

# INTRODUCTION FROM THE St. Johns Riverkeeper



Submerged aquatic vegetation (SAV) is the foundation of our river's health - providing biofiltration, fish habitat, and more. Sadly, the St. Johns River is suffering mounting threats resulting in the near demise of our river's SAV. In search of solutions, St. Johns **RIVERKEEPER**® (SJRK) launched a 5-year effort, the *SAVe Our River's Grasses Expedition*, earlier this year.

In October, St. Johns **RIVERKEEPER**® (SJRK) returned to the river for its third and final sampling tour of the 2023 SAV growing season, seeking answers and solutions to the disappearing SAV of the St. Johns. Over four days, our team once again surveyed an 80-mile stretch of the river between Doctors Lake and Lake George searching for remaining grass beds, taking measurements, conducting water quality testing, and seeking solutions to restore this vital habitat.



Due to king tides, wind and rising water levels, the river bottom at each site was too deep for the team's mapping procedures. As a result, the SJRK SAV team had to implement adaptations to its sampling protocols including a hand/foot survey instead of submerged quadrat and intercept methods. This involved feeling with feet and hands along the designated transect line and estimating percent cover in areas where SAV was present (*further described in [Attachment A](#)*). SAV canopy height, species, and water depth were all recorded consistent with previous protocols.

We also met with riverfront residents, community leaders, scientists, anglers and river enthusiasts deepening our connection, **developing our joint path forward and sharing our sense of value for our river.**

On October 18, we held our second Brewing Up Solutions - Putnam event at downtown Palatka's Azalea City Brewing. Concerned citizens and area residents gathered to hear from our speaker, former SJRK Board Member and conservationist Ben Williams. Discussion topics ranged from the importance of SAV to the river's health and its fisheries, to the value of protecting and restoring our land, wild spaces and wetlands. Over a tasty brew, we explored how we can all work together to address the health of the St. Johns and the state of the river's SAV.

The SJRK SAV Expedition Team added an extra day to meet with Georgetown homeowners on Friday, October 20, to gauge interest in a **pilot fencing initiative to protect SAV from grazers.** This initiative is based on protective enclosures built by the Florida Fish and Wildlife Conservation Commission (FWC) and local bass anglers. **SJRK is developing a program to complement FWC's efforts by working with homeowners and bass anglers to install smaller enclosures along our Expedition route in 2024.** Permitting and supply investigations for this project are under way.

This Field Log captures a summary of our work at each site including conversations and observations with riverfront homeowners and highlights of our SAV Team's data collection in search of solutions to *SAVe Our River's Grasses.*

# SUMMARY OF SJRK OCTOBER 2023 Expedition Findings

- The SJRK SAV Expedition Team once again found **fledgling grasses at the Doctors Lake site**, as we did back in August, where none existed during the May 2023 Expedition.
- **SAV was also found at the Fruit Cove site.** The river's grasses were more widespread at this location but **cropped short by hungry grazers**, most likely turtles and/or manatees as we found throughout the Expedition route with the exception of SAV within the protective FWC enclosures.
- One of the most exciting highlights was the **presence of long, healthy grasses within Dancy Point's three-acre enclosure and San Mateo's smaller enclosure.** The Dancy Point enclosure is part of a FWC's project to protect grasses from grazers, giving our river's SAV a fighting chance to grow, germinate and spread. Inside the enclosure, SAV canopy continues to grow at an impressive rate with highest canopy heights recorded at 7 cm in May, 25 cm in August, and 105 cm in October. Average October canopy height inside the fence was 45.5cm with an average percent cover of 60%. Outside the Dancy Point enclosure, SAV was cropped short at an average height of 1.8cm and 41% coverage, similar to the other unprotected areas, **demonstrating the significant grazing pressure due to limited SAV food sources throughout the Lower St. Johns.**
- **Chara, an SAV that is a type of macroalgae, was once again observed at the Welaka and Drayton Island sites**, but it was much more sparse than in August and May. Chara was not found at the Beecher Point site, where it was quite abundant during our May and August surveys. The lack of Chara could potentially be a result of wind action and high water levels of recent Hurricane Idalia, but this is unconfirmed. **St. Johns River Water Management District scientists consider Chara to be a precursor species to eelgrass.** The SJRK SAV Team and area residents hope to see eelgrass presence in the 2024 growing season.

## ONWARD TO 2024!

Our work continues while we prepare for year two of our five-year *SAVe Our River's Grasses Expedition* in search for answers and solutions to the absence of healthy SAV in the St. Johns. This work could not be possible without all of our partners and friends along this journey, including riverfront residents and their neighbors, advising scientists, community leaders, anglers, and river lovers of all types. Over the winter, we will continue to work with riverfront homeowners, state agencies, scientists, and bass anglers to install protective SAV enclosures along our Expedition route to provide the river's grasses relief from grazing pressures and to provide us all more data for a holistic solution to fully restore the St. Johns River SAV.

If you live upstream or downstream of this 80-mile stretch of the river from Doctors Lake to Lake George, the absence of SAV also impacts your connection to the St. Johns. The river's estuary, which begins at the confluence of the Ocklawaha and the St. Johns River, is the foundation of Northeast Florida's recreational and commercial fisheries. A river without SAV is a river without vital habitat for blue crabs, shrimp, red fish, trout, largemouth bass, and other important fish. SAV also provides much needed filtration of pollution needed for good water quality downstream.

We ask that you join us in this effort by diving in to fully understand what is at stake and to learn how you can help. Let us know if you or your organization would like a *SAVe Our River's Grasses Expedition 2023* presentation. If you would like to provide input on the state of SAV behind your home, please do so by completing our [SAV Survey](#).

OCTOBER 2023

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# SAV FIELD LOG

PREPARED BY  
ST. JOHNS RIVERKEEPER®



ST. JOHNS  
RIVERKEEPER®

# OCT 2023 *SAVE OUR RIVER'S GRASSES* Background

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In October 2023, St. Johns RIVERKEEPER® (SJRK) returned to the river for its third and final sampling tour of the 2023 SAV growing season, seeking answers and solutions to the disappearing SAV of the St. Johns. Over four days, our team once again surveyed an 80-mile stretch of the river between Doctors Lake and Lake George searching for remaining grass beds, taking measurements, conducting water quality testing, and seeking solutions to restore this vital habitat.

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## SITE 1 - DOCTORS LAKE

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The SJRK SAV team was greeted by Betsy and Tony Sievert as well as several of their neighbors who joined us out of interest in SJRK's efforts to *SAVe Our River's Grasses*. The Sieverts have owned their Clay County home located on the northbank of Doctors Lake since 1969. Located just west of the HWY 17 Bridge, their property is bulkheaded and historically had lush SAV and frequent manatee visits. Eelgrass (*Vallisneria americana*, a/k/a "tape grass") used to dominate this area, but none was present at the time of the May 2023 Expedition. SJRK is happy to report that SAV was present during the August and October field visits. The grass, though short and stunted due to visible signs of grazing pressure, was well-dispersed throughout the site area. **SAV average canopy height for Site 1 was 3.2cm versus 2.6cm in August. Average percent cover for SAV in October was 34% versus 30% in August. The site had higher turbidity during the October visit than both the May and August visit: The turbidity was 1.77 FNU in May, 2.54 in August, and 2.63 in October.**

The salinity was slightly higher than in August (0.51ppt vs 0.71ppt) but drastically different from the salinity reading in May which was 6.3ppt. Given the time of year, October's water temperature was much cooler at 22.1°C versus 27.8°C in August and 29.6°C in May.

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## SITE 2 - FRUIT COVE

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Ben & LouAnn Williams have lived on the eastbank of the St. Johns just south of Julington Creek for nearly 35 years. Their St. Johns County property has a natural shoreline with mature cypress trees. Once a commercial fisherman and the founder and 35-year owner of Fisherman's Dock, Ben knows and cherishes the St. Johns like an old friend. **We once again found grasses at Fruit Cove with canopy heights similar to August, but the grass bed dispersion did not exceed 40 meters, whereas the grass density in August allowed the SAV team to extend their transect to nearly 50 meters. Average percent cover in October was 21% versus 34% in August. Average canopy height in October was 3.4cm versus 2.1cm in August.**

The salinity was slightly higher than in August (0.40ppt vs. 0.44ppt) but much lower than in May at 5.13ppt. The turbidity was also higher than in August (1.62 FNU vs. 2.59 FNU) but lower than in May at 4.26 FNU. SAV in August and October was more abundantly dispersed, denser, and had a higher canopy height than in May, even though it was still subject to intense grazing pressure.



## SITE 3 - COLEE COVE

Victor Jackson has lived in Colee Cove for 28 years. His property on the eastside of the St. Johns has a low wooden bulkhead with several large cypress trees. Victor has witnessed the visible decline of eelgrass behind his home over the years. Though short and stunted during the October 2023 visit, the SJRK team witnessed abundant coverage of grasses. Unfortunately the water depth at this site was too high to do the modified sampling (described in [Attachment A](#)). Findings of note for Site 3 include lower turbidity readings, where the turbidity in May was 3.26 FNU, 1.20 FNU in August, and 0.35 FNU in October.

The salinity was lower than in May (1.24ppt vs 0.44ppt) and slightly higher than in August (0.40ppt vs 0.44ppt).



## SITE 4 - TOCOI

Ken and Joanne Schultheis live in St. Johns County on the eastbank of the St. Johns in Toco, a small community near Toco Creek. Ken, along with his neighbors Dan and Jenny Palmer (owners since 2000), have noticed a loss of eelgrass behind their homes. The SAV team did not feel any grass at this site, and the water levels were too high to do quadrat and intercept sampling. Findings of note for Site 4 include no SAV, higher than normal water levels, and lower salinity (0.99ppt in May, 0.45ppt in August, 0.4ppt in October). The turbidity was slightly higher than May (4.07 FNU vs. 4.21 FNU) and much lower than August (9.54 FNU vs. 4.21 FNU).






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## SITE 5 - DANCY POINT

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Ray and Lana Bunton have lived on the eastbank of the St. Johns in East Palatka for 47 years. Additionally, Ray's family has lived at that location since 1970. Ray partnered with his friend David Girardin and FWC to fence off nearly three acres of riverbottom through a public partnership to monitor SAV growth while protected from grazers. The shoreline consists of a wooden bulkhead. The SAV team monitored SAV and water quality inside the fenced area as well as outside of the protected zone. **Inside the fence, SAV canopy height was much taller than in May and August with the highest canopy height recorded at 105 cm whereas the highest in August and May were 25 cm and 7 cm, respectively. Average canopy height inside the fence was 45.5cm whereas in August was 6.4cm and in May was 2.4cm. Average percent cover inside the fence was 60%, whereas average percent cover in August was 63% and in May was 29%. Outside the fence, average canopy height was 1.75cm versus 1.45cm in August and 1.3cm in May. Average percent cover outside the fence in October was 41% versus 57% in August and 19% in May. Epiphytes were found growing on all SAV, which can block light and hinder photosynthesis. Eutrophic (higher dissolved nutrient concentration) conditions increase epiphyte abundance (Sagan 2007; Stallings, 2015). SJRK documented SAV outside the fence as well, but the grasses were shorter and less dense due to grazing pressure. Other findings of note were a much lower turbidity reading inside as well as outside the fence:**

- **Turbidity inside the fence:** 4.26 FNU in May, 3.28 FNU in August, .79 FNU in October
- **Turbidity outside the fence:** 3.38 FNU in May, 3.07 FNU in August, 1.81 FNU in October

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## SITE 6 - SAN MATEO A

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Tim Houghtaling and Leslie Mullins have lived on the eastbank of the St. Johns River in Putnam County since 2013. Their property has a metal bulkhead. Tim is actively advocating for more protections of our river's grasses. In March of 2022, he installed his first fenced enclosure similar to Site 5 - Dancy Point, but on a smaller scale. Inside the fence the SJRK team identified primarily eelgrass ([Attachment A](#)). **This site had an average percent cover of 55% versus 51% in August and 51% in May. October's site visit showed an average canopy height of 15.9cm versus 5cm in August and 2.3cm in May. Inside the fence, October's salinity and turbidity were both lower than August and May:**

- **Salinity:** 0.50ppt in May, 0.46ppt in August, 0.34ppt in October
- **Turbidity (much lower):** 3.78 FNU in May, 3.39 FNU in August, 0.70 FNU in October



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## SITE 7 - SAN MATEO B

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Sam and Lorraine Carr have lived on the eastbank of the St. Johns in Putnam County for 25 years. Their property is bulkheaded and features majestic live oaks that date back to the days of William Bartram. Sam has witnessed significant loss of eelgrass in his area. An avid fisherman and conservationist, Sam spends ample time on “his river.” Similar to August, at the time of the SJRK Team’s site visit, the water levels were too high to get an accurate SAV sample, with a depth of 137 cm at the bulkhead. The salinity and turbidity were both lower in October than in May and August:

- **Salinity:** 0.50ppt in May, 0.46ppt in August, 0.32ppt in October
- **Turbidity:** 4.33FNU in May, 2.01 FNU in August, 0 FNU in October

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## SITE 8 - SATSUMA SPRING

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The team was unable to stop at the Satsuma Spring site during this field visit.








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## SITE 9 - WELAKA

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The Welaka site is located at the home of Jessica and Kevin Finch, who have lived at the property since 2012. The shoreline was natural with cypress trees. The SJRK team once again only found one species of SAV, *Chara sp.*, which is a type of grass-like algae that is growing where healthy eelgrass once did and is commonly referred to as “musk grass” due to its unpleasant odor. This macroalgae is not new to the St. Johns River, but we have found no evidence of *Chara sp.* being the dominant species. *Chara sp.* has a low biomass and thus does not represent an ideal food source for grazers. It is typically found more frequently in Lake George and Crescent Lake. There is evidence to suggest that *Chara sp.* is an early colonizer that appears prior to other SAV species growth, which could be a positive indicator of more diverse and abundant SAV growth in the future. **Unfortunately, the SJRK team found much less SAV coverage with an average of 9% cover, and an average canopy height of 4.2cm. The turbidity reading was higher than August (2.14 FNU vs. 2.22 FNU) but lower than May (4.15 FNU vs. 2.22 FNU).**

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## SITE 10 - BEECHER POINT

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The SJRK team visited the River Bend Condominiums just south of Welaka in Beecher Point. In August, the SAV Team found river grasses dominated by *Chara sp.*, like the Welaka Site, with the site's *Chara sp.* averaging 58% percent cover based on observational analysis. **In October, the SJRK team found no SAV present. The water levels at Beecher Point were also quite high, with a water depth of 118cm just 6 meters from the bulkhead. The turbidity was lower than August and May, with a turbidity reading of 1.81 FNU versus 4.49 FNU in May and 2.82 in August.**





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## SITE 11 - DRAYTON ISLAND

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Ken & Jamie Baxley have lived at this property since 2004. The site exhibited a natural shoreline with a gentle slope and cypress trees. The SJRK team took water quality samples and noticed only *Chara sp.* at this site like Site 8, but like the other sites, the water levels were too high to get an accurate survey. **Findings of note at this site showed lower turbidity than August and May (5.05 FNU in May, 3.58 FNU in August, 0.46 FNU in October).**

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## SITE 12 - LAKE GEORGE

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This site is located on the southeast bank near the southern tip of Drayton Island. No SAV at this site was detected. **Comparing the water quality data in May, as the team was not able to conduct water quality samples in August, the readings did not vary much from each other besides the turbidity reading. Turbidity levels were lower in October than May (3.48 FNU vs. 1.49 FNU).**



For more information and updates as the Expedition continues,  
visit [StJohnsRiverkeeper.org/SAV](https://StJohnsRiverkeeper.org/SAV).

**LINKS TO DATA:**

[Attachment A: Methodology & Data](#)  
[Attachment B: Water Quality Graphs](#)  
[Attachment C: Story Map](#)

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