

Outlook

A quarterly publication by:

**JOHNSON
ENGINEERING**

— An Apex Company —

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"Your project. Our passion."

In This Issue:

BUILDING THE FUTURE OF SENIOR LIVING: THE OAKS AT CYPRESS COVE

As part of the expansion of Cypress Cove, The Oaks at Cypress Cove is a newly developed independent living community located just across the street from HealthPark Medical Center in Fort Myers, Florida.

Johnson Engineering played a pivotal role in the development of The Oaks at Cypress Cove, the newest independent living neighborhood within Cypress Cove, a Life Plan Community located in Fort Myers. Our team provided comprehensive site civil, utilities, and water management infrastructure design, ensuring the community meets the highest standards for both functionality and sustainability.

Designed for active older adults, The Oaks at Cypress Cove encourages an independent, active lifestyle while offering convenient access to healthcare services. Cypress Cove is a well-established senior living community for individuals 62 years and older, offering a range of living options such as independent living, assisted living, memory care assisted living, skilled nursing and rehabilitative services. The

Oaks at Cypress Cove is the newest addition to this community, featuring 12 acres of gated luxury living with 48 independent living units. The development includes 24 elevated residences and 24 villas, all equipped with smart-home technology for enhanced convenience and security.

The development also integrates two new lakes into the six existing lakes throughout the HealthPark and Cypress Cove campus. Designed with both environmental sustainability and community needs in mind, these lakes play a crucial role in water conservation, a priority in the unpredictable climate of



The Oaks at Cypress Cove community is the newest addition to the Cypress Cove campus, featuring 12-acres of gated luxury living with 48 independent living units.

The Oaks at Cypress Cove



Tracking Sanibel's Hydrology Post-Hurricane Ian



Johnson Engineering Supports Our Mother's Home



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PEOPLE & PROJECTS: ON THE MOVE



Chris Barrett, EI
an Engineer Intern in our Development group was recently elected as Secretary/Treasurer for the Calusa Chapter of the Florida Engineering Society (FES).



Charles Reed, EI
joins our Transportation team as the branch manager for our Lutz office in Pasco County. He brings 22 years of municipal project management, FDOT, and LAP Compliance experience.



Erik Mead, PE
joins our Land Development team. He brings over 10 years' experience in municipal infrastructure engineering design and project management.



Jordan Moulton, EI
joins our Land Development team. He brings 7 years of municipal utility engineering experience throughout Southwest Florida.



Two fountains and a cascading rock waterfall work together to enhance water circulation and promote healthy aeration, with water being pumped from the lower lake to the upper lined lake creating a visual and functional feature.

Southwest Florida. The upper lake is lined to reduce water loss through seepage, making it especially effective for water conservation. Water is pumped from the lower lake to the upper lake, where it flows back down through a cascading waterfall rock feature, creating a visually stunning and functional water system. This setup not only improves water quality by promoting aeration but also supports healthy water circulation. To further enhance circulation and maintain water health, fountains are strategically placed throughout the system.

In addition to these environmentally conscious features, The Oaks at Cypress Cove also offers a variety of amenities that promote an active and social lifestyle. The Greenway Trail is a natural pathway connecting The Oaks neighborhood and The Villas neighborhood at Cypress Cove. This thoughtfully designed trail promotes an active and

vibrant lifestyle, featuring tennis and pickleball courts, a dog park, and a lakeside pavilion—perfect for gathering with friends or enjoying peaceful moments outdoors.

This project goes beyond creating another luxury living community; it's about addressing the growing needs of Southwest Florida, a region with an expanding retiree population. As demand for senior living options continues to rise, developments like this provide a vital resource, offering high-quality living options in a thriving and supportive environment. By focusing on independence and access to healthcare, this new community ensures residents can continue to live comfortably and safely, with peace of mind.

We are honored to contribute to projects that meet the needs of our community. The Oaks at Cypress Cove not only enhances the entire Cypress Cove campus but also benefits the broader Southwest Florida region by offering a thoughtfully designed and sustainable environment for older adults. It's a privilege to help develop senior living communities that provide both independence and security, addressing the evolving needs of our growing retiree population. This project exemplifies our commitment to the future of our community, ensuring that Southwest Florida remains a vibrant and welcoming place for all.

For more information on this project, contact Dana Hume, PE, at (239) 461-2471 or dhume@johnsoneng.com.



Aerial taken by FAST Florida Aerial Services, courtesy of Cypress Cove and Chris-Tel Construction.

RESILIENCE IN RECOVERY: TRACKING SANIBEL'S HYDROLOGY POST-HURRICANE IAN

Sanibel is a 12-mile-long barrier island located off the coast of Lee County, near the mouth of the Caloosahatchee River. Sanibel contains two large freshwater basins – the Sanibel River West Basin and the Sanibel River East Basin – which serve as essential freshwater reservoirs for the island. Protecting these freshwater systems is crucial for preserving the island's native flora and fauna, as well as conserving the freshwater in the surficial aquifer beneath the island.

When Hurricane Ian made landfall in late September 2022, the island was inundated with storm surge, causing saltwater contamination of freshwater ponds and wetlands. Since Ian, there has been a noticeable loss of vegetation, and a general sense amongst residents that the island's hydrology has changed.

One method to measure changes in vegetation health is through the Normalized Difference Vegetation Index (NDVI), which uses satellite imagery to assess vegetation density and greenness by comparing red and near-infrared light reflections. Johnson Engineering processed hundreds of images from NASA/USGS Landsat 8 satellite from 2013 to 2023, creating long-term NDVI averages before and after Hurricane Ian (see Figures 1 and 2). These images clearly show the hurricane's devastating impact on plant life across the island.

Historically, water from the island's interior basins has left through evapotranspiration, a process that is closely tied to plant growth. With a significant decline in plant populations post-hurricane, it is logical to assume that the island's hydrology has been affected as well. However, continued monitoring shows an encouraging trend: NDVI values have steadily increased through early 2024, signaling the resilience of Sanibel's ecosystems.

Though the island's freshwater basins experienced further saltwater intrusion following last fall's hurricanes, it is expected that the upcoming summer rains will replenish these basins, aiding in the continued recovery of the island's environment.

For more information contact Jordan Varble, PE, at (239) 461-2431 or jvarble@johnsoneng.com.

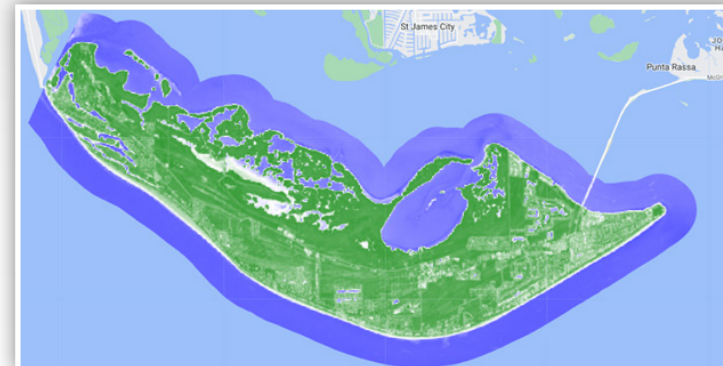


Figure 1. Map showing NDVI values before Hurricane Ian (long-term average November 2013 to September 2022).

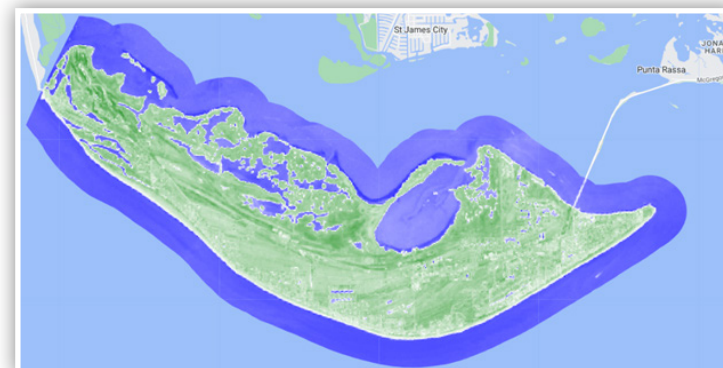


Figure 2. Map showing NDVI values after Hurricane Ian (averaged November 2022 to May 2023).



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JOHNSON ENGINEERING SUPPORTS OUR MOTHER'S HOME

Johnson Engineering's annual give back initiative grew out of our belief that our company has an ongoing responsibility to contribute to help positively shape our local community and those who will be the future of our communities. Our search for an organization that matched our belief led us to Our Mother's Home of Southwest Florida.

This organization provides young mothers, ages 11-21, in foster care and human trafficking systems, a safe, nurturing, and supporting environment to stay with their babies, learn life skills, and finish their education. Their mission is to empower them to break the generational cycle for themselves and their children.

This past Christmas, Johnson Engineering employees donated hundreds of new toys, personal care items, and household items to the home.

Community support is such an important resource for supporting Our Mother's Home. Improving their resources will help them empower these young women with knowledge and create a future filled with hope and possibilities.

We are honored to support such an important and impactful cause. For more information about Our Mother's Home visit their website at <https://ourmothershome.org>, or contact Juli Kern at (239) 461-2424 or jkern@johnsoneng.com. ■

