



www.FLMS.net Winter 2021

Florida Lake Management Society

Managing Florida's Water Resources

President's Message



FLMS President, Dr. Serge Thomas

Dear all,

As a challenging and stressful year moves behind us, I feel that 2020 sounds like "may you live in interesting times", which ostensibly is an ancient Chinese curse although researchers point out it is of a more modern western origin and should be considered a blessing. Thus, while this phrase has generally a negative connotation, it also has positive outcomes.

Although we all were excited to have our regular symposium at the Hyatt in Bonita Springs last summer, we reluctantly had to switch – for the first time ever – to an online version of it. This endeavor was not for the faint of heart as we were navigating in uncharted waters. While we all miss the face to face social interaction, the migration was however a successful one as we experimented our first free-to-attend plenary speaker presentation which drew many participants on September 11th. Even better, this symposium is now stretching out over 6 months with three more sessions in 2021, which undoubtedly increases FLMS' presence throughout the year. Because of the online delivery, it also is very economical, ecologically friendly and, quite unexpectedly, positive revenue generating. This success is linked to all of you who attended but especially to our talented and dedicated board of directors (BOD) who has worked relentlessly to make the event happens. Additionally, the BOD will reflect on what we learned from this online symposium and examine what could be kept for our future more normal symposia starting with the upcoming -normally scheduled as real life- event at the Hawks Cay Resort in the Florida Keys this upcoming summer.

Furthermore, as the life of Dr. Karl Havens (an outstanding Florida researcher and a plenary speaker at FLMS and an Edward Deevey, Jr. recipient) ended unexpectedly last year, it also gave birth this year to a FLMS' scholarship fund "KHSF" named after him which supports academic degree seeking graduate students focusing on water research. This year also marks the increase in funding of our "Love Your Lake" program (LYL) which is especially needed as water crises emerge uncontrollably throughout the State.

Finally, with over 520,000 deaths and millions of COVID-19 cases in the US alone, I would like to send my sympathy to the victims as well as my compassion to the impacted working class but also to the affected students, teenagers and stay-at-home parents. With the revolutionary vaccine, we can all be hopeful that the pandemic is coming to a halt, but we must be vigilant as the it will take a couple of years until we see the end of it. Further, as the country is taking a new political turn, we all shall forget our differences and work conjointly for a prosperous sustainable future starting with what Earth has the most precious, its freshwater.

From the deepest of my heart, I am wishing you and your family a happy and healthy 2021.

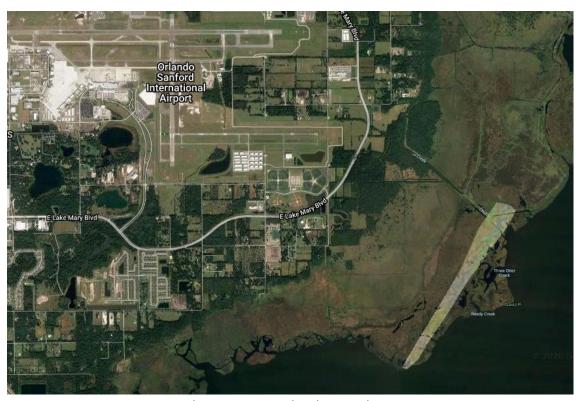


Treating an Invasive Plant with Aerial Technology

Phragmites, a genus of four species of large perennial reed grasses found in wetlands, is difficult to control using conventional methods in remote areas. A particularly challenging treatment area lies adjacent to Lake Jesup, near the Orlando Sanford Airport. The Seminole County Lake Management Program collaborated with Leading Edge Aerial Technologies, Inc (LEAT), to tackle the efforts of managing this invasive plant using UAS (Unmanned Aircraft System) and apply recommended herbicides to treat the phragmites. Challenges presented in this endeavor included:

- 1. Identify the locations of the phragmites across a vast and remote area
- 2. Deploying our multispectral imagery UAS to identify the precise location of phragmites
- 3. Operating in Sanford Airport International Class C airspace within 3-miles of the airport
- 4. Creating treatment polygons for autonomous application flights
- 5. Executing precision treatments of Phragmites while keeping the integrity of surrounding beneficial natives
- 6. Deploying the entire field operation in a swamp, with no solid land mass to operate from
- 7. Logistics of water supply for mixing
- 8. Afternoon thunderstorms

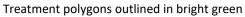
After airspace permits were secured, LEAT flew an initial mission to quantify the precise location of all Phragmites locations (below).



Phragmites areas bordering Lake Jesup.

Seminole County Project Manager, Gloria Eby, used imagery provided by LEAT to identify Phragmites and create treatment polygons.

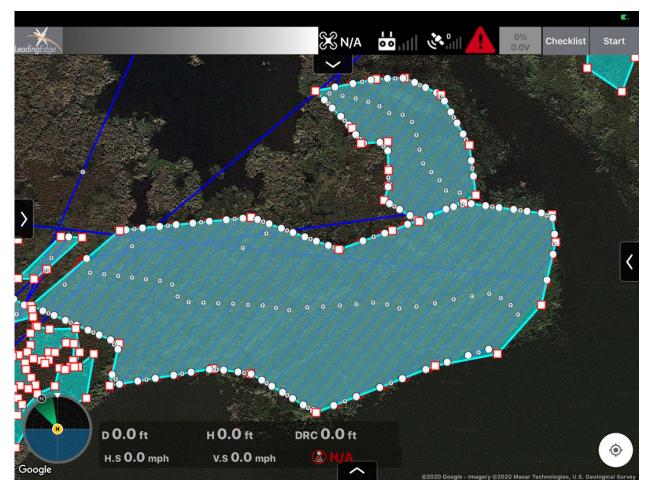




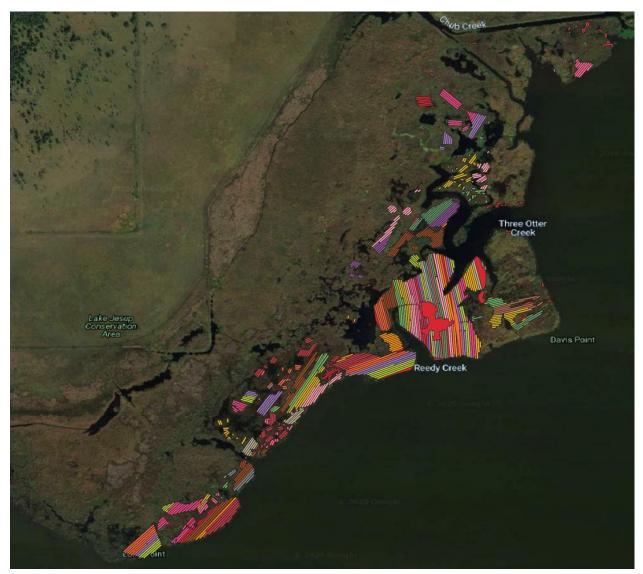


Additional polygons using the feature Flight Plan Creation

From the imagery and polygons, autonomous flight plans were automatically created by a seamless importation of the shapefiles created directly into the PrecisionVision iOS Applications (below).



After weeks of COVID delay, the LEAT UAS team was deployed for their multiple day collection at the marsh base camp. The final product of the project resulted in more than 70 acres of treatment on Phragmites. A post-treatment UAS multispectral flight was performed in October 2020 to determine the efficacy of treatments.



Post treatment flight recording confirming all area polygons were treated.

FLMS 2020 Sessions Still Available

Thank you to everyone who joined us for our series of technical sessions during FLMS 31st Annual Technical Symposium! Attendees have received links to all eleven sessions for viewing on demand. The recordings will be available until July 1, 2021 so you have time to catch up on any you missed. There are also on demand workshops too!

We appreciate all of our session sponsors who understood that, although we could not meet in person, it was important to provide funding to support FLMS and its ability to disseminate quality scientific information at an excellent cost.

Gearing up for FLMS 2021 in Hawks Cay

We're heading back to one of our Society's favorite locations to celebrate 32 years of sharing lake management information. The Call for Abstracts is ready and waiting for you to submit your progress on that really cool project you have been working on. How easy did we make it? Easy! All you must do between now and March 31st is to send us your proposed title and a two-sentence summary of your abstract along with your bio and you are DONE until May 14th. Then, by May 14th, send us your final abstract so we can create the printed program.

Click here to view the Call for Abstracts

Please bear with us as we update the website from our 2020 info to 2021. Oh, and what are our fallback plans? Likely a shorter version of the technical series and workshops we ran for 2020. So, don't let travel restrictions stop you from submitting this year!

Symposium Rate Information

As a reminder, due to rising facility costs, the registration rate beginning this year have changed:

Individual 3-day registration: \$350

Exhibit Booth: \$850



Hawks Cay, Duck Key



Leading Edge

Aerial Technologies



Many Talents One Firm















Dates to Note

Friday, March 12, 2021: Panel Discussion Webinar: The Current State of Aquatic Plant Management in Florida

Wednesday, March 31, 2021: Short Abstract & Bio Due for 2021 Symposium

Friday, May 14, 2021: Full Abstract Due for Accepted Papers for 2021 Symposium

Friday, May 21, 2021: Nominations for FLMS Board Deadline

Monday, July 26, 2021: Room Block Rates End for Hawks Cay 2021 Symposium

Tuesday, August 31, 2021: Pre-symposium Workshops

Wednesday – Friday, September 1 – 3, 2021: FLMS 32nd Annual Technical Symposium at Hawks Cay

More info available at www.FLMS.net

Our Mission

The mission of the Florida Lake Management Society is to promote protection, enhancement, conservation, restoration, and management of Florida's aquatic resources; provide a forum for education and information exchange; and advocate environmentally sound and economically feasible lake and aquatic resource management for the citizens of Florida.