

40-Acre Industrial Wastewater Treatment Facility

Location: Texas City area

Process: Oxygen-Activated Sludge (40-Acre)
Non-hazardous solid waste industrial landfill
(Campbell Bayou)

Capacity: 15.7 million gallons/day (40-Acre)

The 40-Acre Facility commenced operations in 1974 and today provides regional wastewater treatment services for two chemical plants and a marine terminal operation. The facility also treats storm water and carriage water from the 40-Acre landfarm, which receives sludge from the wastewater treatment facility. The storm water and non-hazardous leachate from GCA's nearby Campbell Bayou landfill are also treated at the 40-Acre Facility.

Wastewater is transported to the facility by pipeline, treated with sludge activated by pure oxygen infusion and polished in a series of retention ponds before the treated water is discharged into the Hurricane Canal, which feeds into the Texas City ship turning basin.

Personnel from the 40-Acre Facility actively participate on the local Economic Alliance organization and Community Advisory Panel to promote economic development and community communication.

40-Acre Customer Benefits

- Proximity to Texas City Industrial Complex;
- Multi-stage post-treatment retention pond system provides buffer time to detect anomalies before effluent is released into environment;
- GCA is responsible for air and water permits;
- Space for capacity expansion;
- Excellent regulatory record.

40-ACRE INDUSTRIAL WASTEWATER TREATMENT FACILITY & CAMPBELL BAYOU SOLID WASTE MANAGEMENT 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.



Campbell Bayou Solid Waste Management Facility

Campbell Bayou is a landfill that accepts non-hazardous industrial solid waste such as construction debris from chemical plants operating in the Texas City Industrial Complex. Landfills are no longer permitted within 75 miles of coastal areas, so the grandfathered facility occupies a strategic position for serving this important industrial area.

The facility was permitted in 1978 and began operations the following year. Since then, GCA has completed and sealed nine waste cells and one land treatment unit. Space at the landfill is available by contract only.

Solid waste is trucked to Campbell Bayou, where facility personnel weigh and check loads to ensure all material received meets permit requirements. Operators compact the solid waste into impermeable, lined cells, which capture rainwater percolating through the landfill for treatment at the 40-Acre Facility. Wells monitor the quality of groundwater under the landfill on an ongoing basis.



Campbell Bayou Customer Benefits

- Grandfathered permit uniquely positions facility to serve industries within 75-mile coastal zone;
- Significant expansion capacity for serving new and current customers.

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.