

# Spotlight on Service: Volunteers Provide Relief in Hurricane Aftermath

*Much assistance was supplied to improve the infrastructure and environment in the areas affected by last year's hurricanes. The New York Water Environment Association's Humanitarian Assistance Committee became aware that a number of engineering professionals had stepped forward to become volunteer relief workers and consultants. Although there are probably many who have given time and energy to these relief efforts, these six individuals from around the state give us a glimpse of their experiences providing services to the citizens of Louisiana, Mississippi, and Texas in the aftermath of Katrina and Rita.*

*These engineers were asked to describe their roles in disaster relief efforts for the flood and wind damaged Gulf Coast communities in which they served; what they observed and learned while there; and, how their engineer training and expertise prepared them for such work. Would they recommend performing this type of relief work to others? Find out by reading their comments here from the field.*

## ASSIGNMENT: Houston, TX – 6 months

David Gaddis, PE, CDM, Edison, NJ

I served as a public assistance coordinator in the Houston area field office for Hurricane Rita. I was responsible for processing all public sector and private nonprofit eligible applicants through FEMA's Public Assistance Program.

Liberty County experienced a hurricane force storm and associated physical damage. They also dealt with coastal evacuees. Harris and Montgomery counties dealt more with the massive coastal evacuation and also the influx of over 150,000 Katrina evacuees. They gave food off their shelves, their homes and their clothes, just because others needed them. The physical damage to property has much more impact in person than any camera can capture.

Foremost, I was touched and humbled by the extreme generosity and care for fellow man exhibited by the citizens of these counties in the wake of the storm and evacuation. While there, I learned firsthand as a *de facto* federal employee what it's like to work for the government. As an early responder to Texas, I was awed at the speed at which FEMA can mobilize people, equipment and facilities to support disaster response and recovery.

Engineers and scientists are very good for these jobs even though we were cautioned against practicing our professional skills for these particular assignments. I think the natural organization of our brains suits the type of work needed to come up to speed on the program,



In Lake Conroe, TX, October 25, 2005, David Gaddis, a FEMA public assistance coordinator, meets with Montgomery County officials. FEMA provided millions of dollars for overtime and rentals, as well as for damage.

evaluate damage, make a recommendation on eligibility and expedite the claim for funding.

I absolutely would recommend this work. Committing totally to be onsite, joining a group and working extended weeks of many hours on the noble cause of disaster recovery will lift anybody's spirits. The networking also yields new contacts and the sense of fulfillment cannot be overstated. For those Catholics out there, it will take many years off your time in Purgatory.



Photo courtesy of D. Gaddis

Wave-induced damages at Lake Conroe Dam, a regional reservoir operated by the San Jacinto River Authority, resulting from Hurricane Rita on September 24, 2005. The damage to the upstream slope protection of Lake Conroe Dam was substantial. Riprap and bedding had been disturbed, displaced and, at some isolated locations, removed by wave action through about 4,000 feet of dam length. FEMA provided over \$1.68 million for repairs. David Gaddis evaluated the damage and proposed mitigation working directly with the Dam Safety Program Manager for USACE-Region 6.

## ASSIGNMENT: Baton Rouge/Covington, LA – 5 months

Michael Popper, PE, CDM, Edison, NJ

I was a project officer in FEMA's Public Assistance (PA) Program, assisting municipal and state governments in restoring their infrastructure to the extent covered by FEMA. I was located in the part of Louisiana mostly affected by Katrina's winds, but little flooding. I had a direct involvement in restoring public facilities including an airport hangar, 190 miles of gas pipeline, an animal shelter, firehouses, police stations, a community center, wastewater treatment lagoon, several parks and a medical center that were damaged to various degrees by the storm. Much of the work involved compensating communities that provided emergency protective measures, such as shelter, food, transportation, security, evacuation and medical care, to the hard-hit areas.

Being a project officer in public assistance is very similar to being a project manager for a public works or infrastructure project. The FEMA PA program doesn't perform the engineering or design required to restore the damaged facilities, but since they are a part of the built environment, engineering judgment is required to quickly and effectively produce "Project Worksheets" that will be approved in order to get the funding to the applicant.

In dealing with applicants, it seemed that no matter how bad their situation was, they knew somebody worse off so they didn't feel sorry for themselves. Also, press reporting of FEMA's incompetence was over-hyped. FEMA was truly helping people and the people appreciated it.

I would recommend this experience to people with compassion, patience and humility who aren't afraid of hard work with talented professionals from all over the country.



Aircraft overturned by winds from Hurricane Katrina in Hammond, LA.



The Hammond municipal airport hangar damaged by Katrina winds.

Photos by M. Popper

## ASSIGNMENT: Purvis, MS – 3 months

Michelle C. Mora, PE, CDM, Albany, NY

I was a project officer trained also in FEMA's Public Assistance Program. I performed evaluation of publicly-owned sites damaged by Hurricane Katrina. Based on my evaluations, I recommended if these damaged sites were eligible for federal funding per rules and guidelines established by FEMA.

The area I worked in suffered mostly wind damage which resulted in damaged roofs allowing rain to inundate the structures. Throughout the water districts, there were uprooted trees that pulled up water mains and disrupted service.

My experience in water distribution and process piping projects was called upon for assessing the pipeline damages. There was a lot of on-the-job training in areas that I've never been exposed, but there was a deep pool of knowledge among the other project officers from which to pull. Working in a team environment as an engineer proved valuable in this experience.

I learned how flexible one needs to be in performing this task. I've seen the many faces of kindness, generosity and hospitality the hurricane victims shared despite their losses. Yes, I would recommend this as a great learning experience and for the exposure to the many good and positive things that can come from something so disastrous.



Michelle Mora at FEMA work site in Purvis, MS.

Photos courtesy of M. Mora

## ASSIGNMENT: Houston, TX – 3 months

John W. Scheid, PE, CDM, Syracuse, NY

I was a FEMA Public Assistance Program project officer for damage assessment, site rehabilitation and project coordination for state agencies. Most of the applicants I met with were located in southeast Texas, which was hardest hit by the hurricanes. The city of Beaumont, TX suffered much damage. Many homes and businesses had structural damage, predominantly roof loss and blown-out windows. Additionally, interior damage occurred as a result of flooding. Huge piles of construction and vegetative debris were still evident along many city streets months after the disaster. Further complicating a difficult situation were the large number of displaced persons and the additional costs for sheltering.

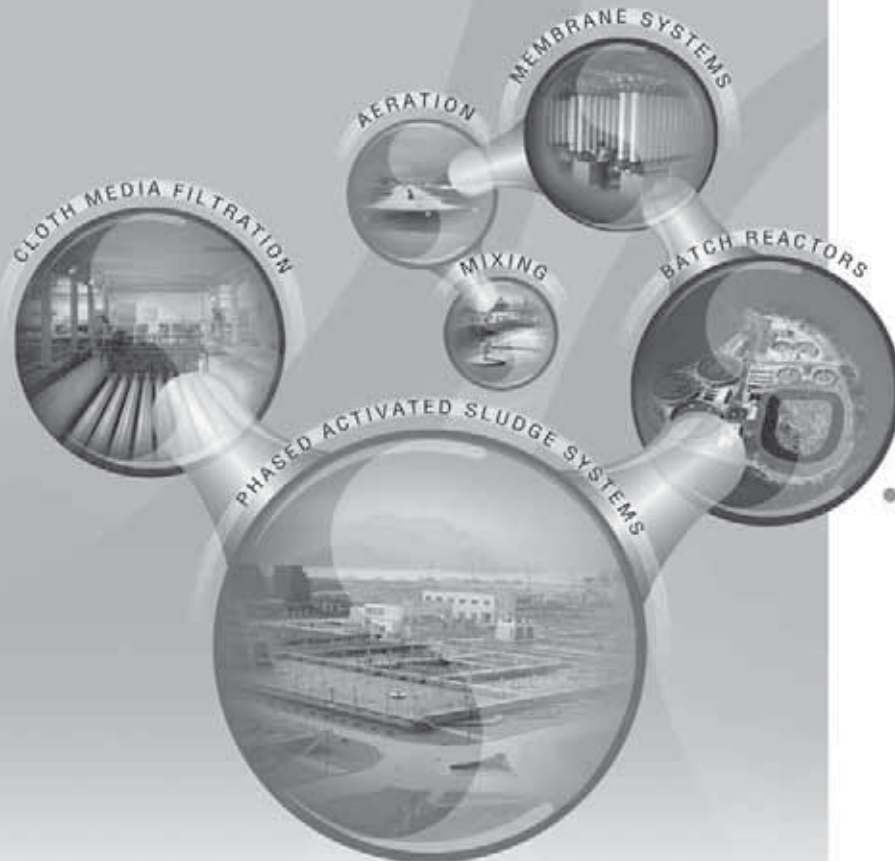
Most of the people encountered were genuinely happy to welcome FEMA's presence and were anxious to get things back to normal. There was a general air of goodwill in the community and a willingness to deal with adverse living conditions.

I was selected for this work partially because of my extensive work with state agencies combined with my background in structural

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design, building codes and estimating. I found the work both challenging and interesting yet not outside my realm of engineering.

I believe that this type of work offers a unique opportunity for an individual to develop people skills in an attempt to understand and appease the applicant's concerns. I witnessed firsthand the extent of the damage and now fully appreciate the need for public assistance programs. It allowed me to work on a variety of projects, each case presenting different problems, thus expanding my working knowledge base in developing site-sensitive alternative solutions.

### **ASSIGNMENT: Jackson County, MS – 1 week**

**Justin C. Minadeo, PE, Malcolm Pirnie, Inc., White Plains, NY**

I performed a structural condition assessment of 82 county-owned facilities. These facilities included fire departments, community centers, libraries, schools, parks and an airport.

Jackson County, specifically Pascagoula, fell victim to a tidal surge. Due to the warm, humid climate, mold became a major issue after the tidal surge had receded. As the county worked to clean up debris from the heavy wind and rain associated with the hurricane, the mold continued to grow at an exponential rate. Many buildings had to be completely gutted because the spread of mold could not be contained. Also, although it was not part of our scope of work, we did observe dozens of residential units that were completely destroyed by the tidal surge and many houses had to be gutted due to the mold issue. We found the roof of one house two blocks from where the house once stood.

Being onsite, post-hurricane, one gets a true appreciation for the force that these storms possess. The amount of damage caused by a hurricane of this magnitude is unbelievable. On a personal level, I got an appreciation for the strength and determination of the people who were affected by this disaster. The county worker who escorted us to the facilities had his home completely destroyed by Hurricane Katrina. He was forced to stay with friends, but his personal loss did not prevent him from working 16-plus hours a day to help restore the county facilities. He even found time to take us to his favorite BBQ joint and his secretary baked us a "really southern" pecan pie.

I had performed property condition assessments in the past, although never following a natural disaster. Our group modified the procedure used previously to better suit the conditions we encountered.

There is certainly a distinction between our scope of work and providing direct humanitarian assistance to the people affected by the disaster. With that in mind, I would recommend the type of work I did to someone interested in being involved but who may not be capable of coping with the emotional aspect of direct humanitarian assistance.



**Example of mold spreading inside building affected by flooding.**

Photo by J. Minadeo



**Tidal surge damage in Pascagoula, Mississippi, as seen by Justin Minadeo.**

### **ASSIGNMENT: New Orleans, LA – 1 day**

**Robert Adamski, PE, Gannett Fleming, Locust Valley, NY**

I was attending the SAME (Society of American Military Engineers) National Conference in May of this year, an event held in New Orleans to show support in spite of the flood. While there, my wife, Janet, and I visited the First Presbyterian Church to see if we could help. We joined groups from Chicago and South Dakota in repairing water damage, efforts that involved painting and restoring the pastor's house.

Damage and need were everywhere in the city. This was after the reporters had left and conditions were still not good. The city's 9th Ward was still devastated with signs of damage everywhere. We learned there were many opportunities to help in-person or through contributions.

Also, while at the church, two of the volunteers got stuck in the church's elevator. Since I was an engineer, they turned to me for help. With the repairman on the phone, he talked me through lowering the elevator to the first floor, and getting the panic-stricken victims out so they could catch their plane back to Chicago.

I would definitely recommend such relief work to someone else. The reward is indescribable. You can check out the situation at the New Orleans' church on its website: [www.fpcno.org](http://www.fpcno.org).



**Robert Adamski (right) greets pastor of flood damaged church he visited to help in New Orleans.**



**A scene of the hurricane flooding disaster in New Orleans' 9th Ward as seen by Robert Adamski.**