

Bayport Industrial Wastewater Treatment Facility

Location: Bayport Industrial District, Pasadena, TX

Process: Activated sludge with atmospheric and pure oxygen diffusion

Capacity: 30 million gallons/day

Bayport is GCA's largest facility, serving 63 industrial customers and two municipalities via a 2.25-mile BioSan pipeline for process wastewater and contaminated storm water runoff and a parallel "Clean Stream" concrete channel for streams that require solids treatment only, such as cooling tower blow-down water. The original plant was built by Friendswood Development Company, then owned by Exxon, as part of its Bayport Industrial Complex. GCA acquired the facility in 1974 and has expanded and improved it since.



With customers ranging from petrochemical plants, warehouses and transportation cleaning facilities to the City of LaPorte and the City of Shore Acres, Bayport treats one of the most diverse wastewater streams in the GCA system.

The facility employs a "sludge" of naturally occurring microbes, kept healthy and active by air and oxygen diffusion, to consume and render harmless the pollutants contained in a wastewater stream. Effluent or treated water from the activated sludge process is clarified for solids removal, disinfected and finally passes through a series of ponds that provide additional solids removal before being discharged into the Bayport Ship Channel. The solids are dewatered on belt presses, loaded into trucks and shipped to a municipal landfill. The Bayport facility is permitted only for wastewater conveyed by pipeline, so any new customers must be piped into the system.

BAYPORT INDUSTRIAL WASTEWATER TREATMENT FACILITY



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Gulf Coast Waste Disposal Authority

Protecting the waters of the State of Texas through environmentally sound and economically feasible regional waste management practices

Gulf Coast Waste Disposal Authority

The Gulf Coast Waste Disposal Authority (GCA) has successfully fulfilled its mission of protecting the waters of the State of Texas since 1969. GCA continues to play a significant role in improving the water quality of Galveston Bay and the Houston Ship Channel; in promoting economic development in Texas through professional, cost-efficient, environmentally responsible treatment of regional industrial and municipal wastewater streams; in financing solid waste and industrial sewage pollution control equipment for Texas industries and issuing industrial development bonds for manufacturers in Galveston, Harris and Chambers counties.



GCA's operations include: several regional industrial wastewater treatment facilities serving over 80 industrial customers in the Houston - Gulf Coast area and in the City of Odessa; a regional municipal wastewater treatment facility serving the City of Friendswood, a small part of Houston, and two Municipal Utility Districts; a municipal wastewater treatment plant serving the Cedar Bayou Park Utility District; a receiving station for trucked-in non-hazardous wastewater; a landfill for non-hazardous industrial solid waste; and a Central Laboratory accredited by the National Environmental Laboratory Accreditation Program (NELAP) that tests incoming wastewater, treated water before discharge and samples from outside customers.

In 2013, the Texas Legislature expanded GCA's purview to permit the treatment of water that falls outside of industrial wastewater settings. The bill granted the Authority the same powers with regard to the acquisition, construction, and operation of such water systems that it has with regard to disposal systems. Water systems covered by the legislation include pipelines, conduits, canals, pumping stations, force mains, plants, storage, and other water treatment, collection, disposal or distribution facilities.

Bayport Customer Benefits

- Permitted to treat industrial and municipal wastewater streams;
- Economies of scale since multiple customers share treatment and permitting costs rather than bearing them individually;
- Strategic location in the Bayport Industrial Complex;
- State-of-art wastewater treatment technology, expert staff.

Why communities and industries contract with GCA

GCA offers significant advantages for municipal and industrial customers:

Industrial

- Favorable economies of scale save money and improve efficiency;
- Industries avoid the cost of installing and operating extensive treatment systems;
- GCA can provide tax-exempt financing for pipelines and solid waste facilities;
- GCA fees are an operating expense, rather than a capital expense;
- GCA responsible for permits and dealing with regulators;
- GCA staff are experts in wastewater treatment and industrial solid waste management.

Municipal

- Favorable economies of scale save money and improve efficiency;
- Infrastructure financed by GCA preserves municipalities' capacity to issue bonds for other purposes;
- GCA fees are an operating expense, rather than a capital expense;
- GCA responsible for permits and dealing with regulators.

Many of the same advantages of working with GCA to provide regional municipal and industrial wastewater treatment solutions also apply to water treated under the Authority's expanded scope granted by the Texas Legislature in 2013.



Core values

GCA's core values guide every aspect of operations:

- **Stewardship** of the environment and of the health and safety of employees, customers and neighbors;
- **Communication**—open, honest, frequent—with all stakeholders;
- **Reliability**—ensuring that our operations are safe, compliant and cost effective;
- **Integrity** of our staff who operate in a simple, clear, transparent and honest manner;
- **Planning** to ensure continuity of service, innovation, sustainability and financial responsibility; and
- **Teamwork** to foster trust, commitment, enthusiasm and innovation.

What makes GCA function so well are the dedicated employees, managers and board members who do their very best, every day, to protect the waters of the State of Texas and work with our customers and government officials to help foster economic development that is the envy of the nation.