



IWA PIPELINE

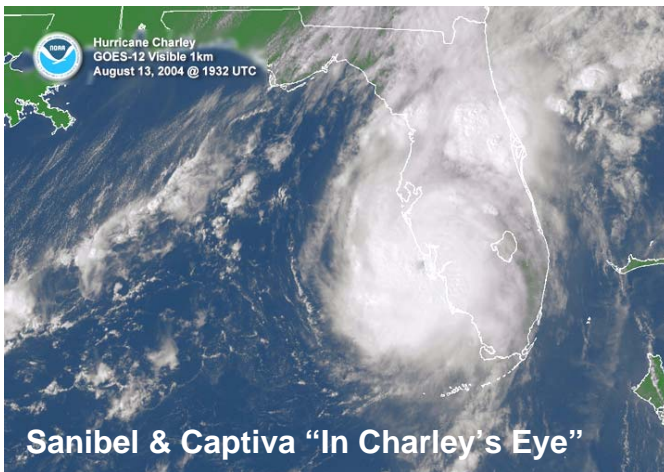


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ENOUGH ALREADY!!!!!!



As this newsletter was being written in mid-September, hurricane Ivan had finally decided not to pay our islands a visit, which is just as well, since it will be several more months before the clean-up from hurricane Charley is complete. In addition, many of our beaches were already badly damaged by the combination of Charley and Frances. The 2004 hurricane season still has 2.5 months to go, and already it is one to remember for everyone on our islands ... but it will certainly not be a fond memory!

In a special communication mailed on August 25th, we updated all IWA Members on our progress in restoring water service and asked for their help in ensuring that their irrigation systems were intact before returning them to service, thereby avoiding a large waste of water and helping us to maintain our system pressure for fire protection purposes. Our Members responded very well to this request, and we have been able to maintain system pressure at all times. To recap this communication, Charley made landfall as a category 4 storm with sustained winds of around 140 miles per hour on August 13th. IWA employees escaped across the

causeway at the last moment, leaving our system operational and hoping to return before system pressure was lost. We returned to the islands with a small group of key employees early on August 15th to find that our system had lost pressure and shut down due to a multitude of leaks. By August 21st, we had restored water service to everyone on both islands, although around 300 Members were shut-off due to leaks in their private piping systems, and the water was not yet safe to drink. By August 25th we had received bacteriological clearance for our water, and it was once again drinkable ... pretty good, considering the magnitude of the disaster we had endured. Many IWA employees worked long and hard (12 hours/day, 7 days/week) to accomplish this, under very difficult and dangerous conditions. Employees ate, slept and lived in our facilities around the clock for about a week (and shared a single shower ... one at a time!).

We currently estimate that Charley will cost IWA around \$930,000, split about equally between additional costs and lost revenue. We hope to recover some of that amount from the Federal Emergency Management Agency (FEMA), but the actual amount and timing of any such recovery is unknown. Fortunately, we had ample financial reserves to cover these additional costs, which is one of the main reasons we have such reserves. IWA remains a very financially-sound company, despite having endured a major natural disaster.

Our many years of planning for this situation really paid-off. We planned for a worst-case scenario, and that is exactly what happened. Our most critical facilities sustained amazingly little damage, despite winds of 140+/- miles per hour, a testament to their wind-resistant design. We used virtually every piece of equipment that we had bought over the years to help us protect our facilities from a major storm and then to quickly restore water service. We produced and distributed water for several days without LCEC electricity, utilizing four different generators, which consumed around

1,400 gallons of diesel fuel every day. We ate most of our emergency food supply, along with meals from the Red Cross until local grocery stores reopened. Of course we never had a problem with our water supply!!

While Charley was an experience no IWA employee would ever want to repeat, there actually were some positive and uplifting outcomes.

- When we first returned to the islands on the 15th, we quickly encountered two young adolescent woodpeckers who had apparently been separated from their parents. They adopted IWA employees and would sit on our arms/shoulders/hands/heads while being fed their food of choice ... peeled grapes. After a week or two, they disappeared, having apparently managed to find something to eat on their own.



- Since it took over two weeks to restore power on Captiva, we received a request from the Captiva Fire Department to loan one of our large portable diesel generators to power the Captiva Civic Association building as a community comfort station, where residents and members of various assisting organizations could get out of the oppressive heat and humidity and rest/eat in comparative comfort. Since power had already been returned to our facilities on Sanibel, we were able to agree to this request, much to the relief of many people who remained on Captiva for the next week or so.
- Since IWA's facilities were the only ones with both power and water for the first few days after the storm, we opened our facilities to emergency forces, who were living in temporary quarters before the storm due to ongoing construction of a new fire station on Sanibel. Both Sanibel Fire Department and Lee County Emergency Medical Services personnel oper-

ated out of our facilities (and lived there as well) for a few days after we returned to the islands. At one point, we had 5 emergency vehicles in our parking lots and garages. This experience helped form a stronger bond between IWA and these critical island organizations.



- All organizations involved in recovery efforts from hurricane Charley worked together very efficiently, getting the job done as quickly as possible, with a minimum of red tape. Everyone got to know their counterparts in the other organizations much better, and that should reap further benefits in the future. IWA would particularly like to recognize the assistance it received from The City of Sanibel (overall coordination, debris removal, and even hotel reservations for key IWA employees fleeing the storm at the last minute), U.S. Fish and Wildlife (great chain saw and heavy equipment crews), both island Fire Departments (coordination, fuel and chain saw crews) and Bonita Springs Utilities (Gatorade and a four-man crew for a week). Without the assistance of these organizations, it would have taken a lot longer to restore water service to the islands.

Thanks everyone!!

Following are a series of photographs we took after hurricane Charley during our work to re-pressure our water distribution system. There are a lot more photos on our website at www.islandwater.com, as well as on many other island websites. For those Members reading this article who were not here immediately after the storm, all that can be said is that pictures do not tell the whole story. You really needed to be standing in the middle of the damage to appreciate the true extent of it.



A 140 mph Flag



Repairing a Main Break



Looking for a Water Meter



Breakfast at IWA

After hurricane Charley passed and we were just starting to get our facilities and operations back to something resembling normal, we could hardly believe it when hurricane Frances approached us from the opposite direction, the east, in early September. Frances was also a category 4 hurricane, like Charley, but it was a much larger storm. In addition, it moved very slowly, actually remaining stationary for what seemed like an eternity when it was located due east of our islands, just off the east coast of Florida. Key IWA employees again moved into our facilities and lived there for a couple of days waiting to see what the storm would do before fleeing to the mainland. In the end, Frances finally came ashore and crossed the state just north of us. We saw some heavy rain/surf and moderate winds on the islands for a couple of days, but we stayed in our facilities and kept the water system operational, avoiding a repeat of the massive effort to re-pressure it, as we had to do after Charley. Everyone was very relieved when Frances finally disappeared from the radar screens!

However, no sooner had Frances passed then hurricane Ivan formed. Ivan was a massive category 4/5 storm, with the 6th lowest pressure in the eye ever recorded in any storm. At one point, it was forecast to follow the exact path of Charley, again making landfall very close to our islands. However, this time the storm fooled the forecasters and it went much more westerly than predicted. Our good fortune with Ivan was obviously bad fortune for many people living along the northern Gulf coast.

Just before Ivan made landfall, hurricane Jeanne formed. As this newsletter was being written, it was forecast to move in our general direction as a minimal hurricane. Here's hoping at least the "minimal" part of that forecast proves to be true!

Enough Already!!!!

CONGRATULATIONS!

Phil Noe, Production Manager for IWA, has received the Robert O. Vernon Award from the American Membrane Technology Association. The award was presented at the Association's Biennial Conference on August 6th in San Antonio, Texas, in recognition of Phil's outstanding accomplishments and contributions to water supply improvement and desalination.

Phil joined IWA in 1987, working in the Reverse Osmosis and Electrodialysis desalination plants. He progressed through the ranks very rapidly, becoming a Lead Operator in 1989. In 1992,

the Electrodialysis plant was decommissioned, and Phil was promoted to the position of Chief Plant Operator in the Reverse Osmosis Plant. In 1998, he was promoted to his current position of Production Manager. In his role as Production Manager, Phil is responsible for all of IWA's water treatment and distribution pumping systems, as well as water storage. Phil also serves as IWA's Safety and Security Director. He is a Florida A-licensed operator as well as a certified Occupational Safety & Health Administration Trainer. He is also certified in hazardous materials handling at the level of "On Scene Commander". He has authored technical papers for the Southeast Desalting Association in 1997, the American Membrane Technology Association in 1998, and for the American Chemical Society in 1998 and 2001.

Congratulations Phil!!



MORE ELECTRIC POWER SAVINGS

In previous editions of this newsletter, we have discussed some of the efforts we have taken to save electric power and hence to keep our water

rates as low as possible. We installed an energy recovery turbine to recover the energy from our brine waste stream. We also installed a new, more efficient high pressure pump on RO Train A.

A few weeks before our focus shifted to a never-ending series of hurricane threats, we continued our energy conservation efforts. We installed three more high efficiency high pressure pumps on RO Trains B/C/D. With the installation of those three pumps, we now have high efficiency pumps on all six RO trains. We expect that the significant power cost savings from these pumps will offset their cost in just a few years.

We have also replaced the old membranes in RO trains E and F (see picture below). The new membranes produce the same amount of water at a lower pressure than the old ones we replaced. Lower pressure translates to lower energy requirements and hence lower power costs again. At this point, all six RO trains have the most energy-efficient membranes we can buy, and, like the new pumps, we expect the power cost savings will pay for the new membranes in just a few years.



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