

# CLARIFIER

A P U B L I C A T I O N O F G U L F C O A S T A U T H O R I T Y

FALL 2021

-STRATEGY-

**GCA Sets Course for Future**

**Levine to Retire After 40 Years**

**Sandhu to Become Technical Director**



**GCA Joins New Research Initiative**

**Friendswood Inks New GCA Agreement**

**Legislature Updates Financing Authority**

## CHAIRMAN'S LETTER

Frederick Douglass once noted that, "If there is no struggle, there is no progress." Despite the challenges of COVID, Winter Storm Uri and Hurricane Nicholas, the past year at Gulf Coast Authority has been incredibly productive.

We are putting our finishing touches on a strategic plan that builds on our solid legacy to take us into a future of new growth and opportunity while remaining true to our mission. Thanks to Rita Standridge for leading this effort on behalf of the Board and to the GCA staff for their hard work – they really demonstrated strategic vision and a commitment to GCA. Kudos, too, to Liz Fazio Hale for directing this effort with insight and enthusiasm.

My charge to everyone was to stretch ourselves in terms of vision: First asking what we want to achieve and then establishing a framework that will help us get there. Working together, the Board and staff have delivered just that. While the detailed implementation plan will be worked early next year, we are already seeing the parameters we've established helping guide our current efforts.

I am also deeply appreciative of the leadership of State Senator Larry Taylor and Representative Dennis Paul in skillfully shepherding through legislation that modernizes our financing authority. This new capacity will allow us to support projects critical to Texas' future and our mission of protecting the environment while also supporting economic growth. People tend focus on the front end – ensuring sufficient water for communities, agriculture, and industry – but do not realize those volumes will need added wastewater treatment capacity on the back end. GCA intends to be a leader in helping meet that critical need as well as in supporting new innovations in wastewater and water treatment.

My deepest admiration and appreciation to our team. Their commitment to serving our customers and communities through difficult times while looking ahead to build an even brighter future is truly inspirational.



**Franklin D.R. Jones, Jr.**



## CEO'S LETTER

### Passion. Purpose. Progress.

This inspirational motto perfectly describes my first year at Gulf Coast Authority as the General Manager/CEO. It has been a constructive first year, and in spite of the many obstacles we have faced, the GCA team remained united in accomplishing our mission to protect the waters of Texas.

I am incredibly humbled by our employees' commitment to GCA and to each other. That commitment has ensured our ability to maintain safe and compliant operations through extreme weather challenges. And despite an ongoing pandemic for more than a year now, our people are still showing up to provide critical support services. Their dedication is further validated by our facilities' stellar track record as GCA continues to receive annual recognition for exceptional compliance at the national and state levels. That commitment takes more than courage, it takes **passion**.

As we wrap-up our first written strategic plan at GCA, we are revitalized by a mission that was created more than 50 years ago. The strategic visioning that our Board has provided meets perfectly with the hard work and ethical behavior exhibited by our employees. We are guided by our principles and **purpose** to continue doing better. In lockstep, we will follow the strategic planning initiatives with implementation and metrics for providing cost-effective services to our customers while maintaining the highest standards of protection for the environment.

This past year has seen significant **progress**. In addition to our strategic planning efforts, the Texas Legislature recently passed a bill modernizing our capabilities to provide financial services nationwide in an increasingly global market and to provide additional financial services to property assessed clean energy (PACE) projects, also nationwide. Together, these initiatives provide a solid foundation for GCA to continue building upon as we look into the future and plan for our success.

With such an amazing team, we are looking ahead to an even more impactful 2022. **Passion. Purpose. Progress.** Together!



Elizabeth Fazio Hale







# STRATEGIC PLANNING

Early in 2021, under the leadership of Gulf Coast Authority's new General Manager/CEO Liz Fazio Hale and the GCA Board of Directors, GCA began a strategic planning process. Building on its storied 50-year legacy, the goal was to look ahead and create a five-year roadmap to launch GCA's next half century of protecting the state's waters while supporting economic growth.



Through a series of facilitated sessions over three months, 14 GCA team members, including senior leadership, facility management, and economic development teams, met to create the GCA Strategic Plan for 2022-2026. These members served as ambassadors representing all GCA employees, seeking and sharing their input into the planning process. Employee surveys solicited additional input once the draft plan was completed.

“The staff really stepped up to the plate and provided an excellent blueprint,” said Board Chair Frank D.R. Jones, Jr. “They provided solid foundational elements that, combined with the Board’s vision, should help us fulfill our mission to the greatest extent possible under state law.”

The Board reviewed and provided comments on the first draft plan in late May. The Authority then sought input from external stakeholders: customers, participants, and environmental and economic partners, among others. The Board met again in August and in October to consider additional visioning for the plan and the Authority. It is anticipated that the plan will be finalized by the end of the year.

“The old saying, ‘If you don’t know where you are going, all roads will lead you there,’ encapsulates my feelings toward strategic planning. We need to make sure we are on the ‘right’ road. My perspective is that the entire team is involved in forming the strategic plan, which is essential,” said Chris Peden, Board Secretary. “A team that is bought-in and has a clear vision will always accomplish more,” he opined.

As it stands, the plan lays out milestones and target goals for a five-year period from 2022-2026, focusing on five key initiatives:

1. Maintain and Better the People and Business Practices of GCA;
2. Manage and Develop GCA Facilities Across the State to Address Sustainability in Wastewater Needs and Water Management Practices;
3. Strengthen Relationships/Partnerships to Maintain and Facilitate Economic Success;
4. Become a National Leader and Trusted Resource in Providing Governmental Financial Services; and
5. Educate and Engage Stakeholders on the Role and Purpose of GCA.

“Much of what is in the plan are things we already do,” said Mark Schultz, speaking from his 41-year history on the GCA Board, “but it is great to get them documented. We have a symbiotic relationship with the industries and communities we serve, and the plan will help us stay true to our mission while looking ahead to anticipate what the future may hold. Our outstanding staff will be on the front lines, helping GCA deliver day by day within this strategic context and adapting as regulations and technologies evolve.”

## Creating the framework

“We want to create the ‘what’ and the ‘why’ for GCA’s future,” Fazio Hale said. “The goal is to ensure we have the appropriate support in place for GCA people and processes, infrastructure, partnerships, services, and stewardship.”

Economic Development Committee Chair, Rita Standridge spearheaded the Board’s contributions. “This is a key planning process in which the Board of Directors refreshed our vision for GCA as we continue our mission to protect the waters of Texas. It provides a ‘high-level guide’ or a ‘long-term radar’ for GCA as we serve our business customers and communities.

“Our professional staff are the backbone in creating and implementing this tool,” Standridge added. “While the Board oversees this work at a high level, the groundwork is rooted in our employees’ passion to achieve our mission.”

Board Member Kevin Scott agreed: “Mrs. Fazio Hale and the strategic planning team have done an outstanding job in putting together a thorough document that provides GCA with a clear five-year plan moving forward. This plan allows us to stay focused on the present as well as challenge ourselves as we continue to grow and refine our practices. I am very excited about Initiative #1. It is a commitment to hiring quality people, allowing them to develop and grow as well.”

Phyllis Frank, Chief Administrative and Strategic Projects Officer, echoed Scott’s focus on people from a senior leadership perspective. “The process for creating the plan has been very collaborative including employees, our Board, and representatives of our external partners. Incorporating these various perspectives makes the plan relevant to what we should be doing and where we should be focusing for the future. As an organization, we are transitioning to a less-tenured team and focusing on our people is an important element of the plan.”

“It is great to have a vision of where we want to go as a company and a clear path to follow to get there,” agreed Doris Haydon, Central Lab Manager.

“The strategic planning process was an opportunity for GCA to reflect on our mission and vision going into the next chapter of the Authority,” echoed Blackhawk Facility Manager Shannon Mitfari. “This was truly a team effort soliciting input from all levels and backgrounds to better understand our goals and targets for the future. It is a great first step in moving us forward with improvements and keeping us accountable.”

## Looking to the future

GCA’s Strategic Plan is based on a five-year planning cycle toward a 50-year vision. This complements the state’s water planning process and provides a framework to align wastewater treatment capacity to support the growing need for water resources across Texas.

“This strategic plan demonstrates real leadership,” said Lamont E. Meaux, a Board Member representing Chambers County. “The staff’s thoughtful input created a blueprint for GCA’s next 50 years that is ambitious but doable. It expands our horizons while staying true to our mission.”

“I think strategic planning is an important exercise for an organization, enabling it to take the next step toward achieving its goals,” noted Chief Operating Office Scott Harris. “This planning process forced us to evaluate what is important to the employees of

the Authority and plan for the best ways to advance the vision. As a roadmap, I think it will be important for us to consider it a living document, taking the lessons we learn through its implementation – updating, adapting, and changing the plan as we strive for success.

“GCA continues to evolve, and this was the logical next step to continue maturing as an organization,” Harris added. “I am appreciative of the inclusiveness of the process that allowed employees of all tenures to participate. We all have different backgrounds that allow us to contribute different ideas, making for a better plan. I think with the employees’ participation we are better aligned with direction toward achieving the goals.”

“Having input from all parts of the Authority (our facilities, engineering staff, finance, and HR) is invaluable and is truly what sets us up for success,” agreed Jonathan Sandhu, Assistant Director-Technical Services. “Among all our differing viewpoints, we were able to determine where we want to go and how to get there. The sky is the limit, but we need to work as a team and make sure we’re all growing together.

“Our strategic plan truly serves as a guiding star moving forward,” Sandhu added. “Every day we have opportunities/ventures/ideas come up that we can explore. Rather than needing representatives from every group to review each opportunity, we can now ask ourselves the very simple question: ‘Does this align with our strategic plan?’”

“Having celebrated our first 50 years, the timing of this makes sense as we are now looking to the future, and I salute Liz’s leadership in driving the process,” said Billy Enochs, Board Member representing Galveston County. “The staff was amazing; their draft plan was so well done, showing how much time and thought was invested. It’s ambitious, but not overwhelming, and answers (Board President) Frank’s challenge to stretch ourselves in this amazing mission we pursue for the state. It brings real value in aligning employees and the board around a vision of where we are going.”

“GCA’s mission defines why we exist, and our values and strategies define how to get there,” said Keith Hardcastle, Human Resources Director/Public Information Officer. “We then look to prove it every day with a strategic plan that has 100 percent ownership and accountability.”

## Implementing the plan

The next step in the process, in early 2022, will focus on developing a detailed implementation plan – the “how” and “when,” including metrics to measure progress toward the plan’s goals.

“The staff are already excited about the next step – this will be where the rubber meets the road as we work together to build on the strategic plan to create actionable steps to move us forward,” said Fazio Hale. “We will look at each initiative and ask ‘How do we want to implement this and what is our priority?’”



“GCA’s Strategic Planning process has involved evaluating our current state and making plans for the future,” said Kim Ontiveros, Bayport Facility Manager. “I look forward to seeing how the process progresses through implementation and the impact that it has on GCA’s long-term goals.”

“Any time leadership continues to strengthen the beliefs of an organization by engaging the team in formulizing those strategies, it will invigorate and motivate the team to create, adapt, and adopt,” said Diane Maloy, 40-Acre and Campbell Bayou Facility Manager. “The process allows the team to remain cognizant of our purpose and therefore continue to be open to new goals to strengthen that purpose. It will also allow the team to become better cheerleaders for the organization, which automatically strengthens loyalty. The most important goal now is to strengthen the team by ensuring they understand our purpose and believe in that purpose because when one believes in something, pursuing goals to sustain that belief is motivational.”

“The strategic plan gives us a written plan for operations and development for the next five years,” said Chief Technical Officer Gordon Pederson. “These are things that we have always talked about, but we had never put them on paper. This gives us a framework for planning short-term and helps develop goals.”

Financial Director Carrie Latimer also was part of the planning committee. “The strategic planning

process was a successful, collaborative effort that provided an open, safe environment in which to discuss the possibilities of GCA’s future. I feel it will bring cohesiveness to our organization and allow us to walk forward together while further defining GCA’s purpose as we move into the future and continue protecting the waters of Texas.”

“I think this is a fascinating new initiative and look forward to its implementation,” agreed Technical Director Leonard Levine.

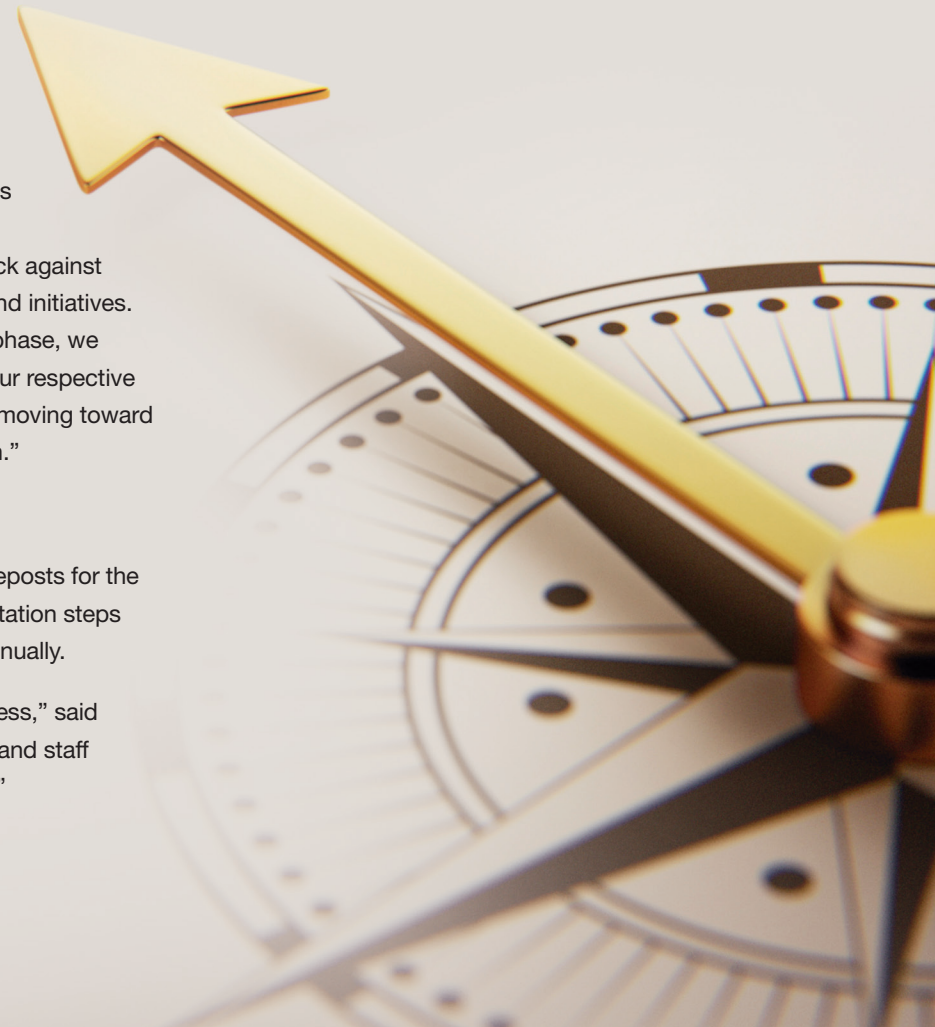
“It was very wise to set out objectives for our long-term growth,” said Charles “Choc” Harris, Odessa South Facility Manager. “The plan gives us a yardstick against which to measure potential projects and initiatives. As we move into the implementation phase, we can tailor our tactics to the needs of our respective customers and communities while all moving toward the common goals outlined in the plan.”

### **Achieving the vision**

GCA’s Strategic Plan will provide guideposts for the next five years, with tactical implementation steps evaluated and refreshed as needed annually.

“This has been such a rewarding process,” said Fazio Hale. “I cannot thank the Board and staff enough for their vision and hard work.”

“We have a tremendous legacy, but now we are stepping it up to the next level,” said Jones. “This plan will help us stretch our reach across the state as we advance our mission. The Authority holds a special charge from the state that is vital for the health of the environment and the economy. This plan will help ensure we continue to meet and exceed those expectations.”





# LEVINE TO RETIRE AFTER 40 YEARS

“Engineering is really cool,” said Leonard Levine. “You get to be creative. You take a problem and turn it around until you find a way to do it, sometimes conventionally, sometimes not. It’s always fun.”

This approach sums up the Technical Director’s 41-year career at Gulf Coast Authority as he looks forward to retirement and handing over the reins to Assistant Director Jonathan Sandhu next February.

Since joining GCA in 1980 as a project engineer, Levine has had many opportunities to put his engineering skills and out-of-the-box thinking to use. He has been involved in projects, great and small, to commission new facilities and services, adapt to new regulations and customer needs, and revamp or upgrade existing plants.

Levine credits GCA with giving him the room to grow and learn new things, often as the industry evolved. His experience with the many aspects of environmental control has allowed him to view problems in a holistic manner – an opportunity not always available in today’s world with its focus on specialization.

While attending college at Rensselaer Polytechnic Institute, he chose environmental engineering as his major, believing it was the most diverse option. Graduating in 1972 just before passage of the Clean Water Act, his first job was with a small engineering firm developing some of the early EPA effluent guideline manuals. In 1974, he went to work for AWARE, a Nashville-based engineering firm, to help develop process configurations for various industries

to meet the new regulatory requirements. While there he had the opportunity to work on projects across the U.S. and, in a few cases, internationally. He credits the guidance of Wesley Eckenfelder, who is generally regarded as the founder of modern industrial wastewater treatment technology.

“I got involved with groundbreaking process work, learning from a man with an amazing amount of insight into the field,” he remembered. “I was helping develop treatment technology for sources – great experience and great fun doing conceptual design on the most challenging waste streams.”

After earning a master’s degree at the University of Florida, Levine returned to AWARE. The new generation of industrial treatment systems were now operating and needed help training the people hired to run them. He found that he enjoyed teaching – a passion he still pursues.

When AWARE opened a design office in Houston, Levine took the job of liaison to bridge the gap between conceptual and detailed design, learning instrumentation and control systems. The job involved a lot of travel, so as his family grew, he began looking for something that would keep him closer to home.

Levine joined GCA in 1980 just as the Bayport expansion and the Campbell Bayou facility were

nearing completion and Blackhawk was continuing construction. He worked in the Technical Services department providing support for the industrial facilities and later was assigned directly to Industrial Operation while staying engaged in some project work. The position required him to get familiar with the regulatory and permitting aspects of the operations and provided him an opportunity to help train the GCA operators on the principles of wastewater processes. To this day, the operators he trained comment on the analogies he used in the training program.

“We’d cover topics like the difference between pounds of loading vs. concentrations,” he said. “My philosophy is that understanding how a process works allows operators to make better decisions than purely written instruction.”

He points with pride to a Lotus spreadsheet report he developed for operators to track what’s happening at a plant in the days before a central computer system. Its format is still used today although now via a modern computer program.

In 1983, he was appointed the lead person for developing the EPA-required GCA Pretreatment Program. He had only 30 days to submit a response to EPA comments.





*Leonard Levine (left) and Jonathan Sandhu confer over planned facility upgrades.*



## **WATER ENVIRONMENT FEDERATION HONORS LEVINE**

### **W. Wesley Eckenfelder Industrial Water Quality Lifetime Achievement Award**

The W. Wesley Eckenfelder Industrial Water Quality Lifetime Achievement Award recognizes and honors an individual who has made substantial and measurable engineering, scientific, and/or operations contributions to the management or treatment of industrial wastes related to the improvement of water quality.

Leonard Levine is the 2021 receipt of this prestigious award. He has been an active member on WEF's Industrial Wastewater Committee for many years, published several technical papers, and delivered many presentations on the topic. His achievements in the field and at WEFTEC (the annual conference) over the years are very impressive and he is very deserving of the Wes Eckenfelder Lifetime Achievement Award.

"Those were exciting times," Levine recalled. "My boss handed me EPA documents on development of a pretreatment program for municipalities with the direction to develop a program that fit regional industrial treatment systems within these guidelines. With a huge amount of support from the facilities, we were able to meet the deadline with a package our attorney could sign off on."

Given GCA's unique status in the U.S., the approval process took a lot of work and extensive discussions with the EPA on how GCA differed from municipal systems in its equipment and operations. Eventually, EPA staff approved the program.

Over the years, Levine remained involved in providing technical support for evaluating impacts of new regulations on GCA operations and developing comments supporting GCA's position. As federal regulations developed post-creation of GCA's statutory authority, GCA maintained that requiring its customers to treat certain waste prior to direct discharge to GCA would be duplicative and unnecessary since GCA's facilities were specifically designed to treat those same waste streams. After years of discussion with the EPA, GCA successfully received Congressional relief for the redundant treatment requirements.

Levine also has stayed engaged with other environmental and industry groups on behalf of GCA, tackling new regulatory requirements and technical innovations over the years, not only in the waste area but also in solid wastes and control of air emissions from treatment facilities.

"I've written many papers, participated in many working groups, and given lots of presentations," Levine said. "It is my and GCA's way of giving back and helping fulfill our mission of protecting water quality and growing the economy."

Levine also enjoys working with young engineers. "I tell them to focus on making it work, don't just run the numbers. Look at the system as a whole, including equipment and controls, and how it will run.

"One thing I've learned over my career is that simple is better," he said. "Sometimes the biggest challenge is tackling a complex problem and stripping it down to the essentials. The less complicated the system, the less to go wrong and the easier to operate and maintain."

Looking back, Levine noted, "GCA's concept of regional treatment of waste to protect the waters of Texas has really proven itself over the decades. We've done what our statute set us up to do: clean-up Galveston Bay and promote regional treatment. Regulators generally accept us as the good guy, or at least someone worth listening to. Economic development groups appreciate our work as does the environmental community," he added. "And I'd like to think that the innovative projects we've done have advanced the industry."





“Much of what we have accomplished at GCA could not have been done without Leonard’s creative approach,” said Gordon Pederson, Chief Technical Officer. “Leonard has never been deterred by difficult or new technical challenges; instead he focused on how he could make it happen.”

What does Levine believe is his greatest contribution? Levine says he’s proudest of two things.

“New innovations, for sure,” he said, “particularly the innovative processes GCA put in place in physical structures. Coming into this new field as a young engineer, we were inventing technology as we went.”

Second, he said, is “the caliber of the engineering group I am leaving behind as the last of the ‘old guard’ retire. We’ve got great facilities, solid operations, and good maintenance programs, as well as a GCA team that has the technical know-how and creativity to address new issues and challenges as they arise.”

At home, Leonard and his wife Andrea have three children and four grandkids. He’s looking forward to traveling more and perhaps taking up golf and photography again. He also predicts he will continue consulting part-time as issues around treatment and reuse continue to evolve.

“Legends like Leonard really do not ride off into the sunset,” said Liz Fazio Hale, General Manager/CEO. “I expect that he will continue to be a great support to GCA and the communities that we serve. There is still a lot that to be done and Leonard will continue to be a part of the solution.”

Levine ended with: “Plus, I really enjoy engineering and I’d like to keep my hand in its evolution.”

## 40-PLUS YEARS OF SERVICE

During Levine’s tenure, he has played a key role in many major updates and expansions of GCA facilities, as well as being involved in industry initiatives over the decades.

### GCA MAJOR PROJECTS

#### Bayport

- Development of two-step activated sludge process now in use
- Advancement of control system upgrades for centralized instrument monitoring
- Consolidation of customer sampling points
- Conversion of the open channel collection system to an enclosed pipeline
- Development of a novel temperature control system for the activated sludge system
- Upgrade of the facility to meet air regulations, including obtaining approval of a first-of-a-kind control system in Texas for lift station emission controls

#### 40-Acre

- Expansion to handle new waste loading
- Modifications to meet new solid waste regulations
- Modifications to meet air emission standards

#### Odessa

- Redesign of an existing facility to meet GCA needs
- Upgrades to provide reuse water for oil field operations, including advanced treatment to improve usability

#### Washburn Tunnel

- Development of no-operating-cost disinfection system for incoming municipal wastewater
- Installation of a belt press sludge dewatering system capable of handling one truckload per hour
- Upgrades to meet air emission standards
- Installation of a new peracetic acid disinfection system (nation’s largest at the time)

#### Vince Bayou

- Development of the original system and operation structure

### GCA OUTREACH EFFORTS

- Served on the Galveston Estuary Program Water Quality and Sediment Subcommittee for 15 years, including five as the vice chairman
- Served on an ad hoc work group to develop and get approval of a new waste load allocation computer program for the Houston Ship Channel
- Served on the industry technical support committee for the development of best available control technology (BACT) regulations for industrial wastewater and provided key support for application to activated sludge processes
- Worked with various industry groups and EPA to draw attention to the potential value of properly treated produced water from oil field operations
- Served by invitation on the water sector work group to develop input into the EPA Water Reuse Action Plan
- Served as the first exhibit chairman for the TWPCA (now WEAT) Annual Conference, leading to the acceptance of exhibits at its annual conferences

# SANDHU TO HEAD TECHNICAL SERVICES

*Jonathan Sandhu joined GCA in May 2020 as an Assistant Director-Technical Services. Previously he was a consulting engineer, providing water/wastewater treatment services to municipalities, refineries, chemical, and petrochemical facilities. His experience includes treatment systems up to 770 million gallons per day and difficult treatment challenges, such as dioxins and furans.*

*Sandhu is a member of the American Water Works Association, WaterReuse Association, Water Environment Federation, and an active member of Big Brothers, Big Sisters Houston. He currently serves on the Executive Board for the Water Environment Association of Texas. He received both his bachelor's and his master's degrees in civil/environmental engineering from the University of Missouri.*

## **What first got you into this field?**

I love problem solving, almost as much as I love math. Once I realized that engineering was problem solving with math, I was sold. Then I had my first class which dealt with water (fluid mechanics), and I was hooked.

Water touches every aspect of life on earth. In the water treatment world, not only are we able to make a difference, but we get to literally see the difference being made. You can go to any treatment plant and look at what is coming in, then look at what is coming out, and realize your impact.

There is also a family component for me. My grandfather started his career engineering potable water systems in northern India. My uncle followed

in his engineering footsteps, focusing on industrial wastewater. I did not know this until I told them that I was concentrating on water and, without realizing it, had taken the reins to be the next generation of Sandhu water engineers. Our holidays are now filled with pump jokes, calculus puns, and eyerolls from the rest of the family.

## **What did you find attractive about the GCA opportunity?**

I've worked at dozens of water and wastewater treatment plants across the globe. GCA is unique, not only in the type of wastewater streams we treat but also in how we are structured to tackle those challenging streams.

We also have a team that includes some of the very best industrial wastewater engineers and operators. Add it all up, and you have a great team, fun challenges, and a system well-positioned to implement solutions. Who could say no to that?

## **What are your goals for the new job?**

We are at a crucial nexus for GCA. We have been incredibly successful cleaning the waters of Southeast Texas and West Texas. We have spent the past 52 years designing robust treatment systems, and working with industries to find the most effective solutions

However, most of the individuals who have been here 40 years (or more!) and were key to getting us to where we are now, are retiring. This transition creates opportunities for our team to step-up into new roles.

In addition, Texas has some of the largest industrial complexes on the planet. For many of them, wastewater treatment is a significant challenge and can be a hindrance to their production. This, in turn, can limit economic development. Our General Manager/CEO Liz Fazio Hale has paved the way for us to expand across the state and be a resource.

It is my goal to not only bridge the gap through this generational transition but to also position us to tackle new frontiers. We are well equipped to reach out across Texas and be a wastewater treatment solution for both industries and communities.

## **What do you see as the greatest opportunities? Challenges?**

I think our greatest challenges are also our greatest opportunities. There are many environmental issues on the horizon that we will need to address. They range from new wastewater regulations, such as per- and polyfluoroalkyl substances (PFAS) and nutrient limits, to providing water in drought-stricken areas.

GCA has a longstanding history of being at the forefront of issues like this; we pre-date both the EPA and the Clean Water Act. Over the past half century, we have constantly tested different technologies and studied innovative solutions to overcome new issues as they were discovered. I believe we will soon be faced with some of our biggest environmental challenges yet. I see them as an opportunity for us to thrive.

In addition, Texas is a state with many water needs. One of the available means to address these water





needs is through water reuse. While GCA's mainstay has been treating wastewater, we have been operating a reuse program in Odessa for the past five years.

We've been working with the EPA, Texas Commission on Environmental Quality (TCEQ), and the state legislature to identify potential new sources of reuse water, namely from produced water. Beyond the regulatory hurdles, produced water can be extremely tough to treat and there are impediments with issues such as brine disposal. It is in situations like this where GCA has excelled.

There is a massive opportunity here as produced water is often found in water scarce areas. If we can treat it to the level suitable for industrial or agricultural needs, this would provide a previously untapped (and much needed) water source.

With the passage of Texas State Senator Perry's and Representative Burrows' bill to form a Texas Produced Water Consortium, we are getting one step closer to addressing the water needs of our state.

**What makes you excited to get out of bed in the morning?**

Being able to tackle new problems with a great team! Our Technical Services department is an incredibly smart group of people, and they are also an extremely fun group. Even when we're working through a tough issue, there are always jokes to be made and laughs to be had.

This camaraderie makes coming to work an absolute joy. When faced with technical issues that have no textbook solutions, we get to tackle them head-on with a sharp team who knows how to find humor in anything.







*A group representing the National Science Foundation's Nanosystems Engineering Research Center for Nanotechnology Enabled Water Treatment Systems (NEWT) visited with GCA Technical Director Leonard Levine and toured the Bayport Facility. From left: Leonard Levine; Ibrahim Abdullah, PhD, Associate Director of Wastewater Testbeds, NEWT; Naomi Fuentes, Research Assistant, Rice University; and Qilin Li, PhD, Professor, Department of Civil and Environmental Engineering, Rice.*

## GCA JOINS NEW RESEARCH INITIATIVE FOCUSED ON WATER SUPPLY, REUSE

Gulf Coast Authority recently joined the Nanosystems Engineering Research Center for Nanotechnology Enabled Water Treatment Systems (NEWT), an initiative of the National Science Foundation. The program partners with prestigious research universities, including Rice University, University of Texas at El Paso, Arizona State University, and Yale University, to foster collaboration between academia and industry with a goal of developing new technologies to meet the growing technical needs for water supply and reuse.

"One of NEWT's focuses is to develop systems to treat and reuse challenging industrial wastewaters in remote locations, such as oil and gas fields, to help energy production be more sustainable and more cost-efficient in regard to its water footprint," said Leonard Levine, GCA's Technical Director. "This aligns with GCA's technical strengths and areas of interest."

GCA's involvement stemmed from NEWT representatives contacting GCA to explore common goals. Three NEWT research team members (pictured at left) visited the GCA Bayport Facility for a tour and discussion of possible collaboration.

"We judged that NEWT membership will aid us in advancing our mission of protecting the waters of the state using advanced technology," said Gordon Pederson, GCA's Chief Technical Officer.

As an associate member, GCA is participating on NEWT's Industry/Practitioner Advisory Board, contributing its expertise, discussing challenges and approaches with other industrial members, and mentoring students doing advanced research in the water field.

"We're thrilled to be working with NEWT," said Levine. "NEWT combines cutting-edge research with industries that can implement these systems. GCA's long history of working with industries to treat complex wastewaters makes this a natural fit."

NEWT's initial goal is to develop cost-effective, mobile, modular, high-performance water treatment systems for complex waste waters. GCA staff see the development of successful technology at this scale as a stepping stone to large scale regional systems.

"GCA looks forward to assisting NEWT in meeting its goals and contributing to the future resilience of Texas water supplies," Pederson said.



# UNDERSTANDING THE FUTURE OF COST-EFFECTIVE SLUDGE DISPOSAL

Like many water resource facilities in the U.S., Gulf Coast Authority experienced a recent increase in solids disposal costs at three GCA facilities in the Houston area: the Bayport Industrial Wastewater Treatment Facility, Washburn Tunnel Industrial Wastewater Treatment Facility, and Blackhawk Regional Wastewater Treatment Facility.

To address increasing costs by proactively seeking cost-effective solutions, GCA recently worked with an engineering consultant to evaluate solids processing technologies and determine an economical, long-term strategy for each facility. The study not only considered an evaluation of cost impact but also additional risk factors, such as the risk of new technologies and emerging contaminants like per- and polyfluorinated compounds (PFAS).

The project evaluated more than 35 solids-handling technologies, organized into treatment trains by thickening, stabilization, dewatering, and post-dewatering. Fatal-flaw screening was used to eliminate individual technologies from the list based on the criteria developed, including factors such as safety, regulatory risk, capital cost, and operational complexity.

The project team completed a thorough analysis to summarize the advantages, disadvantages, and capital and operating costs for the selected alternatives. Combined with the identified risks, this allowed for a further refinement of alternatives, including the development of a desktop tool intended to improve the predictability of cost associated with maintaining current operational procedures versus developing technologically advanced solutions.

Typical solids technology evaluations assume static conditions, i.e., a capital cost of \$X and a solids disposal cost of \$Y. While this type of information is useful, GCA utilized a sensitivity analysis based on tipping fee impacts, capital cost impacts, and technology performance assumptions.

This sensitivity analysis provided GCA with an incredibly useful tool to assess the most economical current options as well as to identify when other options should be considered. For example, a thermal drying system may not be economically feasible now, but if the tipping and disposal costs exceed a certain amount shown in the sensitivity analysis, thermal drying should be considered.

This work positions GCA to evaluate the most cost-effective solution in a dynamic environment.

## COVID UPDATE: KEEPING GCA SAFE

At 20 months and counting, GCA continues to successfully navigate challenges posed by COVID-19.

“As of late October, GCA has not had an employee-to-employee transmission,” said Liz Fazio Hale, General Manager/CEO.

“After speaking with my colleagues in water/wastewater who experienced waves of employee departments contracting COVID, it made me realize what a big accomplishment this is for our team.”

While GCA has seen cases among the staff, GCA facilities have been able to maintain adequate staffing to sustain operations. Fazio Hale attributes its success to a focus on safety and a demonstrated respect by GCA employees for themselves and each other. Additionally, GCA has encouraged voluntary vaccination and voluntary reporting from very early on. Through the end of August, GCA offered paid time off to get the vaccine as well as recover from any side effects. “We were thankful to be able to provide that benefit,” Fazio Hale added. “I think it made a big difference.

“We have continued with a multi-layered approach, actively managing our pandemic planning and implementation; encouraging our employees to maintain high-standards of sanitization, socially distance in community areas, and wear masks when socially distancing is not possible; and monitoring vaccination rates,” Fazio Hale said.

With no end to the pandemic in sight, GCA is transitioning to managing operations in an environment where COVID is “endemic” or indefinite. As essential workers, 70 percent of GCA employees must perform their duties onsite.

“Generally, our people want to come to work in-person – they know what they do is important,” Fazio Hale said.

“Our focus is on providing a safe workplace for our employees and our team continues to rise to the occasion.”



# CUSTOMER CORNER:

## CITY OF FRIENDSWOOD



*Friendswood Assistant City Manager Steven Rhea (left), Director of Public Works Rene Ibarra, and Councilwoman Trish Hanks visit with GCA's Shannon Miftari, Blackhawk Facility Manager.*

Gulf Coast Authority designed and built the Blackhawk Wastewater Treatment Facility as a regional wastewater system primarily serving municipalities, bringing the project online in 1979. Its largest user is the City of Friendswood, with about 60 percent of the volume, but it also serves Harris County Municipal Utility District (MUD) 55, Baybrook Municipal Utility District 1, and extreme southern portions of the City of Houston.

The Blackhawk facility has undertaken three major projects in recent years: a new ultraviolet disinfection system in 2012; a new headworks structure in 2014 to better handle inorganic solids; and a clarifier in 2016 to handle increased flow from population growth.

***Shannon Miftari, Facility Manager for Blackhawk, recently asked Rene Ibarra, Director of Public Works for the City of Friendswood, to comment on his experience working with GCA.***

Friendswood's and GCA's contracted partnership extends back 40-plus years. I personally began my career with the city in 2006, starting in the Community Development Department within the Engineering/Projects sector. In 2014 I was transferred/promoted to Deputy Director of the Public Works Department, and in 2019 promoted to Director of Public Works. So, for the past 15-plus years, I have worked in a capacity associated with the services provided by the Blackhawk Wastewater Treatment Facility. I am grateful for the opportunities and responsibilities that Friendswood has provided me and, as importantly, I am grateful for the opportunity and responsibility of helping maintain the continued beneficial partnership with GCA.

GCA's service to the Friendswood community is more than a benefit; it is a dire and critical need. As we do not have our own wastewater treatment facility, or the current means to install such a sophisticated facility to meet the high standards of TCEQ, having GCA safely process our delivered wastewater capacity through Blackhawk is crucial on all levels: health, environmental, capital infrastructure, and efficiencies.

Our partnered entities have collaborated and worked through various challenges over the last several years. One positive memory – although the event was unfortunate for our region – was how each of our respective organizations worked through Hurricane Harvey. While a catastrophic event, it is not how the event impacted us but how our organizations dealt with it that speaks volumes. I wish to personally

thank GCA staff for their leadership roles in operating the Blackhawk Facility during and after the hurricane, allowing us to continue delivery of wastewater flow when we were able to come back online. We appreciate Shannon's (Miftari) recent promotion to Facility Manager. He is always attentive, no matter the day or time, and I/we are looking forward to infrastructure improvements at Blackhawk.

Collaboration and true meaningful joint partnership are what stand out. To share infrastructure and resources, the four entities Blackhawk serves deliver our shared capacity of wastewater flow to the facility for process treatment. With the initial 40-year contract expiring, we all worked together to update and renew this critical agreement. We took lessons from our experienced and exceptional predecessors and combined it with the knowledge and expertise of the current team to develop an updated contract. This would not have been possible without the promising and longstanding partnership among the entities and with GCA.

GCA is definitely doing an exceptional job with our current services. As we are building the infrastructure and stability for the future, I recently discussed with Shannon a study to evaluate the long-term needs of our collective residents in the next 20 to 30 years and beyond. As potable water supply becomes more strained and regional development continues, proactively preparing for critical infrastructure needs further down the road will help each of our entities. Wastewater recycling reuse, capitalizing on technological advances, assurance on land use, and continued building of staff skillset/knowledge are only a few items that will become more critical for our own children and our children's children.





# TEXAS LEGISLATURE MODERNIZES GCA FINANCING AUTHORITY NATIONWIDE

The 87th Texas Legislature (2021) recently authorized Gulf Coast Authority to provide financial services nationwide with passage of House Bill 2390, authored by Representative Dennis Paul and sponsored by Senator Larry Taylor. HB 2390 modernizes GCA's current statutory authority to provide governmental conduit bond financing services, expanding the availability of those services across the U.S. Further, HB 2390 allows GCA to provide financial services for Property Assessed Clean Energy (PACE) projects, also nationwide.

To date, GCA has provided more than \$3 billion in financial services to support industrial and clean water initiatives in Texas. GCA's new national authority will enable it to provide financial support to cross-border projects as well as projects which require "bundled" financing.

"This is a strong benefit for Texas' environmental and industrial partners," said Liz Fazio Hale, General Manager/CEO. "Being able to provide a seamless process in a global economy is key to protecting and securing future economic resources."



GCA General Manager/CEO Liz Fazio Hale and Board Chair Frank Jones at the state capitol.



Board Member Mark Schultz (left) with Senator Larry Taylor during the 2021 legislative session.

## TRASH BASH KICKS OFF 2022 PLANNING

As a part of our commitment to community engagement, the GCA team is participating in preparing for the 2022 event planned for March 26. Trash Bash® is the largest, single-day waterway cleanup in Texas. The event traditionally includes educational material about the importance of properly managing waste so that it does not enter our waterways. Although it can vary at different locations, five types of litter commonly found along the Texas coast are food wrappers and containers, fishing lines, nets and lure, plastic bags, beverage containers (including plastic bottles, aluminum cans, and glass bottles) and trash fragments. While we clean up once a year, properly disposing or recycling of waste is a year-long activity.



# SCRIPT AWARDS

SCRIPT award nominations come from peers and supervisors for team members who go above and beyond in demonstrating GCA's core values: Stewardship, Communication, Reliability, Integrity, Planning, and Teamwork.



**Carl T. Hennagir** at Bayport Facility received an award for 3rd Quarter 2020 to recognize his demonstration of GCA values into his role in the compliance department. His coworkers say he is organized, efficient, and thorough in all he does while also helping others, often going out of his way to assist. Unfailingly cheerful, upbeat, and positive, Hennagir models what it takes to be a team member contributing to the success of Team Bayport.

**Andrew Castillo** at Bayport Facility received the 1st Quarter 2021 award for his continued growth in work ethic by going above and beyond in his new position as Operator 2. He shows great pride by cleaning and organizing the lab, and ordering supplies and equipment. He received his class A wastewater license and is continuing with further training and education. His attention to detail and teamwork are appreciated by all his team members.

Bayport employees Mike Cunningham (left), John Wilkerson, Carl T. Hennigar, Andrew Castillo, and Ben Reese.





*From left: Gordon Pederson, Joanne MacDougall, and Leonard Levine.*



*From left: Gordon Pederson, Stephen McLemore, and Leonard Levine.*



*From left: Leonard Levine, Jeff Nuss, and Johnathan Sandhu.*



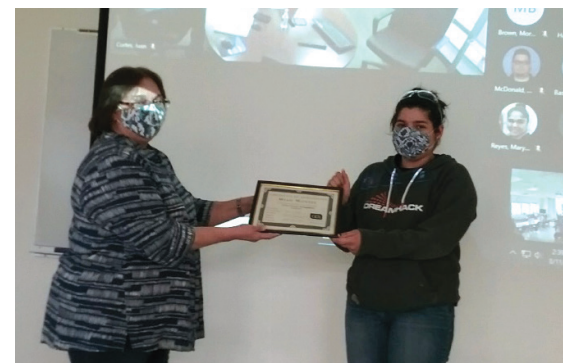
**Joanne MacDougall** and **Stephen McLemore** from Central Office and Bayport's **Jeff Nuss** received SCRIPT Awards for working as a team to address a series of challenges that occurred over an almost-two-week period in fall 2020. They successfully managed significant equipment issues while the facility was experiencing staffing scarcity from COVID protocols. The three worked many long days and nights to minimize impacts and restore full operations. Together, they and the team at Bayport delivered timely recovery while keeping people safe and the plant operating and serving customers. In particular, their efforts showcased the GCA's values of communication and teamwork.



**Dawn Ryczek** at 40-Acre Facility received an award 3rd Quarter 2020 to recognize her exhibition of SCRIPT values in her role as compliance coordinator. She manages reporting and permitting as well as assists in sample collections for both 40-Acre and Campbell Bayou facilities. She also volunteers with Trash Bash each year, organizing bus routes and food for volunteers. She is pictured with Facility Manager Diane Maloy (left) and Liz Fazio Hale.



**Ana Castilla** (right) at Central Lab received a 4th Quarter 2020 award from Doris Haydon. She demonstrated SCRIPT values by stepping up to provide staffing coverage, including the shift supervisor role, as well as by volunteering to learn new test procedures and teach them to others. Castilla completes her duties effectively and efficiently, willingly assists others, and continues to improve herself through professional training.



**Miah Montes** (right), who joined GCA in October 2020, received a SCRIPT award from Central Lab for second quarter 2021. While still new to GCA and the position, Montes has demonstrated a well-rounded display of our core values. She communicates well, has proven her reliability, ensures data integrity and accuracy, and plans and executes duties effectively. These attributes make her a great team member. Doris Hayden presented the award.



# GCA PROMOTES 3: FRANK, EHRLICH, LATIMER



**Phyllis Frank** has been promoted to Chief Administrative and Strategic Projects Officer. In this new role, she will be responsible for Finance & Accounting, IT, Purchasing & Procurement, and Safety. Previously, Frank was Facility Manager of Washburn Tunnel for six years and served as GCA compliance director. She also has been a key player on various strategic initiatives. She joined GCA from Parsons Corporation where she was a program manager.



**Denise Ehrlich** has been promoted to Facility Manager, Washburn Tunnel. Her responsibilities include employee management and oversight of operations and compliance. Ehrlich previously served as Senior Compliance Coordinator for GCA for five years after a 12-year career as an environmental investigator and technical specialist for the Texas Commission on Environmental Quality.



**Carrie Latimer** has been named Financial Director, responsible for oversight of the Finance and Accounting Department; cashflow and rate model analysis, as needed; administration of ERP implementation; and expansion of the GCA bond program. Latimer joined GCA three years ago from the city of Galveston and had been promoted to Financial Analyst in January 2021 in anticipation of her becoming the new Financial Director.



# RETIREMENTS

**Mike Cunningham** joined the GCA team in 2007 as an Environmental Coordinator at the GCA Campbell Bayou and 40-Acre facilities. In 2012 he became Compliance Coordinator at Bayport and was promoted to Compliance Supervisor in 2016. He retired in June 2021. During his 13 years with GCA, his teammates appreciated Cunningham's steady demeanor and willingness to tackle challenges. In his most recent role, he helped grow and train the Bayport compliance team. Cunningham and his wife are moving to the College Station area where they will continue to pursue birding.



**Willie Ray Miller**, Operator III, retired after 36 years of service with Washburn Tunnel Facility. An Army infantry veteran, he first worked for the maintenance contractor at Washburn Tunnel following his military service. From that role, he joined GCA as an operator and became part of the GCA family. In May, his co-workers celebrated his retirement with a socially distanced lunch of catfish and shrimp – among his favorites. Miller was a dedicated operator who in recent years worked to keep the plant operating through Hurricane Harvey and winter storms Uri and Viola. He is looking forward to not waking up at 3 a.m. for work, relaxing, and traveling post-pandemic.

**Jeff Nuss**, Operations Supervisor at Bayport, retired with more than 41 years of service. His first experience with GCA was as temporary help in 1979. A year later Nuss joined the GCA team full-time as an entry level operator at the Bayport Facility. He rose through the ranks to become Operations Supervisor in 2007. Nuss experienced first-hand many changes at the Bayport Facility during his tenure. He spent many nights, weekends, and holidays at the facility and every plant manager knew that Bayport was “his plant.” With his retirement, Nuss will have more time to devote to golf and hosting at the bed and breakfast that he runs with his wife.



**Lisa Robinson** “sailed” into retirement in February 2021 after staying an extra week to help the lab through the Winter Storm Uri. Lisa joined GCA in 1991 as the Conventional Lab Coordinator at the then newly created Central Lab and later became the Metals Lab Coordinator. Robinson has a love for water and will continue to be active in her community with nautical activities, scouting and swim team, as well as pursuing her hobbies of pottery, quilting, sailing, and spending time with family.

## BAYPORT COMPLETES DTB PUMP STATION UPGRADE

To improve reliability, the Bayport Facility obtained authorization from the Texas Commission on Environmental Quality to update its discharge capacity. The goal of the DTB Pump Station upgrade was to increase Bayport's capacity to pump treated water through the permitted discharge. The project replaced existing pumps with larger pumps, increased the size of the pump station discharge pipe, and upgraded supporting electrical components.

Both project and the facility teams successfully navigated obstacles through construction and startup in the fall of 2021. The recently completed performance test on the upgraded pump station exceeded performance specifications.

The pumps are currently operational and additional pumping capacity has been achieved, providing increased flows. Final touches to the project will be made through the end of the year enabling the facility to better serve the Bayport Industrial Complex.



# ALL GCA FACILITIES EARN NACWA PEAK PERFORMANCE AWARDS

All Gulf Coast Authority wastewater treatment facilities were recognized for their 2020 performance by the National Association of Clean Water Agencies (NACWA) with Peak Performance Awards.

For the 16th consecutive year, GCA facilities were honored by NACWA (with awards being received as far back as 1990 from AMSA, NACWA's predecessor organization) for excellence in operational performance and permit compliance.

- Bayport Industrial Wastewater Treatment Facility – Gold;
- Blackhawk Municipal Wastewater Treatment Facility – Gold;
- 40-Acre Industrial Wastewater Treatment Facility – Gold;
- Odessa South Municipal and Industrial Wastewater Treatment Facility – Gold; and
- Washburn Tunnel Industrial Wastewater Treatment Facility – Silver.

“In a year with pandemic challenges, GCA is proud that all of its facilities were nationally recognized for their performance and commitment to protecting the waters of the state of Texas. Our workers provide essential services for our communities, industry, and the environment. And the essential nature of our business was highlighted during the pandemic,” said Liz Fazio Hale, GCA General Manager/CEO.

Peak Performance Awards are provided to outstanding clean water utilities that have demonstrated operational excellence with no more than five permit violations in a calendar year for silver and zero violations for gold. For nearly 50 years, NACWA has been the nation’s recognized leader in advancing sustainable and responsible policy initiatives that help shape a strong and sustainable clean water future. NACWA seeks to fulfill this mission through its national recognition/awards program, its clean water advocacy and communications, and its peer-to-peer utility network to share best practices from coast-to-coast.



*GCA Board Members recognize facilities for achieving “peak” performance include (from left) Lamont Meaux, Rita Standridge, Kevin Scott, Mark Schultz, and Chris Peden. Accepting on behalf of their facilities (third from right) are Kim Ontiveros, Bayport (top); Diane Maloy, 40-Acre (middle); and Phyllis Frank, Washburn Tunnel (bottom).*





## BOARD OF DIRECTORS



Franklin D.R. Jones, Jr.  
Chairman of the Board,  
Harris County



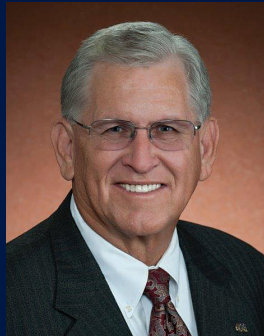
Rita E. Standridge  
Vice Chair,  
Chambers County



W. Chris Peden  
Secretary,  
Galveston County



Kevin Scott  
Treasurer,  
Galveston County



J.M. "Mark" Schultz  
Member,  
Chambers County



Billy Enochs  
Member,  
Galveston County



Lamont E. Meaux  
Member,  
Chambers County

## LEADERSHIP TEAM



Elizabeth Fazio Hale  
General Manager/  
Chief Executive Officer



Scott Harris  
Chief Operating Officer



Gordon Pederson  
Chief Technical Officer



Phyllis Frank  
Chief Administrative and  
Strategic Projects Officer

# CORE VALUES

|          |                      |
|----------|----------------------|
| <b>S</b> | <b>STEWARDSHIP</b>   |
| <b>C</b> | <b>COMMUNICATION</b> |
| <b>R</b> | <b>RELIABILITY</b>   |
| <b>I</b> | <b>INTEGRITY</b>     |
| <b>P</b> | <b>PLANNING</b>      |
| <b>T</b> | <b>TEAMWORK</b>      |



Protecting the waters of the state of Texas through environmentally sound, economically feasible and technologically advanced wastewater and water management practices.

---

Gulf Coast Authority  
910 Bay Area Blvd. • Houston, Texas 77058  
(281) 488-4115 • [www.gcatx.org](http://www.gcatx.org)

