

Restoration project nearly underway

By Shalyn Barker and Special to the Chronicle
Friday, September 25, 2015 at 9:40 pm (Updated: September 25, 9:40 pm)

The contractors for Save Crystal River Inc. (SCR) have begun operations in northern King's Bay on a pilot project whose ultimate aim is to restore the natural habitat of the bay.



Special to the Chronicle

The first piece of equipment used to vacuum the bay in the King's Bay Pilot Restoration Project has arrived and will be joined by others as Save Crystal River and its contractors get ready to begin a \$1.6 million state-funded project to remove sediment and invasive Lyngbya algae from canal bottoms and replace it with native eelgrass.

Gator Dredging of Clearwater began staging equipment and initiating the first steps of the project that will remove invasive Lyngbya algae and a layer of dead organic material from some canals off the bay. After removing the algae and sediment, the company and its marine restoration subcontractor, Sea and Shoreline of Ruskin, will plant a hybrid of native eelgrass known as "rock star" and cover it with special cages.

Rock star can absorb dissolved nutrients in the water faster than Lyngbya, giving it a competitive edge over the algae. The plant was developed at the University of Florida specifically for the project, and Gator Dredging and SCR think that by removing the algae and organic matter and protecting the grass, it will be able to out-compete the Lyngbya. This will allow the natural habitat to return with other native plants and animals.

Staging the equipment began on the property leased for this project at the intersection of Bayshore Drive and Three Sisters Springs Boulevard in Crystal River. The operations are occurring in the adjacent residential canals.

In the first stages of the project, specially modified hydraulic pumping equipment on a barge with both handheld and mechanically controlled suction hoses will remove the material from the canals.

The hydraulic suction equipment has no cutter heads or jetting devices, and is designed so it does not disturb the natural sediment. The pumping equipment will remove algae and dead and decaying material from the canals while leaving the existing sediment in place.

Material suctioned from the canals will be transported to a self-contained processing site on shore. The slurry of algae, organic detritus and miscellaneous debris will then be dewatered at the site

with a mechanical separator. The remaining material not separated will be put into geotubes and further dewatered.

Geotubes are large cylinders of fine mesh cloth that allow water and solids to separate, containing the solids until disposal. The water will be treated finally with a substance which causes any suspended particulate matter to coagulate so it can be removed.

Once the water is extracted, the material will be removed and transported to an approved disposal site or used at approved agricultural area as fertilizer.

When the project area has been cleared of Lyngbya, a native grass scientifically named *Vallisneria americana* will be replanted. It will be rooted in either 4-inch peat pots or 3-foot-by-3-foot mats. The plants will be protected by what are known as herbivory exclusion cages, which are placed over new plantings to prevent grazing and/or removal of the plantings by animals until the plants are self-sustaining.

Every stage of the project had to be permitted before the plan could be approved.

The plants will be monitored for a year after transplantation. Animals, such as manatees, will be able to forage on the plants once the leaves grow long enough to penetrate the sides of the cages. Unlike Lyngbya, the grass is one of the natural foods of the manatee.

After about a year, providing the plantings have firmly rooted and can be self-sustaining, the protective cages will be removed. The initial project work is scheduled to be completed by Nov. 15, the beginning of the manatee season.

"Today marks a new beginning for King's Bay and the great state of Florida," said SCR President Lisa Moore. "Our hope is the success of this project will become a model for the entire state to restore other precious waterways with similar environmental issues."

To find out more about SCR, visit its website at www.savecrystalriver.com and also Facebook at facebook.com/savecrystalriver.