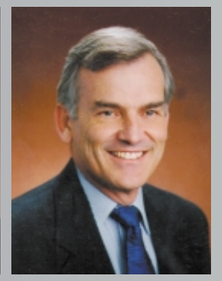
Board of Directors

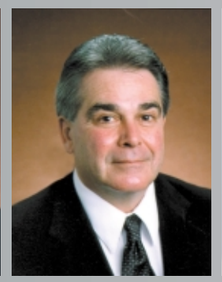
J.M. "Mark" Schultz
Chairman of the Board,
Chambers County

Rita E. Standridge
Vice Chair,
Chambers County



Sam Dell'Olio
Secretary,
Galveston County

Franklin D.R. Jones, Jr.
Member,
Harris County



James A. Matthews, Jr.
Member,
Galveston County

Ron Crowder
Member,
Galveston County

Dr. Irvin Osborne-Lee
Treasurer,
Harris County

Zoe Barinaga
Member,
Harris County

Shirley Seale
Member,
Chambers County

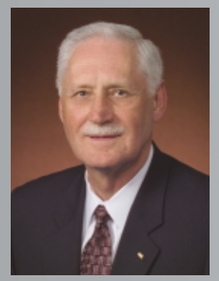
Created by the Texas Legislature in 1969, Gulf Coast Waste Disposal Authority (GCA) is a non-tax-supported unit of local government dedicated to waste management activities. The Authority's primary jurisdiction, and the area from which the nine member Board of Directors is selected, is comprised of Harris, Chambers and Galveston counties. The Authority may provide services in any part of the State of Texas but coordinates its activities with any other authorities or districts in those areas.

GCA owns and operates four industrial wastewater treatment facilities that process liquid wastes from more than 60 petrochemical plants. Three of the treatment facilities are in Harris and Galveston Counties. The fourth is located in Odessa, Texas. The Authority also operates a regional sewage treatment plant located in Friendswood, Texas. An industrial solid waste landfill is located in the Texas City area and a trucked-in liquid waste receiving station is operated near the Houston Ship Channel.

Gulf Coast Authority focuses on providing cost-effective wastewater treatment and serving as a resource for continued economic development.

Gulf Coast Waste Disposal Authority
910 Bay Area Boulevard • Houston, Texas 77058
Phone: 281-488-4115 • www.gcwda.com

Senior Managers



Charles Ganze
General Manager

Charles Goode
Assistant General Manager

Lori Gernhardt
Manager of Operations

Jim Cooksey
Manager of Financial Services

Gulf Coast Waste Disposal Authority

GCA

2006 Annual Report

Bayport

CAPITAL IMPROVEMENTS

Projects which began several years ago, and which continue today at the Bayport Facility, will result in an extremely sophisticated air pollution control system, as well as an improved wastewater treatment process. This long-term emissions control project is projected to cost some $24 million and involves the installation of control sensors, pure oxygen systems, tank covers for the First Step Treatment Tanks and a few hundred other items. The goal of all this work is to do a good job of treating wastewater for industry and, just as important, prevent volatile organic compounds (VOC's) from escaping the system and getting into the atmosphere.

Bayport had previously constructed three above-ground First Step tanks with improved aeration. A fourth First Step tank has now been completed, and all four of the tanks have been fitted with dome shaped covers (domes). These domes seal the tanks so that any VOC's can be directed to two more new pieces of equipment. These Regenerative Thermal Oxidizers (RTO's) handle any off-gases. In layman's terms, they act like the catalytic converter on your car.

"The domes are designed to flex with the varying pressure inside the tanks," said Facility Manager Ricky Clifton. "The dome-shaped tops on the tanks are fitted with flexible aluminum panels, duct work and instrumentation to keep up with what's happening inside each tank."

Vents in the domes allow outside air to be pulled in to sweep any VOC's along to the RTO's where potentially harmful vapors are oxidized at an extremely high temperature.

"We're working with pure oxygen and VOC's," Clifton said, "so we developed an early detection system (EDS) that can simulate what will happen in one of the First Step Tanks before it actually happens." Corrections can be made based on the predictions of the EDS and before the condition actually occurs.

"Our highly sophisticated instrumentation was put in place for safety and for process control. The instrumentation will be able to measure the oxygen concentration, the lower explosive levels (LEL's), pressures inside the tanks and the amount of dissolved oxygen in the water plus the temperature of the water," Clifton added.

This multi-year project is scheduled for completion by late 2007.

BAYPORT SAFETY PROGRAM

Millions of dollars in operating improvements are being made at the Bayport Industrial Wastewater Treatment Facility. It would be understandable if that was the primary topic of most conversations at Bayport these days. But, when you talk to the staff, they start on a related, but different, topic.

Facility Manager Ricky Clifton firmly begins his discussion of what's happening at Bayport with a description of the new Process Safety Management (PSM) system. The PSM system was developed to train plant personnel so that they know the best . . . the safest . . . methods of controlling plant operations.

"We're focused on process technology, process design and operating procedures and practices," Clifton said. "The major objection of the PSM system is to establish procedures that would protect employees by preventing or minimizing the consequences of accidents involving hazardous materials or processes."

The Bayport staff perform a systematic analysis of process hazards; they establish and follow written operating procedures for all processes and chemicals in the workplace.

"And more than ever before we are concentrating on maintaining equipment in good operating condition so that processes work as they were designed to do," Clifton said.

"None of this can work without the free flow of safety information to all employees. It absolutely requires the active participation of all employees, at all levels, on a daily basis. New safety procedures have had to be integrated into everything that the employees do, and believe me, this is no easy task."

One of the most important elements of the PSM program is called a Process Hazard Analysis (PHA). The PHA is an organized and systematic effort to identify and analyze potential safety problems. A PHA provides information that will assist in making decisions for improving safety and reducing the consequences of unwanted or unplanned events.

The PSM is absolutely a new and a better way of doing business at Bayport, said Clifton.

The Blackhawk Facility

The Blackhawk Facility has done it once again. For a second consecutive five-year term, the Facility has won the highly coveted Platinum Award issued by the National Association of Clean Water Agencies (NACWA) for excellence in operating and maintaining the Facility and overall commitment to improving water quality. The Blackhawk Facility was one of only 16 wastewater treatment plants nationwide recognized for exemplary performance in 2005.

The Blackhawk Regional Wastewater Treatment Facility is located along Clear Creek in Friendswood, Texas. The plant provides wastewater treatment for the thousands of people who live and work in the Friendswood area. Blackhawk treats about five million gallons of wastewater every day and is designed to handle up to 9.25 million gallons a day. The Facility accepts influent from four major sources: the City of Friendswood; Municipal Utility District (MUD) No. 55 (the Heritage park subdivision); Baybrook MUD no. 1 (the Baybrook Mall area); and a portion of the City of Houston.

Winning this award is particularly significant considering the boom in the housing developments that have now surrounded the Facility. Housing in the area has nearly tripled in the last few years. This in turn has caused an increase in the flow over the last few years by about 1 MGD with increases expected in 2007 as well.

"We continuously monitor our existing treatment plants, pipeline network and pump stations to provide the highest level of treatment possible," said Jerald Landis, Superintendent of Municipal Services. "And being a good neighbor by controlling odors is a part of the normal operations at this treatment facility." Blackhawk went the extra mile a few years ago by installing a Bioway air filter to treat odors at a major lift station near local businesses as well as another device just ahead of the main plant lift station.

NACWA has awarded Platinum Awards to wastewater treatment plants since 1995. The Blackhawk Facility was recognized at the National Environmental Achievement Awards Luncheon during the National Clean Water Policy Forum in May 2006. There are more than 15,000 wastewater treatment plants in the United States. This NACWA awards program recognizes select wastewater treatment plants or programs that have achieved excellent compliance results as measured by compliance with National Pollutant Discharge Elimination System (NPDES) permits.

Vince Bayou

The Vince Bayou Receiving Station takes in some 11 million gallons of portable toilet waste and non-hazardous and commercial wastewater each year. With the largest tank truck hauling 7,000 gallons per load and the smallest hauling only 500 gallons VBRS handles accepts 350 to 500 deliveries per month.

Located in the Pasadena, Ship Channel area, the station serves some 50 companies. The collected wastewater is sent by pipeline to the Washburn Tunnel Facility for treatment.

Washburn Tunnel

How do you turn a clarifier into a first step treatment tank? Well, just ask the folks at Washburn Tunnel. Currently under construction is a $3 million project converting the T-110 clarifier into a pure oxygen First Step Aeration Tank.

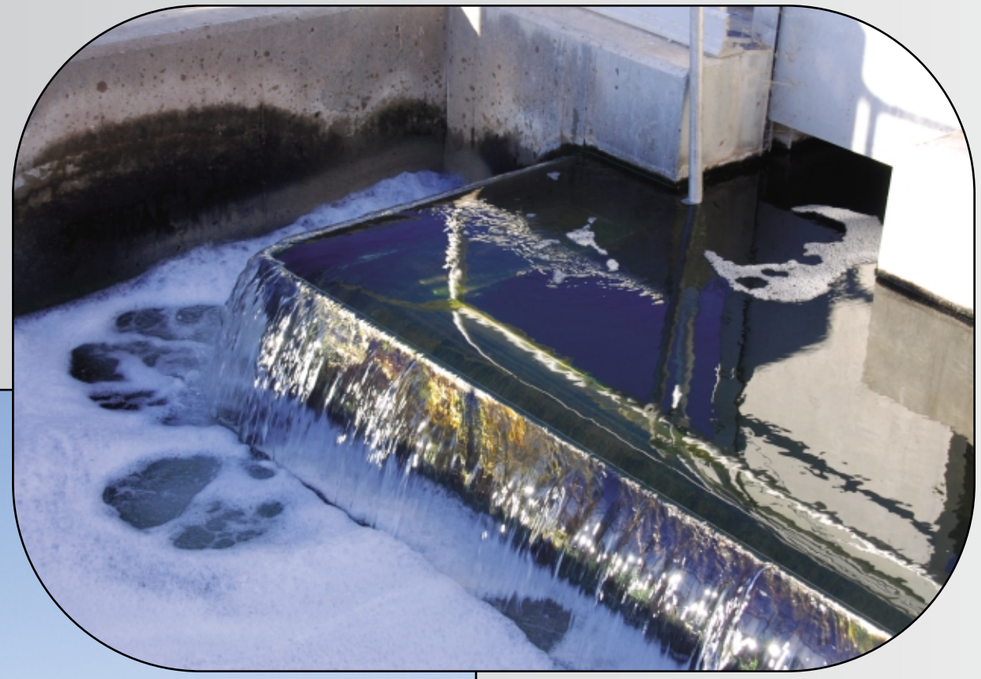
The four million gallon clarifier, with a traveling bridge was shut down and the bridge welded into place. The sludge handling infrastructure was then removed to create a large volume basin. Ten oxygen injection units (ISO-S) were installed and the basin was seeded with “bugs” from Washburn Tunnel’s own treatment process. Finally, untreated incoming waste water was added to the tank creating Washburn Tunnel’s First Step Treatment Tank.

Washburn Tunnel Facility is located in the Ship Channel area just off North Richey in Pasadena.

Odessa

The Odessa Wastewater Treatment Facility utilizes physical, biological and chemical treatment methods to treat between three and four million gallons ofwastewater each day prior to reintroducing it to Monahans draw (dry creek bed) that eventually flows into the Colorado River.

Located in far West Texas, Odessa has recently added Champion Technologies, Inc as a new contract trucked in industrial customer along with Navasota Energy's Quail Run plant, the new power plant.



Campbell Bayou

Located next to the 40-Acre Facility in Texas City is the Campbell Bayou Landfill. It is a carefully designed structure built into or on top of the ground in which non-hazardous industrial waste is isolated from the surrounding environment (groundwater, air, rain).

Employees, using a wheeled front end loader, move the material dropped by a rear dump truck to its final resting place in the landfill where it is then compacted.

40 Acre

A road is currently under construction at the 40 Acre Facility which will provide access to a new Oxygenated Activated Sludge (OAS) Unit being built.

The road is necessary to move thousands of cubic yards of dirt required to build the new unit. After construction the road will be use to traffic trucks to off loading areas in support of the OAS Unit.

The 40-Acre Facility is located just north of Galveston along the Galveston Bay in Texas City.

Central Lab

Central Lab, located on the same site as the Bayport Facility, performs thousands of analytical tests every month. Test results are used to properly evaluate the efficiency of GCA's wastewater processes and to assure compliance with regulatory permits. The Lab staff has designed rigorous procedures to provide accurate and supportable data collection, analysis and reporting capabilities.

Testing is organized into three categories: Metals, Organics and Conventional. Central Lab employs 30 chemists, technicians, and ancillary staff that handle the testing of wastewater for GCA's facilities and required documentation.