In the wake of Hurricanes Katrina and Rita, APGA is overwhelmed by the selfless giving by gas systems of time, expertise, and resources to fellow utilities. This special issue of Public Gas News shares the volunteers' experiences in their own words.

In addition, we also hope that some of their suggestions will help us all be better prepared for future disasters.

Ron Lilly, Corinth Gas

Corinth Gas had already sent a 250 kW Caterpillar generator to Bay Springs, MS to help them get their water system back into operation. In working with that city, I had already been informed that their gas system had sustained only minor damage and was still operational.

The system had been made safe and repairs were underway by local forces. Therefore when asked to make personal contact with other cities, I thought I knew what to expect. So, I set out at 2:00 am the following morning stocked with a cooler of water and soft drinks, peanut butter, crackers, Vienna sausage and beanie weenies, along with an extra 12 gallons of gasoline tied to the top of the truck. The first day I zigzagged my way down through a portion of Mississippi trying to touch base with as many public gas systems as I could, before ending the day at Mobile Gas.

Working out of Mobile, I did this for three days. (Continued on p. 2)
left Mobile as soon as the local curfew would allow, and usually returned after sundown, averaging a little over 500 miles each day. It turned out I needed the spare gasoline I carried in order to return, and the snacks I carried became my breakfast and lunch everyday. There was absolutely no place in the towns along the coast to get gasoline, no place to get anything to eat or drink, and no place to stop and spend the night.

Early on, every town I visited did not have communications, electricity, water, sewer or fuel, but their natural gas system was operational, further proving that gas is very reliable and dependable. While all of Mississippi was impacted by Katrina, the lower 1/3 of the state is where the damage is most prevalent. Directions were nearly impossible to follow when numerous streets, roads and highways were impassable and when most street and highway signs were lying flat on the ground. As you would expect, the closer to the coast one is, the worse it gets. Waveland, MS and Bay St. Louis, MS were the worst, having lost everything.

After those first three days, I thought I had a good idea what shape the gas systems of Mississippi were in, and communicated the information to Bill Coffeen at Mobile Gas for his coordination efforts. I returned to Corinth to see to my responsibilities, but after three days at work, I again returned to south Mississippi. This time I went to aid with technical assessments to gas systems along the immediate coast and inland a few miles, where the vast majority of the damage to gas systems was and where efforts needed to be concentrated. Again working out of Mobile with other volunteers from natural gas systems from Okaloosa, Alabama and Pensacola, Florida, five of us spent another three days talking to system employees and looking at the system damages.

We visited a total of 20 cities with gas systems, not all of them public systems. Damage to natural gas distribution systems ranged from minimal to total devastation but there was not really any system with what may be called moderate damage.
During my travels, there are several things I noticed.

Public gas employees are dedicated to their community and to the system that employs them. Many public employees are responsible for other utilities also but had worked tirelessly around the clock to make their natural gas systems safe. I think all of them did an outstanding job in some really adverse situations. Along the coast, some systems were left without a single vehicle and had only a small fraction of their employees who could get in to assist. The crews that were there worked extremely short-handed.

After the humanitarian needs are met communities demand that the electrical, water, sewer and natural gas utilities be operational – and in almost every case, in that order. Speaking of water, many communities and rural water systems would have continued to have water if their auxiliary motors and generators for operating pumps had been fueled with natural gas. When the auxiliary equipment ran out of fuel, there was none to refuel with in the near geographic area.

Immediately after a disaster, almost all city officials and public employees are swamped with demands and are hard to locate and do not have time to think and plan. So, a public gas system must have its own emergency plans. Also, good system maps are important for restoring a gas system and should be stored in a safe place. Even better, gas systems should consider storing a copy of the maps in a second safe place off-site. Also, valve sheets and key-valve maintenance are key.

As public gas systems, we must emphasize the dependability and reliability of natural gas. I believe it to be a homeland security issue. In addition, considering the dependability of natural gas, more natural gas systems should consider purchasing more natural gas powered vehicles. Finally, good friends in the gas business are important. And through APGA you meet some of the best.
When any hurricane comes ashore in the south we are accustomed to calling each other to see if neighboring gas companies are O.K. and to offer our help if needed. The scale of destruction of hurricane Katrina was so great, I knew phone calls would not be enough, as there were no phone, fax or e-mails coming out of the Mississippi and Louisiana coastal communities.

Since these communities were mostly served by municipal systems, I immediately got on the phone to Bert Kalisch of APGA to offer our help to any public gas utilities affected by the storm. We immediately began sending trucks into Mississippi to determine need and deliver water, food, ice and other needed materials.

APGA did an excellent job of getting public gas systems organized to help in what is proving to be the biggest disaster recovery effort in the history of the gas industry. Initial calls for supplies and/or crews were answered by Energy Services of Pensacola, Okaloosa Gas, Corinth Gas & Water, Philadelphia Gas Works, and Riviera Gas, as well as several utilities through the Municipal Gas Authority of Georgia. Also responding was Jackie Hopper from Lake County Utility District in Tennessee, who drove down non-stop with his wife in a pick-up truck delivering supplies. Shortly afterwards Alagasco of Alabama and Yankee Gas, which sent crews all the way from Connecticut, became an integral part of the gas restoration efforts.

Mobile Gas is a good location for a staging center for a variety of reasons. Even though our downtown area and coast communities flooded we were fine since we are inland, have our own power generators, very thick walls, gas air conditioning, fuel, a warehouse of parts, a garage, and mechanics. We also have an auditorium that has a capacity of more than 200 people and where 34 volunteer crew members from across the country were spending the night on cots as of Tuesday, September 20th. Our facilities are manned 24/7 and volunteer work crews can come back to a safe and comfortable place each night. This gives the folks a chance to relax, take showers and watch the big screen TV in the auditorium and perhaps catch Monday night football. Every morning, Mobile Gas fuels the trucks, give the crews a big breakfast, and packs each man a good-sized lunch to make them as self-sufficient as possible while they do their work.

The initial help our industry gave to our neighboring utilities was basic survival items and materials to secure their system like plugs. We are now moving to repair municipal systems to pre-disaster conditions. The communities where we are focusing our efforts are Moss Point, Pascagoula, Bay St. Louis, and Waveland, all in southern Mississippi.

The most devastation occurred in coastal Mississippi, especially Waveland and Bay St. Louis, where the east side of the eye slammed into the coast. The tidal surge that hit these towns was massive. It seems very likely that this tidal surge into Waveland was 41 feet high! (Continued on p. 5)
(Continued from p. 4) - Bill Coffeen

This is supported by the evidence on the I-10 overpass north of Waveland. Two feet from the top of the overpass, a clean horizontal debris line can clearly be seen where the water receded on a grassy berm on the elevated sides of the Interstate.

In Waveland and the surrounding areas, everything within a half-mile of the Gulf of Mexico was destroyed, as the photos show. The town used to be rows of lovely homes on the beach, but now block after block have disappeared. All the gas department could do to react to Katrina was turn the whole system off at the city-gate station. It was a bit strange to look at this devastation and know that generation after generation have lived in these beautiful coastal communities. These families have a heritage of being self-sufficient, so it is tough for them to ask for help. But we are helping them, and one thing is for sure - they will rebuild. As for the rest of Waveland, there was a railroad track running east-west along the coast 1/2 mile in that took a lot of the brunt of the storm. North of these railroad tracks, houses are still standing, though most are washed out to varying degrees. North of I-10 seven miles inland, however, the houses are in fair shape and livable, and many now have gas service restored.

We brought fuel for the generator in the Waveland fire hall, which had remained standing. This was used as a base of operations in town. Our industry was the first to get people in Waveland water, food, fuel, clothes, cots and other essential materials. Recovery will be especially hard for the cities like Waveland because they not only lost their homes and businesses, but they have lost all city revenue. With no water system, no sewer system and no gas system, these towns no longer have money coming in to pay for community services or pay city employees. In helping all these communities we not only helped the gas departments, but also the fire departments, police departments, city governments and their families.

(Continued on p. 6)
We began with assessment of the damage, then development of recovery plans, line locates, leak detection, removal of regulators and meters and now the placement of new meters, regulators and activating meters. At this point, we are working to restore gas to homes and businesses when they are ready to resume active service.

We have been increasing the number of crews on the ground as we have been able to make space for more volunteers. Our immediate need is for gas line materials such as type 175 and 250 gas meters, 1 x 1 and 1 x 3/4 service regulators, Meter Locks, 2", 3", 4" Poly Valves, and 2", 3", 4" Transition Fittings.

Everyone in the gas industry has been good neighbors in dealing with extreme weather for quite a while, with no distinctions between IOU and public gas. We are eager to help each other. If an event like Katrina had struck us this hard, we know the same effort would be going on right now to get us back on our feet.

We have been putting people to use in the best way at any given time. As every day goes by, we will be able to get more crews in to relieve and augment those already working for the past few weeks. It is going to be a very long haul to rebuild, but we know the APGA membership – and the rest of our industry - is committed.

Systems who want to help the rebuilding should contact me, Bill Coffeen, at (251) 450-4737 or bcoffeen@mobile-gas.com.
Soon after Katrina passed, two ESP employees, John Ramsey and Carter Hall, went to help with damage assessment in the decimated cities of Waveland and Bay St. Louis, Mississippi. ESP has had crews in the area for over four weeks.

Pensacola went through Hurricane Ivan, so ESP experienced some of what the towns in Mississippi and Louisiana are facing. Ivan started at around 8:00 PM, and then got worse for eight more hours. Katrina followed the same pattern, but even more intense. Pensacola had protecting barrier islands and few residential areas in the most vulnerable locations, whereas on the Mississippi and Louisiana coasts houses had been built up to the shore. Now, people literally can’t find the stakes of their houses, and nothing was still on its foundation within 1/2 mile of the Coast.

After taking the destruction in, John and Carter secured a map of Waveland and a customer listing. When they returned to Pensacola, the map and customer information was entered into GIS, and a new map was created showing the location of customers.

The following week, two additional trucks went to Waveland to identify lines and to turn off gas valves to the waterfront. Utilizing a small track hoe to dig up gas mains that had been located they then installed valves, taken from the combined resources of all the systems working in the area, and turned the lines off.

The entire next week was spent identifying 900 homes with risers and meters and verifying they were off. Since the gas main valve to the north of Waveland was in good shape, the crews turned off the gas south of it. This allowed gas service to be restored to some businesses and houses around interstate 10.

Additional crews from Riviera Utilities in Foley, Alabama were also working in Waveland, as were crews from Yankee Gas in Connecticut. Pensacola’s crews have finished up Waveland as much as possible for now, as the city is focused on debris cleaning and repair of water and sewer before restoration of gas service.

All the gas utilities working in the area have moved onto Bay St. Louis, which is four times as big as Waveland. Identifying 4000 customers amidst all this debris is not an easy task. That said, work is going well: customers in Bay St. Louis north of Route 90 are very close to getting gas turned back on.

There is a lot of work to do in restoring Waveland and Bay St. Louis, but it will come in time. These folks that were hit have a very good attitude. They are a bit overwhelmed, but still positive.

Rebuilding along the Gulf Coast is already occurring. Electricity has been restored in Gulfport everywhere except the water front. There has been some issue in trying to get a tracking number from FEMA, to allow us to be reimbursed when this is all done. Lacking this certainly has not stopped any of the utilities from going to help, but it would be nice. In regard to FEMA, after Pensacola’s experience with Hurricane Ivan, we have offered our assistance to the towns affected by Katrina to help them navigate through the FEMA paperwork.

The natural gas industry has done an outstanding job assisting the affected areas. The industry was as ready as it could have been for such a widespread disaster. Mobile Gas, and especially Bill Coffeen, deserves a lot of credit for being the staging area, housing the utility work crews, and providing them breakfast, lunch, and gas everyday. They have done a great job. Alagasco, Okaloosa, Riviera, Pensacola, and Yankee Gas have all been actively helping. There are others who may not be identified here but there has been no distinction between IOU’s and public gas utilities; the industry has come together with support. APGA has done a great job in coordinating and helping people get to know each other.

The American Public Gas Association is the national association of approximately 600 municipally and publicly-owned local distribution systems in 36 states.

**American Public Gas Association**

**The Voice and Choice of Public Gas!**
The Voice and Choice of Public Gas!

Gordon King, Okaloosa Gas

officers, and others to understand their situation, and to determine what was needed to restore the gas utilities back to pre-storm conditions. Communications posed a problem for some of the crews. In the beginning, teams had to drive down the Gulf Coast to find out what was happening and what was needed. Our goal was to conduct assessments and prepare restoration plans. Repairs in some areas will take longer to complete, since natural gas systems are taking a back seat to water and sewer repair. In these cases, the immediate concerns were stopping gas leaks and repairing water and sewer utilities without which people can not return home. Full gas system repair will happen later.

In Pascagoula, there were some areas where the storm had destroyed so many homes and created so much debris, movement in the area was difficult at best. That much damage in one area was overwhelming.

In Pascagoula, I saw everything from total devastation in the first ¼ - ½ mile inland to homes that, while flooded, had no apparent structural damage. In these soaked homes, and in other damaged homes being repaired, our crews have been shutting off meters and capping lines until buildings are ready to use gas again.

(Continued on p. 9)
I returned the following week with four other Okaloosa Gas employees that included service technicians, line locators, and leak survey technicians. This time, we were locating service taps to be killed, and locating and pulling meters on damaged buildings. As of last Friday, teams from another company were working in Pascagoula and Moss Point.

The affected cities still need assistance as other rews. With great effort by Bill Coffeen and Brad Pitt of Mobile Gas, additional assistance has arrived to continue the work that has been started.

Obviously, nothing of this magnitude has ever happened before, but it is possible that another massive hurricane, or another disaster, will happen to gas systems. To prepare for this, there are many lessons to be learned from this experience. After Katrina, a lot of gas companies have been re-evaluating emergency response plans. More mutual aid agreements have been officially set up which will speed reconstruction.

Pre-planning for a worst-case scenario such as Katrina will help in the aftermath of a similar storm. Along the same lines, having an organized Gulf Coast damage team to go in right after the next big hurricane to start conducting an assessment would help.

Finally, assessing and rebuilding work has been slowed by a lack of maps of gas lines, since some of the utilities had all their records destroyed. To prevent this, reaching formal agreements with other companies to provide safe havens for map records will speed up restoration efforts.
Having a gas system on the Gulf of Mexico, I have some appreciation for what the gas systems on the Mississippi coast are going through in response to a hurricane. So, when Al Bean, President of the Alabama Natural Gas Association, ANGA, asked me to join Steve Carter as Co-Chairman of the Mutual Assistance Committee for ANGA, I felt an obligation to serve. You never know when a hurricane the magnitude of Katrina may affect your system, and you want to gain the experience of similar circumstances from both management and field response perspectives.

The ANGA membership, through the Mutual Assistance Committee, has been asked to provide a list of available resources that may be available to the recovery effort. This list is being compiled into a database by Mobile Gas, who is running the Eastern Staging Area for Hurricane Katrina recovery. Once all the gas system assessments in the affected area are completed, this database will help the allocation of resources in an efficient manner.

Riviera Utilities sent three men to Waveland, MS on Monday, September 19 to work with assessment crews from other utilities. The work consisted of isolating sections of the Waveland gas system that had not suffered extensive damage and could easily be reactivated. The crews were locking off all meters and performing leak surveys on incremental portions of the system.

The northern part of the system in Waveland is the primary focus to date for reestablishing service, since these were the customers whose structures best survived the storm. The southern portion of the system suffered extensive damage, and will likely require a major rebuilding effort.

Our second week was spent in Bay St. Louis, where our guys continued to isolate and secure portions of the Bay St. Louis gas system. Service is slowly being brought back on in this town as well.

Several challenges continue to affect the recovery process. Road-clearing equipment and debris haulers tend to destroy above-ground infrastructure. In some areas where the buildings are gone and the roads are covered with sand and debris, finding the gas valves and regulator stations is a challenge in itself.

Another problem has been the approval of mutual aid agreements. FEMA had been slow in approving terms of these agreements. The biggest FEMA concern seems to be a fear of price gouging by the assisting utilities. Mobile Gas has been working with the affected communities to create documentation allowing reimbursement for “fair and reasonable” expenses to restore systems to their pre-disaster conditions. This agreement is available through Bill Coffeen or Brad Pitt at Mobile Gas.

I believe the most important step our industry can take to prepare for the next disaster is to establish mutual assistance protocols prior to the need for relief efforts. This is especially applicable to gas systems along the Gulf of Mexico and the Atlantic, which are likely to be in the path of a hurricane. It would save time and provide more focus to the actual assessment and response needs.

APGA would like to thank every system that has helped those systems and communities struck by Hurricane Katrina:

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<th>Alagasco Athens</th>
<th>Philadelphia Gas Works</th>
<th>Piedmont Gas</th>
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<td>Clark-Mobile Corinth Gas and Water Daphne Gas</td>
<td>Riviera Utilities</td>
<td>Southeast Gas District Trussville Utilities</td>
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<td>Energy Services of Pensacola Florida Public Utilities Fayetteville Gas</td>
<td>Yankee Gas</td>
<td>Municipal Gas Authority of Georgia:</td>
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<td>Lake County Utility District Mobile Gas Okaloosa Gas</td>
<td>City of Lawrenceville City of Maplesville City of Winder</td>
<td>Hodge Enterprises MGAG Employees</td>
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We would also like to thank the hundred other gas companies who have offered material, crews, and equipment, some of which is in route as we go to press.

The Voice and Choice of Public Gas!
To: Public Gas Systems

From: Bert Kalisch

Date: September 29, 2005

Re: ACTION REQUESTED - Need for People, Equipment & Materials

Reconstruction efforts are underway in Mississippi. Gas utility crews from other states are ramping up in Pascagoula, MS and Bay St Louis, MS. We are now calling on those who volunteered when it was time—it is time.

People and Equipment. Currently needs include supervisors who can organize and assign work crews:

1. Pull Meters and Regulators
2. Cut and Cap service
3. Set meters and Regulators, and
4. Regasification planning and execution

Work Crews.

1. Pull Meters and regulators [due to the debris, smaller trucks or 4-wheelers with trailer are needed]
2. Cut and Cap
3. Set Meters and regulators
4. Line Locate, and
5. Leak detection

Mutual aid agreements should be in place this week to reimburse for the work completed and that which must be done to restore the systems.

Material needed for current planned activities.

1. Type 175 and 250 gas meters (Urgent)
2. 1 x 1 and 1 x 3/4 service regulators (Urgent)
3. Meter Locks
4. 2", 3", 4" Poly Valves
5. 2", 3", 4" Transition Fittings

Natural Gas Relief Fund. If you wish to make a donation of money or material The EIN number is 20-3466577

If you have any questions, please call Bill Coffeen (Mobile Gas, Eastern Staging Area Coordinator) at 251-450-4737.
To: Public Gas Systems

From: Bert Kalisch

Date: October 7, 2005

Re: ACTION REQUESTED – Louisiana Assistance

We are now receiving requests for recovery assistance from municipal systems in Louisiana.

This is a formal call for Mutual Aid for Louisiana.

This weekend we will be sending our initial technical assessment teams to Delcambre, LA. One team will come from Cornith, MS and the other from Mobile, AL.

We would like to get several line locator and leak detection teams into Delcambre as soon as possible. The city turned its gas off at the city gate just as Waveland, MS and Bay St Louis, MS did following Hurricane Katrina. We are familiar with the recovery efforts anticipated for Delcambre, LA.

We will need to set up a Louisiana Staging area in order to provide proper recovery efforts for southern Louisiana. Bill Coffeen has arranged for the initial technical assessment teams and is working to identify a location for a Louisiana Staging Center.

If you have any questions, please call Bill Coffeen (Mobile Gas, Eastern Staging Area Coordinator) at 251-450-4737.
The owner of this property on the Gulf in Waveland posted an American Flag on the gas meter (lower center) as a way of saying “we will rebuild.” Bill Coffeen of Mobile Gas took this photo—“Surveying the devastation, I saw this out of the corner of my eye. It spoke to me on many levels, so I had to take this photo.”

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This Hurricane Katrina Special issue of Public Gas News may be forwarded as needed.