought it would be nice to have lake stakeholders know that the lake they enjoy was sampled by Florida LAKEWATCH. We thought that was an excellent idea and we developed the following sign for all of our active volunteers to post on their lake:

### In this issue:

<b>These Waters Are Monitored by Florida LAKEWATCH.....</b>	<b>1</b>
<b>Is glyphosate still a reasonable option for aquatic weed management?.....</b>	<b>3</b>
<b>Featured Locale: Lake Griffin.....</b>	<b>5</b>
<b>Governor Ron DeSantis Announces Legislation to Expedite Water Quality Improvements.....</b>	<b>6</b>
<b>Florida LAKEWATCH History (33 years and going strong).....</b>	<b>8</b>
<b>Congratulations Claude Brown On a Job Well Done!.....</b>	<b>10</b>
<b>We wish you a very Merry Christmas, Happy Holidays, and a Happy New Year!.....</b>	<b>12</b>



Coordinated through the Fisheries and Aquatic Sciences program,

**LAKEWATCH MONITORS 800+**  
**LAKES, RIVERS, AND COASTAL SITES**  
in more than 50 counties!

The information generated from this program is free and available to anyone

**[lakewatch.ifas.ufl.edu](http://lakewatch.ifas.ufl.edu)**

LAKEWATCH actually designed two different styles of sign; one that volunteers have space to personalize with a signature as the volunteer and a generic one that just recognizes a LAKEWATCH volunteers samples the system. Active volunteers will receive a sign at your Regional Meeting and you can post it where you feel it will best serve its purpose.

We thank everyone who filled out the 2018 survey and we will continue to use the information generated to better serve LAKEWATCH volunteers and other stake holders.

Florida LAKEWATCH Director Mark Hoyer

# Is glyphosate still a reasonable option for aquatic weed management?

Jay Ferrell and Stephen Enloe, UF Center for Aquatic and Invasive Plants

There is significant clamor these days about glyphosate and whether it can or should be used as a part of an integrated pest management program. The concerns over this molecule are many and focus on both the science of health risk and public perception. We seem to be standing at a point where a constant barrage of news from social media outlets have painted a very dark picture of the herbicide we have deemed safe for decades. Therefore, let's briefly consider where we are with the science and see if we can find a path forward.

The concerns with glyphosate started in 2015 when the International Agency for Research on Cancer (IARC) reclassified this molecule from "Possible Carcinogen" to "Probable Carcinogen". This change in classification sent shockwaves across the world since we have been told for decades that glyphosate was essentially benign to humans or the environment. This reclassification was a significant move and has since prompted many countries to re-review the data on glyphosate and determine if additional changes in categorization are required.

Subsequent independent re-reviews conducted by the US Environmental Protection Agency, the European Food safety Authority (EFSA), the European Chemicals Agency, Health Canada, France, Germany, Switzerland, New Zealand, Japan, Brazil, Australia, and South Korea have all come to conclusions that disagree with the IARC assessment. In short, none of these other agencies have concluded from the review of hundreds of studies that glyphosate poses a significant health risk. This begs the question, why does everyone seem to disagree with IARC?

This is a complicated and very technical question. If you are interested in a deep dive into this issue, we would highly recommend reading [Tarazona et al. 2017](#) for a full explanation of why the European Union disagrees with the IARC. However, here are some very important nuances of this reclassification. First, we need to set the conspiracy theories aside. the IARC did not make this decision because they are activists that want to penalize pesticides. The IARC is a group of very talented researchers with high ethical standards and a long track record of evaluating a very broad range of substances and activities that may cause cancer. The timing of their



reassessment was legitimate and this does not seem to be a political move.

Second, according to Tarazona et al. (2017), the assessment of all the data show that the IARC and EFSA were actually in very close agreement on most points. However, they differed in their interpretation of specific data that could provide evidence of carcinogenicity in humans. In the end the IARC concluded it was enough to reclassify glyphosate while the EU concluded the data was too weak and inconsistent to warrant reclassification.

Third, what does “Probable Carcinogen” actually mean? It means that there is limited evidence that a substance or activity causes cancer in humans, but sufficient evidence in model species (mice and rats). If the IARC is correct (and it is still an “if”) that glyphosate is a probable carcinogen, it moves it into the same classification that contains consumption of red meat, consumption of beverages heated to >65C, and workplace exposure to haircare products (see <https://monographs.iarc.fr/agents-classified-by-the-iarc/> for the full list). It is important to recognize that the IARC did not move glyphosate to its category of known carcinogens. This fact has been completely ignored or missed by most media outlets. Known carcinogens like sunlight and tobacco are in a completely different classification than glyphosate and those stating that glyphosate is now a known carcinogen are doing so without scientific basis. The IARC is not saying that glyphosate causes cancer, but that it may be possible for glyphosate to cause cancer, just like consuming very hot beverages. But again, it is important to remember that just because IARC has made this designation doesn’t make it so. Pesticide regulatory agencies around the world currently disagree with this assessment and the IARC continues to stand alone.

Finally, the outcomes of the recent lawsuits filed against Bayer/Monsanto on current public opinion cannot be overstated. In all three cases, juries have found in favor of the plaintiffs against the company. These jury outcomes would certainly seem to suggest glyphosate causes cancer. We cannot comment on what evidence for glyphosate causing cancer was presented or excluded from the trials. However, the jury decisions simply do not line up with the independent scientific assessments of every pesticide regulatory authority around the world that has re-reviewed glyphosate. This leaves us in a very difficult place where science and human psychology in the courtroom have moved in very different directions.

So where do we go from here? Should we abandon glyphosate as a useful tool in IPM programs? We would suggest that until additional and more convincing data are generated in rigorous studies and published, glyphosate is not likely carcinogenic and can be safely used in integrated pest management. However, we must remain willing to change this opinion if the data indicates otherwise. We would also suggest that we dedicate ourselves and our employees to education on this issue and strongly adhere to all glyphosate product label directions. Finally, committing ourselves to the dispassionate scientific evidence and being careful not to be swayed by emotion will also help us navigate this important topic.

Literature cited

Tarazona, Jose & Court Marques, Daniele & Tiramani, Manuela & Reich, Hermine & Pfeil, Rudolf & Istace, Frederique & Crivellente, Federica. (2017). Glyphosate toxicity and carcinogenicity: a review of the scientific basis of the European Union assessment and its differences with IARC. *Archives of Toxicology*. 91:2723-2743.



## Featured Locale: Lake Griffin



**Size:** 9,327 acres.

**Location:** Lake County.

**Description:** Lake Griffin is the third largest lake in the Harris Chain, located in Lake County, Florida. Lake Griffin has benefited from fisheries and habitat management such as reconnecting Emeralda Marsh, installing fish attractors, bass stocking, and planting aquatic vegetation. The vegetation expansion, along with fisheries and habitat management, has resulted in Lake Griffin being one of the top bass fishing lakes on the Harris Chain. Recently, the Harris Chain of Lakes has become one of the top bass fishing destinations in the nation attracting big-name tournaments (e.g. B.A.S.S., FLW, and Bass Pro Shops: Big Bass Tour) and anglers from all over the world. Many of those tournament anglers

spend the extra effort to lock into Lake Griffin and the connecting marshes.

Based on results from recent electrofishing and angler surveys, the largemouth bass fishery is the best it has been in over 50 years. In fact, over the past three years anglers are experiencing excellent catch rates of 0.80 fish/hour, which is the highest ever recorded.

The submersed vegetation on the north end and the recently connected marshes are popular areas to target good numbers and size of largemouth bass. Also, Lake Griffin has numerous residential canals that are popular during the spawning months. Flipping or pitching soft plastics (straight worms or creature baits) is a popular tactic to entice Lake Griffin lunkers. Also, blade jigs, swim jigs, and lipless crankbaits in and around the submerged vegetation can provide excellent fish opportunities.

There are three public boat ramps on Lake Griffin: 1 - Lake Griffin State Park (3089 US highway 441/27 Fruitland Park, FL); 2 - Herlong Park (700 East North Boulevard Leesburg, FL); and 3 - the newly opened Emeralda Marsh Area 3 Boat ramp (Emeralda Marsh Road Leesburg, FL). For more information about Lake Griffin visit FWC's [Bass Top Spots](#).

[TrophyCatch](#) partner [Lake County Florida Tourism](#) and [Lake Big Bass](#) support Florida bass conservation by providing our annual Big Bag Prize (see [TrophyCatch Prizing](#) for details)

## Governor Ron DeSantis Announces Legislation to Expedite Water Quality Improvements

10/17/2019

**Jupiter, Fla.** – Today, Governor Ron DeSantis announced proposed legislation for the 2020 Legislative Session that will expedite water quality improvements throughout Florida. The legislation incorporates recommendations of the Blue-Green Algae Task Force, which the Governor created shortly after taking office to aid the Department of Environmental Protection (DEP) in protecting, conserving and managing the state’s natural resources.

The Governor made today’s announcement following a tour of the Loxahatchee River District, where he was joined by DEP Secretary Noah Valenstein and Chief Science Officer Dr. Tom Frazier as well as other environmental stakeholders from across the state.

“The health of our state depends on the health and quality of our water,” **said Governor DeSantis.** “That is why I am proposing legislation to expedite the improvement of our water quality throughout Florida. These comprehensive proposals, recommended by the Blue-Green Algae Task Force, will greatly aid the Department of Environmental Protection in our mission to enhance the quality of our state’s most precious natural resource.”

The proposed legislation furthers the directives outlined in Governor DeSantis’ Executive Order 19-12 and is based on the recommendations of The Blue-Green Algae Task Force. The Blue-Green Algae Task Force, through its discussion and deliberations, provides guidance and specific, science-based recommendations with the goal of expediting improvements and restoration of Florida’s water bodies that have been adversely affected by blue-green algae blooms.

The Blue-Green Algae Task Force received input from a variety of stakeholders and identified runoff from agricultural lands, onsite sewage treatment and disposal systems, sanitary sewer overflows, and stormwater runoff as some of the significant sources of nutrient pollution and made recommendations to improve the state’s policies and programs to achieve targeted nutrient reductions and protect public health.

“Addressing nutrient impacts will require actions by all stakeholders in Florida and significant water quality changes can only occur when all stakeholders work together,” **said DEP Secretary Noah Valenstein.** “This legislation is the foundation for implementing necessary actions by the department, local governments and our regulated community based on the Task Force’s recommendations.”

“Today was another example of leadership by Governor DeSantis,” **said Eric Eikenberg, CEO of The Everglades Foundation.** “The Governor outlined a comprehensive approach to address water quality problems that have been plaguing our state and the Everglades for decades. Today’s announcement ends the era of defending the status quo and moves us into a new chapter of fixing what has been neglected. We look forward to working with the Governor and the Legislature to improve our waterways, restore the Everglades, and protect Florida’s vibrant economy.”

“We are grateful for Governor DeSantis’ continued commitment to Florida’s environment,” said **Gary Jennings, Director of Keep Florida Fishing**. “Keep Florida Fishing supports the Blue-Green Algae Task Force’s multi-faceted, science-based approach to improving water quality throughout the state. We look forward to working with the Governor, Legislature and relevant state agencies to address these issues and move these proposals forward. Water quality is critical for maintaining fish habitat and healthy fish populations, which are so important to Florida’s \$11.5 billion sportfishing industry and more than 4 million anglers.”

DEP is expeditiously working to implement the Task Force’s recommendations, whether through the legislation announced today or through other policy changes and actions they can take immediately.

The proposed legislation does the following, based on topic:

#### **Wastewater Infrastructure and Sanitary Sewer Overflows**

- Requires utilities to develop inspection, maintenance and replacement plans for their wastewater systems, rather than allowing these systems to age and fall into despair.
- Gives DEP the authority to intervene by inspecting these systems and requiring appropriate proactive measures to upkeep wastewater facilities to better avoid future discharges.

#### **Biosolids**

- Ratifies recent rules adopted by DEP to ensure biosolids are only applied to land that is high enough and dry enough to prevent interaction with groundwater.

#### **Septic Systems**

- Transfers the authority of septic tank inspection from the Department of Health (DOH) to DEP to ensure environmental harm by septic systems is accounted for.
- Requires plans for the improvement of impaired water bodies, known as Basin Management Action Plans, to include septic remediation plans

#### **Agriculture**

- Requires DEP to coordinate with top academic institutions to annually send the most updated research to the Department of Agriculture and Consumer Services (DACS) to ensure agricultural best management practices are grounded in the most up-to-date science.
- Requires onsite verification of best management practices for each enrolled producer at least every two years.
- Requires DACS to provide DEP and water management districts the types and amounts of nutrients BMP enrollees are tracking on agricultural products.

#### **Stormwater**

- Directs DEP to adopt rules to ensure that stormwater systems throughout the state reflect the most up-to-date science and contemplate environmental harm.

Tags: [Press Release](#)

## Short History of Florida LAKEWATCH (33 years and going strong)



Photo Credit Mark Hoyer. Regional Coordinator Daniel Willis helping to develop and LAKEWATCH Volunteer training video that will soon be loaded to the LAKEWATCH web site.

Recently, Florida LAKEWATCH Regional Coordinators have been training many new volunteers to sample both new systems and systems that were in historically in the LAKEWATCH program but volunteers have moved or retired. Thus, it is always good to recap the history of the LAKEWATCH program defining our mission statement and primary goals as a little refresher both for new and veteran volunteers. The following is a brief history and statement of our LAKEWATCH mission:

LAKEWATCH is coordinated through the University of Florida's Institute of Food and Agricultural Sciences/SFRC Fisheries and Aquatic Sciences, the Florida LAKEWATCH program has been in existence since 1986. In 1991, the Florida Legislature recognized the importance of the program and established Florida LAKEWATCH in the state statutes (Florida Statute 1004.49.). LAKEWATCH is now one of the largest lake monitoring programs in the nation with over 1000 trained citizens



monitoring 600+ lakes, rivers and coastal sites in more than 57 counties. LAKEWATCH maintains collection centers in 38 counties.

The LAKEWATCH Mission Statement is as follows:

Work with Citizen Scientists for the purpose of monitoring Florida's aquatic ecosystems to provide research quality data (Research), public education (Extension) and student training (Teaching) with respect to water quality and aquatic systems management.

Florida LAKEWATCH's primary objectives are:

- Determine how changing geologic gradients everywhere apparent in Florida impacts the Limnology of Florida aquatic systems.
- Determine the natural variance exhibited within and among Florida's aquatic systems to help separate natural from anthropogenic changes.
- Maintain long-term monitoring to determine if any trends are occurring in Florida's aquatic ecosystems.

LAKEWATCH has been very successful over the last three decades following our Mission Statement and producing many peer reviewed scientific articles (Research), over 45 graduate students, (Teaching) and informing our volunteers of many aspects of lake management (extension). Many of these accomplishments and information you can find on our web site. That is a good introduction to LAKEWATCH's new web site that will be in place early in 2020, keep an eye out and let us know what you think when it is released.

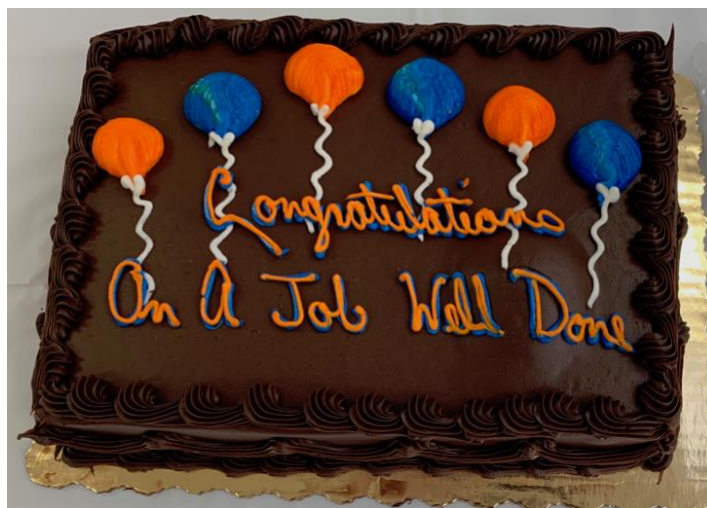
Finally, LAKEWATCH writes a newsletter four time a year to keep you informed on LAKEWATCH action items, current activities and other article of interest to aquatic resource stakeholders. If there is anything you think would be interesting for the newsletter please share and we will try to add it. As always LAKEWATCH thank all of our volunteers for their continued service and have a Merry Christmas!

Mark Hoyer

Director Florida LAKEWATCH



## Congratulations Claude Brown On a Job Well Done!



Dr. Daniel Canfield hired Claude Brown in 1990 to help in the LAKEWATCH water chemistry laboratory where he soon showed his expertise in laboratory techniques and quantitative analysis. Later in his career (1999) when LAKEWATCH was rapidly expanding Claude shifted from the laboratory to a Regional Coordinator working directly with our LAKEWATCH volunteers. When Mary Stonecipher the LAKEWATCH Chemist retired Claude again shifted back to the laboratory as a Chemist heading up a staff of four laboratory technicians where he finish off an excellent career. Claude has retired from the University of Florida after 29 years of service. He will be missed but LAKEWATCH wishes him well and God speed on his new life path.

### Claude's Short Biographical Sketch:

- *Claude Brown is a Chemist II with the Florida LAKEWATCH Team. Claude analyzes various chemistries, works closely with our Laboratory Manager and Technicians in cross-training and evaluating analyzed results. Claude has co-authored 8 peer-reviewed publications and numerous reports while working in the lab. Claude has worked with the Director and Lab Manager in the development and initial over-sight of Florida LAKEWATCH's "Standard Operating Procedures" to meet the long-term data collection mission of Florida LAKEWATCH. Claude has been with Florida LAKEWATCH since 1990.*
- *Claude is a sixth generation Floridian. He received his BS degree from University of Miami in Biology/Chemistry 1980 and a MS degree in Agriculture (majoring in Limnology) from the University of Florida 1994.*

- *Claude is a conservationist who enjoys all aspects of the great outdoors including: camping, canoeing, hiking, and bird watching. Claude is a founding board member of the Putnam Land Conservancy, and has been involved in the Putnam County Environmental Council, Putnam County Blue-ways and Trails, Friends of Little Orange Creek Nature Park, Sierra Club, Santa Fe Audubon, and various other environmental organizations.*
- *You can contact Claude at: (browncdb@ufl.edu).*

The following are citations for three of Claude's most cited scientific articles:

Brown, C. D., D. E. Canfield, Jr., R. W. Bachmann, and M. V. Hoyer. 1998. Seasonal Patterns of chlorophyll, nutrient concentrations and Secchi Disk transparency in Florida Lakes. *Lake and Reservoir Management Journal* 14: 60-76.

Brown, C. D., D. E. Canfield, Jr., R. W. Bachmann, and M. V. Hoyer. 1999. Evaluation of surface sampling for estimates of chlorophyll, total phosphorus, and total nitrogen concentrations in shallow Florida Lakes. *Lake and Reservoir Management Journal* 15:121-132.

Brown, C. D., M. V. Hoyer, R. W. Bachmann, and D. E. Canfield, Jr., 2000. Nutrient-chlorophyll relationships: an evaluation of empirical nutrient-chlorophyll models using Florida and northern temperate lake data. *Canadian Journal of Fisheries and Aquatic Sciences*. 57: 1574-1583.



LAKEWATCH staff celebration Claude's last day at work.

We wish you a very  
Merry Christmas,  
Happy Holidays, and a  
Happy New Year!



LAKEWATCH  
CITIZEN SCIENCE SINCE 1986



UF IFAS  
UNIVERSITY of FLORIDA



SFRC

This newsletter is generated by the Florida LAKEWATCH program, within UF/IFAS. Support for the LAKEWATCH program is provided by the Florida Legislature, grants and donations. For more information about LAKEWATCH, to inquire about volunteer training sessions, or to submit materials for inclusion in this publication, write to:

Florida LAKEWATCH  
Fisheries and Aquatic Sciences  
School of Forest Resources and Conservation  
PO Box 110600  
Gainesville FL 32611-0600  
or call  
1-800-LAKEWATCH (800-525-3928),  
(352) 392-4817,  
E-mail: [flakewatch@ufl.edu](mailto:flakewatch@ufl.edu),  
Website: <http://lakewatch.ifas.ufl.edu/>

All unsolicited articles, photographs, artwork or other written material must include contributor's name, address and phone number. Opinions expressed are solely those of the individual contributor and do not necessarily reflect the opinion or policy of the Florida LAKEWATCH program.

