

# KINGS BAY

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## RESTORATION PROJECT

**Kings Bay Restoration Project  
For Outstanding Florida Waters  
ANNUAL REPORT  
2017-2018**

**REMOVE • RESTORE • MAINTAIN • PREVENT**

Photo Credit: John Moran



## What Happened to the Water in Kings Bay?

During the 1993 "No-Name" storm, salt water killed acres of invasive *Hydrilla* that was choking the bay. When it died and fell to the bottom, it completely covered the native grasses. The dead material decayed and bacterial decomposition created a low oxygen environment. This was the perfect condition for the invasive blue-green algae called *Lyngbya* to invade and quickly cover the bottom with its slimy filaments and prevent the native grasses from returning.



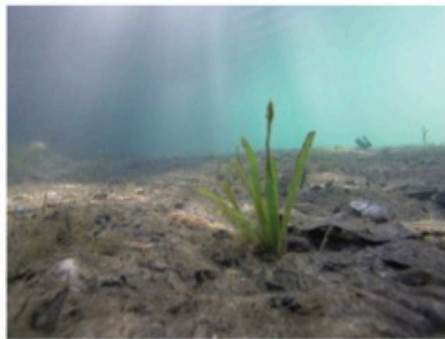
## Restoring the Bay



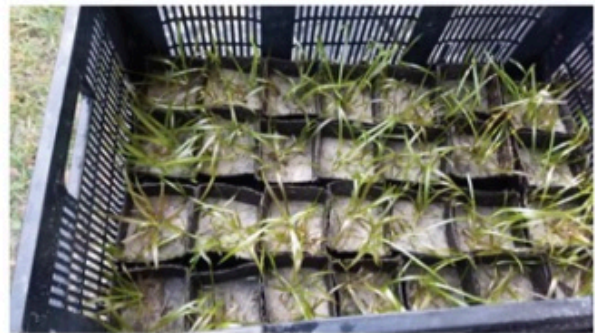
◀ LEFT:

*Lyngbya* is vacuumed from the bay and is mechanically separated from other suspended material. The remaining liquids are filtered through Geotube bags where a patented polymer mixture is added to facilitate removal of nearly 100% of the phosphorus and about 50% of the nitrogen from the water. Clean water escapes through tiny mesh holes and is collected and returned to the river.

## How Does Native Eelgrass Help Solve this Problem?



Once the *Lyngbya* and dead detrital material is vacuumed from the bottom of the restoration area, a native variety of eelgrass called "Rock Star" is planted in the clean sand. Once the planted eelgrass begins to flourish, the habitat begins to change.



Rock Star Eelgrass plants are planted in small groups in the cleaned sand and covered by cages to protect them from predators until their roots become established. The plants will grow up to 7 feet in all directions. The roots intertwine to secure Eelgrass in the soil.

## FACT

In the original 3.5 acre Pilot Project area in 2015, we planted 1800 eelgrass plants. As of September 17, 2017, the eelgrass plants have now multiplied to over 4.9 million. That is equal to 300 plants per square meter.



Measurement of Eelgrass growth shown after planting 1800 plants in 2015. We now have about 5 million as of September 2017.

- The eelgrass produces large quantities of oxygen needed by aquatic animals into the water.
- Oxygenated water inhibits *Lyngbya* growth because *Lyngbya* can't survive high oxygen conditions.
- Eelgrass outcompetes *Lyngbya* for nutrients in the water taking up nitrogen and phosphorus – improving water quality.
- Native grasses provide food and shelter for thousands of aquatic organisms.
- Once roots are established and interwoven, it is difficult for herbivores to damage and remove the grass beds. The result is a meadow of beautiful, undulating grass that creates a healthy habitat in the clear, clean water.

**“Without oxygen there is no life; without plants there is no oxygen.”**  
– Candy Murphy



There were about 100 new spring vents opened in the first two phases – and now an additional 78 for a total of 178 new spring vents opened as a result of the Kings Bay Restoration Project work. No wonder the restored areas are looking so good, growing grass like crazy, and have lots of wildlife!

## WE HAVE SUPPORT!

### City of Crystal River/ Citrus County BOCC:

Voted to allocate approximately \$650,000 in funding to continue the mechanical maintenance on each area cleaned by the Restoration Project for an additional two years after the initial one year of maintenance is completed. This will give the cleaned areas two additional years of monitored maintenance in order to let the grass have the greatest chance of survival and enable the habitat to be restored.



## A Scientifically Proven Success!

Throughout this restoration project, Sea and Shoreline biologists have conducted monthly inspections of the various project areas including a detailed annual analysis of the project's success. The Pilot Project has now been growing for over three years and has exceeded expectations. Plant survival rate at year three is 92% which is well above the anticipated survival rate (Sea & Shoreline Pilot Project Annual Monitoring Year 2). These plants have survived one year within protective cages and one year exposed to the elements and the grazing of animals such as manatees, ducks, and other species. Phase 1A has a survival rate of 93.2% after one year of growing within cages (Sea & Shoreline Phase 1A Annual monitoring Year 1). This survival rate is better than the average global success rate for transporting seagrasses considered to be  $\leq 50\%$  (Fonseca et al. 1998).



Not only are the plants surviving, but they are thriving with increased shoot densities measured both by mean density and Braun-Blanquet measurement methods. The Pilot Project started with 1,800 plants installed and the density is now almost 5 million plants! What is also interesting to note is in each phase measured, the plants have spread beyond their original planting sites and are colonizing the canals on their own. Additionally, macroalgae is now less abundant in the restored areas compared to unrestored areas since eel grass helps maintain clean canals by taking excess nutrients from the water column and producing abundant oxygen which impedes the growth of algae.



To ensure that reporting of the project's success was unbiased, a third party was hired to conduct an independent assessment to compare the restored areas to unrestored areas. Johnson Engineering (2017) focused on an analysis of the macroinvertebrate communities. By using Petite Ponar dredge, Hester-Dendy (HD) substrates and qualitative dip net sampling in addition to fish trapping and visual surveys, a comprehensive statistical analysis was conducted. This study found an increased diversity within the restored habitats as compared to the unrestored areas (they were 73% dissimilar in community structure and these differences were statistically significant  $p < 0.05$ ) (Johnson Engineering 2017). The most noteworthy difference between the restored and unrestored areas was video documentation of spawning and nesting largemouth bass and other sunfish only seen in restored canals.

## FACT

**In addition to the 100 spring vents opened in the previous two years, this year there were 78 new spring vents opened up by vacuum cleaning of canals.**

Furthermore, in addition to the one hundred spring vents that were opened in the previous two years, this year seventy-eight new spring vents were opened by vacuum cleaning the canals. Of these 78 new vents, 25 are small sand bubblers, 42 are small vents, and 11 are large vents. Together, the past three years of restoration have not only removed 88.5 million tons of muck, opened close to two hundred spring vents, we have also planted 63,532 plants. With a survival rate over 93% despite storms, hurricanes, boat damage, and manatee grazing, it is safe to say this has had a major beneficial impact on the entire Kings Bay ecosystem. Once the remaining 76.94 acres are cleaned, imagine how amazing this Outstanding Florida Waterway will be once again.

## Scientific Research Initiatives

Save Crystal River is committed to ensuring our work has a lasting impact by continually striving to foster the best scientific research on this project. In addition to an independent third party evaluation conducted by Johnson Engineering, we are partnering with academic scientists and are applying for research grants to enhance restoration practices to further our knowledge and understanding of this ecosystem. This year SCR, Sea & Shoreline, and Dr. Jake Hosen (currently with the Yale School of Forestry & Environmental Studies at Yale University but who will be relocating to the University of Florida this year), have outlined several areas of research so we can continue learning and refining our methodologies to be the most successful. We are currently executing a pilot study to provide data on the environmental conditions that lead to restoration success using newly developed sondes. Additionally, we hope to share our findings through scholarly publications to help other researchers and communities be successful in their restoration efforts. Furthermore, a grant from Duke Energy has allowed us to purchase water quality sensors. These sensors will allow us to not only use real world data to educate the students, but will allow us to continually collect and monitor our project areas. These investments allow us to begin testing our hypotheses about this ecosystem and will provide a platform to support a more robust research program.



### FACT

**Underwater grasses are crucial to the health and clarity of a water body:**

- **Filters the water, removing excess nutrients**
- **Generates oxygen used by aquatic animals**
- **Reduces erosion**
- **Provides food and shelter for fish, shellfish, and other aquatic life**

#### **Bibliography:**

Fonseca, M.S., Kenworthy, W.J. and Thayer, G.W. 1998. Guidelines for the conservation and restoration of grasses in the United States and adjacent waters. National Oceanic and Atmospheric Administration (NOAA) Coastal Ocean Office. NOAA Coastal Ocean Program Decision Analysis Series No. 12, Silver Spring (MD).

Sea & Shoreline. 2017. Save Crystal River Pilot Project Annual Monitoring Report (Year 2 of 3). Report prepared for Save Crystal River, Crystal River (FL).

Sea & Shoreline. 2017. Save Crystal River Phase 1.A Annual Monitoring Report (Year 1 of 3). Report prepared for Save Crystal River, Crystal River (FL).

Johnson Engineering Inc. 2017. Aquatic Faunal Assessment of Submerged Aquatic Vegetation (SAV) Habitats in the Crystal River Ecosystem. Final Report to Save Crystal River, Crystal River. FL. 47pp.

#### **Link to Reports:**

<https://kingsbaypilotrestorationproject.com/thescience/>.

## Working With the Community To Restore Kings Bay



### Eelgrass Event with Duke Energy

Duke Energy is continuing its support of clean coastal water. They have partnered with Save Crystal River on events that educate and engage the public. During these events, volunteers taught residents how to harvest, grow and plant Rock Star eelgrass that was grown at the Duke Energy Mariculture Center.

### Manatee EcoTourism Association

Tour operators are growing Rock Star eelgrass in aquariums at their dive shops in an effort to educate tourists as to the benefits of restoration. During guided river tours, they proudly highlight the now restored areas. As their ongoing commitment to educating the public, Meta volunteers cleaned the planting site for Crystal River Primary Schools at Hunters Spring.

### Friends with Fins

Save Crystal River was the subject of an episode of the YouTube show 'Friends with Fins'. This education channel produces high quality marine science videos as well as a series of educational books. Friends with Fins produced a wonderful video on the work SCR has been doing with Gator Dredging and Sea & Shoreline. Jaclyn Friedlander, author and host of the show, also visited with students at Crystal River Primary where they sang their Rock Star Eel Grass song for her show. You can watch this educational and entertaining show on YouTube by searching for [Construction Workers and Marine Biologists unite to Save Crystal River!](#)



### University of Florida Tour

This past fall, a group of 15 undergraduate and graduate students studying soil science and sustainable land resources from the University of Florida came to tour the site. They were excited to see machinery work where the dredgers cleaned the water. Once in the water, they snorkled through unrestored areas, then the restored Pilot Project area. The water was beautiful, clean, and cold for these young scientists in the Pilot Project area. However, in the unrestored areas, the water was warmer and many who dared to touch the large fluff of Lyngbya noted that the blue-green algae was warm and even hot. These scientists also saw the lack of fish, manatees, and living organisms in the unrestored areas. The water was murkier and not as fun to snorkel through. The class concluded by discussing why this happened and how this restoration project could be applied in other communities with perspective toward land management.

# Working With the Community To Restore Kings Bay

## Primary School EcoWeek

During the 2016-2017 School Year, Save Crystal River partnered with Duke Energy to grow Rock Star eelgrass in every classroom at Crystal River Primary School as part of the National Wildlife Federation's Eco Schools USA Award program enabling them to achieve the coveted "Green Flag" status. Over 1200 Rock Star eelgrass were planted by students on May 12, 2017, at Crystal River's Hunter Springs Park and are flourishing. The signs on the two following pages highlight the results of this project. In December 2017, Crystal River Primary again celebrated Eco Week with 600 students growing Rock Star eelgrass in classrooms and planting will begin again in May of 2018. During the semester, all students will be investigating and conducting numerous STEM activities using some of the latest scientific technology ranging from water quality sensors to Virtual Reality videos of the project area. These students are the stewards of tomorrow and will have an ongoing commitment to our outstanding Florida Waterways.



## Grants to support educational outreach:

This year Save Crystal River submitted and received two grants to continue our educational efforts at the Crystal River Primary School. This ongoing project allows each classroom to grow eelgrass in an aquarium and incorporate ecological concepts into all aspects of their curriculum. These grants will allow for the expansion of this project as well as the formalization of the teaching curriculum so other schools can then utilize this program. This program will also increase the technology available to the students in the form of virtual reality videos of the restoration efforts to allow every child to experience Crystal River's ecosystem. Grants received included \$1,519.95 from SWFWMD's Splash Grant program and \$9,274.80 from Duke Energy's Local Community Development grant program.

Howard Miller from Gator Dredging explains how detrital material is measured in cubic feet and yards. Did you know the amount of material taken from the river so far would stretch from Crystal River to Walt Disney World?



Duke employees instruct Crystal River Primary students on how to plant RockStar eelgrass for classroom aquariums. This eelgrass will be planted in Kings Bay in May 2018.

# Be A ROCK STAR! Grow Eelgrass.



The students and staff of Crystal River Primary School enthusiastically embrace ownership of and responsibility for the protection and preservation of Crystal River and the natural resources that abound in this community. So much so, that the students from this National Wildlife Federation Green Flag Award School (in addition to other Citrus County students) wrote letters of support to the Florida Legislature for funding the Save Crystal River/Kings Bay Restoration Project.

Save Crystal River, together with school staff, then developed a program to educate students on the role of eelgrass in a healthy springshed. In December 2016, the Duke Energy Crystal River Mariculture Center donated over 1400 eelgrass plants, and a grant provided supplies and educational learning media in support of Be a Rock Star! Grow Eelgrass. All students, K through 5th grade, planted Rock Star eelgrass in classroom aquariums. Activities that followed allowed students to observe their growing eelgrass and to learn about problems and solutions facing our Outstanding Florida Waters.

On May 12, 2017, 5th grade students and volunteers replanted the classroom eelgrass here at Hunter's Springs in support of restoring the Crystal River/Kings Bay springshed.



## Save Crystal River/Kings Bay Restoration Project

Save Crystal River, Inc., a non-profit organization, is committed to restoring the waters of Kings Bay and Crystal River in addition to educating our future generations on maintaining a healthy springshed. It's a coalition and partnership of residents and community leaders who became united by their commitment to maintain and protect the unique quality of life for all people in the communities of Crystal River and Citrus County.

Since June 2015, the Florida Legislature approved over 5 million dollars for the Kings Bay Pilot Restoration Project - a project to remove lyngbya (an algae) and monitor submerged aquatic vegetation along canals that feed Kings Bay.

Save Crystal River volunteers will continue to seek funding to complete all phases. The goal is to complete the entire project by July 2, 2023 - when the City of Crystal River will celebrate its centennial.

Duke Energy supported Save Crystal River's "healthy springshed" student education initiative through a community development grant. The Duke Energy Foundation provides philanthropic support to address the needs vital to the health of its communities, with a focus on "K to Career" educational and workforce development initiatives, the environment and community impact. Duke Energy is dedicated to being a good steward of the environment and is proud to support local community programs that are committed to protecting and restoring wildlife and natural resources.



Crystal River

WWW.SAVECRYSTALRIVER.COM



This School/Community Eco Project owes its success to Save Crystal River and Duke Energy along with community sponsors: Citrus County Schools, City of Crystal River, Crystal Automotive Group, Sea and Shoreline, Gator Dredging, Manatee Eco Tourism Association, SWFWMD, One Rake at a Time, a variety of State agencies and numerous volunteers and businesses.



# Restoring Kings Bay

Crystal River/Kings Bay covers 600 acres and is fed by more than 70 springs - the second largest group of springs in Florida. Over the years, the Crystal River/Kings Bay springshed has been threatened, diminished and impacted by an overgrowth of invasive Lyngbya.

Lyngbya (pronounced "ling-be-ah") is an algae - not a plant - that covers and smothers native submerged aquatic vegetation (SAV). Elevated nutrient concentrations, water temperature, sunshine and diminished water flow from the springs all contribute to its prolific growth. In addition to producing a rotten egg smell as layers of lyngbya decompose, it also:

- Clogs the springs and reduces water flow
- Blocks sunlight not allowing native plants to flourish and grow
- Reduces food sources for manatees and turtles
- Depletes oxygen and deteriorates suitable habitat
- Could cause skin irritations, eye infections and breathing problems in humans
- Is toxic to manatees and pets, if eaten



Lyngbya and dead detrital material is being removed from the bottom of the river and eelgrass is being replanted.

## A Healthy Eelgrass Habitat is Key

Eelgrass is a perennial flowering plant that grows in freshwater springs, lakes and rivers. Submerged aquatic vegetation ecosystems are among the most diverse and productive ecosystems in the world. Healthy eelgrass beds form dense underwater meadows that:

- Help maintain water clarity by trapping fine sediments and particles with their leaves and by utilizing excess nutrients in the water and soil
- Stabilize the bottom with their roots and rhizomes
- Provide shelter for fish, crustaceans and shellfish
- The grasses and the organisms that grow on them are food for many animals and water birds

The variety of eelgrass (also called tape grass) called "Rock Star" is being planted into the Crystal River/Kings Bay.



Here in the Crystal River/Kings Bay, our SAV ecosystems are also facing the hazards of propeller damage from inadvertent or careless boating practices called propscars.

### Tips for boating in near shore habitats:

- Do not anchor in restoration areas. Anchors will damage newly planted eelgrass.
- Familiarize yourself with the local waters.
- Used marked channels where they exist and stay in deep water.
- Know your boat's draft.
- When in doubt about the depth, slow down and idle, with motor trimmed or tilted up.

## YOU Can Help Avoid Propscars

### To avoid running into seagrass beds:

- Keep track of tides
- Wear polarized sunglasses
- Look for dark brown patches in the waterways that could be grass beds
- Read navigation charts

**Stop**  
Stop your engine.

**Tilt**  
Tilt your motor.

**Pole**  
Pole or walk your boat to deeper water.



If you do run into a SAV bed, you will be leaving a sediment trail behind your boat, making the water murky and probably cutting roots. Stop immediately and tilt your engine.



## Partnerships in Protecting the Aquifer

Save Crystal River is committed to take action and promote partnerships that protect and improve our waterways and springsheds. Save Crystal River and its partners (**Citrus County BOCC, Duke Energy, City of Crystal River, Southwest Florida Water Management District, Florida Department of Environmental Protection, etc.**) have increased efforts and the following is a listing of the group effort provided.

- Duke Energy Reclaim Project — \$7M project was a public/private partnership that benefits the Crystal River/Kings Bay springshed by replacing 750,000 gallons per day of valuable groundwater with reclaimed water for industrial uses at the power plant.
- Sanitary Sewer Slip Lining — The City of Crystal River has budgeted \$100K per year for sealing aging vitrified clay pipe sanitary sewers which reduces exfiltration of nutrient-rich sewage into the groundwater. To date, nine (9) miles of pipe have been slip-lined.
- Hunter Springs Park Living Shoreline Project — \$820,000 project provided a restored shoreline which creates habitat and improves water quality through reducing erosion and nutrients entering Kings Bay.



## Partnerships in Protecting the Aquifer




- Stormwater Best Management Practices (BMPs) Feasibility Study — \$100K study to determine the best site locations for the implementation of stormwater BMPs for water quality improvements within the city limits of Crystal River, FL.
- Hunter Springs Park, 2015 — renovation project included retrofitting to provide stormwater quality treatment
- Installed numerous hydrodynamic stormwater separators throughout the city.
- Rebuilt NE 8th Ave stormwater control structure to ensure continued water quality treatment at the Copeland Park Lake.
- Constructed an additional bay access at Hunter Springs Park in response to a request of non-profit *One Rake At A Time* to ease the linygbya cleanup efforts.
- Three Sisters Springs Wetland Treatment — enhancement project completed in 2016 to divert stormwater runoff through the treatment wetland to filter pollutants prior to discharge to Kings Bay.
- Purchased a sanitary pump-out boat to service floating vessels.

## Partnerships in Protecting the Aquifer

- City of Crystal River maintains a Waterfronts Board to monitor and seek improvements related to water quality.
- City of Crystal River and Citrus County Board of County Commissioners are members of the Southwest Florida Water Management District, Springs Coast Steering, Management, and Technical Committees for Weeki Wachee Springs, Chassahowitzka Springs, Kings Bay Springs, Rainbow Springs and Homosassa Springs.
- Citrus County Board of County Commissioners created and subsequently updated a fertilizer ordinance to reduce nutrient loading.
- Public awareness campaign included mailing out informative flyers regarding grass clippings and fertilizer use. This information is posted to the City's website:

**CITY OF CRYSTAL RIVER**  
PUBLIC WORKS DEPARTMENT  
123 NW HWY 19, Crystal River, FL 34428  
Ph: (352) 795-4216



*Landscape and Fertilizer Tips to Help Preserve King's Bay and the Crystal River*

The City of Crystal River recently adopted ordinance No. 17-0-08 which mandates *Florida-Friendly Landscaping* practices and established penalties of up to \$500 for each violation. Help us protect our waterways and reduce waste while improving the health of your lawn. Please use these tips as a quick guide and share with your lawn service provider. For more information please go to [WaterMatters.org/yards](http://WaterMatters.org/yards)

**1** *Grass Clippings*  
It is unlawful to discharge grass clippings to water bodies and streets. Please collect the clippings or leave them on your yard. Grass clippings contain nutrients that will fertilize your *Florida-Friendly Landscape*; however, these nutrients harm our waterways and can cause algae blooms. It is also recommended to only mow your grass 1/3 its length at a given time.

**2** *Fertilizer Content*  
Fertilizer nutrients are useful to your plants only if they are kept in the root zone, so use fertilizers with at least 35% slow release nitrogen and/or with 4% or less phosphorus.  
<http://www.floridayards.org/landscape/Springs%20Handbook.pdf>

**3** *Fertilizer Application*  
Nitrogen or phosphorous fertilizer must not be applied to turf, landscape plants, saturated soils or spilled onto impervious surfaces. It must not be applied during any prohibited application periods, and before or within the first 30 days of seeding/sodding. Rotary spreaders are recommended.

**4** *Fertilizer Free Zones*  
Fertilizer must not be applied within 25 feet of any spring, pond, stream, watercourse, waterway, lake, canal, sinkhole or wetland. Any fertilizer deposited on impervious surfaces (i.e. driveways, sidewalks) shall be immediately removed to the maximum extent practical.

**5** *Prevent Runoff*  
Help us protect Kings Bay by preventing the runoff of fertilizer and grass/vegetation clippings. By minimizing fertilizer use, managing grass clippings and following *Florida-Friendly Landscaping* principles we can address pollution in our waterways.

## Partnerships in Protecting the Aquifer



 Friends  
with Fins  
MEDIA.COM

### City of Crystal River Ongoing Projects:

- Providing funding assistance to Save Crystal River for vacuuming and replanting submerged aquatic vegetation (SAV).
- Fats, Oils, and Grease Ordinance update which will help minimize sanitary sewer overflows (SSOs).
- Hunter Springs Park overflow lot designed to provide enhanced water quality treatment.
- City Council recently approved the purchase of 21 additional lift stations with automatic cellular callout systems to reduce the response time in an effort to mitigate the potential for SSOs — soon all of the City's 67 lift stations will be fitted with dialers.
- Awaiting delivery of storm drain public awareness markers for installation at key locations.



# KINGS BAY RESTORATION PROJECT - 2018

## REMOVE

Invasive algae that has overtaken native grasses and habitats

**15.45** acres of canals cleaned ... roughly equivalent to 9 football fields

**47,821** cubic yards of Lyngbya removed

**95%+** amount of phosphorus pollution removed from treated water tested

**50%+** amount of nitrogen pollution removed from treated water tested

**48** number of weeks for mobilization, vacuum dredging, and planting

## RESTORE

Healthy ecosystems will be replanted into clean canals

**78** new, previously unidentified spring vents opened and flowing

**+100** opened vents last year for a total of **178** new vents

**63,532** native "Rock Star" grasses planted

## MAINTAIN

Newly planted grasses to prevent recurrence of algae overgrowth

**Improve** water quality

**Provide** food & shelter for native species

**254** manatee friendly patented exclusion cages protecting the grasses

**Pilot Project** withstood Hurricane Hermine and significant saltwater intrusion

## WHAT'S NEXT?

**About 76.94**

acres still to be cleaned and restored




**July 2, 2023**

target completion date - Crystal River's 100th Year Anniversary



**Clean Water Means Business**  
[www.kingsbayrestorationproject.com](http://www.kingsbayrestorationproject.com)





*Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.*  
*-Margaret Mead*

### **Raya Sassard -**

*The restoration to Kings Bay has been amazing!! I could barely see the spring at Hunter's growing up. Life long resident. 300% better.*

### **Jackie Lancaster Morris -**

*Love to see any and all restoration take/taking place in Florida. That's why we spend so many weeks in Florida each year.*

### **Christy Croteau -**

*We are grateful for your dedication on cleaning and restoring Hunter Springs and all the canals that you have done so far. Thank you for all your hard work to get our waterways cleaned. It was a really long process to get one canal cleaned!*

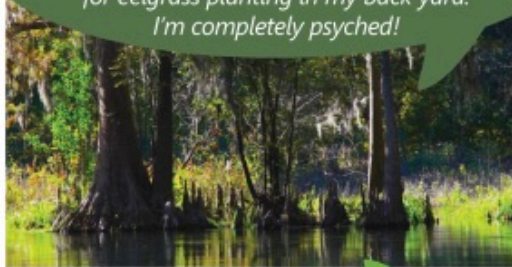
### **Lisa Moore -**

*There used to be SO many blue crabs in the river. We swam the restored area about a month ago and they were in every cage and scurrying all over the place. Grass everywhere! The Kings Bay Restoration Project IS WORKING - better than we could ever have even hoped!!! We are getting our river back!!!*



### **Pete Langolis -**

*Habitat restoration. Save Crystal River today was putting down cages for eelgrass planting in my back yard. I'm completely psyched!*



### **Madge Sparks Cioffi -**

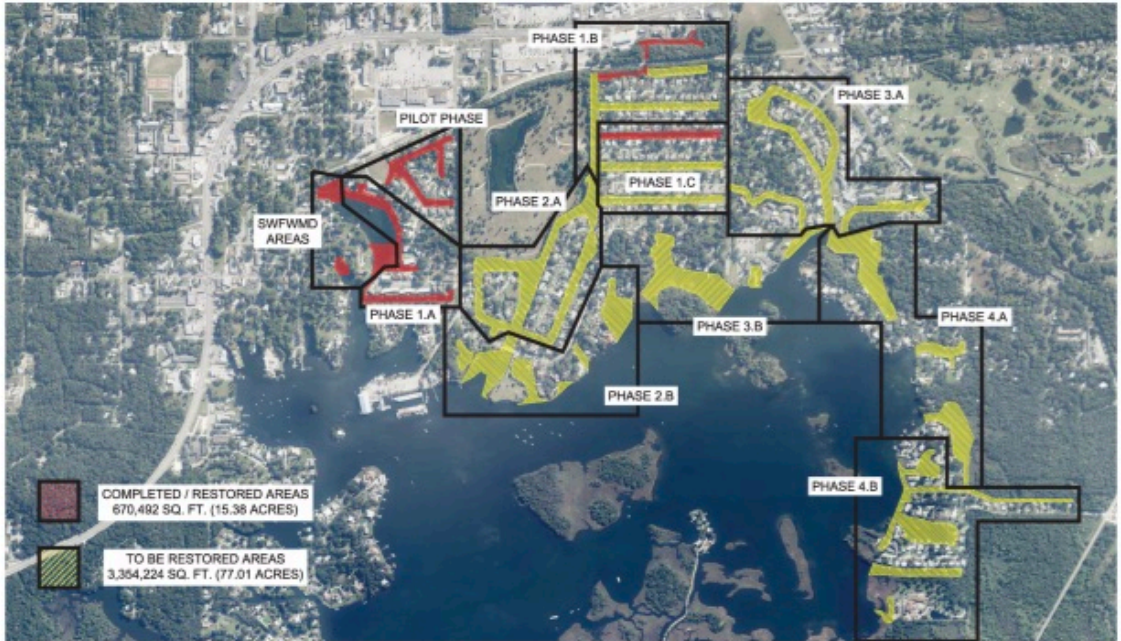
*It's nice that all the canals have been taken care of. I go to Crystal River all the time and ENJOY it. Keep up the good work.*



# The Next Phase of Restoration

## What's Next?

Save Crystal River's restoration project includes approximately 93 acres of residential canals. To date, we have completed the restoration of approximately 15.45 acres in the Hunter Springs Basin area and surrounding canals. The next phase of restoration scheduled is Phase 1.B, adjacent to Three Sisters Springs, a major first magnitude springs and a primary manatee wintering site.



## 2018 Completion of Phase 1.B





# THANK YOU TO OUR SPONSORS, PARTNERS & SUPPORTERS



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In Loving Memory of Frank Fusick  
A dedicated advocate for the outstanding waters of the great state of Florida.  
Board member and in-house Engineer for Save Crystal River, Inc. and  
the Kings Bay Restoration Project.

THANK YOU!!!

# KINGS BAY

## RESTORATION PROJECT

Visit us for project updates and to see how  
you too can help

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