

Outlook

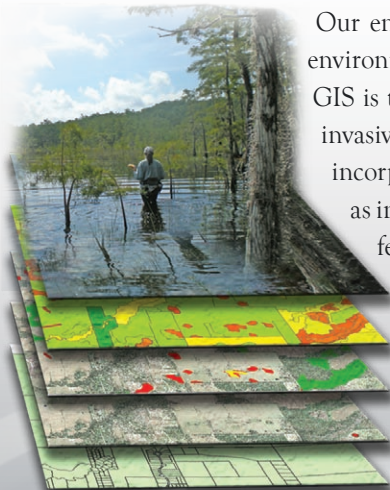
"Your project. Our passion."

VIEWING YOUR ENTIRE PROJECT FROM ABOVE - INTERACTIVE WEB-BASED GIS MAPPING OF ENVIRONMENTAL DATA

Most everyone has used Google Earth at one time or another to view their property, but wouldn't it be useful if you had the ability to view multiple layers of detailed information about your piece of land, such as endangered species locations, exotic vegetation, wetland areas or maybe historic patterns and trends?

The Social Science Research Network states that more than 65% of the world's population are visual learners. Our Geographic Information Systems (GIS) team caters to this learning style and provides tools and methods for each of our market groups to share with clients. GIS not only allows one to visualize, analyze and interpret spatial data in innovative ways, but also provides ways to solve problems and answer questions. GIS contributes to efficiency and cost savings for many of our client's projects.

Our environmental market group maximizes the functions of GIS for environmental assessment and permitting tasks. One application for GIS is to help our clients prioritize land management activities, such as invasive vegetation treatments and prescribed burning. We do this by incorporating historic and current land management activities, as well as invasive plant locations, into a database along with other geographic features such as trails, ditches, fire lines and land use. We analyze the relationships between the features to identify infestation patterns, risks, and trends. With this valuable picture of the land conditions, we provide recommendations for optimal land management strategies for our clients. Our GIS team takes products of this work and creates an interactive easy to use web-based map for clients.



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A quarterly publication by:



Spring 2011

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Environmental
Data



Business Sense
of Reducing
Emissions



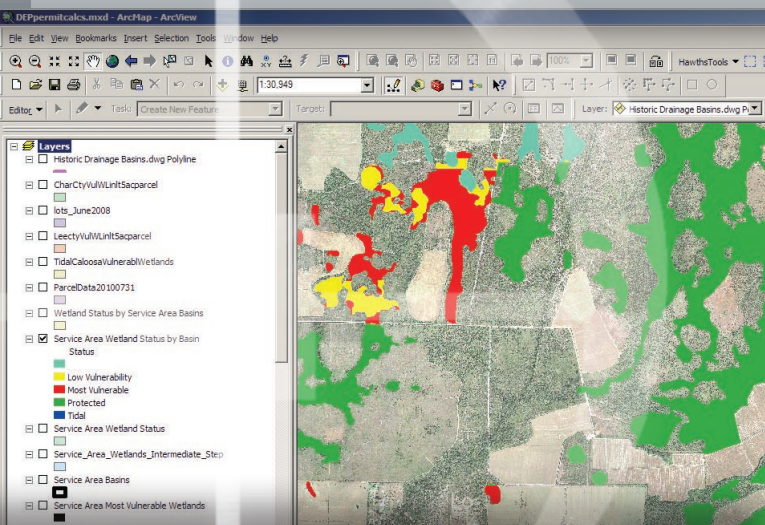
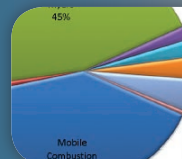
Bonita Springs
Welcomes
River Park



FGCU Fine Arts #2
Receives LEED Gold
Certification



Measuring Our
Own Sustainability
Efforts



PEOPLE & PROJECTS: ON THE MOVE



Sarah Webber

Ecologist, joins our Environmental team. Having worked for the Seminole Tribe of Florida, she brings extensive wildlife surveying, monitoring, federal regulatory & NEPA experience.



Erik Howard, P.E., LEED AP

was recently appointed to the Charlotte County, Murdock Village Community Redevelopment Agency Advisory Committee, as their General Contractor Representative.



Peggy Grant

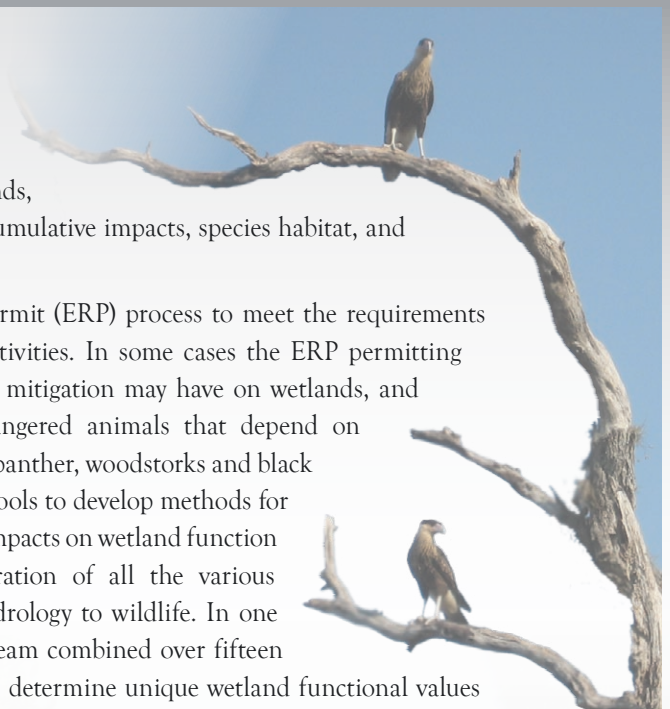
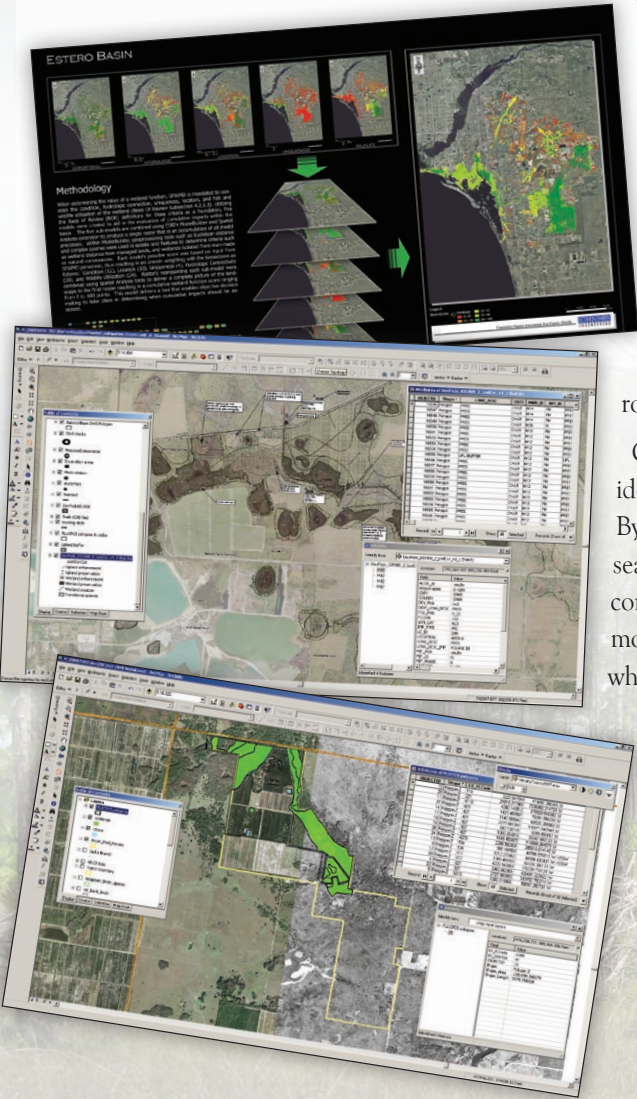
Ecologist, was appointed to the Lee County Eagle Technical Advisory Committee (ETAC), where she reviews projects within bald eagle nest protection zones and monitors the status of bald eagle nests in Lee County.

Our ecologists also use interactive databases in GIS to efficiently address our client’s permitting, mitigation, reporting and compliance needs. GIS technology allows our teams to combine publicly available data, like aerial photographs and topography, with data we have collected in the field, such as the location of wetlands, endangered species or exotic vegetation. We then apply this technology to assess cumulative impacts, species habitat, and territory modeling.

Various GIS assessments are often used during the Environmental Resource Permit (ERP) process to meet the requirements of Florida’s water management districts for both development and mitigation activities. In some cases the ERP permitting process entails evaluating the cumulative effects certain types of development or mitigation may have on wetlands, and the threatened and endangered animals that depend on them, such as the Florida panther, woodstorks and black bear. We have used GIS tools to develop methods for quantifying cumulative impacts on wetland function which includes consideration of all the various wetland factors from hydrology to wildlife. In one recent assessment, our team combined over fifteen different data sources to determine unique wetland functional values for more than 500,000 acres of land. Our water resources team also uses GIS technology to develop surface roughness for hydraulic modeling from FLUCCS mapping in watershed studies. This has greatly reduced the cost to determine roughness in modeling large areas such as the one mentioned above.

GIS technology is also an essential tool for creating habitat and territory models to identify probable nesting locations of protected animals, such as the Crested Caracara. By mapping flight patterns and observing the Caracara’s activities throughout nesting season, we are able to efficiently focus our survey efforts. When this mapped flight data is combined with ecosystem functionality data and species biology information, our mapping model becomes an important tool that increases effectiveness and efficiency of surveys, which translates to cost savings for our clients.

GIS is a technology that helps us do our jobs more efficiently and accurately. We also strive to find ways to accomplish more with smaller budgets, and GIS is a tool that has delivered success to our clients for a wide range of environmental aspects of their projects. ■



FGCU FINE ARTS - AIMING FOR SILVER, BUT GOT THE GOLD

Florida Gulf Coast University’s Fine Arts #2 Music Building received Leadership in Energy and Environmental Design (LEED) Gold certification from the U.S. Green Building Council in February 2011. The initial project goal was for the LEED Silver Certification, so achieving the Gold level was especially rewarding for the University. Johnson Engineering was part of the project team that helped navigate the project through the certification process with determinants such as site development – maximizing open space, development density & community connectivity, stormwater management – quantity and quality, alternative transportation – fuel efficient vehicles & parking capacity, and heat island effect non-roof. This is the third building on campus to achieve LEED certification and the University has made it a commitment that all future buildings become LEED certified. Johnson Engineering is proud to work with the University and help them achieve their goal of creating a learning and working space that is deeply rooted in environmental awareness. ■



THE BUSINESS SENSE OF REDUCING EMISSIONS

Federal legislation to reduce greenhouse gas (GHG) emissions appears to be at a standstill, so why are more and more private companies and local governments choosing to track and reduce emissions? The answer is for a number of reasons, tracking and reducing GHGs just makes good business sense.

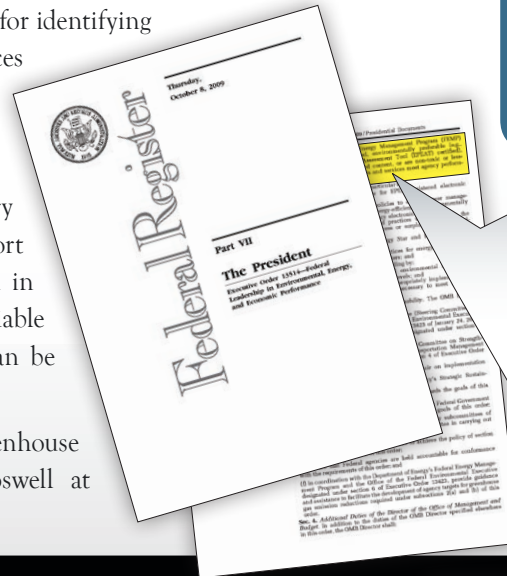
In October 2009 President Obama signed Executive Order 13514, requiring all federal agencies reduce their GHG emissions and implement sustainability plans. As a result of this initiative 95% of new federal government contracts will factor “sustainability” in the award of contracts. What does this mean for state and local governments and private entities? Local governments and companies competing for federal grants and contracts gain a competitive edge by voluntarily tracking and reducing GHG emissions.

In addition, Florida statutes now require local comprehensive plans to include policies aimed at GHG-reducing land use patterns and reduced GHG emissions from the transportation sector. Forward thinking local governments will find these strategies reduce new infrastructure costs, as well as improve community health and the environment in the long term.

Other driving forces behind emission reduction efforts are: the significant buying power of large companies committed to sustainability and efficiency, a growing trend of environmentally based decision making among consumers, and the significant cost-savings being realized through eliminating inefficiencies. The good news is that agencies and organizations with emission reduction strategies in place regularly report reductions and cost-savings beyond their expectations thanks to facility improvements and operational management which did not require large capital expenses. These can range from changing out light bulbs to instituting employee flex schedules.

Performing a greenhouse gas inventory allows for identifying and tracking emissions from various sources and assists in developing an implementation strategy towards more cost-effective projects and policies for reducing emissions. In 2010, we performed our own greenhouse gas inventory for our Johnson Engineering offices in an effort to move toward more efficient operations and in support of a healthier environment. Quantifiable results of energy reduction and cost-savings can be viewed on the back page of this newsletter.

For more information on conducting greenhouse gas inventories, contact Ecologist, Jaime Boswell at 239.461.2449 or jboswell@johnsoneng.com. ■



Johnson Engineering’s Effort to be Energy Efficient:

1. Replacing light fixtures and air conditioning units, as needed, with more energy efficient models.
2. Maximizing efficiency of air conditioning settings while maintaining a comfortable workplace.
3. Encouraging the use of Go-To-Meeting and teleconferencing to reduce travel.
4. Use of energy-saver settings for computers, printers and other office equipment.
5. Conducting regular maintenance on air conditioning units to see proper functionality.

Things all employees can do:

1. Turn off computers and other office equipment overnight and on weekends.
2. Turn off lights and fans when leaving the office.
3. Make sure energy-saver settings are used on computers.
4. Close/open blinds to reduce heat gain during warm months, increase heat gained from sun during colder months.
5. Maintain appropriate tire pressure to maximize fuel efficiency.

“Ensure 95% of all new contracts, including non-exempt contract modifications, require products and services that are energy-efficient, water-efficient, biobased, environmentally preferable, non-ozone depleting, contain recycled-content, non-toxic or less-toxic alternatives.”

BONITA SPRINGS WELCOMES RIVER PARK

The much anticipated Bonita Springs River Park is now open, allowing public access to the Imperial River for fishing, kayaking and canoeing at this southernmost part of the Calusa Blueway. An eagle’s nest briefly slowed construction; however, the project was completed without incident and will in turn allow safer eagle viewing from the park rather than from the U.S. 41 bridge. Johnson Engineering and the City worked to overcome extreme budget cutbacks and creatively turned an existing Lee County Visitor and Convention Bureau Grant into a buildable first phase of the park. Our team also played a part in the removal and mitigation of exotic vegetation, grading, water management, temporary vehicular access and stabilized parking areas. The park now offers a boardwalk and small floating boat dock, and is scheduled to include an interpretive facility and additional boardwalks throughout the waterfront ecosystems. ■



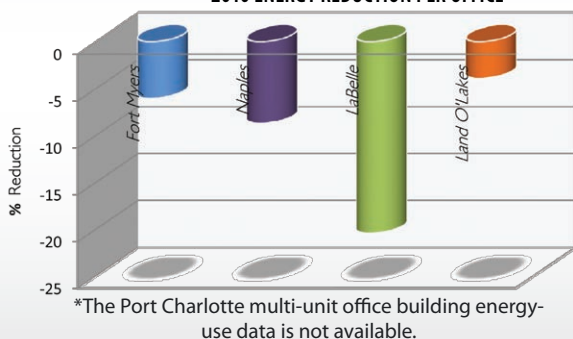
MEASURING OUR OWN SUSTAINABILITY EFFORTS

Johnson Engineering recognizes the financial, environmental and social benefits of sustainability. We have taken initial steps toward more efficient business operations. The first step was to conduct a baseline greenhouse gas (GHG) emissions inventory, prepared by our own ecologist Jaime Boswell who has earned a certificate in GHG accounting from the Greenhouse Gas Management Institute. The inventory accounted for the entire company's energy and vehicle usage, and the resultant carbon dioxide and other GHG emissions during the 2009 calendar year. This inventory provided a mechanism for us to determine where we could eliminate unnecessary emissions through implementing the most cost-beneficial changes, such as maximizing air conditioning efficiency.

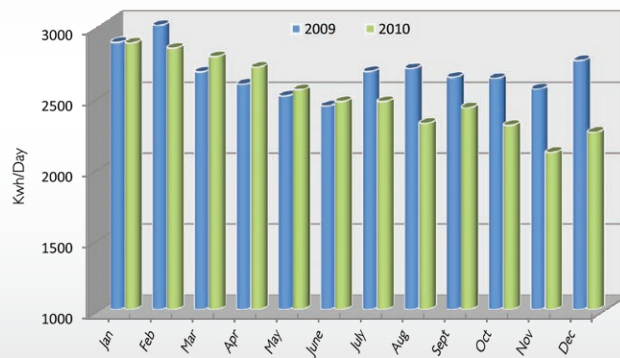
The terms "green" and "sustainable" are being used more often to market products and services, and the validity of these claims is coming into question. Our GHG emissions inventory and reduction strategy allows us to scientifically measure our progress on becoming a more sustainably conscious company. An initial assessment of 2010 data shows that company-wide energy use was down more than 6% compared to 2009, resulting in cost-savings of over \$10,000.

We look forward to furthering this effort and improving our operations to help the bottom line of both our company and our environment. ■

JOHNSON ENGINEERING'S
2010 ENERGY REDUCTION PER OFFICE



JOHNSON ENGINEERING'S
CORPORATE HEADQUARTERS ENERGY USAGE



Outlook

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