

Outlook

"Your project. Our passion."

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In This Issue:

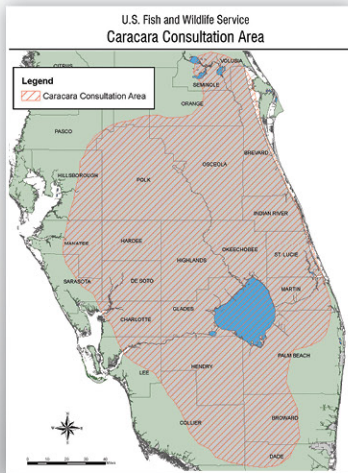
CARACARA NESTING SEASON APPROACHES

Caracara nesting season is fast approaching and if your project falls within the U.S. Fish and Wildlife Service (USFWS) consultation area for this federally listed bird, you may need to plan ahead. If a project occurs within this area and suitable caracara habitat is present, permitting will often require a full season of caracara surveys, January through April.

Florida is no stranger to "snow birds" who make the trip south to enjoy our warm winters and abundant sunshine; however, a few of us are year-round residents to Florida. The northern crested caracara, a type of raptor, is included among the list of year round native Floridians. The great ornithologist, John James

Audubon was one of the first to describe this native bird of prey in 1831, saying "I was not aware of the existence of the caracara in the United States, until my visit to the Floridas..." Historically, the caracara was found throughout Florida within open prairie habitats that were scattered with cabbage palms. As landscapes have changed over the centuries, so has the caracara's range and habitat. Dr. Joan Morrison, one of the leading experts on the caracara, explains that the birds are now predominantly found in central and south Florida within open "prairie-like" habitat such as improved pastures. The loss of habitat throughout the decades has resulted in a population decline, and in 1987 the USFWS listed them as Threatened under the Endangered Species Act.

The federally protected status of this species requires that any project within the USFWS caracara consultation area, which will result in modifications to potential caracara habitat, must complete a caracara nest survey and consultation with the USFWS. Having



If your project is within the USFWS Crested Caracara Consultation Area shown above, nesting season surveys may be required.

Caracara Nesting Season Approaches



Our New Sebring Office Opens



Page Field Airport Wins Environmental Award



Edison State College New Student Housing



Hendry County's Forward Thinking Helps Flooding



CONTINUED ON PAGE 2



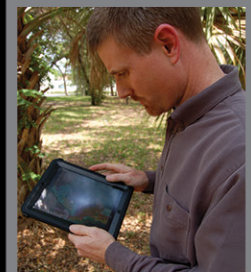
PEOPLE & PROJECTS: ON THE MOVE



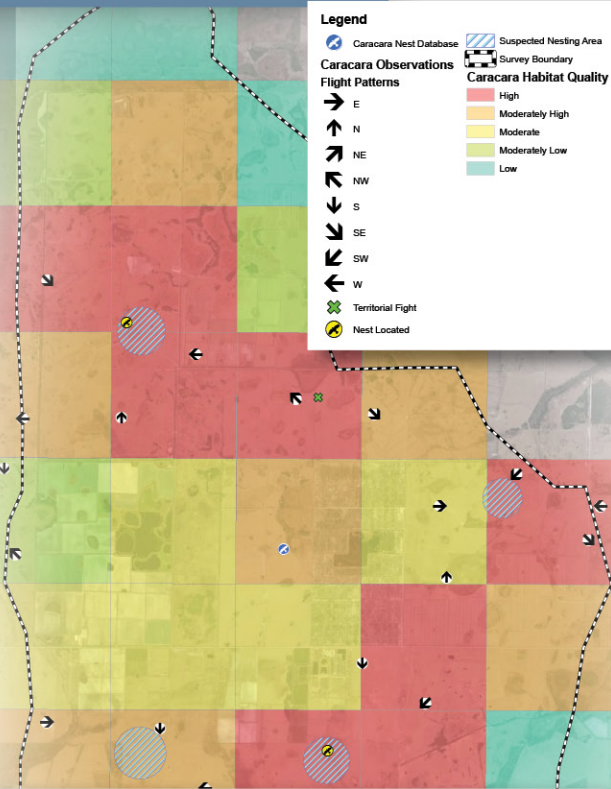
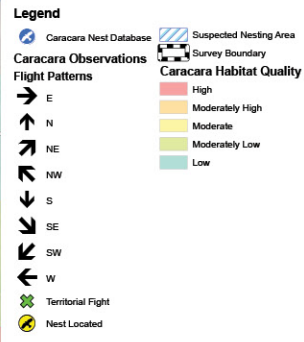
Staci Nance joins our Water Resources team as an environmental scientist. Her recent research and lab work in Environmental Science and Policy at USF will be beneficial to our team.



Tyler Sharpe, E.I. has earned his State of Florida Engineering Intern (E.I.) certification. Tyler is a graduate of FGCU's engineering program and is pursuing his P.E. license.



Paul Lohr GIS Geodatabase Administrator, has developed a group of unique mobile mapping tools for iPads, iPhones and Android devices.



This sample geospatial analysis shows how our team can utilize data collected using GIS field equipment during surveys to document all caracara observations, recording flight patterns, behavior, and time for each record. This data is then analyzed for trends, which allows for a greater focus of search efforts and subsequent identification of the nest.

a project that falls within these parameters; however, does not have to mean either the project will impact the caracara or the caracara will impact the project. By simply planning ahead you may help to avoid both impacts to the caracara and costly delays for your project. If you think your project may require special considerations for the caracara and the project is scheduled to begin within the next two years, it will be important to begin caracara surveys this January, in order to adequately meet federal requirements.

Johnson Engineering's environmental team has been providing caracara monitoring services since 1995. We have worked closely with Dr. Joan Morrison and, subsequently, with dozens of clients throughout Florida. Our ecologists have surveyed nearly 80,000 acres of Florida lands, and have collectively logged more than 5,000 monitoring hours.

Our team has developed a unique geospatial analysis approach that increases the effectiveness of surveys thereby decreasing the amount of time spent locating nests, which ultimately results in a major cost savings for our clients. We begin by reviewing our Geographic Information System (GIS) database of caracara nest locations and observations throughout the state; this database is compiled with not only publically available information, but decades of data collected in house, as well as data provided by private researchers. We then conduct a GIS habitat analysis that is customized to your project. By utilizing GIS software and the most recent scientifically based research for the species, we are able to quantify the quality of habitat and estimate the approximate size of the caracara territory within a survey area. These initial exercises allow us to focus our search efforts and decrease the amount of time spent locating a nest. Our unique approach does not end with the desktop analysis. We utilize GIS field equipment during surveys to document all caracara



observations, recording flight patterns, behavior, and time for each record. This data is maintained in a GIS geodatabase and is then analyzed for trends, which allows for a greater focus of search efforts and subsequent identification of the nest.

"Johnson Engineering has many years of experience surveying for caracaras and their nests. Their knowledge of the bird and its habitat allows their survey work to be accurate and efficient, helping both the caracara and the client. I have worked with Johnson Engineering on several projects that involve caracaras, and I would highly recommend them as a leading consultant to conduct caracara surveys."

Dr. Joan Morrison
Renowned caracara expert (Professor of Biology, Trinity College, Hartford, CT)

observations, recording flight patterns, behavior, and time for each record. This data is maintained in a GIS geodatabase and is then analyzed for trends, which allows for a greater focus of search efforts and subsequent identification of the nest.

This is yet another example of how our team cross-utilizes the various disciplines we have under one roof to increase our efficiency performing caracara surveys, translating into a cost savings for our clients.

For more information on caracara surveys, contact ecologist Sarah Webber at swebber@johnsoneng.com or 239.461.2405. ■

NEW SEBRING OFFICE HELPS SUPPORT PROJECTS IN CENTRAL AND EASTERN FLORIDA

We are excited to announce the opening of a branch office in Sebring, Florida. This new office at 9200 US Hwy 27 South, Suite A, Sebring, FL 33870, will allow us to better serve our clients in the central and eastern portions of the state.

We have worked on a variety of projects within Highlands and neighboring counties and feel this is the perfect time to expand our presence in this area. This new location will positively impact our clients by helping reduce travel time and expenses commuting from our other offices. ■



OUTSTANDING ENVIRONMENTAL PROJECT AWARD – PAGE FIELD AIRPORT

At the recent 2012 Florida Planning & Zoning Association Awards, the Page Field General Aviation Terminal Complex project was presented with the 2012 Outstanding Environmental Project Award. This award recognized Lee County Port Authority's capital improvements in the heart of urban Lee County because of extra effort to make the airfield compatible with the community that has grown around it. Not only does the Page Field Complex have an award-winning appearance, the improvements at Page Field are designed according to the unique and complex safety considerations that are unique to airport properties. An example of this is the landscaping that helps create visual screening for passengers and pedestrians along the roadway which is specially designed to not attract wildlife, particularly birds, which could pose hazards if they come into contact with operating aircraft.

As a General Environmental and Planning Consultant to the Lee County Port Authority, we contributed to the success of Page Field's recent developments. Our planning team completed the rezoning of the airport property in 2011. Through the rezoning process, we developed airport compatible landscape buffer standards to minimize the use of plant species that attract hazardous wildlife. We also resolved a strategy for reduced buffer plantings in runway protection zones to minimize conflicts with take-off and landing activity, while providing for compensating plantings in safer locations on the property. The lakes at Page Field are another feature that required special consideration to minimize wildlife attraction. While the lakes are attractive to the human eye, they are not attractive to wading birds because the lake banks are steeper than normal and lined with rip rap. Trees that are found on the airport-compatible landscape list we developed for the Port Authority, are provided around the lakes to enhance their appearance, another consideration in the rezoning approval. Development on airport property is a complex business, and even more so when the airport is located in the heart of an urban area. The 2012 Outstanding Environmental Project Award recognizes the work at Page Field as a job well done.

For more information contact Laura DeJohn, AICP at ldejohn@johnsoneng.com or 239.280.4331. ■



STUDENTS MOVE ONTO CAMPUS AT EDISON STATE COLLEGE

This fall students moved into Lighthouse Commons, the first on campus housing at Edison State College in Fort Myers. Instead of the traditional dormitory style, these are furnished two and four bedroom suite style apartments. With the expansion of baccalaureate degrees, students from out of the area are considering Edison State as their college of choice, increasing the need for on campus housing. This independent lifestyle is also attractive to students who live in the area as it gives them a sense of college dorm life while still being close to home. On campus living also allows students with similar academic interests the chance to live among those in the same field of study, giving them opportunities for study groups and meeting friends with similar career interests.

As students move in, they won't realize the efforts that went into creating these spacious apartments. Since the conceptual phase, Johnson Engineering has been involved and has provided the overall site design, utility design, and surface water management/drainage design for the building. The goal is for this building to become LEED certified, similar to other buildings on the College campus.

For more information contact Dana Hume, P.E. at dhume@johnsoneng.com or 239.461.2471. ■



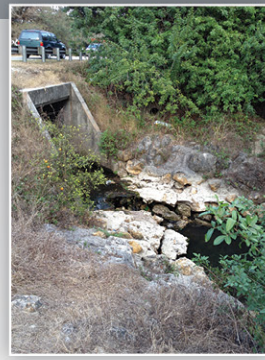
FORWARD THINKING HELPS ALLEVIATE FLOODING

Hendry County has recently completed the first phase of a multi-phase improvement project for County Road 78 by constructing two new box culverts at Pollywog Creek and Kell Mill Boulevard in north LaBelle. Rather than simply resurfacing the existing roadway the County took the initiative to address some larger drainage issues that have plagued the north LaBelle neighborhood. A drainage study revealed the existing box culvert at Pollywog Creek was undersized and the aging metal arch pipe at Kell Mill Boulevard was soon to become a maintenance problem.

The Pollywog crossing was of particular concern with a large watershed extending well into Glades County. Drainage models predicted the creek would overtop the roadway in larger rainfall events, potentially severing the only east-west corridor for the neighborhood. The new structure was designed such that it could be constructed without shutting down the roadway or impeding the flow of the creek. In addition to providing much needed additional capacity, the new culvert also restored the natural flowline of the creek allowing the creek stages to return to their historic levels. A concrete sediment basin was also incorporated, cast monolithically with the footer of the upstream headwall to catch nutrient laden sediment before it enters the Caloosahatchee River. By providing a mechanism to remove both nitrogen and phosphorus the County received a grant from the South Florida Water Management District helping to fund the project.

The project was finished within budget and perhaps more importantly on time, just before the rainy season. Subsequent phases of the project will address the roadway drainage, resurfacing, and sidewalks. This project serves as a great example of designing for the future...smart, simple, and sustainable.

For more information contact Ryan Bell, P.E. at rbell@johnsoneng.com or 239.461.3310. ■



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