

KSA's water and wastewater portfolio is extensive and includes the following capabilities:

**TREATMENT PROCESSES
(WATER)**

- Microfiltration
- Reverse Osmosis
- Disinfection
- Ozone
- Chlorination Options
- Ultrafiltration and Nanofiltration

**TREATMENT PLANTS
(WATER AND WASTEWATER)**

- New
- Rehabilitation
- Expansion

**CONVEYANCE AND PUMPING
(WATER AND WASTEWATER)**

- Pumping Stations
- Lift Stations
- Water Storage Tanks
- Trenchless Technology

**TREATMENT PROCESSES
(WASTEWATER)**

- Conventional Activated Sludge
- Sequencing Batch Reactors
- Fine Screen Technologies
- Solids Handling and Disposal
- Disinfection
(Chlorine Dioxide and Ultraviolet)
- Reclamation and Reuse
- MBR

**COLLECTION SYSTEMS
(WASTEWATER)**

- Pressure Sewer Systems
- Gravity Sewer Systems



CLIENT LIST

Our water and wastewater planning and design is best illustrated by the following select client list. Completed projects include new and retrofit plants as well as associated infrastructure including lift and pumping stations and transmission.

- | | |
|-----------------------|----------------------------|
| City of Bastrop | City of Quitman |
| City of Bonham | City of Mount Pleasant |
| City of Carthage | City of Mount Vernon |
| City of Grand Prairie | City of Pecos |
| City of Hico | City of Rockdale |
| City of Hondo | City of Savoy |
| City of Honey Grove | City of Selma |
| City of Ladonia | City of Tyler |
| City of Lindsay | Dodd City |
| City of Longview | East Cedar Creek FWSD |
| City of Marlin | Southern Utilities Company |
| City of Marshall | Texas Parks & Wildlife |
| City of Mineola | |

KSA

**KSA WATER &
WASTEWATER
CENTER OF EXCELLENCE**

**KSAENG.COM
877.572.3647**



Since its inception in 1978, KSA has specialized in providing water and wastewater systems design for small to medium-sized municipalities and water districts. We have intentionally focused on this segment of the market due to their unique needs and requirements.

DESIGN PHILOSOPHY AND APPROACH

Our market focus starts with our engineering design philosophy—a philosophy that has evolved over the years based on the unique needs of our clients. We have found that towns and cities in the small to medium-size range are most interested in cost effective solutions that are both reliable and easy to maintain. Very few of these entities have the luxury of unlimited budgets. Based on these unique requirements, we have become known for our expertise in the application of the most appropriate technologies to strike a reasonable balance between initial capital and operational costs; and effective systems that are easy to maintain and operate without adding unnecessary over complication. Whenever possible, our first considerations leans toward the utilization of existing facilities to accomplish the same results as if they were new.



Adequate water supply and wastewater treatment capacity are always critical components of a city's ability to grow.



PROJECT MANAGEMENT AND DELIVERY

KSA's water and wastewater project delivery process is built around a strong team of local project managers. We have intentionally created this organization to provide a team that combines local knowledge with specialized experience. This means that your project will be managed by a project manager that either resides in your vicinity or is in close proximity to you. This is your assurance of a team capable of providing the most technically sound and cost-effective design in a manner most responsive to your needs.

Your project manager will utilize the specialized expertise within the Water and Wastewater Center of Excellence to guide the overall project approach and provide a highly specialized and unique design. Collaboratively, the team will work together to determine the tasks, team and technologies necessary to optimize the design and meet or exceed the goals established for the project.



The way a community handles its water resources is directly proportionate to its health, vitality and expansion.



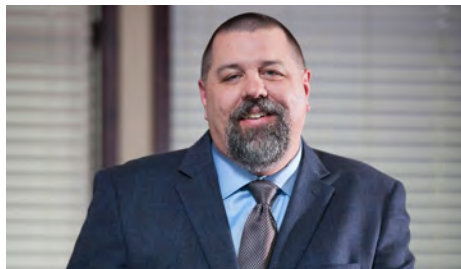
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MEET OUR TEAM OF TECHNICAL EXPERTS

Our Water and Wastewater Design Center of Excellence is led by a core team of subject matter experts. Their comprehensive experience includes the full spectrum of services from plant design, to treatment, to conveyance, pumping, transmission and distribution.



John Reidy, P.E. is a senior engineering director with thirty years of experience with a demonstrated ability to lead water and wastewater engineering projects from the master plan and modeling stage, through the completion of construction including design build and consent decree programs. John has worked with communities and municipalities with populations ranging from 2,000 to 2 million. John represents KSA as the Director of Municipal Services. He oversees all civil, mechanical and electrical engineering services for community facilities such as water and wastewater treatment plants, street and drainage improvements and recreational facilities.
jreidy@ksaeng.com



Chris Aylor, P.E. is an expert in water and wastewater plant design, collection, treatment, transmission, conveyance and distribution since 1999. His design experience includes both membrane and conventional treatment. Like all of our subject matter experts, Chris has enjoyed significant success in obtaining federal and state grant funding.
caylor@ksaeng.com



Shriram Manivannan, P.E. is licensed in Texas and Canada, with 11 years of work experience in engineering consulting services consisting of water/wastewater treatment, distribution and remediation projects. Shriram is a Certified Project Manager with experience in multi-disciplinary projects, some of which include developing and managing project budgets, schedules, assigning project scope and administering QA/QC. He holds strong knowledge in water/wastewater treatment processes, water distribution hydraulic analysis, PFAS remediation, risk assessments and dispersion studies.
smanivannan@ksaeng.com



Alan Phillips, P.E. is a professional engineer with 30 years of experience in civil and environmental engineering licensed in Texas and Louisiana. Alan received his Bachelor of Science in Petroleum Engineering from Louisiana Tech University and his Master of Science in Civil and Environmental Engineering from the University of Tennessee at Knoxville. His background includes agency funding (TWDB, USDA, CDBG, GLO), business development, comprehensive municipal water and wastewater facility design, construction management, administration, inspection, and international construction.
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Tracy Hicks, P.E. has provided comprehensive water and wastewater planning and engineering design services to more than 20 municipalities throughout the south central United States since 1980. His project experience includes water and wastewater plant design, conveyance, distribution, collection, treatment, and pumping systems. Tracy is well known for his cost-effective design approach that seeks optimal use of existing facilities by providing the proper blend of conventional and new process technologies.
thicks@ksaeng.com



Clayton Scales, P.E. joined KSA in 2002, a few years after earning a Bachelor's of Science in civil engineering from Texas A&M University. Clayton's curiosity and willingness to learn new things has served him well throughout his career. His clients appreciate his readiness to truly understand their problems and his ability to find solutions that serve their unique needs and operational styles.
cscases@ksaeng.com



Chase Frazier is a master electrician with specialized experience in the custom design of SCADA systems for water and wastewater operations since 2013 when he began working at KSA. His team of electrical technicians and designers have developed SCADA systems for a number of municipalities throughout central, east and southeast Texas. His SCADA systems design approach is user-friendly and utilizes select components that have been time-tested for reliability, quality and cost-effectiveness.
cfrazier@ksaeng.com



Angela "Angie" Sanchez, P.E., PMP serves as Senior Project Manager in Sugar Land, Texas. Angie is an experienced professional civil engineer and Project Management Professional (PMP) in commercial, municipal, industrial, retail, multi and single family development as well as military construction and federal services program and project management. Angie has management and leadership experience in the land development sector handling recruitment, local marketing, client retention, workload management, and project acquisition and life cycle management. She has excellent communication skills through project reporting, client relations, and being a liaison between local and international government agencies.
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