

FWEA SOUTH FLORIDA CHAPTER NEWSLETTER



Florida Water
Environment
Association

SOUTH
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CHAPTER

1ST SEMESTER – 2025

MESSAGE FROM THE CHAIR

Abnery Picon, Jacobs

The South Florida Chapter of the Florida Water Environment Association (FWEA) is pleased to present you our second newsletter for the Fiscal Year 2024-2025. In this issue you will find three technical articles prepared by field experts from Gannett Fleming, Jacobs, and Stantec, that donate their time and knowledge to the newsletter, and you will find a summary of the events hosted during the fiscal year.

Our first event was in August 2024 where we had a Networking and Dinner event that included a technical presentation from Christine Wartman and Daniel Lizarazo of the Miami Dade and Sewer Department. In September 2024, we have a Young Professionals Networking event in Top Golf Doral, where students, and young professionals had the opportunity to play while networking with other participants. In October 2024, Lilian Marrero (Treasurer in-Training) and Melody Gonzalez (Vice-Chair) represented our Chapter in WEFTEC. As part of the WEFTEC activities, Lilian Marrero graduated from the Water Leadership Institute, an intensive program that allows participants the opportunity to engage in management training and leadership development while networking with other participants from the public and private sectors. In November 2024, we had our second Networking and Dinner event that included technical presentations from Lucine Dadrian and Dr. Matahel Ansar from the South Florida Water Management District. In December 2024, we joined forces with other local professional organizations for the Holiday Social Event held in Doral. In January 2025, we had our first full day Technical Seminar titled PFAS in Water and Wastewater: Solutions for a Healthier Tomorrow. The participants of this event received 6 PDHs while learning regarding the PFAS regulations. In early February 2025, the FWEA held its Leadership Workshop, where Juan Aceituno (Treasurer) and I represented the South Florida Chapter. To end the fiscal year, in April 2025 we will be hosting the Members Appreciation and Networking event. Details regarding this event will be distributed in the next weeks.

All these events would not be possible without the support from our Chapter's Annual Sponsors. As a non-profit organization all the funds collected through sponsorship are directed to organize events for our professional community and to provide lower registration fees to our members, government employees, and students. As part of our commitment with future generations studying engineering, we also allocate funds to give back to the community. This year we contributed with a computer to the Engineering Club of the TERRA Environmental Research Institute at Miami. Also, we donated \$1,250 to the UM James D Englehardt Excellence Award in Environmental Engineering, and \$1,250 to the FIU Fang Zhao Women in Engineering Leadership scholarship for Civil and Environmental Engineering students.

At the end of this fiscal year, I will step aside from my current role as Chair of the FWEA South Florida Chapter. I want to personally say thank you for the support received from our Chapter Board. Without your support none of these events would have been possible. For the next fiscal, I am thrilled to announce that Melody Gonzalez, will be stepping into the role of Chair for the South Florida. Melody's journey with FWEA began many years ago while still being a student in FIU. Her active involvement, and her dedicated contributions to the Chapter have set her apart as a natural leader. The FWEA South Florida Chapter could not be on better hands.

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FWEA SOUTH FLORIDA CHAPTER

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TECHNICAL ARTICLE

A COMPREHENSIVE CASE STUDY ON MUNICIPALITY BIOGAS UTILIZATION: FROM ALTERNATIVE EVALUATION TO TECHNOLOGY SELECTION

Yuan Fang, PE¹, Dru Whitlock, PE¹ and Chris Wilson, PE² (¹Stantec Consulting Services, ²Hampton Roads Sanitation District)

Beneficial biogas utilization has become a hot topic in recent years due to its advantages of energy recovery and greenhouse gas emission reduction. However, implementing biogas utilization technologies is capital-intensive partially due to costly biogas cleaning and upgrading required prior to beneficial utilization. In recent years, the federal, state, and local governments have implemented policies that are beneficial to lower upfront capital costs, streamline the regulatory process of implementing biogas utilization systems, and create potential revenues. For the Hampton Roads Sanitation District's Atlantic Water Reclamation Facility (WRF) three biogas utilization alternatives were evaluated.

This study highlighted:

- An evaluation of biogas utilization alternatives for a facility has 30% of its biogas (400 scfm) used for steam generation for its thermal hydrolysis process and remaining biogas flared.
- The comprehensive decision-making methodology that was applied in the evaluation of different biogas utilization alternatives. This methodology combines evaluations on financial and non-financial performance.

A 30-year net present value (NPV) analysis was presented for each of the biogas utilization alternatives. Impacts of changes in discount rate, inflation rate, Renewable Identification Number (RIN) values, and Electricity Renewable Identification Number (eRIN) availability on the NPV analysis and payback period were included in the sensitivity analysis. Non-Financial evaluation consisting of the weighting and scoring of 12 selected decision-making criteria covering social, environmental, and technical performance.

Alternative Evaluation

Currently, biogas usage at the Atlantic WRF is used primarily for steam production. Approximately 30% of the raw biogas is sent to the biogas cleaning system and fed to the steam boiler to provide sufficient steam for the THP process. The remaining biogas is sent to the flare and combusted.

Three alternatives considered for this water reclamation facility, which included:

- A combined heat and power (CHP) alternative includes installing three 800 kW engine generators – two in service and one standby. The existing biogas conditioning system was adequate and re-used for biogas cleaning. The CHP produced steam is sufficient to cover the needs of THP process based on mass and energy balance.
- A renewal natural gas (RNG) alternative required meeting the quality requirements from the gas utility for injection into the pipeline. Unlike the CHP alternative, the RNG option will not have heat recovery for steam generation; therefore, natural gas will be used in the steam boiler to provide steam for the THP process.
- A compressed natural gas (CNG) alternative that upgrades the raw digester biogas to RNG, which is then further compressed to CNG for fleet vehicle usage.

Table 1 summarizes financial evaluation results for all biogas alternatives investigated for the facility. The net revenues for all three alternatives are relatively close to each other (within 15%); however, the project cost of the CHP alternative is significantly lower than the RNG/CNG alternatives.

Biogas Utilization Alternatives	Project Cost	Net Revenues		
		O&M	Revenue	Net Revenue
CHP Upgrade	\$8,745,000	\$2,440,000	\$4,788,000	\$2,348,000
RNG Injection	\$21,277,000	\$1,061,000	\$3,123,000	\$2,062,000
CNG Fleet Vehicle	\$18,460,000	\$1,137,000	\$3,375,000	\$2,239,000

Table 1: Cost Comparison of Biogas Utilization Alternatives (2023 US dollar)

The weighted score of each individual decision criterion are shown in **Figure 1**. The CHP alternative has a highest weighted score (78) compared to the RNG or CNG alternatives (both 63).



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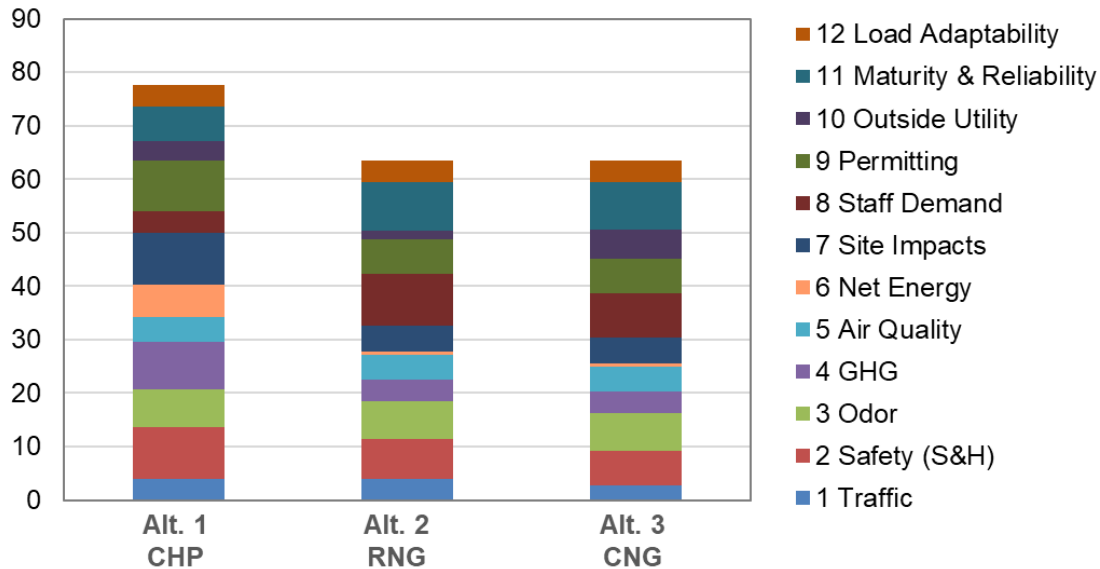


Figure 1: Alternative Comparison, Non-Financial Score

Conclusions

The CHP alternative maximized the utilization of the existing facilities but required a new CHP system. It had the lowest project cost and the highest weighted score on the non-financial decision criteria category. The CHP alternative has a reasonably short payback period, which is the shortest among the three alternatives. However, this payback period is dependent upon eRIN benefits. If eRIN benefit is not feasible/considered in the calculation, the CHP option has a much longer payback period.

The RNG alternative would require the installation of a new biogas cleaning/monitoring system, a RNG injection station, and a gas pipeline to the injection station. It had the highest project cost, a longer payback period, and a lower score on non-financial categories. This alternative is highly dependent on the third-party utility because the utility can shut off the injection at any time if the RNG quality monitoring results show that the gas produced is not meeting its requirements.

The CNG fleet vehicle alternative required the installation of a new biogas upgrading system and a CNG fueling station. The financial and non-financial performance of this alternative are similar to that of the RNG option. However, the CNG option is considered unfeasible due to the substantial number of vehicles that would be required to use the generated CNG and their impacts on general access to ATP. Also, considering the new era of electric mobility beginning worldwide, the future of CNG vehicles in North America is questionable.

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TECHNICAL ARTICLE

INTEGRATING AQUIFER TREATMENT WITH PFAS REMOVAL

Katie Walker, PE; Cary, North Carolina, JACOBS
GJ Schers, PMP; Fort Lauderdale, Florida, JACOBS

As water treatment plants (WTPs) are faced with new PFAS regulations, many are considering how to simultaneously address aging infrastructure and/or other water quality challenges such as iron and/or organics removal in their groundwater supplies. Careful attention should be paid to how PFAS treatment technologies can integrate, supplement, or even replace existing water treatment technologies.

- Main Topic: Utilities that need to comply with per- and polyfluoroalkyl substances (PFAS) regulations should consider how treatment technologies can be integrated while handling other common water quality challenges
- How the article can benefit utilities: Highlights the key differences in PFAS treatment systems and how they can be coupled with softening and organics removal processes.

Treatment Technology Summary

PFAS Treatment – Best Available Technologies

In April 2024, the Environmental Protection Agency (EPA) issued maximum contaminant levels (MCLs) for six PFAS and a hazard index, which is a calculated value based on a combination of PFAS. Many drinking water utilities in Florida have identified PFAS levels in their shallow groundwater sources that are above the future MCLs. The following are considered by the EPA to be “Best Available Technologies” for PFAS removal:

1. Granular Activated Carbon (GAC). GAC removes PFAS through adsorption; GAC can also reduce organic levels and certain metals (e.g., iron). However, GAC can have a faster exhaustion rate than other media types due to this competition and can be especially problematic for water sources with high organics.
2. PFAS-removal Ion Exchange (PIX). Like other IX resins, PFAS molecules are exchanged on the IX surface. These specialty PIX resins are typically only designed for PFAS removal and do not address other water quality challenges, such as organics and color.
3. NF/RO Process. Dependent on the pore size and structure, PFAS is rejected by NF and RO membrane systems. NF/RO processes can also reject a wide number of other constituents, such as metals and organics.

Iron Treatment

In addition to needing to employ softening, many utilities that treat water from Southeast United States’ aquifers require specific steps to remove high levels of iron. Processes traditionally used for iron removal include:

1. Homogeneous Removal with Oxidation and Filtration. Aeration is used to oxidize and then precipitate iron, which can be removed by filtration.
2. Heterogeneous Iron Removal with Greensand Process (GS+). Manganese dioxide-coated sand, along with a chlorine residual, oxidizes soluble iron and manganese and removes precipitates.
3. Other Processes. Dissolved iron can be removed biologically or with a membrane separation process.

Organics Removal

High organic levels can pose a challenge for utilities when it comes to disinfection by-product (DBP) formation or color for aesthetics. Although GAC can be used for organics removal, high levels can require frequent media replacements and significantly increase the overall operation and maintenance (O&M) cost. Alternative options for organics removal include:

1. Anion Exchange (AIX). Organic molecules are exchanged on the resin surface for a chloride ion. There are many types and configurations of AIX systems; they can also typically be regenerated in situ.
2. Membrane Process. Organics and color can be removed using a membrane separation process.
3. Coagulation. Metal-salt coagulants can capture organics and other contaminants and settle them out in sedimentation sludge.

Developing Candidate Treatment Trains

Developing candidate treatment trains that combine multiple technologies should be performed with an understanding of their benefits and synergies alongside conflicts and cost. For the purposes of this evaluation, two treatment trains are compared (see **Table 1**) to highlight the major differences between treatment processes.

Train Alternative	Pretreatment	Iron Removal Technology	Organics Removal Technology	PFAS Removal Technology
1 – Adsorption	None	GS+	AIX with Cartridge Filters	PIX
2 – Separation	Strainers + Cartridge Filters	NF or RO Membranes		

Table 1: Candidate Treatment Trains – Adsorption versus Separation

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Figure 1 presents a simplified process flow diagram for each candidate treatment train.

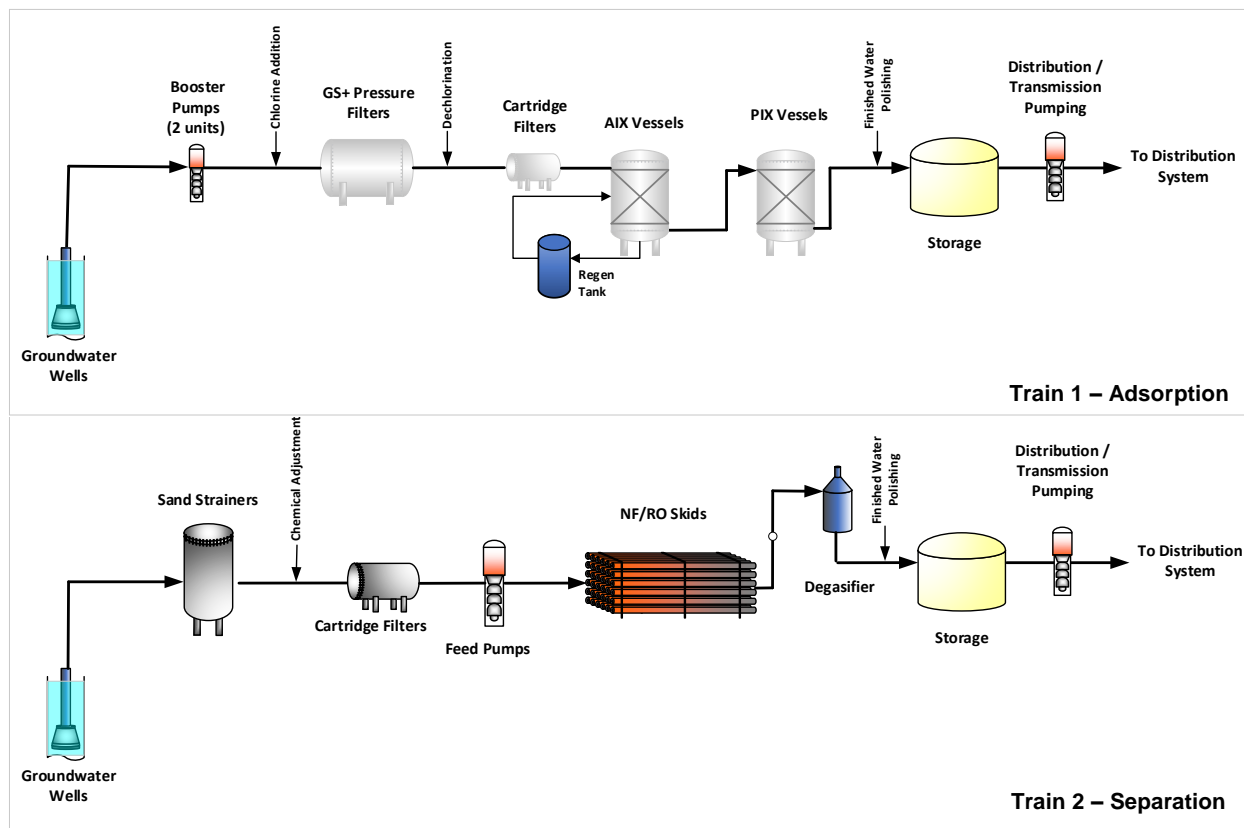


Figure 1: Candidate Treatment Trains – Process Flow Diagrams

Table 2 summarizes differences between the treatment trains.

Criteria	Train 1 – Adsorption	Train 2 – Separation
Treatment Robustness – ability for train to handle other water quality parameters	Each technology (GS+, AIX, PIX) is designed for targeted contaminants and typically unable to address others (e.g., PIX can only remove PFAS)	Likely to be able to handle a wide range of contaminants; rejection is based on molecular weight size exclusion
Level of Proprietary Equipment – the number of vendors or manufacturers, and ability to interchange technologies	Most systems are proprietary, although there are several resin vendors for GS+, AIX, and PIX	Multiple membrane vendors; most membrane systems are “open” and can use any membrane element manufacturer
Proven Technology – number of applications in service	Limited number of operational PIX applications; many are currently in design or construction	Large number of operational NF/RO systems
Treatment Complexity – impact to staffing requirements	Most IX systems are housed in pressure vessels (low complexity) but train requires multiple treatment steps	Requires high learning curve if staff is unfamiliar with membrane technologies (cleaning systems, etc.); single treatment step
Schedule Implementation – complexity of construction or availability of materials	Pressure vessels are experiencing long lead times; relatively straightforward construction of tanks mounted on a concrete pad either inside or outside	More complicated construction with numerous pieces of equipment; requires larger horsepower motors

Table 2. Comparison of Adsorption and Separation Treatment Trains

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A final key difference between the two train options is the impact on residual streams. Although the EPA does not currently have any regulatory requirements for the treatment, destruction, and disposal of water treatment residuals that contain PFAS, understanding the future risk is an important consideration. Interim guidance provided by the EPA lists landfilling, deep injection wells (DIW), and thermal treatment as options for disposing of PFAS-laden residuals.

For Train 1 – Adsorption, backwash water from the GS+ and AIX treatment systems can be captured, treated, and returned to the head of the plant. However, regeneration waste from the AIX process is traditionally disposed of to a sanitary sewer. As utilities move away from accepting this waste via sewer, waste disposal options may become more challenging or costly. While PIX systems do not require backwashing and produce a very limited amount of waste primarily during media installation, the media will become exhausted overtime and require replacement. Currently PIX media is incinerated or sent to a landfill, which can be challenging if PFAS regulations are tightened. However, regenerable PIX or other PIX regeneration solutions are currently in development.

For Train 2 – Separation, the disposal of the concentrate stream poses the largest challenge. Potential options may include disposal to surface water or sanitary sewers, or through a DIW. One benefit of separation treatment is that the concentrate stream presents an opportunity for novel PFAS technologies that are currently in development. These technologies include foam fractionation for further separation/concentration and destruction technologies.

Conclusion

The new PFAS regulations require rethinking of what treatment processes are required to meet the MCLs and the long-term risk of residuals disposal. Utilities already utilizing NF or RO treatment should evaluate their systems for PFAS rejection but should also be cognizant of how future regulations may impact their ability to discharge concentrate waste. For utilities already using adsorption technologies for iron or organics removal, a PIX system may be a good option and a familiar process to plant staff. However, it's important to consider the disposal options for PFAS-laden PIX material.

Katie Walker, Jacobs' Global Principal for PFAS (Drinking Water & Reuse), has more than 18 years of water and wastewater experience with a focus on identifying and addressing water quality challenges, especially emerging contaminants. Contact her at katie.walker@jacobs.com or 919-713-6322 to learn more.



FWEA SOUTH FLORIDA CHAPTER

TECHNICAL ARTICLE

BUILDING FLOOD-READY COMMUNITIES THROUGH SMARTER PLANNING AND TECHNOLOGY

This article is adapted from the technical paper titled "Using Geospatial Modeling to Empower Stormwater Resilience and Flood Mitigation," originally co-authored by Jose Abinazar (Gannett Fleming), Marina Blanco-Pape (Miami-Dade County Department of Regulatory and Economic Resources), Alberto Pisani (Miami-Dade County Department of Regulatory and Economic Resources), and Georgio Tachiev (GIT Consulting, LLC), and presented at the 2024 Florida Water Resources Conference. The content has been modified for a broader audience.

Ground Zero For Resilience: Why Modeling Is A Must

To address the growing challenges of climate change, sea level rise (SLR), and urban development, Miami-Dade County has advanced its Stormwater Master Plan (SWMP) through the application of geospatial modeling tools. These models provide critical insights into flood vulnerabilities and help prioritize capital improvements. Using XPSWMM hydrologic and hydraulic models, geographic information systems (GIS), Light Detection and Ranging (LiDAR), and other multidimensional data sources, the County analyzed existing and future stormwater conditions across its 11 sub-watersheds. This effort supports the development of comprehensive flood mitigation strategies and updated regulatory standards.

Geospatial Modeling Approach: How The Models Were Built

The modeling framework covered approximately 780 square miles, and incorporated the following sources:

- Digital Elevation Models (DEM) of 5-ft resolution
- Land use and impervious surface data
- Soil characteristics from United States Department of Agriculture (USDA), Natural Resources Conservation Service's (NRCS) Soil Survey, extracted from databases such as Soil Survey Geographic (SSURGO) and State Soil Geographic (STATSGO).
- National Oceanic and Atmospheric Administration (NOAA) and South Florida Water Management District (SFWMD) rainfall data and distributions
- Sea Level Rise (SLR) projections from the Southeast Florida Climate Compact
- Groundwater and tidal boundary conditions

Simulations were performed for present-day (2020) and future scenarios (2040, 2060, 2080, 2100) under multiple storm events (24- and 72-hour durations with 5- to 1000-year return periods). The XPSWMM model incorporated over 10,000 hydraulic links including pipes, canals, culverts, and pump stations. Python scripts supported post-processing and flood mapping.

Key Findings And Regulatory Updates

Results from the modeling informed updates to two major regulatory tools:

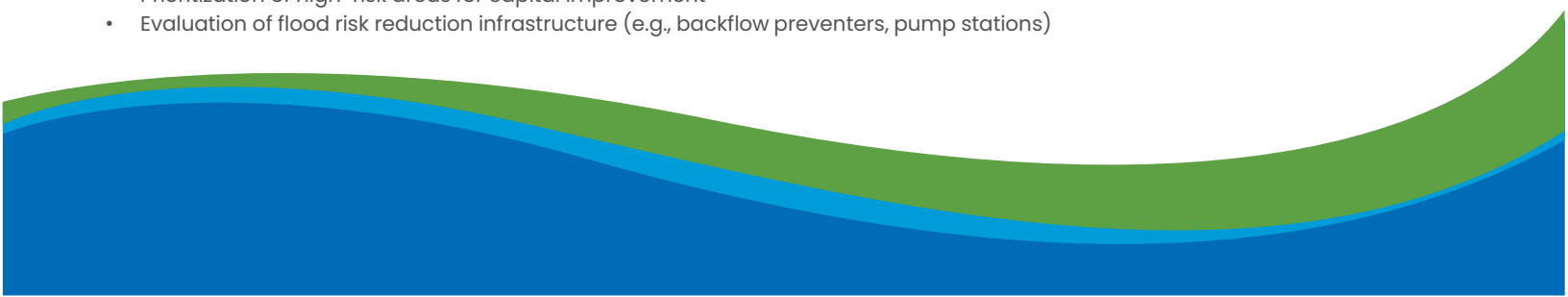
- County Flood Criteria Map (CFC):
 - Establishes minimum elevation requirements for finished grade, roads, canal banks, and seawalls.
 - Based on the 10-Year/24-Hour event under 2060 SLR projections.
 - Increased minimum elevations by an average of 2.55 ft across all watersheds.
- Water Control Map (WCM):
 - Reflects storage and conveyance capacity based on the 25-Year/72-Hour event under 2060 SLR.
 - Updated canal bank elevations and design standards aligned with Miami-Dade's Public Works Manual.

These updates are publicly accessible and designed to guide developers, engineers, and policymakers in resilient infrastructure planning.

Putting Models To Work: Applications And Benefits

The geospatial modeling supports multiple strategic outcomes:

- Prioritization of high-risk areas for capital improvement
- Evaluation of flood risk reduction infrastructure (e.g., backflow preventers, pump stations)



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- Coordination with Federal Emergency Management Agency (FEMA) on Flood Insurance Rate Maps (FIRMs) and Flood Insurance Study (FIS) updates
- Informed policymaking for regional and federal agencies
- Flood Depth Analysis and other visualization tools to display data in maps, charts, and graphs, enhancing communication and understanding among stakeholders, making it easier to convey complex hydrological scenarios (See figure below)
- Flood hazard maps generated from model outputs are used to develop site-specific mitigation strategies and to update permitting and zoning standards

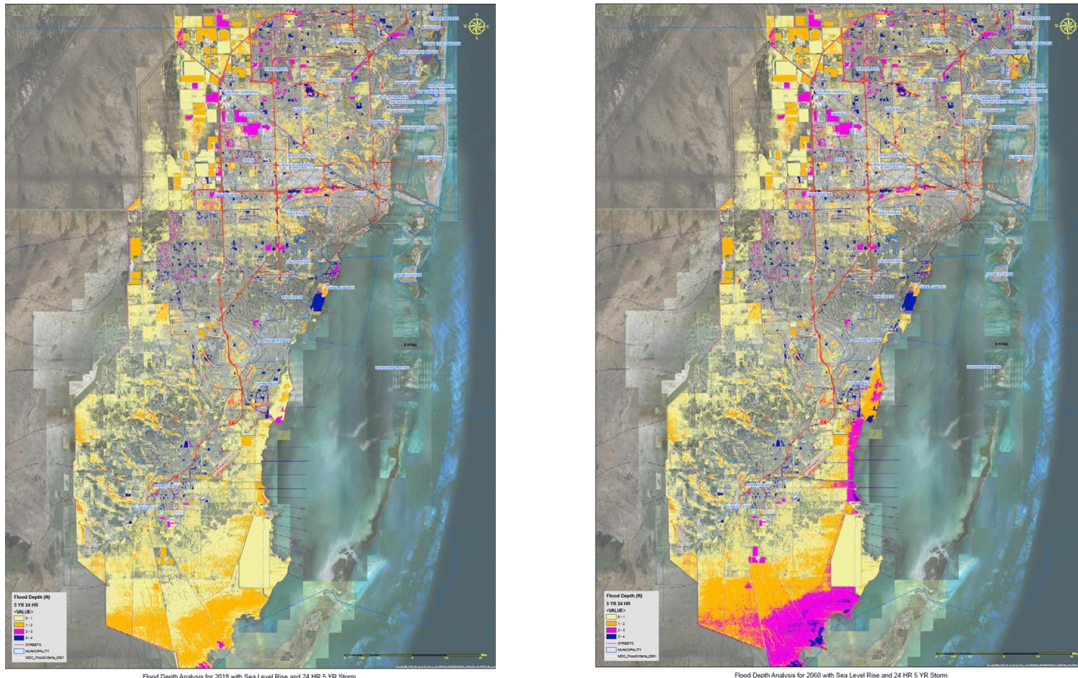


Figure 1: Depth Analysis with Sea Level Rise 5-yr/24-hr Storm Event: Current vs 2060 Conditions

Conclusion

Miami-Dade County's integration of geospatial modeling into its SWMP showcases a forward-looking approach to flood resilience. The results enable science-based planning, regulatory updates, and coordinated infrastructure investments to meet future stormwater and climate challenges. This approach provides a replicable model for other coastal urban areas seeking to modernize flood risk management practices.

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FWEA SOUTH FLORIDA CHAPTER

PREVIOUS EVENTS

August 2024

INNOVATIVE UTILITY PROGRAMS FOR UPGRADING WASD'S CRITICAL INFRASTRUCTURE

On August 21, 2024, the FWEA South Florida Chapter hosted an insightful Dinner and Networking event at the 94th Aero Squadron. Attendees had the privilege of hearing from two distinguished keynote speakers and local Miami-Dade County leaders, **Daniel Lizarazo and Christine Wartman from the Miami-Dade Water and Sewer Department (WASD)**. They presented on *"Enhancing Our Future: Innovative Utility Programs for Upgrading WASD's Critical Infrastructure"*. The presentation highlighted WASD's comprehensive efforts to upgrade and maintain critical water infrastructure, including the **Water Reset Program** to address needs in water treatment and distribution, and compliance with Florida's Ocean Outfall Legislation (OOL) to eliminate ocean outfalls for treated wastewater. The **Connect-2-Protect Program** aims to safeguard homes, health, and natural resources by transitioning from septic systems to the County's sanitary sewer collection system. The **Force Main Rehabilitation/Replacement Program** focuses on repairing or replacing high-risk force mains to ensure system reliability and redundancy. The event was well-attended, with 124 participants who engaged enthusiastically with questions and discussions after the presentation. The FWEA South Florida Chapter extends its gratitude to Daniel and Christine for their informative presentations and for taking the time to connect with the local engineering community.



November 2024

GENERAL MEETING WITH SFWMD

FWEA hosted the second General Meeting event on November 7, 2024, featuring two distinguished keynote speakers, **Lucine Dadrian and Dr. Matahel Ansar**, who shared invaluable insights into critical water management and restoration projects in South Florida. Lucine Dadrian, Division Director of the Engineering, Construction, and Modeling Division at the **South Florida Water Management District (SFWMD)**, delivered a compelling presentation on Restoring America's Everglades. She provided an in-depth update on several key projects, including the **Everglades Agricultural Area (EAA) A-2 Stormwater Treatment Area (STA)**, the **C-43 Reservoir**, and the **expansion of STA-1 West**. Lucine also discussed ongoing initiatives such as the **Comprehensive Everglades Restoration Plan (CERP)** and the **Central Everglades Planning Project (CEPP)**, emphasizing their critical roles in enhancing water quality, improving flood control, and restoring vital ecosystems across the Everglades. Through her leadership, these ambitious restoration projects are making significant strides in preserving one of the most important natural landscapes in the United States. Dr. Matahel Ansar, Bureau Chief of the Hydrology and Hydraulics Bureau at SFWMD, presented on the Application of 2D and 3D Hydrodynamic Models to the Kissimmee River Restoration Project. Dr. Ansar highlighted the use of advanced modeling techniques to simulate water flow, sediment transport, and flood risk management within the Kissimmee River. His expertise in **computational hydraulics** is pivotal to the project's success, allowing for more precise forecasting of hydrological behavior and guiding critical decisions in the restoration process. Dr. Ansar's work helps ensure that the Kissimmee River restoration effectively balances ecological needs with flood risk mitigation, providing long-term benefits for the surrounding environment and communities. Both presentations underscored the integral work being done by the South Florida Water Management District in addressing the region's environmental challenges. The event provided attendees with a deeper understanding of the innovative solutions being implemented to restore ecosystems, manage water resources, and protect South Florida's unique environment.



FWEA SOUTH FLORIDA CHAPTER

PREVIOUS EVENTS

September 2024

YP AND NETWORKING EVENT

On September 16, 2024, the South Chapter coordinated a Young Professionals and Networking Event at Top Golf in Doral, FL. This event successfully sold out a week prior to it happening, and even with rain and Miami traffic on our side we still filled the space up. Members from across our organization including university students showed up and we graciously extended our party to accommodate the additional interest. We're happy to note this event has potential for growing in the new year, given the level of engagement we received. The South Florida Chapter is looking forward to bringing the community together again to continue to promote networking opportunities among young professionals, where everyone can kick up their feet and have a good time over some games, food, and drinks. We appreciate all of those who showed up and we welcome you to join us again in a near future. Stay tuned for more fun filled events like this one!



January 2025

SUPPORTS FUTURE ENGINEERS AT TERRA ENVIRONMENTAL RESEARCH INSTITUTE

FWEA recently demonstrated its commitment to fostering STEM education by supporting the Engineering Club at TERRA Environmental Research Institute with an in-kind donation. This collaboration arose from a heartfelt request by Mr. Escobedo, an Engineering and Robotics teacher at TERRA, who sought support for his dedicated students working on innovative engineering projects. In his email, Mr. Escobedo described the incredible hands-on learning experiences offered through the TERRA Engineering Club. With 120 members, students participate in a wide range of projects, including modeling water towers, competing in the Wind Wall competition at Florida International University (FIU), developing autonomous vehicles, and exploring architectural design. These projects provide students with invaluable opportunities to apply classroom knowledge in real-world scenarios while igniting a passion for engineering and technology. To further enhance their capabilities, the club needed an all-in-one computer to complete their wind tunnel project, a critical tool for data collection and improving project efficiency. Recognizing the significance of this request, FWEA was delighted to contribute to the club's efforts by donating the necessary equipment. The impact of this donation is profound. With the new resources, TERRA's students can refine their projects, collect more accurate data, and gain a deeper understanding of engineering concepts. This support not only helps advance their current projects but also inspires the next generation of problem-solvers and innovators. Mr. Escobedo and the students expressed their gratitude for FWEA's generosity, noting how this support will help them achieve their educational and project goals. The donation exemplifies FWEA's dedication to empowering young minds, building stronger communities, and nurturing the future leaders of the engineering and water industries.

FWEA is proud to be part of such an impactful initiative and looks forward to seeing the remarkable achievements of TERRA Environmental Research Institute's Engineering Club in the future. Together, we can continue to inspire and support the engineers of tomorrow.



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PREVIOUS EVENTS

December 2024

JOINT MIAMI ENGINEERING HOLIDAY SOCIAL

The Miami engineering community recently gathered for the 2024 Joint Miami Engineering Holiday Social, hosted at the stunning rooftop of the Doral Cultural Arts Center. This collaborative event was organized in collaboration with the **Florida Engineering Society (FES)**, **ASCE Miami-Dade**, the **Cuban American Association of Civil Engineers (CAACE)**, and the **American Water Works Association (AWWA)**. Attendees from various engineering disciplines came together for an evening filled with networking, camaraderie, and a shared mission to give back to the community. So great to see the engineering community celebrate another successful year. A key highlight of the evening was the toy drive in support of the U.S. Marine Corps Reserve's Toys for Tots program. Guests generously donated unwrapped toys, which will be distributed to children in need across Miami. The event emphasized the spirit of giving, ensuring a brighter holiday season for many families. With great conversations, purposeful donations, and a sense of togetherness, the evening was a resounding success, showcasing the engineering community's commitment to both professional excellence and meaningful community impact.



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FWEA SOUTH FLORIDA CHAPTER

PREVIOUS EVENTS

August 2024

REFLECTIONS ON WEFTEC 2024: A CELEBRATION OF WATER, LEADERSHIP, AND COMMUNITY

Melody Gonzalez (BV) and Lilian Marrero, PE (Gannett Fleming)

A Celebration of People, Purpose, and Passion

Attending the Water Environment Federation's Technical Exhibition and Conference (WEFTEC) 2024 held this past October in New Orleans, Louisiana, was more than just a professional event—it was a true celebration of the people, purpose and passion dedicated to shaping the future of water. From the moment we arrived in New Orleans, the energy was palpable. The conversations, the insights, and the connections all served as a powerful reminder why WEFTEC remains the premier event in our industry, bringing together thought leaders, innovators, and water professionals from across the globe.

Exploring Innovations at WEFTEC

With 1,000 exhibitors showcasing their latest innovations, technologies, and solutions in water quality management, WEFTEC's exhibit hall offered an unparalleled hands-on experience. It was an incredible opportunity to engage with supplier teams, explore cutting-edge technologies, and discuss solutions to some of the most pressing challenges in the water sector.

Empowering the Next Generation of Water Leaders

A core component of WEFTEC is its Water Leadership Institute (WLI), which plays a pivotal role in developing emerging leaders in the water sector. This intensive program is designed to educate, train, and provide opportunities for leaders to make a lasting impact. WLI participants undergo management training, leadership development, and work on real-world challenges within the water and wastewater sectors.

The culmination of the program is graduation at WEFTEC, where participants leave equipped with the skills and connections to drive change within their organizations and communities. This year's WLI cohort left New Orleans not only with invaluable leadership capabilities but also with strong, lasting relationships that will support their growth and contributions to the water sector.

Commitment to Community and Social Sustainability

At the heart of WEFTEC is its commitment to social sustainability. In 2024, WEF expanded its efforts to foster community engagement while delivering environmental, social, and economic benefits. One of the most rewarding moments was participating in the WEFTEC Community Service Project, which offered the opportunity to give back to the local New Orleans community. Working alongside fellow water professionals, we took part in a project that highlighted the real-world impact of our work. In addition to the Community Service Project and Water Palooza, conference participants assembled laundry kits for the Ronald McDonald House and STEM kits for Community Works of Louisiana. These efforts resulted in the donation of 2,000 STEM kits and 3,000 laundry kits, demonstrating WEF's commitment to community well-being and education.

While it's easy to focus on the technical and regulatory challenges we face, initiatives like these reconnect us to our core mission: improving lives through better water infrastructure and environmental stewardship. They help us reconnect with the heart of our work, demonstrating the tangible benefits that stem from our collective efforts.

Music, Advocacy, and the Jamming4Water Experience

Another unforgettable moment was serving as an EMC for Jamming4Water, where the power of music and advocacy merged seamlessly. Seeing industry professionals come together in such a unique setting reinforced the camaraderie that makes the water sector so unique. This event, like many others during the week, emphasized the importance of fostering relationships and collaboration beyond the technical side of our work. It's the connections and shared passion for making a difference that truly elevate WEFTEC and the water community as a whole.



FWEA SOUTH FLORIDA CHAPTER

PREVIOUS EVENTS

Continued from previous page.

Inspired to Make an Impact

WEFTEC is about more than technical sessions and exhibits—it's about the people. Reconnecting with the Diversity Equity and Inclusion (DEI) Committee; including Howard Carter, the upcoming President, and Steve Hamai, the new DEI Director., fellow Water Leadership Institute (WLI) alumni, and so many colleagues across the industry. Their insights on the future of the organization and the role of DEI in shaping the water sector were both inspiring and timely. Every conversation reinforced the collective passion and expertise driving innovation in water.

As we reflect on this year's conference, we are filled with gratitude for the experiences, the connections, and the renewed motivation to continue making a positive impact on the water industry. WEFTEC 2024 has left us inspired and energized to keep pushing forward in our work and in our commitment to the communities we serve.



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FWEA SOUTH FLORIDA CHAPTER

PREVIOUS EVENTS

January 2025

SOUTH CHAPTER HOLDS A SOLD-OUT TECHNICAL SEMINAR ON PFAS SOLUTIONS

Ignacio Lizama, PE (Kimley Horn), Juan Aceituno, PE (Stantec), and Lilian Marrero, PE (Gannett Fleming)

The South Chapter kicked off 2025 with a resounding success, hosting a sold-out technical seminar on January 29th, 2025. The event, “PFAS in Water and Wastewater: Solutions for a Healthier Tomorrow”, drew 120 attendees for a full day of in-depth technical presentations. A total of twelve technical presentations were delivered featuring insights from industry peers in the public, academic, and private sectors.

The seminar was organized into four blocks of presentations with networking breaks, lunch and a social hour providing additional opportunities for attendees to connect and exchange ideas. The seminar covered PFAS regulations for water and wastewater, including developing a strategic implementation roadmap, and a comprehensive 5-year program to achieve compliance. The discussion also presented approaches from other states including North Carolina, Pennsylvania, and Colorado, as well as initiatives from local utilities like Deerfield Beach and Miami Dade Water and Sewer Department. Presentations highlighted different treatment technologies such as Ion Exchange Resins, Granular Activated Carbon and Reverse Osmosis. Additionally, a nationwide cost survey was reviewed, covering PFAS treatment, project delivery and key lessons learned during construction.

The South Chapter was honored to have among the presenters the president-elect of the AWWA Brent Tippey. Attendees had the opportunity to interact with the presenting experts through interactive Q&A sessions.



Morning Session Speakers with the South Florida Chapter's Board

Opening and closing remarks were given by the South Florida Chapter Chair Abnery Picon; who highlighted the Chapter's commitment to supporting local education and nurturing the next generation of engineering professionals via its donation to a STEM Program at a local high school. The chapter donated a computer, to the Engineering and Robotics Club of the TERRA Environmental Research Institute. We are proud to do our part in supporting and nurturing the next generation of water industry professionals.

An event survey was distributed; great feedback from the speakers and attendees was received, praising the seminar content and organization.

A heartfelt thank you to the event sponsors whose generous support made this seminar possible. Their continued commitment to the Chapter's effort is truly appreciated.

The Chapter Leadership worked months ahead of the event with weekly meetings, abstract review, venue selection, and speaker coordination. The timely coordination of the event allowed us to obtain the approval of 6 PDHs credits to the attendees.

FWEA SOUTH FLORIDA CHAPTER

PREVIOUS EVENTS

Continued from previous page.

Thank you to all the attendees, speakers and volunteers (Dhruv Anand, Genesis Gilles, Jose Abinazar, and Sandra Pedre) for their participation and support of our South Florida WEA Chapter. Special thanks to Chapter Chair Abnery Picon for her exceptional leadership in keeping the team on track and ensuring a seamless event.

Your presence and engagement were instrumental in making this event a success. Stay tuned for more events to come in 2025, and we look forward to your continued involvement.



Conference Room during the morning session.



Afternoon Session Speakers with the South Florida Chapter's Board.

February 2025 LEADERSHIP DEVELOPMENT WORKSHOP

The Florida Water Environment Association (FWEA) held its 2025 Leadership Development Workshop in Daytona Beach, FL, on February 2nd and 3rd. This year's workshop was organized and led by incoming President-Elect Joan Fernandez, PE, PMP. The Leadership Development Workshop covered a variety of valuable topics, including a current financial summary, business planning, and strategies to enhance sponsorships while building an effective brand for FWEA.

The South Florida Chapter was well represented by Abnery Picon (Chair) and Juan F. Aceituno (Treasurer), who had the opportunity to network and build strong relationships while learning alongside leaders from the nine FWEA Chapters across Florida, including FWEA's Executive Committee. As part of giving back to local communities, Abnery and Juan participated in a team-building activity where 21 children's bikes were built for donation to various organizations in Florida.



In this photo Yanni Polematidis (FWEA Director at Large), Jissell Muir (FWEA S&YP Chair), Juan Aceituno (South Florida Chapter Treasurer), Joan Fernandez (FWEA President-Elect), and Abnery Picon (South Florida Chapter Chair)

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FWEA SOUTH FLORIDA CHAPTER

FUTURE EVENTS

SOUTH FLORIDA CHAPTER



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CHAPTER

MEMBERS APPRECIATION AND NETWORKING EVENT

Join us to celebrate the end of the fiscal year and to welcome the chapter's steering committee for the next fiscal year.



THURSDAY APRIL 17, 2025



6:00 PM – 8:00 PM



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Registration will close on April 16, 2025, or once the event capacity is reached.



ANNUAL CHAPTER SPONSORSHIP OPPORTUNITIES

Annual Chapter sponsorship opportunities are available.
Please contact

Juan F. Aceituno
juan.aceituno@stantec.com
786-620-6844



HOW TO BECOME A FWEA MEMBER?

PRIVATE EMPLOYEES (WEF and FWEA Membership)

- 1) Visit link: <https://www.wef.org/membership--community/membership-center/membership/>
- 2) Create an account
- 3) Choose a membership category
 - a) Professional Membership
 - b) Student Membership
 - c) Young Professional Membership (<35 years old)
 - d) Academic Membership
 - e) Executive Membership
 - f) Professional Operator Membership
- 4) As an "Additional Item" select the Florida Water Environment Association (FWEA) from the Member Association Lists.
- 5) Complete payment

SCAN ME



GOVERNMENT EMPLOYEES (FWEA Membership Only)

- 1) Visit link: <https://mms.fwea.org/members/newmem/registration.php?orgcode=FWEA&>
- 2) Fill form
- 3) Complete payment

SCAN ME



FWEA Chapter will be assigned based on the address used in your registration. If you use an address from Miami-Dade and Monroe Counties you will be assigned to the South Florida Chapter. For questions regarding the FWEA Membership, please contact Jaime Abreu abreuja@bv.com.

FWEA SOUTH FLORIDA CHAPTER

CURRENT MEMBERS

Dhruv Anand	Francisco Delgado	Margie Izquierdo	Andrew Pacifico
Andrea Abastida	Steven Eagle	Alexandra Kelly	Kristopher Perez
Jose Abinazar	Bill Eleazer	Martin Leiter	Abnery Ivette Picon
Juan Aceituno	Robert Fergen	Jennifer Leone	Alberto Pisani
Jorge Acevedo	James Flaherty	Aubrey Litzinger	Melissa Pomales
Matthew Allen	Oscar Galindo	Ignacio Lizama	Leo Pou
Efrain Armijos	Christina Garcia-Alario	Catalina Lopez-Velandia	Nicole Romanach
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Anna Bernardo-Bricker	Yurfa Glenney	Lilian Marrero	Jacob Ryan
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Updated as of March 21, 2025



FWEA SOUTH FLORIDA CHAPTER

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