

# FORT MYERS COUNTRY CLUB IS BACK IN FULL SWING

Golfers are excited about the much anticipated Fort Myers Country Club grand re-opening. The legendary Donald Ross course built in 1916 gets a much needed renovation.

Nearly a century ago, the late Donald Ross designed the 130-acre Fort Myers County Club Golf Course located between McGregor Boulevard and US 41. This iconic facility has been masterfully managed by the City of Fort Myers since its inception. The toll of brutal summer rains and decades of use has impacted the course so much in recent years, that the City began regularly closing the course after heavy summertime downfalls.

This summer the course finally received a much needed renovation, bringing it up to 21<sup>st</sup> century standards. As the lead civil engineer for this project, our team worked closely with the City of Fort Myers staff, Wright Construction and the golf course architect, Steve Smyers, to incorporate an innovative system of water retention and water quality infrastructure into the new design.



On November 1, 2014, the project team, along with representatives from the City and County, came together for the ribbon cutting ceremony commemorating the grand re-opening of the Fort Myers Country Club.

Our familiarity with the grant programs through the Department of Environmental Protection was instrumental in helping the City obtain \$840,000 in TMDL water quality restoration grant funds to make this project happen.

To ensure the City's facility would be open for the public during peak season, the team met a very aggressive construction schedule. The schedule was compressed into six months, and it ran from April to October, which is the

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Zachary Stone, E.I. in our Naples Development group, has successfully completed his Fundamentals of Engineering exam, earning his State of Florida Engineering Intern (E.I.) Certification.



Robert White. E.I instrument technician in our Naples office, has successfully completed his Fundamentals of Engineering exam, earning his State of Florida Engineering Intern (E.I.) Certification. most challenging time to renovate a golf course because it is rainy season. The course re-opened to the public on schedule, just in time for City residents, seasonal residents and visitors to enjoy the golf course during the season of cooler weather and less rainfall.

The new course kept many of the same challenging elements from Ross' original design, vet incorporated enhancements that are suited to today's golfer and modern equipment. The project features revamped fairways, greens, pathways, tees, roughs, and sand traps. The irrigation, drainage, and utility facilities are also now modernized and more efficient.

The new water management system retrofits are particularly beneficial to the course, because they serve a dual purpose as hazards for the golfers, and as stormwater infrastructure that improves water quality and attenuation. For maximum efficiency, stormwater runoff that flows into the ponds is being reused for course irrigation.

The City Public Works Department and the Community Redevelopment Agency collaborated to make the ponds on the golf course even more impactful to the community, because they also provide water quality credits that can benefit property owners who seek to redevelop older properties along the Cleveland Avenue corridor.

It was a rewarding project for our team, combining both history and innovation. For more information, contact Kevin Winter, P.E., at 239.461.2473 or kwinter@ johnsoneng.com.





Graphic above, courtesy of The News-Press, depicts a few of the exciting renovations that took place in a short six months

## **RESEARCHING EFFECTS OF MOSQUITO SPRAY ON OTHER SPECIES**



David Ceilley sets up an insect net to help determine the impact of insecticide. (Photo: Andrew West/The News-Press)



During the summer of 2014, Sr. Ecologist, David W. Ceilley was co-investigator on a research grant from the Florida Department of Agriculture and Consumer Services to Florida Gulf Coast University (FGCU) for "Measuring the fate and non-target impacts of Dibrom<sup>™</sup> using aerial ultra low volume (ULV) spray technology in mangrove and open marsh wetlands". The research team also included Edwin M. Everham, III, Ph.D., Talal El-Hefnawy, M.D., Ph.D., Jonathan Hornby, Ph.D., Neil Wilkinson, Katherine Nelson, and Rachel Morreale. Several undergraduate student employees and employees of the Lee County Mosquito Control District also assisted with this research project conducted in Lee County preserves.

This study looked at the impacts of adult mosquito control spray on honey bees, peacock butterflies, and hundreds of non-target insect species by comparing sprayed wetland sites and non-sprayed (control) wetland sites before and after a single nighttime aerial spray event.

The study showed that low altitude ULV spraying of Dibrom<sup>™</sup> takes about an hour to reach the ground with a potential to drift for a mile or more depending on wind speed. Residues of  $Dibrom^{M}$  and its degradation product dichlorvos, may remain on the surface of plant leaves and on water for several hours before evaporating.

The research team found temporary but significant changes to insect communities after the spray event and an increased mortality of honey bees. Peacock butterflies also showed increased mortality but results were inconclusive as to the cause. Lab experiments by Dr. El-Hefnawy with fruit flies showed 100% mortality in 20 hours at dosage rates of less than 1.0 part per million. Additional studies are needed to identify any possible long term effects on non-target organisms.

The results of this study on the mosquito adulticide Dibrom<sup>™</sup> fate and impacts on non-target species can be used to address concerns of the effects on endangered species, mangrove and marsh wetlands, and may help redefine mosquito adulticide exposure levels. These findings may also influence management decisions regarding mosquito control, particularly in public wetlands and preserve areas.

The study would not have been possible without the full support and cooperation of Lee County Mosquito control and Lee County 20/20 program. The full 175 page report is available from FGCU or Johnson Engineering. For more information on this research study, contact David Ceilley at 239.461.3395 or dceillev@johnsoneng.com.

# **ROTONDA WEST UPDATES THEIR COMMUNITY IDENTITY**

gateway entry feature signs.

This "soup to nuts" project began with the evaluation of new potential locations for the required five entry signs including the analysis of environmental concerns, easements, ownership issues, sight lines, and sign visibility.

Community workshops were conducted and concept graphics were presented in order to design a sign that reflected their character. The new gateway sign is larger than the existing signs standing roughly 14' tall and 26' long. The new block construction replaced the composite and wood material of the old existing signs for long term durability. Equally important to the material was the color selection of the entry feature elements consisting of rich warm earthtones and the use of gold leaf on the new logo.

ONCEPT PLAN

Our team also developed a new Rotonda West logo consisting of a clean line sweeping palm frond replacing the old palm frond symbol of years past, often referred to as "the claw".

Once completed, the new signs were received well by the residents, County and Rotonda West visitors even generating resident e-mails to the Association Manager with accolades of a job well done.

For more information contact Landscape Architect, Jeff Nagle, RLA at 239.461.3312 or jnagle@johnsoneng.com



Photo courtesy of Aerial Innovations of Florida



David Ceilley checks the status of the Peacock butterflies after exposure to mosquito insecticide. (Photo: Andrew West/The News-Press)

The Rotonda West community was in desperate need of replacing their existing and deteriorating entry signs, while at the same time seeking to update the community's identity through "branding". Our team was retained by Charlotte County and the Rotonda West MSBU to provide survey, design, construction documents (including landscaping, lighting and irrigation), permitting, and construction services for five





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BURROWING OWL NEST AREA

EXCAVADORAS

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THE PROTECTED BURROWING OWL DIGGING ITS WAY INTO CEMETERIES

The Florida burrowing owl is a threatened species in the State of Florida and is therefore protected, along with its burrows, by several state and federal regulations. The Florida burrowing owl is a small, ground-dwelling owl with long legs, a round head and very large bright yellow eyes. They are not only unique due to their size; they are

diurnal which means they are active during the day time, unlike many owls that are active at night.





SUSTAINABLE

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Cemeteries provide ample suitable habitat with maintained grasses, disturbed plots of earth, which makes burrowing easy, and grave stones that serve as perches. Their burrows are often found

parcels of land, such as golf courses, airports and oddly enough, cemeteries.

under grave markers. These owls can be common residents for many cemeteries in Florida and can disrupt regular burial operations.



The Florida Fish and Wildlife Commission and U.S. Fish and Wildlife Service require permitting prior to disturbing the owls or their burrows. We have been assisting cemeteries with these permitting services to help keep cemetery operations running smoothly.

For more information on Burrowing Owl Permitting Services, contact ecologist, Sarah Webber at 954.626.0123 or swebber@johnsoneng.com.

