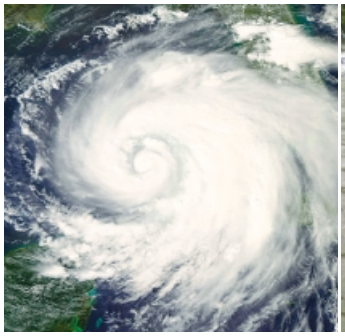
GULF COAST WASTE DISPOSAL AUTHORITY • HOUSTON, TEXAS

2008 ANNUAL REPORT



- 40-ACRE FACILITY
- CAMPBELL BAYOU FACILITY
- BAYPORT FACILITY
- WASHBURN TUNNEL FACILITY
- BLACKHAWK FACILITY
- CENTRAL LABORATORY
- VINCE BAYOU
- ODESSA SOUTH FACILITY

THE YEAR OF THE STORM

MISSION OF THE GULF COAST AUTHORITY

It is the mission of
Gulf Coast Waste Disposal Authority
to protect the waters of the State of Texas
through regional waste management
practices which are environmentally sound
and economically feasible.

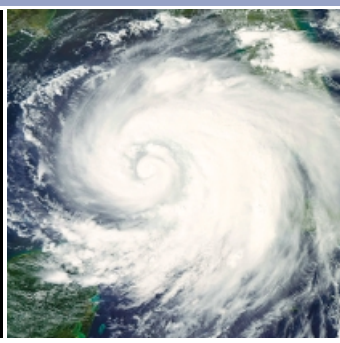
LETTER FROM **THE GENERAL MANAGER**

Hurricane Ike hit the upper Texas Coast in mid-September. Officially rated as a Category 2 storm, Ike was so huge that one edge reached parts of Louisiana, and the other edge skirted Mexico's Yucatan Peninsula. The combination of winds in excess of 100 miles per hour and the sustained 10 to 15 foot storm surge caused much of the damage. The area also suffered significant rainfall over a short period of time. Hurricane Ike climbed across Galveston Island and then pushed all the way into the Piney Woods of East Texas. Gulf Coast Waste Disposal Authority's (GCA) largest treatment and waste management facilities were right in the middle of the monster storm.

Damage to our treatment plants ranged from torn roofs and downed fences to major destruction of motors, pumps, wiring, levees, roads and buildings. Employees also suffered personal damage to their homes, as did members of our Board of Directors.

Within days of the storm's landfall, the GCA Board of Directors scheduled a meeting. Every person on the nine-member Board was present. Board Chairman Mark Schultz issued a personal letter to each member of the Board expressing his appreciation for their dedication to duty. The names and photos of those members are shown on page 12 of this report. I have to add my own thanks to this group for setting aside their own storm-related problems to help GCA deal with the emergency.

And I know that the Board joins me in expressing appreciation to the employees of Gulf Coast Authority. Our emergency plans for each operating location certainly helped to minimize the downtime before operations could come back on-line, but the plans would be worthless if our employees didn't make the effort to get back to work, to evaluate the damage, to clear out the mess



and to begin the work to make repairs. As soon as officials allowed travel on the roads, GCA crews were on the job. Of course repairs have gone on for months, but basic functioning of the treatment facilities was resumed within about a week. The biggest hurdle in most cases was return of electrical power, but a lot of preliminary work had to be completed before power could safely be restored.

From the Central Office, to the Technical Support and IT Groups, to Management, Operations and Maintenance, everyone brought their time and their expertise to focus on the problems . . . and on the solutions. They got the job done.

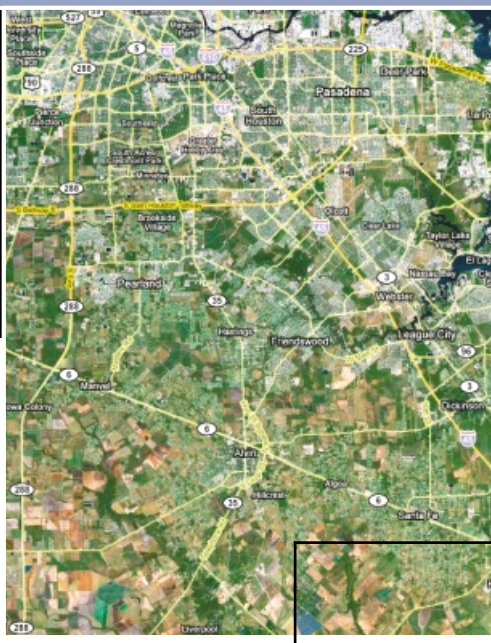
I have to add that the folks at our treatment facility in Odessa, Texas, were never so glad to be nearly 1,000 miles from the upper Texas Coast. They were very glad to carry on with business as usual.

Please take a few minutes to read through this report which is largely dedicated to a review of Hurricane Ike's impact on GCA's Harris and Galveston County operations.

Thank you,

Charles (Charlie) Ganze
General Manager

40-ACRE AND CAMPBELL BAYOU FACILITIES



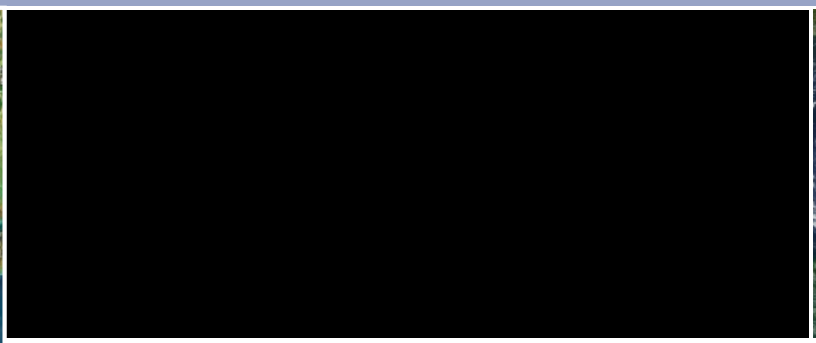
Campbell Bayou Industrial Solid Waste Facility (CBF) and 40-Acre Industrial Wastewater Treatment Facility are located less than a mile apart along Highway 197 in Texas City, Texas. Take a look at a map of the area and you will see that Highway 197 runs just inland of Galveston Bay. Both GCWDA Facilities are located between 197 and the waters of Galveston Bay. These two locations received the full fury of Hurricane Ike's winds and water when it ripped across Galveston Island and rolled onto the Texas mainland.

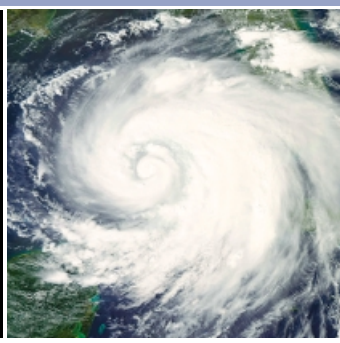
The 40-Acre Facility treats industrial wastewater inside a series of dikes that actually cover ??? acres. The top of those dikes serve as roadways to provide access to the different treatment units and related equipment. The wind and water scoured those roadways and severely damaged portions of the earthen and concrete dikes and caused almost a mile of fencing damage. In some cases the power poles running along side of the roadways were snapped off some 35 feet off the ground.

The access road from Highway 197 into the 40-Acre site was also damaged. Luckily, rising water did little damage to buildings at the Facility since they are located on top of the raised dike system. Damage to electrical lines, pumps, motors, aerators, and the diesel powered dredge was extensive.

Maintenance and Operations staff at 40-Acre had the plant operating again within nine days after the storm. Due to the system design there was no interruption of customer flows.

GCA's Campbell Bayou Facility receives non-hazardous industrial solid waste from contracted Participants. Damage was considerably different at CBF. The main office is located on the second





story and therefore received no damage from flooding, although it did lose air conditioning equipment. The maintenance building is at ground level and received five feet of floodwater, affecting both the operators' work area and storage of tools and equipment at the site.

In addition to building damage from rising water, CBF had entire concrete slabs washed away. A generator was also damaged. The active landfill cell was spared damage due to its elevation.

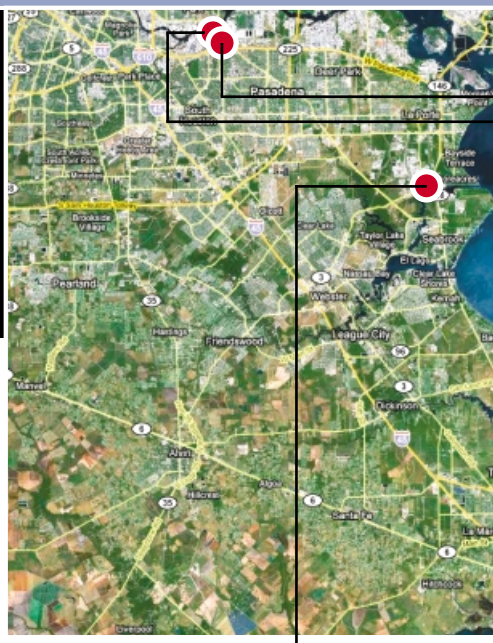
Terri Strachan, Facility Manager at both sites, reports huge amounts of debris washed up just outside the fencing at CBF. Everything from boats to furniture to household appliances to a giant light bulb (unbroken) could be found on the property adjacent to the plant site.

"We also had problems getting food and ice to our crews immediately after Ike," Strachan reported. "We were able to come up with supplies from Friendswood and the Clear Lake Area.

"All the managers I've talked with have high praise for their employees and contractors," Strachan said. "It was certainly the case here. Everyone pulled together to get 40-Acre and Campbell Bayou back to basic operations."

CAMPBELL BAYOU FACILITY

BAYPORT FACILITY



The Bayport Industrial Wastewater Treatment Facility suffered probably the worst combined damage of all GCA facilities. The plant had major wind damage that caused downing of power lines and poles, and the loss of roofing material on some of the buildings. The cooling tower was cracked and torn from top to bottom.

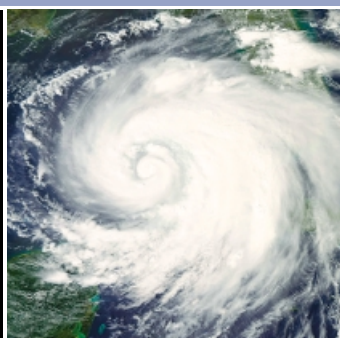
But the worst damage was from rising water. Facility Manager Jack Wahlstrom reported water from one and a half to two feet deep in many of the buildings at Bayport. The plant has been through many storms in its 35 years since GCA took over the operation from Friendswood Development Company but never before had flooding reached these levels.

File cabinets and furniture in areas which had been high and dry in previous storms, were submerged. Vehicles flooded inside garages. Wallboard and insulation had to be ripped out and repaired.

While the damage inside buildings was severe, the most costly effects of the storm resulted from the erosion of slopes and roads within the Facility. Taylor Lake is adjacent to the Bayport Facility, and waters rose and enveloped the plant site with the exception of the primary and secondary treatment units. Estimates were approaching the half million dollar mark to repair levees around basins and repair plant roadways.

Even though there was significant damage to the site, Bayport was ready for operation on Sept. 16, 2008. This quick recovery was made possible by the dedication and commitment of the Bayport staff and the support received from several of our customers. Bayport treats wastewater for 63 industrial customers and two municipalities.

WASHBURN TUNNEL FACILITY AND VINCE BAYOU



Hurricane Ike took a double swipe at Washburn Tunnel Industrial Wastewater Treatment Facility (WTF). The main plant suffered mostly wind damage. The Vince Bayou Receiving Station (VBRS) took on rising water inside the office building.

VBRS receives trucked-in wastewater from industry and from portable toilet companies. The location is less than a quarter mile from the main gate of WTF and pumps wastewater to the Facility for treatment. Even though the office at VBRS is built two feet off the ground, and the site is well above nearby Vince Bayou, water reached 14 inches inside the building. Cabinets, walls, furniture: everything had to be ripped out four feet above the floor. On the positive side many of the pumps and motors at Vince Bayou are located on raised platforms and avoided being submerged.

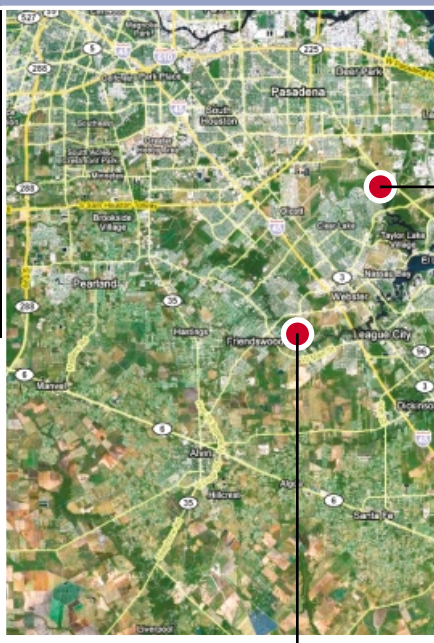
The WTF itself is built on a high bluff above the Houston Ship Channel. Rising water was not the problem, except in a well-named area of the plant known as the "low-lift." Incoming wastewater comes by pipeline from surrounding industries, is collected in the low-lift area, and is then pumped to different parts of the plant for treatment. Pumps and motors in this area were submerged by the storm surge.

Plant supervision reported damage to nearly every electrical substation at the Facility. Just about every structure had roof damage from high winds. Awnings and porches on the buildings were ripped away.

Large flat trays that carry heavy electrical and other cabling through the Facility were ripped loose from their supports and rearranged like a roller coaster at a theme park. Facility Manager Gordon Pederson reports that sections of the plant had to be powered down, area by area, as these trays were returned to position and secured, and wiring was checked.

Despite all the damage, the dedicated WTF staff worked to resume basic operations so the plant could resume wastewaters from its users within 82 hours after Ike passed.

BLACKHAWK FACILITY



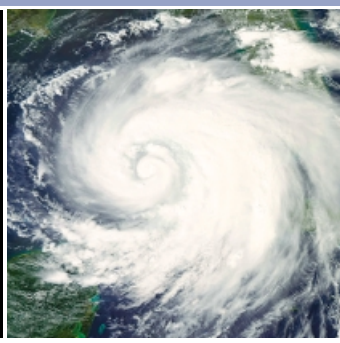
GCA's Municipal Operations consists of the Blackhawk Regional Sewage Treatment Facility, located in Friendswood, Texas, and a contract operation near Baytown, Texas, known as the Cedar Bayou Facility. While the municipal operations didn't completely escape the furor of Hurricane Ike, they did very well compared to the industrial locations.

Jerald Landis, Municipal Superintendent, reported that the Cedar Bayou Facility was up and running, "as soon as we could get over the highways to actually get an operator in there."

Blackhawk Facility had some roof damage and several trees blown down inside the plant and suffered damage to the six-foot fence that surrounds the operation. The plant escaped flooding because it sits on one of the highest bluffs along Clear Creek.

The plant serves the City of Friendswood, Harris County Municipal Utility District No. 55, Baybrook MUD 1, and parts of the City of Houston. Also, some flow is received from League City.

CENTRAL LAB

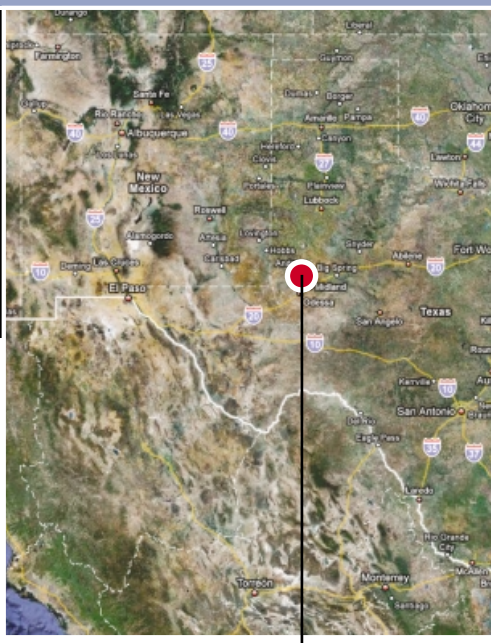


The Central Laboratory at GCA conducts hundreds of analyses every day both for permit reporting requirements and to provide process information to our operations staff so they can fine tune the operation of our various facilities. If a silver lining can be found in the blow delivered by Hurricane Ike, Central Lab is that silver lining.

Facility Manager Diane Maloy reports that both portions of the large lab complex (which is located on the same site as the Bayport Facility) are built higher than the Bayport buildings that flooded. "I actually didn't think we had any damage at all for several days," Maloy said, "and then I slowed down enough to notice that a few of our windows had cracks in them."

Maloy joined the other GCA managers in giving high marks to our employees who managed to get back to work right after the storm, assessed what had to be done to recover and then made it happen.

ODESSA FACILITY

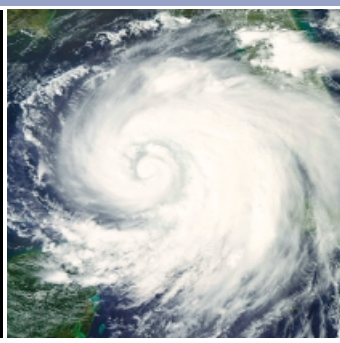


While geography protected the Odessa South Industrial Wastewater Treatment Facility from the ravages of Hurricane Ike, the site did accomplish two improvements to its infrastructure during 2008.

The Pipe Gallery at Odessa South is like a long tunnel that houses aeration equipment, pipelines and electrical conduit. This area is topped with a flat concrete roof that also serves as a walkway around a basin. The concrete top had begun to experience significant spalling and cracking to the point of exposing the reinforcing steel. This area was repaired.

A second project for the year was the replacement of air headers in one of Odessa South's digester basins. Digesters bubble air through sludge in order to reduce the volume of that sludge and to allow for settling and thickening of the material prior to pressing the excess water out so that it can be more efficiently transported to permitted landfills. The existing headers had been in place since 1980.

Sludge is a natural by-product of the treatment process and consists mostly of the excess beneficial bacteria which consume the organics discharged in the wastewater to the treatment system.



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.

GULF COAST WASTE DISPOSAL AUTHORITY
PROTECTING THE WATERS OF TEXAS
TEXAS

BOARD OF DIRECTORS

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

Rita E. Standridge
Vice Chair,
Chambers County

Randy Jarrell
Member,
Galveston County

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

James A. Matthews, Jr.
Secretary,
Galveston County

Ron Crowder
Member,
Galveston County

Dr. Irvin Osborne-Lee
Treasurer,
Harris County

Zoe Barinaga
Member,
Harris County

Lamont Meaux
Member,
Chambers County

Sam Dell'Olio
Board Treasurer
Sam Dell'Olio was honored at the June 2008 Board meeting with a proclamation honoring his 11 years of service on the GCA Board of Directors

SENIOR MANAGERS

Charles Ganze
General Manager

Ricky Clifton
Manager of Industrial Operations

Lori Gernhardt
Manager of General Operations

Jim Cooksey
Manager of Financial Services

GULF COAST AUTHORITY

910 BAY AREA BLVD.
HOUSTON, TEXAS 77058
281.488.4115
WWW.GCWDA.COM