Looking Back -

Town of Smithville
DEVASTATED BY TORNADO

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PIPELINE is a publication of the Alabama/Mississippi Section of the American Water Works Association. PIPELINE is mailed to all members of the Section. In an effort to keep all community water system officials informed, the AWWA trustees voted to provide a complimentary copy to all community water systems within both states. This will help keep water systems current on events affecting the water supply industry and aware of products and services through the AWWA. Current circulation is over 2,800.

Articles and photographs are encouraged and appreciated. All submissions, comments, or other matters concerning this publication should be directed to:

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Help us become stronger

As you read this issue of our AL-MS Section AWWA Pipeline, we will all have experienced one of the warmest winters within the last 50 years in our two states, with ample rainfall to boot. But, as they say just about everywhere you go, if you do not like the weather today, just stick around for a day or two.

It is difficult at this point to predict how both the weather and the economy will have affected us by the end of 2012. But, I know we will be able to say that regardless of these results our water utilities making up the AL-MS Section of AWWA, along with the consultants, manufacturers and suppliers who support them, will have served their customers and our constituents admirably. We have one of the greatest groups of dedicated professionals serving one of the country’s most critical needs to our citizens.

On March 7-8, four delegates from our Section (Mark Snow and Amy McLeod from Mississippi, Les Brown and David Stejskal from Alabama) attended the annual Water Matters Fly-In held in Washington D.C. Armed with issues of importance to each of us like water quality regulations and federal funding, delegates visited with our Congressional offices to emphasize our positions, solicit understanding and support on matters that affect our health and pocketbooks.

Our Education Committee has been active preparing educational seminars throughout the year for you to take advantage of and earn credit hours as needed. Please be on the lookout for email notices or check our website for information on topics and dates. These seminars are free to our members and are spread across the region to provide more opportunities for local participation, but are also available for you to attend as webinars for your convenience.

A Strategic Planning Committee convened in January 2012 with the purpose of reviewing and updating our AL-MS Section Strategic Plan, last revised over six years ago. Capably led by one of our past Section Chairs, Jim Miller, the committee’s goal is to accomplish this task and report to the Section by this October at our annual conference.

Speaking of our annual conference, our Planning Committee has met twice and is preparing an exciting conference at the Renaissance Riverview Plaza Hotel in Mobile, AL this October 14-16. This will be our first conference in Mobile in over 20 years. We know you will enjoy the city and what it now has to offer. More details will come in our next issue of Pipeline and on our website. In the meantime, mark your calendars as you will not want to miss this chance to enjoy great fellowship, food and entertainment, exciting competition and a very interesting educational program.

This is ‘your’ AWWA Section. We will only be stronger and more effective with YOU involved. Share your ideas, serve on a committee, recruit a fellow friend/worker to join or serve. Contact any of our Section officers or committee members for ways to do so.

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Since my last report, I attended the winter meeting of the AWWA Board of Directors. This meeting was hosted by the Puerto Rico Section in San Juan, Puerto Rico. This report will focus primarily on the highlights of that meeting.

The AWWA Board of Directors met January 21-22, 2012. A number of transactional items were acted upon, including the approval of by-law changes for several Sections, one of which was the Alabama-Mississippi Section. Some of the remaining key issues that highlighted the meeting were as follows:

- Elected Jim Chaffee as President-Elect. Jim is from the Wisconsin Section and you may remember that he and his wife Jan attended our Section’s annual conference last fall in Biloxi, Mississippi. This is the second year in a row that the President-Elect represented AWWA at our annual conference.
- Elected four new Vice Presidents as follows:
  - Mark Cline (South Carolina Section)
  - Reid Campbell (Atlantic Canada Section)
  - David Koch (Michigan Section)
  - Rosemary Smud (California-Nevada Section)
- Elected Sean Osborne from the New England Section as a Director-at-Large
- Confirmed Dave Rager as the incoming AWWA Treasurer replacing Lee Roberts.
- Approved the 2012 annual budget. Highlights from the Treasurer’s report are as follows:
  - 2011 revenue was $1.3M less than planned. 2011 revenue was slightly greater than 2010 Revenue. 2011 revenue deficit was primarily in membership dues ($276k less than budgeted; 1.8% drop in membership) and publication sales
  - 2011 expenses were $1.6M less than planned. Less than planned expenses in salaries, publication and membership promotion costs, and savings realized at conferences and events.
  - 2012 revenue and expense budgets planned at essentially 2011 levels. 2012 budget is planned to have a net operating income of $800k.

Membership retention and providing value to our membership continues to be a dominant theme that influences our Association’s tactical plans. Our Section’s Board of Trustees also have this as an operating strategy. If there is anything we can do to enhance the value of your membership in AWWA, please do not hesitate to contact me or one of your Section Trustees.

If you have not done so already, I encourage you to register for AWWA’s Annual Conference which will be June 10-14, 2012 in Dallas, Texas. The next deadline for the best rate is April 12, 2012.
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s there any in-between anymore? Has anyone noticed there does not seem to be anything newsworthy on TV or in the newspapers except hot topics such as the current political environment, the economy, world unrest, lives of celebrities and so forth. On the other hand, the opposite can reflect cruel, harsh or uncaring feelings, freezing, wintry weather, the cold war (everyone thinks is over), or the just the (ugh) common cold. The Andy Griffith show was warm; the movie, Bambi was a warm & cuddly movie, too. I mean, what happened to our entertainment choices?

As the photograph (taken by Pipeline Editor, Harry Gong) below showing Ruleville, Mississippi’s two old water towers depicts, people should have choices. However, what happens if a limited offering doesn’t quite suit your palate? This photo could suggest a ‘take-it-or leave-it’ attitude by many professional associations across the globe whose offerings do not quite live up to the varying needs of the majority of their membership. Your Board of Trustees has been working over the past few years to meet member’s needs by enhancing this Section’s annual educational offerings, expanding services, engaging our diverse membership and continuing to add value and enjoyment to our annual conferences.

As a member, your participation is sought by this and future years’ Trustees and Committee Chairs. Every Section Chair is on a ‘talent hunt’ beginning at least 12 months before he or she anticipates rolling into that position from Vice-Chair. That talent can present useful and unique ideas for annual Section activity; members – new ones, as well as us old timers’ should and do have a door open for opportunities to participate in committee work and, if truly committed, may be asked to Chair a committee. Each and every year, I receive requests from new and current members to become involved … be careful what you ask for. Involvement, participation and commitment by the Section membership is vital to our continued growth and stability. That stability is reflected in our National standing in membership retention status of Utilities, Service Providers and Individuals. Additionally, AWWA offers an array of member categories from which to choose such as student, retiree, administrative and so on … no matter the category, every member should play a part in the Section’s direction.

Your Section of the AWWA has no ‘hot or cold,’ ‘black or white’ cookie-cutter strategy to serve its members; to the contrary, it is the full-mix of membership needs that now charges our Trustees with the continual development of the living document of our Strategic Plan. Does this Section return just two or three satisfactory ‘value-adds’ to the Utilities, Service Providers or Individual members of this Association? You be the judge … our direction is determined by our membership and this Section will continue to evolve with an annual agenda to best suit its membership. There is no time like the present to send me or our Chair, your thoughts and your desire to become involved.

Call me at anytime at (662) 719-7756 or e-mail to almsawwa@cableone.net to let your voice be heard.

Your Section of the AWWA has no ‘hot or cold,’ ‘black or white’ cookie-cutter strategy to serve its members; to the contrary, it is the full-mix of membership needs that now charges our Trustees with the continual development of the living document of our Strategic Plan.
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April 27, 2011 started out as just a normal day for Mike Hathcock, the Town of Smithville certified Water and Wastewater operator. Mike and his co-workers Danny Benefield and Josh Hathcock, Mike’s young nephew, had completed all of the meter readings for the month and had settled down taking care of routine matters such as repairing a water leak that morning, making repairs to the backhoe, checking on the lime feeder at the water plant, making sure chlorine residual levels were proper, and checking on the blowers at the aerated lagoon. Just the week before Mike had reviewed plans for their next sewer rehabilitation project in the northern part of town. The southern project had worked so well in reducing inflow and infiltration into the sewer system that Mike and Mayor Gregg Kennedy were extremely anxious to get this second project underway. Thoughts of the upcoming project and the routine daily chores tended to overshadow the eerie weather on that April day.
Call it a sobering event, a life changing event, a day that will always be remembered; but the EF5 tornado with 210 mph winds that ripped apart the Town of Smithville at 3:47 P.M. that afternoon was all of these.

Life in the small northeast Mississippi town would never be the same again. When the tornado sirens sang out, and with the sight of horrific storm clouds in the area, people began to seek shelter. Mike, Danny and Josh found themselves close to the small concrete block police department and quickly entered the building along with several others. Some were shuttled into the back office while others took shelter in the small bathroom. Seconds later videos confirm the loss of power, the cover over the police cars being sucked into the air, and all windows being blown out of the police station with horizontal winds blowing glass, trash and debris into the lobby. The loss of the video signal coincides with the complete destruction of the police department building as the roof was ripped from the top of the structure and the walls were toppled on top of the occupants. Miraculously no one was seriously hurt inside the building, but Josh Hathcock did receive a severe dislocated shoulder while trying to hold onto the bathroom door when the building collapsed. According to his father, police chief Darwin Hathcock, who grabbed Josh as he was being sucked from the building, “two or three seconds more and we would have both been pulled from the building and into the funnel of the tornado.” Other than a severe black eye the police chief survived with no other major injuries.

When everyone climbed from the rubble of the police station they were in shock to see what was left of their small hometown. The EF5 tornado, estimated at one half mile across, had followed Highway 25 into town and had completely destroyed everything in its path. Homes were lifted in the air and rotated like the fictional home of Dorothy in the Wizard of Oz while others were completely swept away leaving only a concrete slab remaining. Many others were split in half or left in a tangled web of splintered wood and debris. Most homes were completely unrecognizable.

Adjacent to the police station they found Mel’s diner gone, the Post Office collapsed, the Town Hall in a pile of twisted rubble, the police station in shambles, and the Piggly Wiggly across the street gutted. All of this was just in the immediate area. Inspections soon after the event showed that almost one third of the town had been hit hard with most of the downtown area destroyed.

The immediate concern was for the welfare of everyone in town as search and rescue operations began.

Walking across the street from the police station Mike, Danny and Josh first noticed tin hanging from the struts on the elevated tank. Miraculously the elevated tank was still standing even though a concrete block building not 20 feet from one of the legs of the tank had been completely destroyed. That concrete block building not only housed the mowers, the pressure washers and other items used for utility maintenance, but it also contained one of the main control panels for the water plant automation.

SPIRALING DOWNWARD

As Mike, Danny, and Josh began to assess the devastation that the EF5 tornado created in less than one minute, they did not realize that the water system was quickly spiraling downward. First, a fire hydrant located behind the post office had been hit by debris with the impact separating the foot of the hydrant from the main line. Amazingly, the hydrant was found about ten feet away completely intact. Second, all homes destroyed by the tornado including the downtown businesses were spewing stored water from the elevated tank into the air. The final blow was that all electrical service to the town was down. Telephone and power poles lay in splinters. When the power pole serving the water plant was ripped from the ground it also took with it the entire electrical service to the water plant including the service riser, meter pan, and all electrical conduit.
and wires. The 75,000 gallon elevated tank soon drained leaving the town without any potable water.

SAVING GRACE – IN PART

About half of the customers of the Smithville water system are served by a rural water plant located almost seven miles from the center of town. The rural water system and town system are connected, but routinely the two systems are maintained separately due to different water chemistry. Although the rural water plant did not sustain any damage, it did lose all power. The rural plant generator started automatically and was able to keep the plant running but only at half capacity because only one of the two water wells is powered by the rural plant generator. The other water well has no backup generator. Power was restored by the utility company exactly 24 hours after the event allowing the rural water system to produce water at full capacity. To the best of everyone’s knowledge the rural system never lost system pressure. A standby portable generator from an adjacent water system arrived at almost the same time that power was restored. It remained in standby mode and fortunately was never needed. With the rural water system running at full capacity and in automatic (although no telemetry was available) the operators could concentrate their efforts on the town system, at least half the customers had water.

INITIAL ASSESSMENT

Search and rescue efforts continued early Thursday morning. Water service to rural areas was limited while the town water system was completely shutdown. Power poles were splintered and wires strewn like spaghetti across fields, lots and streets. Although no permanent auxiliary unit had ever been installed at the water plant, it would have done little good since all exterior power conduits, wires and meters, and other essential components of the electrical system had been ripped from the building.

A quick assessment of the facilities revealed that the most productive measures would be to maximize the output from the rural water plant in an attempt to slowly bleed as much water as possible to the town without compromising the rural system.

Late Thursday, after site assessments of most facilities had been completed, the following priorities were established:
1. Maximize the output from the rural water plant.
2. Open valves from the rural system to the town allowing as much water as possible to flow to town without compromising the rural system integrity.
3. Install a temporary roof on the main water plant building to protect the building from incoming rain.
4. Isolate main lines with leaks.
5. Identify services to all homes. This was accomplished by painting a blue circle in the street as close to the location of the water meter as possible. Because many of the water meters were covered in debris, the circle in the street would at least alert debris removal contractors that a water meter was in the immediate area.
6. Turn off services to damaged homes. If a service could be found and turned off, a white X was painted inside the blue circle to indicate that the service had been turned off.
7. Return the elevated tank to service as soon as possible.
8. Repair or replace controls and SCADA. The high service pump control panel had been destroyed and the main SCADA computer in the Town Hall was lost when the building was destroyed.
9. Wastewater lagoons. This work could be placed on hold since the most critical issue facing the town was potable water. Most of the town sewerage collection system flows by gravity to the lagoons. The single pump station in town would be run by a potable generator currently being installed. Another potable generator would be brought to the lagoons to run the discharge effluent pumps. Although the aeration system and lagoon cover were completely destroyed, at least some treatment from the facultative lagoons would continue.

Mr. Bob Fisher of Fisher Tank arrived late Thursday afternoon and performed an initial assessment of the town elevated tank. Bob confirmed that a large object had indeed hit the top of the elevated tank creating a dent almost three feet in diameter. Damage to the top of the tank did not appear to have compromised the structural integrity of the bowl, but a horizontal strut 40 feet above the ground was damaged severely. Recommendations were not to return to tank to service until the strut was repaired or replaced.

Marshall Law was imposed and everyone left for home around 7:30 PM after the last FEMA/MEMA meeting concluded.

FRUSTRATING EVENTS

Early Friday morning the priority list was reviewed again and efforts were concentrated on bringing water to town from the rural system. The rural water system is located well above the town system such that water will flow from the rural system to the town system through a pressure-reducing valve. A 100,000 gallon ground storage tank just downstream of the pressure reducing valve would provide the only storage for the town system with the elevated tank in town out of service.

Air entrapment problems with the pressure reducing valve soon developed due to the high volume of water rushing through the valve. These problems were resolved with a manual air bleedoff valve. Regardless of the herculean efforts to try and get rural water into the town, no water would flow and many customers whose homes were not damaged in town were still without water two days after the event. Finally, after checking numerous valves and verifying the line size by counting the number of turns to open and close, and trying to decipher forty-year old maps, one critical valve remained elusive. Maps of the rural system were of such a large scale that even the side of the road of the water line was not easy to detect. Valve detail sheets had never been prepared and some valve markers (two inch steel pipes mounted in concrete and projecting 24 inches above ground and painted blue) had been hit or destroyed over time. As always is the case, the one valve that appeared to be closed could not be located. Three people combed the corner of one intersection for over an hour in a grassy field covered with campaign signs looking for the one elusive valve. Finally, after finding pieces of concrete and several holes in the ground, we hit pay dirt. Clumps of grass were moved back exposing the broken piece of vertical PVC pipe. After the removal of dirt that filled the pipe, the valve wrench finally hit metal and after much effort locked onto something. Flashlights shining down the hole revealed what appeared to be a two inch operating nut, but the valve would not budge. Option 1 included digging up the

“Early Friday morning the priority list was reviewed again and efforts were concentrated on bringing water to town from the rural system.”
valve, but excavation in the area would be tough with phone lines criss-crossing the area and not enough time for One-Call tickets. Option 2 was to ‘get a bigger hammer.’ Two ‘cheater’ pipes were placed on the valve wrench and two people took their position to force the valve open. Slowly the wrench turned, but were we really lifting a disc in the valve or simply twisting the pipe? Soon the wrench vibrated and water rushing through the valve sounded like a jet engine screaming by. Faucets on homes just downstream of the valve began to spurt verifying that water was rushing to town.

TOO MUCH A GOOD THING

Water rushing to town started filling all lines that had drained completely from the storm. But water was also rushing unnoticed from destroyed homes, leaks, and occupied homes where every faucet had been left open by customers hoping to find water. The amount of water rushing to town exceeded all expectations. The 100,000 gallon ground storage tank drained that evening eventually causing the town to run out of water once again. Customers’ hopes of restored water service were soon dashed with faucets running dry once again.

GOOD NEWS

Saturday morning the power company informed everyone that power would be restored to the town water plant.

This was miraculous news considering that major power lines into town were still down. The power company informed us that power would be fed through the undamaged residential area. With the rural water system feeding as much water as possible to town and with the prospect that power would soon be restored to the town water plant, all efforts were then made to get the town plant up and running.

Earlier that morning, even before it was known that power might be restored to the water plant, crews from the City of Fulton, Mississippi under the watchful eye of Mississippi Rural Water employee Tom Abernathy and Consultant Ricky Herndon, began to clean out the coke tray aerator and the solids contact clarifier. Typical of most wind driven storms shingles in clarifiers are a kiss of death. Shingles over sludge hoppers block any flow of water from the unit and cannot be removed by back flushing. Shingles essentially act as the perfect check valve preventing any water or sludge from leaving a clarifier. The only way to make sure that shingles or debris would not cause problems was to completely drain and clean the unit. The City of Fulton crew worked at a fever pitch and had the unit cleaned before lunch. Water well number two, with power fully restored, was then utilized to refill the basin running the water through the aerator to begin the oxidation of the extremely high raw water iron.

NO CHLORINE OR LIME

Although power was restored to the water plant it became very evident that no chlorine could be fed to assist with oxidation of the iron and for disinfection. All chlorine injection is accomplished by using normal distribution system pressure with finished water. With essentially no water pressure in town, no chlorine could be fed. Phone calls were made and miraculously on a late Saturday afternoon four 50 lb pails of HTH were found close by in Amory. The other main chemical fed at the water plant is lime. Although the lime feeder did not appear to be damaged from the event, the main electrical motor that ran the unit appeared to be burned up. A spare motor was taken from storage and wired to the unit. Soon afterwards this motor failed and a second spare motor was installed. After the second spare motor failed all efforts to use the existing lime feeder were halted. Instead, calculations were made to dose the clarifier with chemicals. Lime and HTH would be fed manually into the clarifier every hour until the chlorine and lime feed systems could be restored to service. Initially, all water from the clarifier was sent to waste until a blanket was built. After that, all water was diverted to the filters. By 9:00 PM on Saturday water from the clarifier was running clear with the iron content down to 0.9 milligrams per liter from an initial of 20 – 30 milligrams per liter.
HALF A SCOOP OF ‘THIS’ AND
HALF A SCOOP OF ‘THAT’

It became apparent late Saturday night
that without automated chemical feed
either the plant would have to be
shutdown or someone would have to
man the plant throughout the night
manually feeding chemicals. Because
the Town of Smithville was under
Marshall Law, National
Guard troops
were placed on every street corner with
additional soldiers available for any
other duties that may be required. Two
young national guardsmen were brought
to the plant and were put in charge of
feeding chemicals Saturday night. There
instructions were quite simple, feed one-
half scoop of HTH every 30
minutes and feed one scoop of lime every 30
minutes. Although the measurements
were not precise, they did provide the
proper ratio and quantity of chlorine
and lime such that the clarifier blanket
could be built and stabilized and clear
water sent to the filters. The national
guardsmen performed perfectly feeding
the chemicals every 30 minutes and
recording water system pressures every
15 minutes all night long.

OUT OF THE WOODS

By Sunday morning, almost three and
half days after the tornado hit, water
pressure in town was 46 psi and the iron
content leaving the filters averaged 0.2
milligrams per liter. Water from the rural
system was now keeping the town alive
and the manual chemical feed system
that had been devised was working
such that the town plant was producing
good water less than 24 hours from the
time it was started. The lowest chlorine
residual in the system measured 0.8
milligrams per liter and at 10:00 AM on
Sunday morning one of the plant high
service pumps was started sending water
into the system. Because the plant still
lacked telemetry and automation, this
high service pump was throttled back
to match the production capacity of the
single water well that was in service.

“One of the landmarks and focal
points in the small flat town is the
elevated tank. It has been there for
50 years and is a prominent focal
point on the landscape.”

DID ANYONE
CHECK THE VOLTAGE?

Once power was restored to the water
plant all efforts were made to get the
plant back up and running as soon as
possible. The additional water coming
from the rural system had placed a strain
on that system and the town plant was
needed to supplement the rural feed to
meet the demands of the town. As soon
as power was restored to the town plant
the rotation of the clarifier and the high
service pumps were checked and all
things seemed to be normal. However,
odd things began to happen. The motor
to the lime feeder failed, the motor to
the lime system solution tank began to
overheat, and a solenoid valve on the
chlorine system failed. After replacing
the second motor on the lime system,
a volt meter was found and the voltage
checked on several of the circuits. In all
of the haste to get things running again
no one thought to check the voltage of
the incoming power. One of the ‘legs’ had
been wired incorrectly (they referred to
this as the ‘stinger’ leg) and now most of
the 110 volt circuits in the building were
receiving 240 volts. This readily explained
why motors were failing, contacts were
burning up, and other obvious signs that
something was wrong. The electrician
quickly rewired the system but not until
a number of spare motors and contacts
had been ruined. Fortunately, some of the
critical motors and other components such as the relays for the starters for the high service pumps were not damaged.

A CAR HIT THE ELEVATED TANK: YES, THE TOP OF THE ELEVATED TANK!

One of the landmarks and focal points in the small flat town is the elevated tank. It has been there for 50 years and is a prominent focal point on the landscape. Eyewitnesses claim that a red car hit the top of the elevated tank. While the make and model is not known, it did leave a 32 inch dent in the tank approximately six inches deep with a nice red scar. The damage is very evident from the ground even though the dent is approximately 150 feet in the air. The greatest concern about the structural integrity of the elevated tank was not the dent at the top of the tank, but rather one of the horizontal struts that was hit some 40 feet above the base. The strut was bent almost three feet toward the center riser which also caused one of the four legs of the tank to bow inward.

The elevated tank not only provides critical fire protection for the town, plus level control for the high service pumps, but equally important provides backwash water for the sand filters at the adjacent water treatment plant. Without this tank the filters cannot be cleaned which is extremely critical for a plant that treats up to 30 milligrams per liter (that is no typo-30 is correct) of raw water iron.

Initial thoughts were to cut the strut loose and replace it. That is until Mr. Ed Bird, P.E. showed up. At first you might confuse Mr. Bird with a retired senior citizen who sits in the park playing checkers all day. Mr. Bird arrived late Sunday afternoon to access the tank. The dent did not bother Mr. Bird, but the bent strut was a great concern. Using an old chalkboard as a table, what has to be the very first addition of the Steel Manual, a calculator that looked like it came from Star Wars, and a paper pad and pencil, Mr. Bird starting his work. Just thirty minutes later he explained “We are going to bend the strut back into place without removing it and here is how we are going to do it!” Mr. Bird quickly orchestrated the repairs outlining the exact components needed, the procedure, and the method. Essentially, Mr. Bird used a large beam laid on its side (a strong back as he called it), supports welded to the legs, and all-thread rods to pull the strut back into place. Once bent back within 3/8” of its original position he instructed the contractor, JESCO of Fulton and Tupelo, Mississippi, to weld channels to the top and bottom to reinforce and stabilize the member. The leg returned to its original position and the horizontal strut is now the strongest member on the tank, simply brilliant.

NORMAL OPERATION

Monday, May 2, was spent fine tuning the water treatment plant in manual operation, checking on the rural plant control valve to make sure that it was operating properly refilling the adjacent ground storage tank, obtaining quotes to repair or replace the control systems at the plant, and opening up isolated parts of the water system one line at a time such that homes and businesses in the damaged part of town could also have water for cleanup operations and fire protection. Some homes as close as 200 yards from the path of the tornado were not severely damaged and needed water for cleaning.

By Thursday, just over one week from the time the tornado hit Smithville, the tank repairs were completed and the tank was being refilled, most all of the main...
water lines of the town water system had been reopened and were in service, controls at the water plant were being installed, and two hydrants damaged during the storm were being repaired. The town water plant was kept in manual operation for almost two weeks until all automation was restored. Mike, Danny, and Josh continued to repair leaks and damage from debris removal operations as the town slowly returned to somewhat normal operations. However, as with any event of this magnitude, things in Smithville, Mississippi will never be ‘normal again.’

**LESSONS LEARNED**

There is no way any person can fully prepare for the type of devastation that the EF5 tornado did to Smithville, Mississippi on April 27, 2011. However, some good lessons were learned:

1. Make sure a duplicate set of plans for all facilities are maintained in a separate remote location.
2. Prepare in advance valve details with references to good landmarks so that all valves can be found easily and readily. Using GPS with coordinates is fine, but what if your GPS equipment is destroyed in the event?
3. Annually manipulate each valve to make sure that all valves are in working order. Repair all valve markers.
4. Try to install permanent auxiliary generators on all critical components or have several spare portable units available that can be dispatched to critical sites.
5. In advance, manually calculate dosages for all chemicals. Figure out how much is to be fed (‘Scoops’) per a specific time frame in the event that a set of scales is not available. Have a source of alternative chemicals available (HTH versus gaseous chlorine).
6. Keep spare parts in stock. Thank goodness Mike Hathcock had three spare motors in stock and at least as many sets of contacts for the lime feeder.
7. For other systems willing to help, be patient with the storm victims. Regardless of the event it takes time to evaluate the situation and to establish priorities. Help is certainly welcome, but only after specific repairs can be identified.
8. Many thanks to Mr. Bill Rutledge, Damage Prevention Coordinator for Mississippi 811 and the former Mayor of Pontotoc, Mississippi for his efforts to help coordinate and locate all utilities during the repair effort.

*Photos courtesy of Joey Vaughn of the Mississippi Rural Water Association*
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In an effort to keep public water supplies safe, the U.S. Environmental Protection Agency (EPA) uses the Unregulated Contaminant Monitoring (UCMR) Program to collect data for contaminants suspected to be present in drinking water but that do not have health based standards set under the Safe Drinking Water Act (SDWA).

Every five years, 30 contaminants are selected for monitoring by public water systems to gather data that will help EPA determine which, if any, of the contaminants need to be regulated.

The UCMR provides EPA and other groups scientific data on the occurrence of target contaminants in drinking water, the number of people potentially exposed and the level of such exposure. The information is stored in a National Contaminant Occurrence Database (NCOD).

The UCMR was designed as a 3-tiered approach based on method availability: List 1 uses established methodology to test for target constituents; List 2 is set aside to test newly developed methods in drinking water analysis; List 3 is set up for pre-screen testing on methods for drinking water analysis that are in the development process.

In the past, monitoring was done by all large Public Water Systems (PWSs), those serving more than 10,000 people, and a representative group of smaller water systems. Under the latest revisions to the program known as UCMR3 all previously excluded systems are now subject to UCMR monitoring.

UCMR3 includes PWSs and participation based on retail population served. Systems previously excluded are now subject to UCMR monitoring (i.e., systems that purchased water were excluded in UCMR1 & UCMR2).

Transient systems can now be selected by EPA to represent small (25-10,000 served) systems. These systems are now subject to List 3 (enterovirus and norovirus and select specified pathogen indicators) for pre-screen sampling if selected as one of 800 random PWSs to participate.

This ruling clarifies groundwater source monitoring for any PWS whose source is groundwater. The groundwater well selected must be the higher annual volume producing and consistently active wells. An alternate location would be selected if the previous well should go off-line. When submitting the Entry Point to the Distribution System (EPTDS), the information listed in 40 CFR 141.35(c)(3)(ii) must be submitted for sample locations.

The time for UCMR three laboratories to electronically report results has been reduced from 120 days to 60 days and the time for PWSs to review the data has been reduced from 60 days to 30 days.

All small and large systems must report the disinfectant type used with the UCMR3 data. This is an additional data type as well as the data types listed in Table 1 of this Proposed Rule.

Systems participating in List 3 must allow the EPA to monitor for enterovirus and norovirus and other selected pathogens. List 1 contains 28 new priority contaminants and both List 1 and List 3 have new monitoring dates of January 2013 through December 2015. The EPA designates the year and months of sampling for large systems. During discussion of this proposed rule, EPA mentioned the possibility of adding hexavalent chromium to List 1.
• Schedules set by the EPA for monitoring may now be modified from EPA's schedule to account for sample point availability for large PWS sampling. Systems must notify the EPA if the schedule set forth initially by the EPA cannot be met.

• List 1 chemical contaminants will be samples collected from the EPTDS. In addition to EPTDS collection, the metals and chlorate samples will also be collected from Distribution System Maximum Residence Time (DSMRT). This will provide the EPA with data to determine if the metals and chlorate levels are influenced by the distribution system or if increases are from the distribution system itself.

• The Minimum Reporting Limit (MRL) was revised to represent an estimate of the Lowest Concentration Reporting Level that can be achieved 75% of the time among various labs.

How does UCMR3 apply to me?
• All entities regulated by this action are PWSs. This includes all large community and non-transient non-community water systems that serve more than 10,000 people which would be required to monitor for chemical contaminants (List 1) in the proposed ruling.

• Of the Community Water Systems (CWSs) and Non-Transit Non-Community Water Systems (NTNCWSs) serving less than 10,000 people, only a nationally representative sample would be selected to monitor for chemical analytes. A CWS is defined as a PWS that has at least 15 service connections used by year-round residents or regularly serves on average at least 25 year-round residents and may be affected by this ruling. An NTNCWS is defined as a PWS that is not a CWS and that regularly services at least 25 of the same people more than six months per year. Transient non-community water systems, systems that do not regularly serve at least 25 of the sample people over six months per year, would not be required to monitor for the chemical analytes (List 1).

• Any transient ground water system serving 1,000 people or less may be selected for virus monitoring (List 3). Up to 800 of these systems could be chosen nationally. If a system is chosen, EPA would sample and pay for all analyses.

What is the states’ role in the UCMR program?
State participation is voluntary. Specific activities for individual states are identified and established exclusively through the Partnership Agreement process if states wish to participate. The states would develop a representative monitoring plan for small systems. The Partnership Agreements would address the following: process for review and revision of the state monitoring plans, replace and update system information, modify timing for monitoring, review and approval of proposed representative EPTDS, notification and instructions for systems, and offer compliance assistance.

Suzanne Lindblom is the Laboratory Manager for Mobile Area Water and Sewer System (MAWSS). She has over 13 years experience in the environmental laboratory industry with analytical, quality assurance, and project management experience. Lindblom has a Bachelor of Science in Biological Sciences and a Master of Science in Aquatic Ecology from the University of Alabama.
Newsmakers

RON HARRIS APPOINTED TO ADVISORY BOARD

Ron Harris, President of Krebs Architecture & Engineering, Inc., has been appointed to the Advisory Board of the Alabama Productivity Center (APC). The Alabama Productivity Center is devoted to working with Alabama businesses to find solutions to challenging technical problems. The APC, a nonprofit organization located on the campus of the University of Alabama, works to improve Alabama companies’ productivity, quality, and competitiveness through the use of the University’s research and educational resources. For more information on APC, visit http://www.proctr.cba.ua.edu/.

GLEN THOMAS RETIRES

On November 30, 2011, a retirement reception was held for Glen Thomas as the Water and Sewer Manager for the City of Richland, Mississippi. Glen has been an active member of the AWWA for over 27 years, Glen was also the 2009 winner of the George Warren Fuller Award. The Alabama Mississippi Section of AWWA congratulates Glen on his retirement. Glen is pictured with his wife Deb during his retirement reception.

BILL MOODY WELCOMES TWO TO THE FAMILY

Bill Moody and his wife, Lori, went to China back in October 2011 and returned with two new additions to their family. Bill and Lori completed the adoptions of Edward and Alexander, and both are adapting well to life in Mississippi. Bill is the Director of the Drinking Water SRF Program at the Mississippi State Department of Health and was the 2009 Chair of the Section. The Alabama-Mississippi Section of AWWA congratulates Bill and Lori on their new additions. Alexander is in Lori’s arms and Edward is in Bill’s along with older brother Davis in front.

DR. MICHAEL STALLINGS JOINS THE MEMORIAL SCHOLARSHIP BOARD

The AWWA AL-MS Section welcomes Dr. Michael Stallings to the Memorial Scholarship Board representing the College of Engineering at Auburn University. Dr. Stallings is a native of northeast Alabama and received a BCE and MS from Auburn’s Department of Civil Engineering. After working in a structural engineering office for two years he entered graduate school at the University of Texas at Austin to earn a PhD. He has been on the Civil Engineering faculty at Auburn for 24 years and is currently Head of the Department. Dr. Stallings serves as faculty advisor for the Student Chapter of the American Society of Civil Engineers. He has been recognized in the past for teaching with an Auburn Alumni Association Undergraduate Teaching Excellence Award, a Birdsong Merit Teaching Award, and by being named Outstanding Civil Engineering Faculty Member four times.

We look forward to working with Michael in the future on supporting scholarships for the beneficiaries of the Memorial Scholarship Fund.

NEWSMAKERS NOTICE

If you have recently been promoted, passed an exam, become certified, retired, become a parent, etc..., the PIPELINE would like for you to submit a small write-up and a profile picture for consideration for the Newsmakers Section. Please send the information to Harry.Gong@msdh.state.ms.us or call Harry Gong at (601) 576-7527.
The benefits of belonging

Ensuring the quality and sufficiency of water today and into the future is a commitment AWWA and the Alabama-Mississippi Section renews daily. In so doing, AWWA positions your utility to meet the evolving needs of the profession, wherever the future leads. That’s what AWWA is all about—giving you the information and resources you need to deliver safe water to the world.

WHAT IS IN IT FOR YOU?

Utility alerts and advisories
- Regulatory and Legislative alerts provide timely information on proposed legislation and regulations that could impact operations. These often serve as a call to action for utilities to submit comments to appropriate agencies to help shape smart policies that are based on sound science.
- Public Affairs advisories work to keep you informed about water-related news stories that are generating media attention. These advisories often include suggested language or strategies to assist your utility in responding to media inquiries.

‘Only Tap Water Delivers’
- Utility members are given free access to the ‘Only Tap Water Delivers’ media campaign that helps communicate the value of tap water service.
- Campaign includes advertisements, press releases, talking points, consumer handouts and more, all of which can be customized to meet your utility’s needs.

Subscriptions
Members receive the following AWWA periodicals, with both print and online expanded content versions.
- Opflow—Written by operators, Opflow presents hands-on guidance to make a utility’s work smoother and more efficient. There are insights about complex technical and regulatory issues to help operators make sense of it all.

Additional benefits of membership
- AWWA Communities
  - Communities combine member expertise with AWWA resources in an easy-to-use online environment.
  - They provide channels to disseminate information and promote industry-wide collaboration, as well as new networking and volunteer opportunities.
  - Current communities include Conservation and Customer Service, with more communities developing around specific topics.
- The AWWA Bookstore offers more than 500 books, standards, manuals, videos, and electronic products on everything from operator certification to membrane technologies to infrastructure development. AWWA members save up to 33% on all titles.

- Visit The Water Library at www.awwa.org for free access to download more than 8,500 Journal AWWA articles and more than 3,400 Opflow articles. You can also research and download AWWA Standards at discounted member prices.

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• Mardi Gras Parade from Hotel to Museum
• Excelsior Band
• Cocktail Buffet Dinner & Bar
• Museum Tours

Monday, October 15th
Keynote Speaker – Opening Session
Ed Conyers
• Motivational Humorist
• Director of College Relations – University of Alabama Course of Continuing Studies
• University of Alabama Football Practice Referee
• Member – Alabama Speakers Association
• Alabama Native and Veteran

Tuesday, October 16th
Guest Speaker - Awards Banquet
Dan Clark
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Awards & Safety Committee seeks nominations for 2012 Awards:

The AL/MS Section AWWA is soliciting nominations for the **Operator of the Year and Young Professional of the Year**.

Awards for the **Operator of the Year** will be considered for any public water supply utility system, including purchasers. Award criteria include operations records, maintenance programs, professionalism, safety, emergency preparedness, use of innovative technology, plant and/or system security. Provided eligible award candidates are identified, there will be one winner for each state.

Awards for the **Young Professional of the Year** will be considered for any AWWA member under the age of 35 or with ten years or less experience in the water industry. Young Professional eligible for this award include those working for utilities, regulatory agencies, consulting firms, manufacturers, distributors, or academic institutions. Provided eligible award candidates are identified, there will be one winner for each state.

To nominate an operator or young professional, send the operator name and contact information, and a letter of recommendation explaining why this person is being nominated, to Awards & Safety Committee Chair, Shannon Bailey at Shannon.Bailey@tetratech.com. Nominations must be received by **June 1, 2012**.

Awards will be presented at the 2012 AL/MS AWWA Conference, on October 14 -16, 2012, at the Renaissance Riverview Plaza Hotel in Mobile, Alabama.

MAC Notice

The Alabama-Mississippi Section of AWWA is here to represent the needs of our Manufacturing Representatives, Suppliers, Contractors, Engineers, and Related Service Providers. Our MAC Chair, Chris Griffin, and his Assistant Chair, Rob Coleman may be contacted to address how the Section can better serve your needs. They may be contacted at the following:

Chris Griffin, P.E.
CH2M Hill
4121 Carmichael Road, Suite 400, Montgomery, AL 36106
(334) 215-9025  Chris.Griffin@ch2m.com

Rob Coleman, P.E.
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For more information about any of the above postings or to see additional classifieds, please visit the Classified Ads Section on our website (www.almsawwa.org). If you have a classified ad posting that you wish to include in either the PIPELINE or our website, please email Harry Gong at Harry.Gong@msdh.state.ms.us.
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